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Appendix 1 - Publications during the research


Where have all the ideas gone? An anatomy of sketch inhibition among student designers.

THURLOW Lisa* and FORD Peter
Affiliation Organisation, De Montfort University, Leicester, UK
* Corresponding author e-mail: lisa.thurlow@dmu.ac.uk
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The reluctance of student designers to engage in sketching during the early stages of their processes is an increasing phenomenon, observed on a continual basis within higher education, and one with marked effects on design quality. An investigation into the causes and symptoms of sketch inhibition identifies social, personal and skill-set shortfalls among students together with a favouring of digital tools. A lack of understanding of the functions and benefits of sketching together with an assumption that design sketching is intuitive and requires no tuition have led to its neglect. An anatomy of sketching and its particular qualities is presented, concluding with the issues that higher education needs to address. These include a greater awareness of digital and manual tools and design-specific research types, together with the need for a revised pedagogy for design sketching.

keywords: Sketch inhibition, design development, design education, higher education

Introduction

During a studio teaching session, a group of thirteen post graduate students studying fashion and textiles were asked if they felt they could draw. Only two raised their hands. The same group, when asked to imagine and sketch simple forms struggled to produce anything. Some wildly scrubbed away with erasers to remove traces of their perceived ineptitude as they attempted to put their thoughts on paper. Others sat, almost in tears, clearly panic-stricken, unable to pick up a pencil. Many of their sketch-books intended to convey their design development contained little more than collections of pictures cut

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from magazines and printed from the internet. These were their design ideas. This is how they would create their collections: to them, this was creativity.

In another session, a group of twenty interior design undergraduates were asked to generate sketch ideas for a living space in a six metre cube. One scribbled images of foliage, later explaining that he didn’t want to concentrate on designing the space itself, but rather the surroundings it would sit in. Another took out a small set square and repeatedly drew lines, desperately trying to construct a space in which to map his ideas. An hour later, he was still struggling to visualise a 6m cube. Others complained that they couldn’t think on paper; they sat motionless, complaining they could only develop their ideas on computer.

The truth was they struggled to think at all. As soon as they were permitted to do so, they dashed towards the available Macs to develop their concepts. These ranged from 6 metre cubes containing naïve repeated elements, all straight-line-based, to those containing nothing more than CAD blocks found online. Some looked impressive, utilising the benefits that computers offer the designer: scanned images had been imported to create backdrops to the cube and ultimately convincing presentations, but the results were depressingly and frighteningly similar – an inability to develop complex ideas combined with a CAD aesthetic.

Sadly, this is not the exception; it is becoming increasingly the rule. During eighteen years of my own teaching of design-based subjects in higher education, students are rarely witnessed arriving for tutorials with bulging sketchbooks, with their heads so full of ideas that they have to sit and scribble them down before they evaporate into thin air. Attending tutorials with nothing more than a single thought about what might (or, more accurately, might not), be produced in answer to a problem-based learning activity is the norm. The norm is also to vanish, to spend week after week explaining good intentions without actually putting pencil to paper, to repeatedly apologise for accidentally leaving sketches at home, or to develop a chronic illness that precludes the ability to sketch. Students avoid putting pen or pencil to paper for as many weeks as they can, offering their, ‘great ideas’ in the form of elaborate explanations of ill-developed notions, often based on only a tiny snapshot of a personal observation. They then submit something rendered by computer – something that looks smart and shiny, but actually reflects their limited ability both as designers and as visualisers. The reality is they are suffering a skills shortfall that affects their ability to become effective, creative designers.

Why do so many design students actively avoid putting their thoughts down on paper? What are they missing in not doing so, and is it possible for higher education serve them better? These issues are constantly mooted within higher education and widely bemoaned in industry where the possibility of recruiting design graduates with meaningful drawing skills is becoming increasingly rare. Curiously, these issues have garnered little attention from the very academics that develop the learning experiences that designers will engage in during their journey through higher education.

The content of this paper is based upon doctoral research conducted over the past year. The methodology includes a review of current and historical literature relevant to the nature and purpose of design sketching and the cognitive processes it supports. Observation and teaching practice within several higher education environments together
with semi-structured interviews with educators, industry experts and students of various design disciplines have been employed at this albeit initial stage of the project.

It seems to start with the student’s understanding of, and relationship with research. Bruce Archer’s seminal paper published back in 1995, (Archer, 1995), conveys the importance of practice-based research for the designer, but somehow this still eludes so many students of the disciplines. At ground level, students’ understanding of what research actually is appears desperately limited. During tutorials, they readily convey their belief that research for design is spent trawling what they perceive as the dry stacks and journal databases of their university library – that or Google will supply all the answers.

Based on my own observations and those of colleagues, Google is where most visual research is initially tapped into, often comprising collections of pictures stuck into a sketch book with little or no analysis. Students are increasingly demonstrating a lack of awareness of and appreciation for the richness and value of practice-based research; the hours spent sketching, drawing, model-making and prototyping that underpin their developmental thinking and decision-making processes towards a final solution. They tell me this is not proper research; they believe research can’t possibly be a creative or enjoyable process. The sketching of ideas is becoming an increasingly rare sight in many university design studios. The most personal, immediate and reflective of tools available to the designer is the very one that appears to be struggling for existence.

Akin & Akin’s research, (1996), into the design problem-solving process suggests that in order to create new concepts the designer’s frame of reference needs to be broken. Shifts in mode between drawing, examining and thinking enable design discoveries to be made and the gathering of information, drawing and reflection in combination with quick switches between these activities are deemed to be vital to successful progress during design development. So why is this often such a problem for students?

**Why designers don’t sketch**

Pamela Schenk is one of only a tiny handful of educators who has voiced concerns over many years about the demise of the use and importance of sketching in design higher education. She suggests that secondary education fails to equip prospective students with drawing skills required for their studies and that consequently, industry’s needs are not being met by the drawing skills of graduating designers. She has observed the standards of drawing among newly graduated and early career designers dropping over the past few decades and as a result, impeding the activities of commercial design studios, (2005a).

Mis-conceptions among students about the purpose and nature of sketching appear to affect their relationship with it, and could suggest an issue within higher education at a fundamental level. This, from an interior design course leader:

> It’s their perception of what is a good sketch...they think it has to be the most amazing Leonardo da Vinci-type sketch, instead of a working idea, a methodology to discuss your ideas from your head, and it doesn’t have to be perfect, (Fitton, 2016).

Interviews with educators suggest a generalised mystique around sketching, for example:

> People are terrified that it’s a very personal activity and I think there’s a lot of mythology around the ability, where that ability comes from, you know is it a learnable skill or is it a dark craft? (McNicoll, 2016).
Changes in society have also affected the attitudes of individuals towards any relationship they may have with sketching, with technology replacing the manual processes that previously existed. McNicoll states,

*People don’t necessarily use the word ‘draw,’ or what we would think of as drawing activity any more in their lives,* (McNicoll, 2016),

and this is having wider effect on industry, one design director complaining,

*Over the last 15 years... reliance is on software to provide the answers rather than a deep thinking process,* (Mawford, 2016).

Issues affecting design undergraduates as they engage with their higher education experience act as a barometer of attitudes affecting wider society, including the belief that digital products are more attractive than anything manual. Instant gratification has become an intrinsic part of our existence and immediacy of results has become deeply embedded within our culture. This and the constantly media-driven belief that success happens without effort may be affecting the potential relationships of students with the idea of sketching, with lecturers bemoaning their students’ attitudes:

*A lot of people sort of say, “oh, I’d love to be able to sketch,” and I say, “well, you can if you try hard enough,” but there seems to be an unwillingness to spend the time sketching,* (Mawford, 2016).

There is definite acknowledgement of sketch inhibition within higher education often manifesting in avoidance behaviour as observed by Fitton:

*If it’s a session with an activity, they just pretend they’re doing it, don’t do it, or do just a part of it...sometimes they stop coming to their sessions.*

Additionally students, “*will go to the extent of not having produced any sketching and not coming into tutorials because they’re embarrassed because they haven’t got the work...then they present their sketchbooks and we can have students who have as few as four pages of drawings,*” (Fitton, 2016).

Booth, Taborda, Ramani, & Reid, (2016), identify several types of sketch inhibition during the design process and these fall into three distinct areas. Firstly, the issues of the individual, including intellectual inhibition, or a lack of awareness of the relevance of sketching to the design process. Skill-set inhibition; the lack of expertise needed to actually use sketching to an effective level. Personal inhibition; the ego-driven issues of perfectionism that impair the creative flow, and situational inhibition, when a designer does not feel in the right state of mind to sketch, i.e., not in the zone. Secondly, social issues are observed to create inhibition towards sketching. These include social and comparative inhibition, or the fear of being judged unfavourably by others during the process of creating sketch material. Social loafing applies to situations including sketch generation and involves a lack of input in a group situation, either through fear of judgement or laziness. The third area is that of technological inhibition caused by a prevalence of digital tools available in the designer’s environment which then leads to a disinterest in manual sketching. All of these types of inhibition are evident among students during design-based activities within the studio.
Inhibition based on fear of failure is also identified by Leblanc, (2015), suggesting this has resulted in a common belief that experimentation and failure, which are a normal part of the design process, are unacceptable. Because of this fear, students rush into visualisation as soon as they have the mere suggestion of a concept. This results in omitting stages of evaluation and refinement that are essential for a fully developed design, demonstrating that, “the development process is widely misunderstood or inaccessible,” (p2).

Leblanc’s, (2015), research with industrial design students at Montreal University elaborates on the wider issues of sketch inhibition within higher education. She says,

*We continually observe students struggle with the creative process, especially with sketching, exploring and developing ideas into mature designs. Many see sketching only as a means of visualization and rarely know how to use it as a creative thinking tool, (p1).*

Student attitudes are important to the management of their own sketch inhibition; Leblanc observing that,

*Those with high ambitions and strong self-motivation manage to overcome the deficit; others learn to mask their lack of skills in one area by developing others, (p2).*

Belief that the computer will do one’s creating, eradicating the need for paper and pen anywhere in the design process could be dangerous and the fear among design students to put pen to paper is a concerning trend. Ironically, industry requirements for graduates who can draw is increasing, (Mawford, 2016). To be able to sit with a client and sketch out loose, nebulous ideas at the briefing stage of a project is a USP that many designers need when entering the job market. Indeed, there are companies that require recruits to demonstrate a portfolio of drawn work above anything created using digital methods. However, many students within higher education are under the impression that, as has been the case for the past twenty five years or so, their future success lies more in their ability to use a piece of software to a reasonable standard.

Leblanc, (2015), acknowledges the value of digital tools, but laments their ubiquity in design education,

*Students are judged by their skills with these tools rather than their creativity or problem-solving ability. This unfortunately nurtures the misconception of design as an aesthetic gesture rather than an intellectual, creative thought process that helps solve problems and drive innovation, (p5).*

The essential processes of design embodied by its practical activities have been replaced with what she perceives as, “more gratifying digital tools,” (p2).

One of several problems appears to be the belief among undergraduate designers that the presentation visual is the design – the shiny surfaces and organic shapes that software can offer, accurately positioned and beautifully lit, are testament to both the developer, and to their user. A few sessions of instruction can produce passable images that look enticing to the lay person and fulfil the student’s need for progress. The same few sessions’ instruction cannot develop creative thinking, evaluation, self-awareness and an understanding of how ideas grow into solutions that answer the needs of the user. This takes much longer – and it is where even educators appear to get confused. They sometimes mistake the teaching of thinking with the teaching of visualisation: but,
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remember, the D in CAD stands for Draughting, not Design. Institutions invest many thousands on systems and software to produce the discipline-specific types of visualisation and manufacturing drawings that the designer needs to produce. They often do this at the expense of teaching the conceptual tools that designers need to generate and develop design thinking. This is supported by Stacey, (2016), who suggests that result, as opposed to process-oriented assessment of pupils' work in primary and secondary education leads ultimately to a fear-based mentality among students within higher education who are afraid to experiment in case of failure. Fitton also bemoans the system within schools:

They spend so long at school working through a process to get to the final element...and the whole emphasis and the grades are based on the end product. Because there is no weighting...given to the process and the quality of the sketching, (Fitton, 2016).

This lack of ideas is clearly apparent in the way that designers increasingly choose to work. Fine artists create mess. Their thinking and research surrounds them and is always a tangible part of their activity. A fine artist’s studio is not a tidy space. It is full of research in the form of materials, sketches, found objects and continual experimentation. It is where 2 and 3 dimensions meet in an individualistic, glorious amalgam of creativity. Without their space, artists cannot create. Design students still have the option of studio space to experiment with their ideas, to make mess, to create, refine and develop their thoughts, but an increasing number of them prefer the paperless approach — when you start with no sketchbook and have no ideas, the only place to go is the CAD lab. It’s a safe place to hide — it’s where you can create something that looks convincing, (as long as you can use enough of the functions).

The shame of this situation is that students should be working the other way round. They should be bursting with ideas and seeds of inspiration — generating concept sketches, models, prototypes, colour palettes, and then asking, ‘What should I use to develop my ideas?’

The benefits of computers to design are not in question — they handle with ease things that the mere mortal struggles with: speed of processing and the ability to store and manipulate vast quantities of data at the click of a mouse are their gift to designers. They would otherwise struggle to animate a walkthrough of a building concept before it’s even built, lay out components, revise concepts, and cost-effectively amend manufacturing drawings. However, computers do not handle well the vagueness and interpretative opportunities that sketching offers.

The benefits of sketching
Sketching is not a singular, homogenous activity — it is made of many smaller processes with their own distinct purpose and benefit to the design process. It also serves more than a singular purpose. However, even those who engage with it struggle to identify the many functions it fulfils.

Ferguson, (1992), offers an early taxonomy for sketching, including the, “thinking sketch”, referring to Leonardo’s sketches and those of contemporary engineers as a tool for visual
thinking, the, “prescriptive sketch,” used for specification of a final solution and the, “talking sketch,” (p96-97), used to communicate with others during the design process. 

Pei, Campbell & Evans, (2011), offer a more developed and hierarchical taxonomy involving sketches, models, drawings and prototypes. Personal, shared, persuasive and handover sketches are further classified. They deconstruct personal sketches into idea sketches, study sketches, referential sketches and memory sketches. The idea sketch is to, “allow the developer to externalise his thoughts quickly,” (p12), and is most relevant to this research, as is the study sketch which investigates scale, structure and layout based on the initial idea sketch.

Gabriela Goldschmidt’s extensive and widely cited work has proven one of the most critical contributions to the theory of design sketching for this research. She presents experiments conducted at MIT, (1989), where she reiterates her earlier observations of, “moves,” and, “arguments,” as two distinct types of reasoning embodied by sketching: the, “move,” being a tangible proposition within the process, and the, “argument,” (p35-6), being a conceptual micro-activity on the part of the designer within that process; that of the individual thought.

Goldschmidt classifies sketch activity into three distinct areas:

Moves made while actively sketching, moves made while contemplating sketches and reading off them and moves with no graphic input,” (1989, p127).

She proposes that sketching can be a representation of either linear or diverse thought, acts as a means to test and develop ideas and ends once the hard-line activity, e.g.; draughting, takes place. She coins the term, ‘interactive Imagery’, the process of imaging, sketching and resketching images until useful information can be extracted from them:

Sketching is not merely an act of representation of a preformulated image...it is more often than not, a search for such an image, (1989, p131).

On the purpose of sketch function during the design process, she devises a, “seeing as,” and, “seeing that,” (p131), structure. “Seeing as,” utilises a Gestalt approach during sketch thinking, using the mind’s eye to develop ideas. “Seeing that,” relates to the entity being designed and applying a non-figural approach to considering it - using the tangible output of the sketch process as a platform for further thinking.

Goldschmidt further anatomises sketch activities within the creative process, (1992), referring to leaps, or sudden insights within the mind of the designer “one in which the distance in time or place among relevant moves is too great to track,” (p200). Serial processes are identified where sketches are produced one after another, but not necessarily relying on sequential thought within a linear process and sequential sketch activity that is likened to machine processes where a set of information is developed based upon the previous set of information.

She considers the economy of sketching, (2003), where no cognitive energy is used in converting marks into readable information – marks on the page just are. Access to the history of the creative process is also made possible through sketching being, by default, serial information whereby complete sets of developmental information can easily be kept. Her work also observes the importance of expertise for the effective handling of the sketching process: novices often find themselves unable to detach from an image they have created that they are unhappy with, thus forming a negative development within the
process. This is less the case with more experienced designers who have a broader range of experiences to draw upon, (1992).

On the development of digital tools to replace traditional sketching methods, she argues,

*Persistent attempts to replace sketching with algorithmic, computational techniques, (largely computer-based), have so far failed to contribute to design reasoning in any way...the cause lies not in insufficient development of these new methods but in the inherent potency of the sketching tool, (1992, p215).*

And although over twenty five years old, this statement is still relevant to the intrinsic ability of sketching to support the designer’s creative and cognitive processes.

Goel’s, (1995), work on the nature of ill-structured problems addressed by designers considers the inadequacy of cognitive science and its reliance on structured symbolism to address the complexities of language used by designers during the early stages of the design process. His experiments with graphic designers observe that freehand sketches convey dense ambiguous information which offers the designer new possibilities for interpretation – something that a digital alternative struggles to replicate. He also presents a coding system for sketches based on his experiments: lateral transformations occurring within a solution space during the creative shift to alternative concepts:

...*when a new idea is generated, a number of variations of it quickly follow. The variations expand on the problem space...One actually gets the sense that the exploration and transformation of ideas is happening on the paper in front of one’s eyes as the subject moves from sketch to sketch, (p200).*

By contrast, and similar to Goldschmidt’s concept, vertical transformations occur during the sequential development of a concept towards a solution. Goel also identifies reinterpretation as a vital function of sketches, allowing the observer to apply new meaning to an existing set of information – a vital part of the designer’s activity during the early stages of design.

Donald Schon considers problem-solving activities across multiple disciplines including design for which the importance of sketching is emphasised. Designers are involved in a, ‘transactional,’ relationship with the design and are in a “reflective conversation with the situation,” (1991, p4), for which,

...*the act of drawing can be rapid and spontaneous, but the residual traces are stable...the graphic world of the sketchpad is the medium of reflection-in-action, (1983, p153).*

Design situations involve material situations and analysis though sensory appreciation. Schon, (1991), proposes that the designer constructs a conceptual world comprising objects and their relationships through which he addresses the design problem. A design world is personal to the designer – it is created according to his perceptions. He believes the more innovative a design episode, the more likely it is to be unique to the designer: ‘The designer designs not only with the mind, but with the body and the senses,’ (p7). Similar to Goldschmidt’s proposition of Seeing As and Seeing That, he refers to the process of ‘Seeing-drawing-seeing...a designer sees, moves and sees again,’ (p7). His notion of
the benefits that sketching brings to design; the cognitive processes it supports and the
symbiotic relationship between sketching and idea development. They need to have basic
anatomy and physiology of sketching before they can even begin to engage with it in a
meaningful and sustainable way. Leading the student to water is the easy part, but as any
journey through educational proves, the desire of the individual to learn is essential.
Curiously, the five-year-old congratulated for his naïve mark-making will no doubt become
the nineteen-year-old too fearful to record any kind of thought through sketching. And
there lies the paradox: that something so intuitive and natural can mutate into something
that terrifies intelligent adults. Lambert & Firth, (2006), observe that,

...students are entering design courses with less skill (so) we should be
weighting more of our teaching time towards drawing than ever before at
undergraduate level, as well as in secondary schools and sixth form
colleges, (p6).

Even if the secondary education system and other more complex social issues, (Booth et
al, 2016), are complicit in this, with just a little practice the confidence of sketch inhibited
individuals can grow rapidly. An example being a recent student of mine who spends time
with her eyes closed during studio sessions, creating mental images then sketching them,
regardless of how they appear on paper: her design ability and confidence have grown in
just a few weeks.
Lastly, and possibly most controversially, questioning the trend for a problem-based
approach to learning and considering the dirty word of apprenticeship or a shift toward
classical approaches to the teaching and learning of new skills. Fitton, suggests that,

We’re all a bit timid about pushing students to do things that they don’t
want to do, and I think you have to, (Fitton, 2016).

Before the student can develop their own vocabulary they need structure, a toolkit of
methods which they can then refine and develop, experiment with or leave behind if they
so choose – but at least they have the choice, rather than deferring their creativity from
an analogue to a digital process with no understanding of the differences between the
two worlds.

Conclusion
The purpose of this paper is not to romanticise pre-digital practices or malign vital digital
tools: it is to encourage debate about the importance of sketching, to identify the
functions that it alone can provide for the designer and suggest ways that the concerns of
industry, educators and students alike can be addressed. Reconsidering sketching not as
an outdated practice to be replaced or avoided, but as a cognitively essential process to
drive creativity, and consciously imbuing it within higher education can only be healthy.
Empowering students with the confidence to handle the indeterminacies, intolerances and
vagaries of the design process that only sketching can embody, rather than to cling
onto a simplistic, linear approach can never be a bad thing. In doing this, as educators, we
can help empower design graduates with greater creativity, inspiration and ambition
when embarking on their careers – something which will ultimately prove beneficial to
everyone.
seeing embraces the use of faculties other than sight; his terms, “recognise, detect, discover and appreciate,” (p7), are proposed to reinforce the concept of design being a bodily and sensory process.

Schon & Wiggins, (1992), consider experience as being vital to effective problem-solving. The more experienced a designer, the more domains he can work in at once; the designer’s move to address a single term being effective in many domains at once. A lack of experience and its effects on working memory limitations is also noted; addressing a single domain can overcome the issues of such limitations, especially in a less experienced designer where the act of seeing-moving-seeing assists in the management of complexity in a design problem. George Miller’s infamous paper, ‘The Magical Number Seven,’ (1956), proposes that the human memory can only process seven pieces of information at one time. It is clear that the short term memory utilised by the designer can only handle a relatively small number of issues at once, thereby demonstrating the need for recording the process of design thinking in order to effectively manage and avoid loss of data.

Bilda & Gero, (2005), also identify issues of working memory limitation among non-sketchers and the ability of sketching to offload it. Bilda, Gero & Purcell’s, (2006), protocol analysis experiments establish the importance of sketching during design development: it imparts a dialogue whereby visual messages from the page constantly flow back into the mind. They noted that sketches enable the ability to see the developing concept in both whole and partial form,

...seeing it in parts and seeing it as a whole...the whole emerges from and cannot exist without the parts but depends on the relationship between the parts, (p12).

Re-representation is identified, enabling the designer to detect new elements that could be developed further:

Half the process is drawing it, and drawing it....and eventually...something sort of creeps out at you, (ibid).

Externalisation of mental imagery is noted, supporting the benefit of offloading working memory. Sketches also form a language of immediacy and intuition, “...as you think you speak...if you think first and then speak, it would all come out differently,’ (Bilda at al, 2006, p12).

The themes of Fish & Scrivener’s eminent paper (1990), are still valid, especially those relating to the cognitive aspects of visual imagery. They discuss the indeterminacy of manual sketching that enables perception of more than one option at once, comparing this process to that of the computer where the designer can be forced down the route of developmental detail too early, potentially harming the design process. They also lament the inability of the computer to offer the same serendipity of manual sketching and consider the difference between descriptive and depictive information and the function of sketches in the relationship between them. The language they use enables the designer to create their own mental images based upon what they see on the page; marks seen on the page may influence the image within the designer’s mind. This ambiguity can initiate recognition and further mental imagery – essential tools for the successful designer.

**Education Issues**
The symptoms of sketch inhibition evident to educators, (including avoidance, non-attendance, losing work, and minimal design development), are not insurmountable, and
by taking an analytical approach to current practice in HE, the following considerations are offered:

Sketching for design is not the same as sketching for fine art practice: it is not an artefact-centric activity but one of process, supporting the cognitive activities engaged in by the designer. Schenk alludes to the teaching of drawing specifically within design education, that it is often inconsistent with the needs of designers and based on fine art practice and as opposed to developing a visual syntax to enhance the mental processes required by the designer, (2005a). Friction also appears to exist between the disciplines of fine art and design drawing which serve different purposes for the designer; those of observation and conceptualisation respectively, (2005b).

Students’ belief that they should excel at fine art drawing in order to feel comfortable using sketch methods for design is a common but erroneous assumption and institutions often unwittingly promote this notion. Schenk, (2005b), observed that many drawing tutors are borrowed from a fine art environment to teach observation-based skills that fulfill only part of the needs of the design student rather than developing pedagogy for sketching and drawing that is design-specific. Institutions could be offering, as Schenk believes, teaching contextualised within the specific language of the design discipline being studied.

Management of sketch inhibition using drawing tools has been addressed by Hu, Booth & Reid, (2015), who consider how art-based warm-up exercises among students affect their cognitive states during concept development. They gave a group of engineering students geometric sketching exercises, art-based sketching exercises and as a control, no warm-up exercises prior to a simple design task. They concluded that art-based warm-up exercises were helpful in concept generation; the art-based approach appeared to benefit younger participants most, and unexpectedly, female participants expressed an increase in pride in their sketch output after the exercises. This suggests that management of sketch inhibition through simple studio-based activity is indeed possible and shows further potential for this research.

According to Lambert & Firth, (2006), the growth in numbers of design courses over the past twenty years has created more places than students and consequently, less competition for those places. They state that,

Applicants no longer have to compete against each other, and consequently students’ drawing skills upon embarking on a design degree are generally much less adept than in the 1980s, (p.5).

Within such HE design courses issues exist regarding the understanding of differences between designing and visualisation. Stones & Cassidy refer to Black's, (1990), earlier research, confirming that:

Students judged their work using a different set of criteria when designing with the computer and that a finished appearance forms part of that judgement, as if the students were mistaking a high level of finish with design proficiency, (Stones & Cassidy, 2010, p442).

Educators can also become victims of the persuasion techniques that digital rendering can offer, and situations have occurred when a student with poor design skills has achieved a
higher mark for work presented using CAD, rather than the student who has engaged in the design process more fully, but using less persuasive visual methods.

Engendering student understanding of the importance of practice-based research, and the position of sketching during design concept development is fundamental. Only by reinforcing the importance of “research through practitioner action,” (Archer, 1995), alongside what is considered traditional research, will student designers come to understand that their hands-on activities during the design process are valuable pieces of research in their own right. Accordingly, sketching as the language to record and analyse such activity is crucial within this process.

Flawed assumptions evident in design HE include the belief that students automatically know how to design. Leblanc, (2015), suggests that, “Students use sketching to visualise ideas, yet many do not know how to use it as a thinking tool.” Some simply do not know what to do with ideas, or often, how to generate them in the first instance. An observed example of post graduate fashion students has demonstrated a desperate willingness to learn together with huge motivation, but no design skills of note. They don’t draw, never have and have to begin developing a relationship with their thought processes before they can hope to become creative designers. Many refer to their collections of images from the internet - from then on, they are lost, and this is where sketching could clearly support them.

Students appear to believe that the computer will do their thinking rather than having to engage in what they often perceive as the long-winded and dull exercise of sketching. They do not understand the difference in language between the two systems. They are unaware of the immediacy of sketch mark-making versus the function-based process of making prescribed marks on a screen, the inability of the screen to offer the levels of re-representation of the manual sketch and the lateral and vertical processes that are neglected by working on a single interface as opposed to a wide and endless substrate.

A clearer delineation between the skills of designing and visualisation could also benefit students to understand and develop a healthier relationship with their use of digital tools particularly among those who struggle with their ideas. Coyne, Park, & Wisniewski, consider inexperience as a cause for misunderstanding:

   If you only know how to draw a box, your building will be a box, and if you know how to design anything on the computer you can design anything, (2002, p.270).

Appreciation that an image of a design is not the design itself, but an interpretation of the micro and macro elements at a single point in time is important, rather like a photographic snapshot of a family: it is a useful record but tells us nothing about the nature or dynamics of the family in a real life situation.

Goldschmidt’s, (2003), observations on the value of expertise should be acknowledged to ensure the designer’s relationship with sketching will be sustainable. Spending a few hours a week for a single year learning a new language is not enough to gain expertise in it; it has to be sustained and supported by constant study – this also applies to the visual language of sketching, so why is it treated so differently?

Attitude of the student is vital to their ability to engage with sketching as a language for creative development. As Leblanc, (2015), states, those students willing to invest the effort into developing their skills can conquer their issues of inhibition – others will fall by the wayside. Students, through no fault of their own, are generally unable to elaborate on
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About the Authors:

Lisa Thurlow is a designer, lecturer, PhD researcher and Senior Fellow of the Higher Education Academy. Her interests lie in the relationship between design education and industry and the development of pedagogies for design education.

Peter Ford is Professor of Design and Head of the Design Unit at De Montfort University. He specialises in new product design research and development and promoting the role of design in industry.
IDEAL IDEATION: A FRAMEWORK FOR THE MANAGEMENT OF SKETCH INHIBITION AMONG UNDERGRADUATE DESIGNERS

L. Thurlow and P. Ford

Abstract

Sketch inhibition among undergraduates is a growing but under-researched issue. Affected students avoid engaging with sketching during concept development, they also have little understanding of the benefits it offers effective ideation as a language and a cognitive tool which in turn affects design quality and impedes commercial activity. Causes include skill-set shortage, prevalence of technology and social and educational issues. The proposed management framework aims to reduce inhibition via a three-part tool for use by higher education at strategic, pedagogic and individual levels.

Keywords: sketch inhibition, design education, conceptual design, design methodology, design research

1. Introduction

In a recent interview, Jan Faulkner, (2017) director of Haley Sharpe Design commented that, of the many new graduates he sees during the recruitment process, "less than five per-cent have good drawing skills." Similarly, Martin Witts, (2017) of Soana Witts Design stated, "I’ve never met a good designer who couldn’t draw." Ironically, back in 2005, Schenck (2005) suggested that the inability of secondary education to equip pupils with the drawing skills essential for higher education was resulting in graduates embarking on their careers with increasingly poor drawing ability and consequently having a negative impact upon design organisations.

Although sketch inhibition is regularly mooted within higher education (HE), its effects on industry have yet to be resolved. With this mind, this paper considers the phenomenon of sketch inhibition and proposes a conceptual pedagogical framework for its management within HE. Because of the relatively unexplored nature of sketch inhibition, this study is indicative as opposed to exhaustive: the research, analysis and theory development is still ongoing, and this paper forms a discussion document of the research to date.

Due to the lack of formal research into sketch inhibition, the underpinning for this study is based upon the limited theory of sketch inhibition already developed by Booth et al, (2016) who identify individual, social and technological causal factors: this together with design process theory, and that of design sketching. Historically, theoretical models of design have presented an often linear process and refer heavily to the analysis and synthesis of information. Although, for example, Koburg and Bagnall (1972), (from Bagnall and Koberg, 1990), offered a revised concept of their initial two step theory, Mesarovic (1964), (from Dubberly, 2004), demonstrates feedback loops and Alexander (1964) demonstrates levels of self-consciousness in his model, these do not consider, to the extent to which they are relied upon, the cognitive and feedback activities for which sketching is the most effective tool.
Development in the understanding of the convergent and divergent aspects of the design process is more recently modelled by Cross (2000) and Benathy (2000) but these also fail to consider designer cognition. Theories of the micro-functions within design, e.g.; Goldschmidt's linkography (2014) and Suniva and Tversky's (1997) conceptual dependencies model effectively demonstrate the smallest of design moves, do not specifically consider the role of sketching as support for that process. Ferguson's (1992) and Pei et al.'s (2011) taxonomies offer the most developed examples of the types and positions of sketching activity in the design process, but fail to address the combination of behaviour and cognition activities associated with this.

Cass and Kreye's (2017) theory of Uncertainty Driven Action, (UDA) shows design process being driven by uncertainty perception embodied by information action, knowledge sharing action and representation action, (i.e.; sketching) and is valuable as an underpinning to this study. The position of sketching, (and by default, sketch inhibition), is not defined explicitly, but based upon the literature already reviewed it is clear this would sit comfortably within (and prior to, in the case of sketch inhibition) the domain of representation action - this is demonstrated in Figure 1. The lack of explicit theory relating to sketch inhibition, together with an abundance of empirical information lamenting it from both industry and educators is from where the research need has been identified.

![Figure 1. Cass and Kreye's (2017) model of Uncertainty Driven Action (UDA) used to illustrate the potential position and effects of sketch inhibition.](image)

2. Methodology

The research question has been informed by observations gathered over an 18 year period of teaching within HE - these are also used throughout this paper to support the findings. Because of the limited theory relating to design sketching and sketch inhibition, the study has favoured a Grounded Theory approach, with particular acknowledgement to the Straussian (Strauss and Corbin, 1990) model. This considers literature to be an acceptable component in development of emergent theory, (which was a vital part of undertaking this study), and necessary, according to Wacker's (1998) definition of theory-building, unlike Glaser's (1992) approach which favours no literature.

Development of an emergent theory of sketch inhibition has been sought, and the use of concurrent analysis and theoretical sampling has been a key feature of the approach. The literature has been reviewed, initially focusing on sketch inhibition, however, the dearth of such material led to a need to access a wider sample to contextualise and inform the research.

The literature has been coded using an emergent strategy, referring using Nvivo and has identified the definitions, purpose, micro-processes, and cognitive issues of sketching within the design process. This and the limited literature relating to sketch inhibition provided a basis from which to develop questions - to further "interrogate" (Strauss and Corbin, 1990) the data using a semi-structured interview method. A purposive sampling strategy was used to identify participants for the piloting stage: although not a
pure Grounded Theory approach, it prevented the wasting of much time and allowed for honing-in on the most useful subjects. The sample comprised educators, (within HE), industry influencers, and third year under-graduate design students from a range of design disciplines identified by their tutors as being sketch inhibited.

The literature along with the observational evidence was used to inform the structure of the initial pilot interviews. During the piloting process, several issues were identified and acted upon, as per the concurrent analysis/theoretical sampling approach favoured by Strauss (Strauss and Corbin, 1990). It was evident that some of the student sample had learning differences: whether these were causal of their sketch inhibition was of interest and it was deemed that a further survey of learning style would be of benefit. Some of the student responses to interview evidenced potential issues of their future employability due to their inhibition - this was considered another emerging factor that would benefit further investigation using a longitudinal study approach; both of these tools are currently in the data-gathering stage. As a result of the piloting, it was considered that for comparison, uninhibited students would also be recruited for interview. This would provide the study with a fuller understanding of the sketch inhibition, including whether it is a binary or scalar phenomenon. The research methodology is modelled in Figure 2.

Educators (including academics), from various disciplines were selected based on their understanding of sketch inhibition. These included authors of the sketch inhibition literature as further interrogation of the issues they presented was considered necessary. Industry influencers, i.e., those responsible for the recruitment of newly graduated designers were recruited from various disciplines. This data is currently being gathered but in due course, will be presented according to established protocols - however for the purpose of this paper, it is being used informally to reinforce the literature findings. At present, the literature has been reviewed and interviews are ongoing: this study is neither complete nor conclusive and this must be borne in mind: the development of the conceptual pedagogic framework requires the research to be complete (according to the concept of saturation), and at this stage is also presented tentatively.

![Figure 2. Model of the research methodology](image)

The following sections are presented to contextualise sketching within design activity and establish sketch inhibition within that activity. The initial coding (open coding) of literature enabled themes to be identified, and this forms the structure of the following: The language of sketching is considered in
Section 3, and its subsequent benefits to the design process in Section 4. The cognitive functions and micro-processes within design are presented in Section 5 and Section 6 respectively. From this, the existence of sketch inhibition is confirmed, (Section 7) and the proposed pedagogic tool is developed (Section 8) and discussed in Section 9.

3. Sketching as a language within the design process

Understanding sketch inhibition and its management being the aim of this study, it is has been vital to prove that sketching is intrinsic to the design process. Bilda et al. (2006) established that it enables a dialogue, the opportunity to see, opportunities for re-representation and externalisation of mental imagery. Ferguson’s (1992) taxonomy describes sketches as thinking, talking and prescriptive tools. Pei et al. (2011) position sketches, additionally, as tools for persuasion, memory and manufacture.

The ability of sketches to communicate between individuals and across groups suggests that they possess a similar structure to that of language. This progression forms a dialogue between designer and substrate, and creates a language of (and shared by) designers. Stones and Cassidy (2010) suggest that, “a complex, bi-directional cognitive process occurs as the designer sketches” (p. 440). They refer to Schön, (1983) describing ideation sketching as a “conversation” (p. 76) between the designer and the marks he makes. They further compare this to Laseau (2001) who states that, “the process of graphic thinking can be seen as a conversation with ourselves in which we communicate with sketches” (p. 7). Fish and Scrivener (1990) consider this function in the relationship between descriptive and interpretive information created during the design process. This language of sketching enables the designer to create mental images based upon what they see on the page as their ideas are recorded. At the micro-level of language, Barthes’ semiotic theory can be equally applied to sketches: he considers the literal image to be a denotation of the abstract form - the symbolic image demonstrating that implied through either, it or wider language. He suggests that “all images are polysemous; they imply, underlying their signifiers, a floating chain of signifieds, the reader able to choose some and ignore others” (Barthes, 1977, pp. 38-39). This can be applied comfortably to the sketch; its ability to furnish the designer with pieces of interconnected and free-standing information within a single image. Eckert et al. (2010) note similarities of experience between design disciplines during the Across Design Project: “we observed appreciative surprise among our informants as they recognized the degree to which the experience of other professionals, who they might not have considered as natural peers, did in fact extend across design” (p. 30). They identify sketching to develop structure and process and to convey these to others during their respective design process: “Designers are engaged in many of the same activities and concerns, but in very different guises according to their particular technical domains and social or business contexts,” (p. 38).

4. The characteristics of sketches

The benefits sketching during design development are continually impressed upon students, but rarely considered in greater depth. Speed of the medium is clearly a vital function for the designer; Pei et al. (2010) observe that personal sketches enable the designer “to externalise his thoughts quickly” (p. 12). Powell, M. (2017) believes it offers evidence of thinking, speed of transmission and objective realism that no other medium can. Faulkner (2017) suggests additionally, the need for financial viability in creative business, requiring a designer to be able to offer, “speed of thought, and sketching is part of that.” The economy of sketching is considered by Goldschmidt (2003) who suggests that no cognitive energy is used in converting marks on the page into comprehensible information. She also refers to the ability of the sketch to provide an accessible and logical reference to complete sets of developmental information, the entire design process being, by default, a set of serial information. Reinterpretation of sketch images is an important part of the development of concepts. Schön states that designers are involved in a “transactional,” relationship with the design and are in a “reflective conversation with the situation” (Schön, 1992, p. 4) for which “the act of drawing can be rapid and spontaneous, but the residual traces are stable...the graphic world of the sketchpad is the medium of reflection-in-action” (Schön, 1985, p. 153). Goel (1995) also identifies reinterpretation as a vital function of sketches, allowing the designer to apply new meaning to an existing set of imagery, Fish and Scrivener (1990) suggest their ambiguity can enable perception of more than one possibility at a
time, initiating further mental imagery. They contrast this with that of the computer where the designer can be coerced into early finalising of designs, detailing ill-resolved concepts into poorly resolved solutions: “by failing to represent the important mental component of early sketches, many computer systems have a detrimental effect on the growth of mental imagery in inexperienced students” (p. 118). Crismond and Adams (2012) warn that fixation - the inability of the designer to see beyond a concept towards a more appropriate solution - is also an issue. Atilola et al. (2016) suggest that such fixation negatively affects the design process and its causes are, according to Crismond and Adams (2012), divergent and overlapping. Goldschmidt (2003) makes a strong case for sketching as a tool for its management: “the expert sketcher therefore is someone who can make and manipulate representations fast and with great care while choosing the most appropriate projection(s). If he or she is a designer, this skill is indispensable in the search that is part of, indeed the most significant part of, the design process” (p. 82). Schön and Wiggins (1992) also consider experience as vital to effective problem-solving, observing that a lack of experience can create working memory limitations for the designer that can be addressed through the use of sketches.

5. Cognitive support
The effectiveness of the sketching tool relies on both behavioural and cognitive input, as illustrated by Cash and Kreye’s (2017) model. According to Fish and Sprecter (1990), this includes external references gathered from memory and via observation, the result of this being “a conscious stream of thought transferred onto marks on paper” (Wiits, 2017) allowing for “access to your interior dialogues in a tangible form to see if they are actually fit for purpose” (Downs, 2017). The importance of the dialogue between designer and sketch is endorsed by Cross: “the thinking processes of the designer seem to hinge around the relationship between internal mental processes and their external expression and representation in sketches” (1999, p. 30).

The tacit functions of the sketch include freeing-up of working memory during complex mental tasks. “Empirical studies on visuo-spatial working memory show that the capacity of the visuo-spatial working memory is limited when visuo-spatial tasks are done using imagery” (Bilda and Gero, 2005, p. 145). This suggests that without the sketch as a cognitive support tool, the designer will struggle with the quantity of complex information that must be handled during ideation: “externalization is needed to off-load the visuo-spatial working memory. For the same reason drawings and diagrams play an important role in designing” (Bilda and Gero, 2005, p. 145), thus endorsing sketching as the most appropriate means to offload this.

6. Micro processes
Progression through complex explicit and tacit information during design development has been shown to benefit from the cognitive support offered by sketching. Cross (2001) refers to Akin and Akin (1996) regarding the design problem-solving process and suggesting that, for new concepts to be created, the designer’s frame of reference needs to be broken, a shift in mode between drawing, examining and thinking allowing the designer to identify new ideas.

Goldschmidt (1991) presents experiments conducted at the Massachusetts Institute of Technology where she identifies “moves” and “arguments” as two distinct types of reasoning embodied by sketching: the “move” being a tangible proposition within the process, the “argument” (p. 125) being a conceptual micro-activity within that process. She proposes the notion of interactive imagery, involving a combination of imaging, sketching and rsketching, stating “sketching is not merely an act of representation of a preformulated image… it is more often than not a search for such an image” (p. 131). She refers to “seeing as” and “seeing that” (Goldschmidt, 1989, pp. 155-136), when interfacing with sketch material: “seeing as” utilises a Gestalt approach to perceiving the content of sketch images to develop ideas. “Seeing that” by contrast, refers to the recording of mental imagery in order to analyse it. She also refers to creative leaps within the mind of the designer, “one in which the distance in time or place among relevant moves is too great to track” (Goldschmidt, 1992, p. 200).

The development of thought supported by sketching is also considered by Goel (1995) who identifies lateral transformations during the creative shift to alternative concepts: “…when a new idea is generated, a number of variations of it quickly follow. The variations expand on the problem space… the
exploration and transformation of ideas is happening on the paper in front of one's eyes as the subject moves from sketch to sketch” (p. 200).

7. Establishing the presence of SI

The immense value that sketches and the sketching process afford successful design is well supported by the literature and this together with initial interview data is presented here to establish sketch inhibition as a phenomenon beyond one of empirical. This is structured according to Booth et al.'s (2016) initial taxonomy into three specific types:

**Individual inhibition:**
- Intellectual inhibition - the lack of understanding of the benefit that sketching provides the design process.
- Skill-set inhibition - the lack of expertise and experience needed to engage with sketching effectively.
- Personal inhibition - impairment of creative flow due to the need of perfectionism or not being in the right frame of mind.

**Social inhibition:**
- Social and comparative inhibition - the fear of being judged unfavourably by others during the process of creating sketch material, and.
- Social loafing - a lack of input in a group situation, either through fear of judgement or laziness.

**Technological inhibition:** the prevalence of technology resulting in a disinterest in analogue ideation tools. In addition to this, the research also suggests that educational issues are a causal factor in sketch inhibition among undergraduates.

7.1. Individual inhibition

The interviews with design undergraduates suggest many have little idea of the creative and cognitive processes they engage with. Inhibition results in a “process (that) is lacking and uninformative” (Kindley et al., 2017), and offering few developed ideas (Leblanc, 2017). Inhibited students present very little sketch development or, by contrast, small and highly rendered sketches demonstrating little analysis and high levels of self-consciousness in their production. This can lead to “butt ugly” (Powell, M., 2017) designs demonstrating “poor proportional judgment” (ibid) and clear evidence of design fixation. They are also inclined to produce sketchbooks containing prolific if irrelevant development work, or “wallpaper instead of real ideas” (Vessey, 2017).

Leblanc (2015) refers to fear-based inhibition, as do Booth et al. (2016), and posits the belief that experimentation and failure - a normal part of the design process - are somehow unacceptable because “the development process is widely misunderstood or inaccessible” (Leblanc, 2015, p. 2). She suggests that because of such fear, as soon as students have a suggestion of a concept they rush into the visualisation process, omitting essential stages of evaluation and refinement. Observation of studio sessions prior to this study demonstrate that students with sketch inhibition tend use a very restricted set of materials, will often favour pencil over other tools, and make use of erasers than their more fluent peers. It also suggests that students with a greater understanding of sketch processes combined with competence in their use are more likely to continue using them.

7.2. Social inhibition

The rise of social media together with the culture of instant gratification has led to a shift in student attitudes towards learning. “Millennials experience and expect immediacy” (Skiba, 2005, p. 370). This appears to affect their mind-sets when confronted with learning new skills that push them out of their comfort zone: “a lot of people sort of say, ‘I’d love to be able to sketch,’ and I say, ‘well, you can if you try hard enough,’ but there seems to be an unwillingness to spend the time” (Maynard, 2016). Sketch inhibition can result in absenteeism from studio sessions or refusal to engage with activities. Fitton (2016) observes: “they just pretend they’re doing it, don’t do it, or do just a part of it...sometimes they stop coming to their sessions.” Additionally, “they will go to the extent of not having produced any sketching
and not coming into tutorials because they're embarrassed...then they present their sketchbooks and we can have students who have as few as four pages of drawings” (Fitton, 2016). This was observed during a recent studio session: the most inhibited students finding reasons to leave the studio or not engage with the activity. Studio situations also offer opportunities for sketch inhibited students to hide behind those they perceive to be stronger at sketching. Farzaneh et al. (2012, from Diehl and Stroebe, 1987) refer to group activities being subject to social loafing or free-riding by weaker students. Vessey (2017) and Powell, D. (2017) also observe that children are no longer drawing as they were a generation ago, preferring to spend time with technology-based activities instead, creating a “fear of the white paper” (Bramston, 2017). This in turn is resulting in a demonstrable “lack of maturity” (Phillips, 2017) in design thinking and output.

7.3. Technological inhibition

Jonathan Ive, head designer at Apple stated, “students (are) being taught to use computer programs to make renderings that could "make a dreadful design look really palatable" (from Winston 2014). “People don’t necessarily use the word “draw,” or what we would think of as drawing activity any more in their lives...over the last 15 years...reliance (is) on software to provide the answers rather than deep thinking process” (Mawrdo, 2016). Additionally, Seligman, (quoted by Fumess, 2016) states that “students are now ‘more likely to have a blog than a sketchbook’.” The observations support this view – that software cannot replace the complex cognitive activities of effective concept development. During a recent studio session with undergraduates, many struggled to produce any sketch-based ideation. As soon as they were permitted to do so, they dashed towards the available Macs to develop their concepts. These ranged from naive repeated elements, all straight-line-based, to those containing CAD blocks found online. Some looked impressive, but all evidenced an inability to develop complex ideas combined with a CAD aesthetic. The problem of inexperience is visited by Coyne et al. (2002): “if you only know how to draw a box, your building will be a box, and if you know how to design anything on the computer you can design anything” (p. 270). Kindel’s sides confirms that the design ability of graduates is governed by their “knowledge of software” (2017). Leblanc (2015) acknowledges their considerable value, but also laments the prevalence of digital methods in design, “students are judged by their skills with these tools rather than their creativity or problem-solving ability. This unfortunately nurtures the misconception of design as an aesthetic and rather than an intellectual, creative thought process that helps solve problems and drive innovation” (p. 35). The essential processes of design embodied by its practical activities have been replaced with what she perceives as “more gratifying digital tools” (p. 2). Tutors have also been victim of what appear to be beautifully rendered images of students’ final designs, only to discover that they contain little more than the primitive shapes: if tools embellish irrelevant ideas, camouflage problems and give students a false sense of accomplishment – or worse, are mistaken for “good design” - then they may need to be called into question,” (Leblanc, 2015, p. 6).

7.4. Educational inhibition

Leblanc (2015) highlights the lack of understanding of the sketching tool at institution level. “We continually observe students struggle with the creative process...exploring and developing ideas into mature designs. Many see sketching only as a means of visualisation and rarely know how to use it as a creative thinking tool” (p. 1). Down (2017) believes that institutions and educators fail to understand the difference between the design process and the presentation of designs. Bramston (2017) notes reliance on over-refinement and a fine art approach that continues into higher education, observing student sketchbooks filled with notes and highly polished drawings that fail to demonstrate the thinking behind the ideas. Stacey (2016) bemoans the result-orientated, (as opposed to process-orientated), assessment of pupils’ work in primary and secondary education. He believes this leads to a fear-based mentality among students within higher education. Mis-conceptions about the purpose of sketching appear to affect student relationships with the process: “...they think it has to be the most amazing Leonardo da Vinci-type sketch, instead of a working idea, a methodology to discuss your ideas from your head, and it doesn’t have to be perfect” (Fitton, 2016).

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Powell, M. (2017) suggests the death of the UK government art school’s “systematic approach” and rigidity of pedagogy in drawing education has left students to find their own way, without success. He suggests that drawing tutors lack the skills their peers would have had during the reign of the art school and as a result, are unable to pass on effective tuition to their students. He also believes that tutors who can’t draw do not value the process and will fail to instil the practice and enthusiasm for it in their students.

The challenging relationship between the disciplines of fine art and design plays a role in sketch inhibition, Schenk (2005) commenting that the teaching of drawing is inconsistent with the needs of designers; it is often based on fine art practice as opposed to developing a visual syntax to enhance the mental processes required by the designer.

Lambert and Firth (2006) suggest the expansion in design course offerings from higher education is partly responsible for a decline in sketch fluency. They observe a reduction in competition for places which has led to students being recruited where they would previously not have been considered. Vessey (2017) also notes that much larger cohort sizes and a reduction in one-to-one time tuition time has left students without the necessary mentoring they need to acquire a good level of sketching ability.

8. Development of a conceptual framework for management of sketch inhibition

During analysis of the literature and initial interview data, emergent themes were identified that provided foundation for the initial structure for a management proposal. Parent/meta-themes were developed into further child/micro-themes using NVivo as a tool for analysis. Conceptual tools for this purpose also included mind-mapping techniques to identify linear and axial relationships between themes and from there an initial structure began to emerge. This is modelled in Figure 3.

![Diagram of conceptual framework](image)

**Figure 3.** Model to show identification and development of emergent themes from the data using conceptual tools

The conceptual framework that follows presents a formative, indicative management tool and is intended for discussion. A summative framework will be afforded only once the research has reached saturation in due course.

9. The current propositional management tool

Though it is anticipated that further issues will emerge during the research, an initial framework has been developed. This is structured into a three-part framework based on identification of the major themes and is presented as a top-down model, although this is subject to testing: 1) Management at
strategic level within higher education institutions. 2) Management through studio-based pedagogy, and, 3) Management through the attitude of the individual:

**Level 1: Management at the strategic level within higher education institutions:** The need for greater consultation between higher education institutions and industry during the development stage of courses: Phillips (2017) states that institutions often put their revenue before the relevance of courses to industry. He believes this dialogue could avoid creating “pseudo product design courses.” Raising the profile of sketching as a fundamental design development tool: Cross (2001) cites Ullman et al. (1990), Kavaldji et al. (1998) McGown et al. (1998) and Verstijnen et al. (1998) in reinforcing sketching as the most important tool for the effective designer. Vessey (2017) states that students are currently not given enough time to explore their ideas via sketching, their timetables being taken up with learning technical skills useful to the later stages of the design process.

Greater separation between teaching of the design and visualisation stages of design, in order to avoid the blurring of disciplines (according to Powell, M., 2017). This would reduce incidences of students confusing design with visualisation, producing what Vessey (2017) describes as rudimentary shapes that are easy to model and given glossy finishes using CAD tools, but that have little design value. A revision of recruitment procedures to include observation of applicants sketching ability. According to Powell, M. (2017) many institutions rely on portfolio and interview when recruiting, but an additional sketching task would enable tutors to observe the attitude, understanding and cognitive processes of students while engaged in that activity. It would also serve to reduce instances of fraud (Powell, D., 2017) where students attempt to pass off the work of others in order to gain places.

**Level 2: Management through studio-based pedagogy:**

Engagement in mark-making activities: this has been observed to reduce anxiety of inhibited students. This is endorsed by Booth et al. (2016) “warming-up helps engineers (be) less stressed when generating ideas” (p. 8). Booth (2017), and Leblanc (2017) both believe that production of quantity reduces anxiety. Leblanc suggests at least one hundred sketches which forces creative emergence necessary for the development of new ideas, whereas Booth suggests that around fifteen is ample before the reduction in creativity is observed. Booth et al. (2017) suggest that producing sketches at speed reduces the anxiety surrounding their aesthetic. They suggest 28-30 mins at a time is ample before the brain begins to lose efficiency.

The use of appropriate materials: Bramston (2017) states that architectural pens are a “disaster” as they encourage precociousness. Schenck (2017) recommends big pots of paint and “cheapness” of paper to encourage fluency; Bramston (2017) further endorses the benefits of large paper sizes. The sketchbook is not favoured by Vessey or Schenck: its high quality paper and bound format creates anxiety over spoiling the entire book if a bad sketch is produced Schenck (2017). Group activities involving sketch sharing: these “reduce ownership” (Bramston, 2017) that leads to inhibition. During observation of studio sessions, students initially presented resistance at having to pass on their sketches to peers, but afterwards expressed enjoyment at the process.

The use of 3D materials and processes to support ideation. Both Fitton (2016) and Bramston (2017) suggest that this can enable development of concepts among students who struggle to ideate using 2D tools. Fitzon (2016) suggests using model-making as a method for students to see their ideas and to then make observations sketches of those ideas to facilitate their development.

Engaging in “purposeful observation” within their own discipline (Schenck, 2017) to improve awareness of the user and environment, (as opposed to fine-art based observation). This enables students to improve their ability and expand their frame of reference within their disciplines without creating pressure to produce an aesthetically pleasing artefact.

In addition to this, a theoretical grounding in the processes that sketching supports including Gestalt and perceptual organisation (Leblanc, 2015), the micro-activities of sketching, cognitive processes and language would be potentially beneficial.

**Level 3: Management through the individual:** Importance of individual motivation and will to succeed is not to be underestimated. Leblanc (2015) believes that student attitudes are important to the
management of their own sketch inhibition: “Those with high ambitions and strong self-motivation manage to overcome the deficit; others learn to mask their lack of skills in one area by developing others,” (p. 2). Downs (2017) advocates a questionnaire during the recruitment process to establish levels of motivation and maturity of the applicant. This kind of information would offer assessment of students’ outside interests and act as an indicator of their potential.

10. Further work
Currently, the initial Level 2 pedagogical framework is being developed and will undergo testing in a studio environment. Level 1 is as yet untested and Level 3 can only be addressed by implementing the framework at Level 1 – both these levels will require feedback from peers at institution and industry level to establish their potential benefits. Although beyond the scope of this current study, an interpretive phenomenological study of those suffering from sketch inhibition may identify the deeper issues of sketch inhibition among sufferers and support the development and testing of the pedagogic framework.

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Lisa Thurlow, Part time lecturer and PhD student
De Montfort University, School of Design
Bethesda, IP31 1RR Bury St. Edmunds, United Kingdom
Email: lisa.thurlow@dmu.ac.uk

Lisa Thurlow, Part time lecturer and PhD student
De Montfort University, School of Design
Bethesda, IP31 1RR Bury St. Edmunds, United Kingdom
Email: lisa.thurlow@dmu.ac.uk
An Analysis of Sketch Inhibition within Contemporary Design Education

Lisa Thurlow 1,*, Peter Ford 2

1School of Design, De Montfort University, Leicester, United Kingdom
2Commercial Design Unit, De Montfort University, United Kingdom

Abstract

Sketch inhibition is regularly alluded to by educators as a phenomenon within design higher education, and one having increasingly marked effects on industry - but has garnered little attention from academics. This paper provides a meta-analysis of the literature and evaluation of the anatomy and functions of sketching during design ideation across a variety of disciplines. It demonstrates the importance of sketching for cognitive support, as a language, a means of reflection, and storage of information. It presents initial findings from the literature related to symptoms; from avoidance to an over reliance on digital tools and considers its causes, ranging from psycho-social, to technological. Fine art exercises have proven beneficial to its management, however further investigation is recommended to establish depth and enable a framework for its management within HE.

Keywords
Design Education, Design Methodology, Design Method(S), Design Tools, Sketch Inhibition

1. Introduction

This paper is based on research conducted during a year-long investigation into the little-considered phenomenon of sketch inhibition among UK design students and new graduates: an issue continually mooted among educators and industry alike, but is one that has attracted little interest from academic quarters. The findings presented here form the initial stages of a PhD study and offer discussion of the literature.

Sketch inhibition is an issue prevalent among higher education design courses in the UK and evidence from the literature supports this, [1–3]. It is most apparent during studio-based teaching sessions and appears to be increasing as a phenomenon, its symptoms being embodied in student behaviour and the quality of design output. Industry is subsequently encountering difficulty employing new graduates with the manual ideation skills to fulfill their needs, coupled with an increase in the demand for recruits with manual sketching skills, [4]. There is a growing gap in the skillset of design graduates, and one that education appears to be neglecting. Based upon these initial findings, an investigation into the nature and extent of sketch inhibition among student designers appears to be necessary.

2. Aim & Objectives

The aim was to establish the nature and extent of sketch inhibition within design higher education, (HE), in order to develop a tool for its management. A comprehensive understanding of the characteristics and purpose of sketching relevant to the design ideation process was identified as a vital driver for the research.

Sketching as a cognitive tool serves many disciplines outside the disciplines of design, most commonly that of fine and applied art, and individual users relate to it in very specific and personal ways. However, for the purposes of this investigation a cross disciplinary approach within design was the focus. “The practice of designing has common features, regardless of the domain in which it is exercised...No matter what domain, designing involves certain characteristic activities that must be learned,” [5] (p.3). Thus, a set of objectives was defined as follows: to,

1. Explore and evaluate the specific nature, scope, functions and benefits of sketching activity: its purpose within the design process,
2. Explore the internal dialogue and processes of the designer during the design ideation process: its micro-processes,
3. Establish the nature of sketch inhibition as a phenomenon and whether this is problematic to the design process,
4. Explore the nature, common causal factors and effects of sketch inhibition among designers,
5. Conduct analysis and meta-analysis of the literature using NVivo, relevant to the aim.

During the course of the research, the literature also
provided an invaluable foundation to the investigation in terms of identification of the issues requiring research using primary methods, and, development of appropriate research methodologies for investigation of those identified issues.

3. Methodology

The literature review: A broad range of keywords was developed and the literature accessed using both keyword and citation searches. Databases used included Scopus, Ebsco, Design & Applied Arts Index, COPAC, Google Scholar, the British Library Ethos database and the De Montfort University library catalogue. Forward and backward citation searches were most effective: the position of sketch inhibition within a much wider literature environment meant that the work of relatively few academics provided most impact.

Initial broad-based searches using keywords proved problematic, especially as the term 'Drawing' was functioning as a verb and returning inappropriate results, and 'Sketch' was used as a generic term for presentation of information in disciplines other than design. Initially, literature relating specifically to sketching for design concept development appeared to be virtually non-existent. Coupled with a lack of literature specific to sketch inhibition, this required an inductive approach to the research utilising literature from related areas of study. Expanding on the concept of sketch inhibition, using mind-mapping techniques where necessary provided a framework of relevant subject areas to access via the literature.

Due to sketch inhibition being so little explored within the design ideation process a grounded theory approach was taken [6] involving the use of an emergent coding strategy. Nvivo was used, initially for management of the literature, but additionally, for meta-analysis. As little had been demonstrated academically via the literature to evidence sketch inhibition, the opportunity to apply this methodology to the analysis of the literature was of interest.

Generation of keywords to retrieve data created a position from where to begin coding the literature. The literature itself became the driver for the identification of new issues, and this developed into an iterative process, creating further new nodes into which to code as the body of data grew. Although a broad approach to the type of literature was applied, and grey literature considered a possibly valuable source, the data gathered has been almost entirely peer reviewed academic journals and conference papers together with publications by practitioners and academics including those from relevant related disciplines such as psychology and semiotic theory.

4. Key Findings from the Literature

The literature demonstrates that sketch inhibition as a phenomenon has been touched upon by just a few papers to date. These have all focussed on the issues of inhibition among student designers and have provided validity to a study where the presence of little explicit literature has been an issue.

Meta-analysis of the literature

Over thirty individual nodes have been identified relating to the issues of sketch inhibition, and a further code specifically for the methodologies of experiments demonstrated within the literature.

Three levels of information have been emergent during analysis, that of:
1. The nature of sketching for design, (its purposes and micro-processes),
2. Issues of the individual, and,

The following models illustrate the number of literature sources that provided data for nodes, (figure 1), and number of individual codings within Nvivo for each of those nodes, (figure 2). These demonstrate the lack of literature related directly to sketch inhibition, expertise and design fixation, but present a large body related to education and the processes within sketching.
The lack of correlation between the empirical evidence regarding sketch inhibition among undergraduate designers and the volume of the literature relating directly to it is perplexing. Their specific contribution to the research by Leblanc [1] Booth et al. [2] and Hu et al. [3], has been unquestionable, but begs the question as to why so little explicit literature about sketch inhibition has ever been published, and why the issue has only come to light through said literature in the last three years.

The areas from where the literature has been produced raises further questions. There are disciplines for which writing is the norm, and others for which no literature has been available: craft-based disciplines such as ceramics have not featured in the literature at all. Engineering and architecture have been the most widely documented disciplines to utilise sketching in their processes and the most prolific disciplines from where literature has been accessed, see figure 3. This is unsurprising as these disciplines are embedded more deeply within academia than the craft-based disciplines of textiles and ceramics.

Gross & Do [5] also suggest that other disciplines take from the tradition of academic writing from architecture, “... one of the few subjects where design is the primary focus of university education; therefore architectural education offers valuable lessons for teaching design in other domains,” (p.1). The process of architectural design involves meta-analysis and representation through scale models and drawings, whereas craft-based disciplines involve a more direct and immediate relationship with their respective materials. Architecture and engineering also require the production of conscription devices and bodies of written information in order to be realised: the tradition of academic rigour of such disciplines could offer an explanation as to their strong influence over the literature for this study.
Figure 2. Model to show the number of codings within each node in NVivo
The Purpose of Sketching during Design Ideation

The literature is presented here by way of a narrative of sketching, its purpose, functions and position in education in order to frame a holistic understanding of its importance.

Bilda et al. [7] conducted protocol analysis experiments to establish the relevance of sketching during design development. They established from participant interviews that sketching imparts a dialogue: "you can't stop the messages coming back from each line you put down." They observe the relationship between elements within the sketch, "...seeing it in parts and seeing it as a whole...the whole emerges from and cannot exist without the parts but depends on the relationship between the parts". They consider re-representation: "Half the process is drawing it, and drawing it...and eventually...something sort of creeps out at you," (p.12) which is further considered by Gero, [8]. They consider the importance of externalisation of mental imagery, "the visual is in your mind and then you are putting it down...it is the image (that) moves the pencil." Sketching as a form of language is also considered, (as is the case with much of the literature relating to the purpose of sketching): "...as you think you speak...If you think first and then speak, it would all come out differently...It is like a language you learn to talk and it's essential that you do," (p.12). Bilda & Gero [9] also identify issues of working memory limitation among non-sketchers and the importance of sketching as a means to offload this.

Goldshmidt [10], suggests the benefits of sketching include, by default, access to the history of the creative process as serial information whereby complete sets of developmental information can be kept. On the economy of sketching, she proffers that no cognitive energy is used in converting marks into readable information - marks on the page just are.

Kosslyn’s [11] research into mental imagery has informed understanding of the cognitive importance of sketching to the design development process and has been referred to widely by others during the course of this review. His research suggests there are two types of mental representation: propositional and depictive. The propositional representation constitutes a mental sentence whereby the subject creates their own imagery, such as a verbal description or instruction. It is linear, has a predicate, and is composed of entities, e.g., a ball sitting on a box. The depictive representation, of which the sketch is an example, is by contrast an entity with a configuration in a spatial context. Kosslyn’s work also confirms a literal physiological connection between image and brain: experiments demonstrate that a majority of neurons within the visual cortex are positioned to mirror those of the retina, spatial imagery effectively replicating real world environments. To illustrate this he used an experiment to mentally visualise a boat with an anchor and porphole to demonstrate that the further away a component is within a mental image, the longer it takes the subject to reach it in his mind, thus duplicating a perceptual situation.

Barthes’ [12] has provided a theoretical understanding of sketching as a method and process of communication. He states that the signifier and sign can apply linguistically, as per the work of Saussure, and visually, both involving a system and syntagm. The system provides the units or
language that constitute the syntagon, i.e.; the individual marks and their meaning to the designer. The syntagon is the macro unit of information transmitted; that of the sketch as composed from a collective of marks -- Barthes likens this to the spoken sentence. The literal image is a denotation of the abstract form, and the symbolic image is what it means either through idiolect or wider language. 'All images are polysemous; they imply, underlying their signifiers, a 'floating chain,' of signifieds, the reader able to choose some and ignore others,' [13], (p.38-39). Particularly pertinent to sketching is the notion that when the symbol is inadequate, the sign outstrips its meaning, Barthes [13] cites Christianity as an example of this where the cross is the signifier and Christianity the sign; a cross conveys far more meaning than its signifier is capable of showing. This can be applied to the complex meanings contained within design sketches which go beyond their mere appearance on paper.

Also relevant to the language of sketching is the plane of content from where conceptual information is stored, i.e.; the abstract world of the designer's mind. The plane of expression relates to the sketching environment and the real world where concepts are made manifest. The relationship between these two planes, according to Barthes [13], creates the designer's own plane of reference and is made from the language of the discipline under consideration, personal experience and the Gestalting effects of the mind during interpretation. This creates the designer's idiolect -- his own personal language used during sketching. Drawings, he suggests, can be coded at three levels. They can be rule-governed, when the reproduction of an image or concept requires the application of a set of rules, i.e.; perspective. They can have divisions between significant and insignificant, where not every piece of information is or can be reproduced within the coding of a drawing. He also considers the value apprenticeship, where all codes demand a level of study and application to be successful in their use, this being particularly relevant to the purpose of this study.

**Taxonomies**

Ferguson [14] offers an early taxonomy for sketching, including the, "thinking sketch," referring to Leonardo's sketches and those of contemporary engineers as a tool for visual thinking, the, "prescriptive sketch," used for specification of a final solution and the, "talking sketch," (p.96-97), used to communicate with others during the design process. Although beneficial in understanding of the role of sketching to design, this early taxonomy is perhaps too simplistic for contemporary consideration.

Pei, et al. [15] offer a more developed and hierarchical taxonomy involving sketches, models, drawings and prototypes used during design concept development. Personal, shared, persuasive and handover sketches are further classified. They deconstruct personal sketches into idea sketches, study sketches, referential sketches and memory sketches. The idea sketch is to, "allow the developer to externalise his thoughts quickly," (p.12), and is most relevant to this research, as is the study sketch, used to investigate scale, structure and layout based on idea sketches. Their definition of the referential sketch is of one that records information and observations for future use -- conversely, memory sketches recall past thoughts via the use of conceptual tools including mind-mapping. They also identify shared sketches; these convey information to members of the design team, tend to contain annotation and are more visually developed. Coded sketches contain symbolic information relative to specific aspects of the design whereas information sketches are intended to be understood across a wider group. Persuasive sketches are intended to sell a concept, often in the form of a rendered visual, and handover sketches contain information for manufacture.

Eckert et al.'s [16] observations of the Across Design Project by the University of Cambridge and MIT, introduces the term, 'Conscription device,' (p.247), to explain the manipulative effect of sketches as communication tools. As with Pei, et al. they regard the sketch as an intrinsically language, functioning between individuals within the design process and define designer communication using sketches as functioning on four levels: with themselves, with peers, within multidisciplinary design groups and with lay members of the design process, including clients. They cite, Star & Griesemer [17] to define boundary objects as those that convey information to persons of different expertise. Eckert et al. draw parallels with the sketch -- it can convey information to persons of different disciplines for different purposes, even though they do not understand the relevance of that sketch for each other. Star & Griesemer refer to an "ideal type," (p.410); an artefact that can transmit information in a clear enough manner for purpose while lacking detail, (as per a development sketch), while a, "standardised form," (p.411), is a means of communication across multiple groups each with their own set of priorities, as with a more developed sketch.

**Processes Embodied by Sketching**

Goldschmidt [18] has proven one of the most critical contributors to the theory of design sketching for this research. She presents experiments conducted by Massachusetts Institute of Technology, where she presents observations of, "moves," and, "arguments," as two distinct types of reason embodied by sketching; the, "move," being a tangible proposition within the process, and the, "argument," (p.35-6), being a conceptual micro-activity on the part of the designer within that process. She classifies sketch activity into three distinct areas: "moves made while actively sketching, moves made while contemplating sketches and reading off them and moves with no graphic input," (p.127). She proposes that sketching can be a representation of either linear or diverse thought, acts as a means to test and develop ideas and ends once the hard-line activity, (e.g. draughting), takes place. She coins the term, Interactive Imagery: the process of imaging, sketching and resketching images until useful information can be extracted.

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from them. 'Sketching is not merely an act of representation of a preformulated image... it is more often than not, a search for such an image.' (p.131). On the purpose of sketch function during the design process, she devises a, "seeing as," and, "seeing that," (p.131), structure. 'Seeing as,' utilises a Gestalt approach during sketch thinking, using the mind's eye to develop ideas. 'Seeing that,' relates to the entity that is being designed and applying a non-figural approach to considering it - using the tangible output of the sketch process as a platform for further thinking.

Goldschmidt [19] further anatomises sketch activities with the creative process, referring to leaps - sudden insights within the mind of the designer "one in which the distance in time or place among relevant moves is too great to track" (p.200). Serial processes are identified where sketches are produced one after another, but not necessarily relying on sequential thought within a linear process, and sequential sketch activity that is likened to machine processes where a set of information is developed based upon the previous set of information. She also observes the importance of expertise for the effective handling of the sketching process: novices often find themselves unable to detach from an image they have created that they are unhappy with, thus forming a negative development within the process. She suggests this is less the case with more experienced designers who have a broader range of macro-experiences to draw upon.

On the development of digital tools to replace traditional sketching methods, Goldschmidt [19] argues, "persistent attempts to replace sketching with algorithmic, computational techniques, [largely computer-based], have so far failed to contribute to design reasoning in any way... the cause lies not in insufficient development of these new methods but in the inherent potency of the sketching tool." (p.215). This statement although over twenty five years old, is still relevant to the intrinsic ability of sketching to support the designer's creative and cognitive processes.

Schen [20] considers problem-solving activities across multiple disciplines including that of design for which he emphasises the importance of sketching. He states that designers are involved in a 'transactional,' relationship with the design and are in a 'reflective conversation with the situation,' (p.4) for which, "the act of drawing can be rapid and spontaneous, but the residual traces are stable... the graphic world of the sketchpad is the medium of reflection-in-action." (p.153). He suggests that design situations involve material situations and apprehension of those through sensory appreciation, and proposes that the designer constructs an abstract world of objects and relationships through which he addresses the design problem [20]. He says the design world is personal to the designer - created according to his perceptions, and believes the more innovative a design episode, the more likely it is to be unique to the designer: 'The designer designs not only with the mind, but with the body and the senses.' [20] (p.7). Similar to Goldschmidt's proposition of Seeing As and Seeing That, he refers to the process of 'Seeing-drawing-seeing,' - a designer sees moves and sees again.' (p.7). His notion of seeing embraces the use of faculties other than sight; the terms, "recognise, detect, discover and appreciate," (p.7) are proposed to reinforce the concept of design being a bodily and sensory process.

Schen & Wiggins [22], elaborate on Goldschmidt's notion of experience as vital to effective problem-solving. They suggest that the more experienced a designer, the more domains he can work in at once; the designer's move to address a single term being effective in many domains at once. A lack of experience and its effects on working memory limitations is also noted, especially where the act of seeing-moving-seeing is required in the management of complexity within a design problem.

The themes of Fish & Scrivener's [23], eminent paper are still valid today, especially those relating to the cognitive aspects of visual imagery. They discuss the tolerances and indeterminacy of manual sketching that enable perception of more than one option at once, and compare this process to that of the computer where the designer can be forced down the route of developmental detail too early, potentially harming the design process. They suggest that sketches combine both images collected by the eyes with those generated from memory and clarify the difference between sketching from imagination and from observation: observation sketching relies on the repeated refreshing of overt attention to an external image, whereas sketching from memory relies on the generation and manipulation of mental images.

Fish & Scrivener also consider the difference between descriptive and deceptive information and the function of sketches in the relationship between them. The language of sketching enables the designer to create their own mental images based upon what they see on the page; this may influence the image within the designer's mind and this ambiguity can initiate recognition and further mental imagery. They lament the inability of the computer to offer the same serendipity of manual sketching: 'sketches have the important function of assisting the mind to translate descriptive propositional information into depiction. Deceptive information may then be scanned by attentional processes to extract new and perhaps original descriptive information, which in turn can lead to new depiction,' (p.118).

Goel's [8] widely cited work on the nature of ill-structured problems, such as those addressed by designers, considers the inadequacy of cognitive science and its reliance on structured symbolism to address the complexities of language used during the early stages of the design process. His experiments with graphic designers conclude that fresh hand sketches convey condensed ambiguous information which offers the designer new possibilities for interpretation - something that a digital alternative, at the time of publication, could not replicate. He also develops a coding system for sketches based on his experiments: lateral transformations occurring within a solution space during the creative shift to alternative concepts: "...when a new idea is
generated, a number of variations of it quickly follow. The variations expand on the problem space... One actual gets the sense that the exploration and transformation of ideas is happening on the paper in front of one's eyes as the subject moves from sketch to sketch." (p.200). Conversely, vertical transformations occur during the sequential development of a concept towards a solution. He also identifies reinterpretation as a vital function of sketches, allowing the observer to apply new meaning to an existing set of information.

Cross [24] reiterates the issue of design fixation and attachment to concepts, which is readily seen in HE design studios, particularly among sketch inhibited individuals. He believes fixation can be both beneficial and detrimental to the quality of design output: avoiding an overload of design information so a design can be established, but with the potential for preventing a design from being properly developed. He refers to Akin & Akin's [25] research into the design problem-solving process, suggesting that in order to create new concepts through sudden mental insight, the designer's frame of reference needs to be broken. Shifts in mode between drawing, examining and thinking enable design discoveries to be made and gathering information, drawing and reflection in combination with quick switches between these modes are deemed to be conducive to the most successful progress in problem-solving.

Educational Issues

Schenk's [26] research over thirty years into the position of design sketching and its relevance to education and industry underpins this research and has offered a theoretical foundation and justification for investigating sketch inhibition among undergraduate designers. She suggests that secondary education does not equip students with drawing skills required for HE studies and that consequently, industry's needs are not being met by the drawing abilities of graduating designers. She also observes the standard of drawing among newly graduated and early career designers has been dropping over the past few decades and as a result, impedes the activities of commercial design studios. She considers the teaching of drawing within design education; that it is problematic and sometimes inconsistent with the needs of designers. It is often based on fine art practice and observation as opposed to developing a visual syntax to enhance the mental processes required by the designer.

Schenk [27] also exposes a lack of consistency in thinking about the importance of drawing within institutions, stating that Quality Assurance Agency for Higher Education guidelines on the teaching and learning of drawing in HE institutions are limited to a single sentence. She also alludes to friction between the disciplines of fine art and design drawing which serve very different purposes for the designer, those of observation and of conceptualization respectively. Historically many drawing tutors came from a fine art background and taught observation-based skills that fulfill only part of the needs of the design student. As such she believes the teaching of design drawing should be contextualized within the language of the specific design discipline being studied.

A précis of the main findings from the literature review is presented below in tabular form, (see table 1). The grey sections indicate where literature from more than one source is identified as divergent or presenting very similar data to the study: this is of particular interest to the study. Presented within the table are the definitions of sketching as language, the issues of cognition and the benefits of sketching to that activity, the individual processes within sketching, and the properties of the sketching tool for information handling during the complex design development process.

5. The Symptoms of Sketch Inhibition

Specific reference to sketch inhibition in the literature is sparse, only three papers [3, 2, 4] addressing the phenomenon explicitly: Booth, et al.[3] identify several types of sketch inhibition during the design process and these fall into three distinct areas:

Issues of the individual, including:

- Intellectual inhibition, or a lack of awareness of the benefit of sketching to the design process,
- Skill-set inhibition; the lack of expertise needed to use sketching effectively,
- Personal inhibition; ego-driven issues of perfectionism that impair the creative flow, and,
- Situational inhibition, when a designer does not feel in the right state of mind to sketch.

Secondly, social issues, including:

- Social and comparative inhibition or the fear of being judged unfavourably by others during the process of creating sketch material, and,
- Social loafing which involves a lack of input in a group situation, either through fear of judgement or laziness.

The third area Booth et al. identify is that of technological inhibition caused by a prevalence of digital tools available in the designer's environment which then leads to a disinterest in manual sketching. However, digital tools present their own issues. Coyne, et al. [28] acknowledge inexperience with CAD as problematic in enabling students to realise their ideas: "If you only know how to draw a box, your building will be a box, and if you know how to design anything on the computer you can design anything,"(p.270).
### The nature of sketching

<table>
<thead>
<tr>
<th>Language</th>
<th>Biddle et al.[7]</th>
<th>Barthes [12,13];</th>
<th>Eckert et al.[16]</th>
<th>Star &amp; Griesemer [17];</th>
<th>Fish &amp; Scrivenor[23];</th>
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<tr>
<td>Impacts a dialogue</td>
<td>Symbolism used within ideologic or wider language</td>
<td>Conscriptive devices</td>
<td>Boundary objects</td>
<td>Descriptive information (as opposed to descriptive)</td>
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<td>Cognition</td>
<td>Köhler [11];</td>
<td>Biddle &amp; Gero [19];</td>
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<td>Internalization of mental imagery - depictive as opposed to propositional</td>
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<tr>
<td>Manages working memory limitations</td>
<td>Importance of sketching to offload</td>
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<td>Processes within sketching</td>
<td>Goldschmidt[10, 19];</td>
<td>Schön[23];</td>
<td>Goel[59];</td>
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<td>Interactive imagery</td>
<td>A reflective conversation</td>
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<td>Move-tangible proposition</td>
<td>Argument-conceptual micro-activity</td>
<td>Seeing - drawing - seeing</td>
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<td>Seeing at - utilization of Gestalt to identify possibilities</td>
<td>Seeing - drawing - seeing</td>
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<td>Seeing that-consideration of the image</td>
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<td>Serial process</td>
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<td>Information handling</td>
<td>Fish &amp; Scrivenor, Goel [5];</td>
<td>Goldschmidt[10];</td>
<td>Fish &amp; Scrivenor; Goldschmidt[19, Schön &amp; Wigand[25];</td>
<td>Alain &amp; Atlol[25];</td>
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<tr>
<td>Enables re-representation and deconstruction</td>
<td>Storage of design development information</td>
<td>From imagination or observation</td>
<td>Requires expertise</td>
<td>Requires shifts in mode between drawing, examining &amp; thinking</td>
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Table 1. Table showing a comparative precis of the main literature findings relevant to the nature of sketching.

### 6. Causal Factors

These have been identified at this stage via the literature as belonging to the broadly distinct areas of psycho-social, intellectual, skill-set and technological, or a combination of these. Fear of failure, as mentioned above by Booth et al. [3] is also identified by Leblanc [1] who suggests that, "the development process is widely misunderstood or inaccessible," (p.2), and has resulted in a common belief among students that experimentation and failure, a normal part of design, are somehow unacceptable. Because of this fear, students rush into visualisation as soon as they have a suggestion of a concept, omitting stages of evaluation and refinement essential for a fully developed design solution.

Leblanc's [1] research with industrial design students at Montreal University demonstrates the lack of intellectual awareness among students, who "...struggle with the creative process, especially with sketching, exploring and developing ideas into mature designs. Many see sketching only as a means of visualization and rarely know how to use it as a creative thinking tool," (p.1) She also suggests an over-reliance on technology as a causal factor: "Students are judged by their skills with these tools rather than their creativity or problem-solving ability... (which)... nurtures the misconception of design as an aesthetic gesture rather than an intellectual, creative thought process that helps solve problems and drive innovation," (p.5). The essential processes of design embodied by its practical activities have been replaced with what she describes as, "more gratifying digital tools," (p.2).

The culture of immediacy among millennial learners, [29] appears to be a causal factor of sketch inhibition. Interestingly, the expansion in the number of higher education design courses over recent decades may have, ironically, had a part to play in the increase in numbers of inhibited students. This has come about due to some institutions applying a less rigorous approach to recruitment, Lambert & Firth [31], observing, "Applicants no longer have
to compete against each other, and consequently students’ drawing skills upon embarking on a design degree are generally much less adept than in the 1980s; (p.5).

7. Management of Sketch Inhibition

The management of sketch inhibition is barely touched upon anywhere in the literature. It has however, been addressed by Hu et al. [2] who consider how warm-up exercises among engineering students affect their cognitive states during concept development. They gave a group of engineering students geometric sketching exercises, art-based sketching exercises or no warm-up exercises prior to a simple design task. Electro Cardio Graph and Galvanic Skin Response tests were used prior to and after the task together with a NASA TLX questionnaire to establish participants’ emotional responses. They concluded that art-based warm-up exercises were helpful in the process of concept generation and appeared to benefit younger participants most. Female participants unexpectedly expressed an increase in pride in their sketch output after the exercises. This suggests that management of sketch inhibition is possible and shows further potential for this research.

Leblanc’s [1] research suggests the attitude of the individual is vital in overcoming sketch inhibition. She suggests, “those with high ambitions and strong self-motivation manage to overcome the deficit.” (p.2) and believes that those with the will to confront their fears and determination to develop and maintain new skills have a good chance of becoming fluent and confident Sketchers. However, those without that determination will often develop other skills on order to compensate for their lack of ability. Creating that motivation among inhibited students will be the challenge for educators.

8. Conclusions & Recommendations

At this stage of the research, it is clear that there exists little data regarding the causal and symptomatic factors associated with sketch inhibition, and its management within HE. However, a number of issues have emerged from the research which may be of relevance:

- The importance of student awareness of the functions of sketching and its benefit to design. At present there is little consideration given to understanding its purpose and processes. Rather than deferring their creativity from analogue to digital process with no understanding of the differences between the two, greater understanding of the role of sketching could enable student designers to make more appropriate choices about their processes.

- The need for greater student confidence to connect with the indeterminacies of the design process without fear of “failure” in front of peers. The lateral, re-interpretive functions that sketching provides could persuade the inhibited individual to engage with the design process with less anxiety (rather than to cling onto a simplistic, linear approach), and warrants further investigation. This would however, rely on a better understanding of the processes as mentioned above.

- Greater structure in the pedagogy of teaching sketching could be of potential benefit rather than assuming it is a purely intuitive process. However, student resistance may be an issue, based on Skiba’s [30] observations. Teaching a toolkit that the student can refine according to their own needs, rather than leaving learning to chance, may well be appropriate.

Further qualitative research into these issues is of course necessary, with the need for extensive primary data in order to build a more accurate picture of the phenomenon. A semi-structured/guided conversation method for data gathering is yet to be applied to educators and influencers within education to establish in more depth the human issues and relationship between higher education and its relationship with ideation sketching.

A series of semi structured interviews with design undergraduates from multiple design disciplines, (according to Gross & Do [5]) will be undertaken and endeavour to, through a double coding process, (framed and emergent), establish common causal and symptomatic factors together with reflections of individual participant’s relationship with sketching during design. It is intended that, by this stage, the data will enable a move towards a developmental pedagogical framework for the management of sketch inhibition among undergraduate designers.

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Skirting the Sketch: An Analysis of Sketch Inhibition within Contemporary Design Higher Education

Lisa Thurlow, Peter Ford and Grahame Hudson

Abstract

Sketch inhibition is regularly alluded to by educators within design higher education and one with increasingly marked effects on industry. Over the past thirty years, students have been observed to engage less with the manual processes of design development process in favour of other activities perceived as more attractive, to the detriment of their development as effective designers. This article offers an evaluation of literature which supports the importance of sketching to the design process across a variety of disciplines, its anatomy and functions and demonstrates its role in cognitive support, as a language, a means of reflection, communication and storage of information and the micro-processes it embodies. Initial findings regarding the symptoms of sketch inhibition are presented: from avoidance of studio sessions and minimal design development, to an overreliance on digital tools. It considers causes, ranging from lacking skill-sets, psycho-social, to technological, and although further investigation is recommended to establish depth and enable development of an appropriate pedagogical framework for its management within HE, various methods are offered at this stage for use by educators; these include fine art exercises, a rigorous pursuit of quantity and even paper type.

Keywords

sketch inhibition, design pedagogy, design methodology, design tools, design education, design method(s)

Introduction

Sketch inhibition is prevalent among higher education design courses in the UK and evidence from the limited sources of literature available supports this (Booth et al. 2016; Hu et al. 2015; Leblanc 2015). Although continually moled among educators and industry alike it has, curiously, attracted little interest from academic
quarters. Most apparent during studio-based teaching sessions, it appears to be increasing as a phenomenon, its symptoms being embodied in student behaviour and the quality of design output. Industry is subsequently encountering difficulty employing new graduates with the manual ideation skills to fulfil their needs (Mawford 2016). Coupled with an increase in the demand for recruits with manual sketching skills (Mawford 2016), there is a growing gap in the skillsets of design graduates, and one that education appears to have difficulty in addressing. Based upon these initial findings, an investigation into the nature and extent of sketch inhibition among student designers and a proposal for its management is clearly necessary; this article presents initial finding from an ongoing study into the phenomenon.

Context

Research over thirty years by Schenk (2016) has provided underpinning for this investigation. Her observation of the standard of drawing among newly graduated and early career designers is one of decline over the past few decades which as a result impedes activities within industry (Schenk 2005a), suggesting that secondary education fails to imbue students with drawing skills required for higher education studies. Her research also cites inconsistency regarding the importance of drawing within institutions, stating that United Kingdom’s Quality Assurance Agency for Higher Education guidelines on the teaching and learning of drawing in higher education institutions are limited to just a single sentence (Schenk 2005b).

Schenk suggests the teaching of drawing is inconsistent with the needs of designers (Schenk 2017), and is often based on fine art practice as opposed to developing a visual syntax specific to the designer (Schenk 2005a). She also alludes to friction between the disciplines of fine art and design drawing which serve very different purposes for the designer – those of observation and of conceptualisation respectively – and, as such, believes the teaching of design drawing should be contextualised within the language of the specific design discipline being studied (Schenk 2005b).

Aim and objectives

The aim of this study is to establish the nature and extent of sketch inhibition within design higher education in order to develop a pedagogical tool for its management. To achieve this, a comprehensive understanding of the characteristics and purpose of sketching relevant to the design ideation process was identified as vital.

Sketching serves as a problem-solving tool to many disciplines other than design, (most commonly that of fine and applied art), and individual users relate to it in very specific and personal ways. However, for the purposes of this investigation a multidisciplinary approach within design is the focus: 'The practice of designing has common features, regardless of the domain in which it is exercised ... No matter what domain, designing involves certain characteristic activities that must be learned' (Gross & Do 1997).
Thus, a set of objectives was defined as follows: to
1. Explore the nature, scope, functions and benefits of sketching activity: its purpose within the design process,
2. Explore the internal dialogue and processes of the designer during the design ideation process: its micro-processes,
3. Explore the symptoms and common causal factors of sketch inhibition among student designers, and,
4. Provide an initial set of findings from which a pedagogical framework for the management of sketch inhibition can be developed for design higher education.

Methodology

The issue of sketch inhibition has been little considered until recently, with few articles alluding to or explicitly discussing the phenomenon. This lack of evidence revealed the opportunity to apply a Grounded Methodology approach favouring the Straussian (Strauss & Corbin 1990) method as opposed Glaser's (1992) method which disregards literature. The literature, it was felt, would be vital to the study. Due to the very limited availability of literature specifically concerning sketch inhibition, a wider approach was taken which considered design sketching in its broader context and sketch inhibition as a phenomenon within that. The review was conducted using both keyword and citation searches and Nvivo, initially for management of the literature, but additionally for meta-analysis.

Observations gathered from an eighteen-year period of teaching in higher education have been used as a driver of this study. These helped to identify the initial research need and were used, along with the literature, to structure the subsequent data gathering methods. These were identified through a concurrent analysis/theoretical sampling strategy advocated by the Grounded Theory approach. These observations, together with the literature, formed the basis from which the semi-structured interview questions were developed.

Semi-structured interviews were identified at the start of the study as means of ‘interrogating’ (Strauss & Corbin 1990) the data – to qualify and expand upon issues raised by the literature. These are being conducted among a sample from undergraduate designers, higher education teaching and the design industries and are currently ongoing. The undergraduate sample is composed of sketch inhibited third year students form a variety of disciplines, as per Gross & Do’s (1997) concept of discipline non-specificity. Participants were identified by their tutors as being sketch inhibited or as struggling to ideate using sketching. Educators were identified as those familiar with and who observed sketch inhibition among their students. Subjects from industry were selected based upon their awareness of sketch inhibition, who were involved in the recruitment of newly graduated designers. Interviews are in progress, the aim to reach a level of ‘saturation’ according to the Grounded Theory approach, where the findings from the data inform the need for further activity: initial findings are incorporated within this paper to support the literature and observations.

Key findings from the literature

The purpose of sketching
This has been widely considered over many years. Ferguson (1992, 96–7), offers a taxonomy including the ‘thinking sketch’ as a tool for visual thinking, the
'prescriptive sketch' used for specification of a final solution and the 'talking sketch', used to communicate with others during the design process. Although beneficial in understanding the role of sketching to design, this early taxonomy is perhaps too simplistic for contemporary consideration.

A more developed taxonomy involving sketches, models, drawings and prototypes is presented by Pei and colleagues. Personal, shared, persuasive and handover sketches are further classified. They deconstruct personal sketches into idea, study, referential and memory sketches. The idea sketch is to 'allow the developer to externalise his thoughts quickly' (Pei et al. 2011, 76), and is most relevant to this research, as is the study sketch, used to investigate scale, structure and layout based on idea sketches. They consider the referential sketch as one to record information for future use – conversely, memory sketches recall past thoughts. They also identify shared sketches containing annotation that conveys information to members of the design team. Additionally, they classify persuasive sketches, intended to sell a concept, often in the form of a rendered visual that could be presented to a client, and handover sketches, more technically based images that contain information for manufacture.

On the economy of sketching, marks on the page just are, according to Goldschmidt (2003), who proffers that no cognitive energy is used in converting such marks into readable information. She also suggests that sketching can be a representation of linear or diverse thought and acts as a means to test and develop ideas. Goldschmidt coins the term 'interactive imagery' – the process of imaging, sketching and resketching images until useful information can be extracted from them. 'Sketching is not merely an act of representation of a preformulated image ... it is more often than not, a search for such an image' (Goldschmidt 1989, 131).

Cognitive support is a vital aspect of sketch function, enabling offload of what Miller (1956) identified as the brain's limited working memory. Bilda & Gero (2005), through their experiments, also identify issues of working memory limitation during the design process among non-sketchers and the importance of sketching as a means to manage this. Goel's experiments with graphic designers conclude that freehand sketches 'have an important role to play in human cognition, and they may lie at the root of human creativity' (Goel 1995, 189), something the effective designer engages with heavily during ideation.

Sketches combine two types of image – those collected by the eyes and that generated from memory, according to Fish & Scrivener (1990). Observation sketching relying on the repeated refreshing of overt attention to an external image, whereas sketching from memory relies on the generation and manipulation images from the designer's abstract world. Kosslyn (1996) elaborates on this concept, suggesting there are two types of mental representation: propositional and depictive. The propositional representation constitutes a mental sentence whereby the subject creates their own imagery, such as a verbal description or instruction. The depictive representation, of which the sketch is an ideal example, is by contrast an entity with a configuration in a spatial context. The nature of descriptive and depictive information and the relationship between them served by sketching is also considered by Fish & Scrivener (1990): sketching enables the designer to create their own mental images based upon what they see on the page, (referred to as reinterpretation). These images influence that within the designer's mind and can create a cycle of further mental imagery, thereby pushing the design process forward.
Sketching as a language

Of relevance is the plane of content in which conceptual information is stored, that is, the abstract world of the designer’s mind. The plane of expression relates to the real world sketching environment where concepts are made manifest. The relationship between these two planes, according to Barthes (1977), creates the designer’s own plane of reference and is made from the language of the discipline under consideration, personal experience and the Gestaltising effects of the mind during interpretation. This creates the designer’s idiolect – his own personal language used during sketching.

Barthes suggests that the signifier and sign which applies linguistically, as per Saussure, also applies visually, in this instance to the sketch – both scenarios involving a system and syntax. The system provides the units or language that constitute the syntax, that is, the individual marks and their meaning to the designer. The syntax is the macro unit of information transmitted; that of the sketch as composed from a collective of marks – Barthes (1967) likens this to the spoken sentence. The literal image is a denotation of the abstract form, and the symbolic image is what it means either through idiolect or wider language. All images are polysemous; they imply, underlying their signifiers, a “floating chain” of signifieds, the reader able to choose some and ignore others’ (Barthes 1977, 38–9). Particularly pertinent to sketching is the notion that when the symbol is inadequate, the sign outruns its meaning. This can be applied to the complex information contained within design sketches; full of tacit messages that go far beyond their mere appearance on paper.

Sketching to communicate

At its most basic level sketching embodies the designer’s idiolect, but fulfils more complex functions when in a shared situation. Eckert et al’s (2012, 247) observations of the Across Design Project by the University of Cambridge and MIT introduces the term ‘Conscription device’ to explain the manipulative effect of sketches. Pei et al. (2011) regard the sketch as an intrinsic language existing between individuals within the design process, and define designer communication using sketches as functioning on four levels: with themselves, with peers, within multidisciplinary design groups and with lay members of the design process, including clients. They cite Star & Griesemer (1989), defining boundary objects as those that convey information to persons of different expertise. Within the context of design, such objects, that is, sketches, convey information to such persons even though they do not necessarily understand the relevance of that sketch to each other, illustrating the complexity of communication between disciplines within the design process.

Sketching and expertise

The commitment necessary to gain proficiency in sketching is considered by Bikla et al. (2006, 599): ‘as you think you speak … If you think first and then speak, it would all come out differently … It is like a language you learn to talk and it’s essential that you do.’ This is further endorsed by Barthes (1977), who considers the value of apprenticeship where all codes demand a level of study and application to be successful in their use. Goldschmidt also observes the importance of expertise for the effective handling of the sketching process: novices often find themselves unable to detach from an image they have created that they are
unhappy with, thus forming a negative development within the process. She suggests this is less the case with more experienced designers who have a broader range of experiences to draw upon (Goldschmidt 1992). Schön & Wiggins (1992) elaborate on this, suggesting the more experienced a designer, the more domains he can work in at once. They note the effects of a lack of experience in respect of working memory limitations, especially where the act of seeing–moving–seeing is required in the management of complexity within a design problem.

**Sketching and digital tools**

Sketching, by virtue of its nature, is a valuable means of information storage according to Goldschmidt (2003), who suggests that, by default, it allows for access to the history of the creative process whereby complete sets of developmental information can be kept. Digital tools, conversely, tend to consider only the current image and saving design development is not often considered valuable or necessary, resulting in much tacit information being lost during the process.

Powell (2017) suggests that the sketch enables representation of 90 per cent of a visual with only ten per cent of the knowing – something that digital tools struggle to offer. Fish & Scrivener (1990) refer to the indeterminacy of manual sketching that enables perception of more than one option at once, and compare this to the computer where the designer can be forced into developmental detail too early, potentially harming the process. They lament the inability of the computer to offer the serendipity of manual sketching: ‘Sketches have the important function of assisting the mind to translate descriptive propositional information into depiction. Depictive information may then be scanned by attentional processes to extract new and perhaps original descriptive information, which in turn can lead to new depiction’ (Fish & Scrivener 1990, 113).

The dangers of over-reliance on digital tools are cited by Leblanc (2015, 6) among others, suggesting that ‘if tools embellish irrelevant ideas, camouflage problems and give students a false sense of accomplishment – or worse, are mistaken for “good design” – then they may need to be called into question’. More specifically, Pimmer & Apperley (2002, quoting Landay 1996) refer to the need for early widget selection when using digital tools, forcing the less experienced user to make decisions about their design too early in the process; the ambiguity that sketching allows is non-existent with such tools. This in turn encourages fixation; the inability to negate inappropriate concepts design the design process.

Fixation is readily seen, particularly among sketch-inhibited individuals in studio situations and, according to Cross (1999), it can be both beneficial and detrimental to the quality of design output: avoiding an overload of design information so a design can be established, but with the potential for preventing a design from being effectively developed (Cross 2001). Crismond & Adams (2012, 755) warn that fixation ‘is pervasive across different design domains and persists despite warnings from teachers and consultants’ – something any future management protocol needs to consider.

**Processes**

The macro- and micro-processes engaged in during sketching enable the designer to make progress within their ideation process. These processes are often misunderstood or not engaged with fully by the novice designer. However, the observation of studio activity has demonstrated that an understanding of the
micro-processes encourages positive engagement with sketching and more effective design development.

In regard to these processes, Goldschmidt (1989, 131) devises a 'seeing as' and 'seeing that' structure: 'Seeing as' utilises a Gestalt approach during sketch thinking, using the mind's eye to develop ideas. 'Seeing that' relates to the entity being designed and using the tangible output of the sketch process as a platform for further thinking. 'Moves' and 'arguments' are two distinct types of reasoning embodied by sketching identified during Goldschmidt's experiments at Massachusetts Institute of Technology (MIT), the 'move' being a tangible proposition within the process, and the 'argument' (Goldschmidt 1989, 135–6) being a conceptual micro-activity within that process. She classifies sketch activity into three distinct areas: 'moves made while actively sketching, moves made while contemplating sketches and reading off them and moves with no graphic input' (Goldschmidt 1989, 127).

A coding system for sketches is offered by Goel (1995, 200) based on his experiments with graphic designers: lateral transformations occurring within a solution space during the creative shift to alternative concepts:

- *when a new idea is generated, a number of variations of it quickly follow. The variations expand on the problem space ... One actual gets the sense that the exploration and transformation of ideas is happening on the paper in front of one's eyes as the subject moves from sketch to sketch.*

Conversely, he identifies vertical transformations during the sequential development of a concept towards a solution and identifies reinterpretation as a vital function of sketches, allowing the observer to apply new meaning to an existing set of information.

Designers are involved in a 'transactional' relationship with the design and are in a 'reflective conversation with the situation' according to Schön (1991, 4). 'The act of drawing can be rapid and spontaneous, but the residual traces are stable ... the graphic world of the sketchpad is the medium of reflection-in-action' (Schön 1983, 153). He suggests that design episodes involve apprehension of material situations through sensory appreciation, and proposes that the designer constructs an abstract world of objects and relationships through which he addresses the design problem (Schön 1991). Similar to Goldschmidt's (1989, 131) proposition of 'seeing as' and 'seeing that', he refers to the process of 'Seeing-drawing-seeing' – 'a designer sees moves and sees again' (Schön 1991, 7). His notion of seeing embraces the use of faculties other than sight; the terms 'recognise, detect, discover and appreciate' (Schön 1991, 7), are proposed to reinforce the concept of design being a bodily process.

According to Cross (2001, referring to Akin & Akin 1996), in order to create new concepts, the designer's frame of reference needs to be broken, presenting opportunities for creative reinterpretation, such shifts in mode between drawing, examining and thinking enable design discoveries to be made. Gathering information, drawing and reflection in combination with quick switches between these modes, he suggests, are deemed to be conducive to the most successful progress in design problem-solving. Bilia et al. (2006) consider this in more detail: 'Half the process is drawing it, and drawing it ... and eventually ... something sort of creeps out at you'. They consider the concept of re-representation via their protocol analysis experiments and establish that sketching imparts a dialogue: 'you can't
stop the messages coming back from each line you put down'. They observe the Gestalt nature of elements within the sketch, 'seeing it in parts and seeing it as a whole ... the whole emerges from and cannot exist without the parts but depends on the relationship between the parts'. The importance of externalisation of mental imagery is vital to the designer: 'the vision is in your mind and then you are putting it down ... it is the image [that] moves the pencil' (all in Bilda et al. 2006, 599).

**Observations**

These have been collected during teaching practice since 1999 and are ongoing. They suggest that sketch inhibition in affected students is embodied in a reluctance to physically place pen onto substrate, and a tendency towards use of mental imagery alone to develop concepts. Sufferers demonstrate a tendency to favour temporary mark-making tools such as pencil and are often seen to over-use erasers to remove unsatisfactory developmental marks. There exists a tendency for sufferers to produce smaller sketches than their fluent peers, these often positioned in the corners of pages, together with a refusal to work in larger formats. Over-rendering of sketches is identified, as is poor or weak line quality.

Refusal to participate has been observed among sufferers, some preferring to play with mobile phones during studio session rather than mark-make. Requesting to leave sessions where sketching is required is also seen, sufferers maintaining they cannot, for various reasons, work in the studio.

Tearfulness has been observed on occasion as students suffer the pressure of being required to perform without, as they perceive, the confidence or skills to undertake the task. When required to submit development material for their design projects, inhibited students commonly convey their design concepts as collected images with little analysis or development between such images and their final design.

In interview, Fitton (2016) supports the observations of sketch inhibition during studio design tasks: ‘They just pretend they’re doing it, don’t do it, or do just a part of it ... sometimes they stop coming to their sessions (and) tutorials because they’re embarrassed ... then they present their sketchbooks (with) as few as four pages of drawings.’

Complaints about being unable to think on paper are regularly made by students, those affected maintaining that digital tools are the only means to develop their ideas. During one observed studio session, inhibited students within a group of undergraduates relied solely on CAD to develop their ideas. These ranged from naïve repeated elements, all straight-line-based, to those containing CAD blocks available online. Some design output from this session looked impressive, utilising the benefits of computers, but the results all had the same commonalities -- poorly developed concepts combined with a CAD aesthetic. Coyne et al. (2002, 270), acknowledge this type of inexperience with CAD as problematic in enabling students to realise their ideas: ‘If you only know how to draw a box, your building will be a box, and if you know how to design anything on the computer you can design anything.’

Booth et al. (2016) identify several types of sketch inhibition during the design process, classifying three distinct areas:
Issues of the individual, including:
- intellectual inhibition, or a lack of awareness of the benefit of sketching to the design process;
- skill-set inhibition, the lack of expertise needed to use sketching effectively;
- personal inhibition, ego-driven issues of perfectionism that impair the creative flow; and
- situational inhibition, when a designer does not feel in the right state of mind to sketch.

Secondly, social issues, including:
- social and comparative inhibition or the fear of being judged unfavourably by others during the process of creating sketch material; and
- social loafing embodying a lack of input in a group situation, either through fear of judgement or laziness.

The third area Booth et al. (2016) identify is that of technological inhibition caused by a prevalence of digital tools available in the designer’s environment leading to a disinterest in manual sketching.

Causal factors

These have been identified at this stage via the literature as belonging to the broadly distinct areas of psycho-social, intellectual, skill-set and technological, or a combination of these. Fear of failure, as mentioned above by Booth et al. (2016), is also identified by Leblanc (2015, 2), who suggests that ‘the development process is widely misunderstood or inaccessible’, and has resulted in a common belief among students that experimentation and failure within design process are somehow unacceptable. Because of this fear, students rush into visualisation as soon as they have a suggestion of a concept, omitting stages of evaluation essential for a fully developed design solution.

Leblanc’s research with industrial design students demonstrates the lack of intellectual awareness among students, who ‘struggle with the creative process, especially with sketching, exploring and developing ideas into mature designs. Many see sketching only as a means of visualization and rarely know how to use it as a creative thinking tool’ (Leblanc 2015, 1).

She also suggests an overreliance on technology as a causal factor: ‘Students are judged by their skills with these tools rather than their creativity or problem-solving ability...[which] ... nurtures the misconception of design as an aesthetic gesture rather than an intellectual, creative thought process that helps solve problems and drive innovation (Leblanc 2015, 5).

The essential processes of design embodied by its practical activities have been replaced with what she describes as ‘more gratifying digital tools’ (Leblanc 2015, 2).

The culture of immediacy among millennial learners (Skiba 2005) appears to be a causal factor of sketch inhibition and it is debatable whether sufferers of sketch inhibition would invest their energy in developing a skill-set. One industry interview revealed:

A lot of people sort of say ‘ah, I’d love to be able to sketch’ and I say ‘well, you can if you try hard enough’ but there seems to be an unwillingness to spend the
time ... Over the last 15 years... [the] reliance [is] on software to provide the answers rather than a deep thinking process. (Mawford 2016)

Interestingly, the expansion in the number of higher education design courses over recent decades may have, ironically, had a part to play in an increase of inhibited students. Some institutions now apply a less rigorous approach to recruitment. Lambert & Firth (2006, 5) observing: ‘Applicants no longer have to compete against each other, and consequently students’ drawing skills upon embarking on a design degree are generally much less adept than in the 1980s.’

Management of sketch inhibition

The management of sketch inhibition is barely touched upon anywhere in the literature and remains a conundrum among educators who often apply their own varied approaches. It has however, been addressed by Hu et al. (2015), who consider how warm-up exercises among engineering students affect their cognitive states during concept development. They concluded that art-based exercises were helpful in encouraging concept generation and appeared to benefit younger participants most. Female participants unexpectedly expressed an increase in pride in their sketch output after the exercises. This suggests that management of sketch inhibition is possible and shows further potential for this research.

Leblanc’s (2015) research suggests the attitude of the individual is vital in overcoming sketch inhibition. She suggests ‘those with high ambitions and strong self-motivation manage to overcome the deficit’ (Leblanc 2015, 2) and believes that those with the determination to develop and maintain new skills have a good chance of becoming fluent and confident sketchers – however, creating that motivation among inhibited students will be the challenge for educators. Leblanc (2017) favours quantity of sketch output: requiring students to produce up to 100 thumbnails effectively pushes them towards credible concepts. Booth (2017) considers that quantity is also important, going beyond eight or nine concepts allows the student to reach an effective level of creativity, but warns of burn-out, where the mind fades and students resort to stuffing their development work with meaningless images to fulfil their brief.

Schenk (2017) cites the importance of purposeful observation drawing instead of traditional life drawing to improve student skill-set; she believes that standing at easels engaging in life drawing does not assist students – observation drawing needs to be tailored to specific purpose, for example, studies of anatomy where it specifically supports the need of the design discipline. She has also observed the benefits of taking a less precious approach to sketching by using cheap newsprint and pots of school paint during studio exercises, proving that expensive sketchbooks in themselves have an inhibiting effect.

Conclusions and recommendations

This research presents an account of the value of sketching to design, but curiously an overwhelming majority of students, (and educators), are unaware of its full potential. Unlike the humanities and sciences where there is a tradition of
sharing research and imbibing findings within practice, design appears to suffer a vacuum between research and education — ‘designers don’t read, so design writers don’t write’ (Kalman et al. 1991); this is not always the case, but appears to apply in respect of design ideation sketching.

There exists little data regarding the causes and symptoms of sketch inhibition and its management within higher education. Student understanding of sketching purpose and process and its teaching appears to rely on individual input from tutors with often disparate understandings of the skill and their own agendas. However, a number of issues have emerged from the research which are of relevance:

1. The importance of educator and student awareness of the functions of sketching and its benefit to design in order to support a rational process during design ideation. Rather than students deferring their creativity from analogue to digital process with no understanding of the differences between the two, greater understanding of the purpose of and processes within sketching could enable them to make more appropriate choices about their approaches.

2. The need for greater student confidence to connect with the indeterminacies of the design process without fear of ‘failure’ in front of peers. The lateral, reinterpretable functions that sketching provides could persuade the inhibited individual to engage with the design process with less anxiety (rather than to cling onto a simplistic, linear approach), and warrants further investigation. Tools for this approach could include encouraging improved motor skills through fine art exercises, and the use of non-precious materials and substrates during ideation to avoid fixation. Purposeful observation that benefits the specific design discipline, rather than a broad fine-art approach to drawing tuition, together with support of skills through maintenance activities would also be of benefit.

3. Greater structure in the pedagogy of teaching sketching could be of potential benefit rather than assuming it is a purely intuitive process. However, student resistance may be an issue, based on Sklba’s (2005) observations, and those of design educators: ‘We’re all a bit timid about pushing students to do things that they don’t want to do, and I think you have to’ (Fitton 2016). A longitudinal approach to the teaching, learning and maintenance of sketching skills throughout an entire course could serve this need. Pursuing quantity of output in a structured rather than intuitive approach to sketching could help signify the importance of the skill as a creative and cognitive tool within the student’s own practice.

Further qualitative research into these issues is essential, with the need for extensive primary data in order to build a more accurate picture of sketch inhibition as a phenomenon and to qualify the initial proposed approaches for its management. This activity will enable development of a fully tested pedagogical framework for the management of sketch inhibition among undergraduate designers across the disciplines.

Lisa Thurlow, BA Hons, MA, SFHEA, is an interior designer and currently a lecturer and researcher at De Montfort University, Leicester, UK. She has over 18 years’ experience teaching design and research methods at undergraduate and postgraduate level, and of post-graduate course development for design entrepreneurship in the UK and internationally. Currently undertaking a PhD investigating the nature, causes and effects of sketch inhibition.
among undergraduate and novice designers, her interests lie in the relationship between education and industry and the development of effective pedagogies for design education. Recent publication (with P. B. Ford): Where have all the ideas gone? An anatomy of sketch inhibition among student designers. Design Management Academy Conference 2017, Hong Kong. Contact address: De Montfort University School of Humanities, School of Design, Room VP 2.14, Leicester LE1 9BH, UK. Email: lisa.thurlow@dmu.ac.uk

Peter Ford is currently Professor of Design at Nottingham Trent University where he is leading the recently established Design Matter research group and is taking a lead role within the School of Design on its Applied Practice Research focus. He has over 30 years industrial experience, clients including Minolta, BT, Pfeifer, 3M and Black & Decker. Additionally, he acts as advisor to Governments in the UK, Oman and Indonesia on the role of design in industry. Recent publication: Ford, P. and Tenris, D. (2017) NPD, Design and Management for SME’s. Design Management Academy Conference 2017, Hong Kong. Contact address: Nottingham Trent University, 50 Shakespeare St, Nottingham NG1 4FQ, UK. Email: peter.ford@ntu.ac.uk

Graahme Hudson is associate head, postgraduate programme leader and principal lecturer in the School of Design in the Faculty of Arts, Design and Humanities at De Montfort University. He is the programme leader for MA Design Entrepreneurship and is also a module leader on the MA Design Management and MA Design Innovation. His teaching areas include design management, enterprise, business planning, technology transfer and commercialisation. Contact address: Faculty of Arts, Design & Humanities, De Montfort University, Leicester, LE1 9BH, UK. Email: g.hudson@dmu.ac.uk

References


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Leblanc, T. (2017) [Associate Professor, University of Montreal, Canada] – Interview.


Appendix 2 - Keywords used for literature search

drawing design

sketch* (where * represents a wildcard)
sketch inhibition
sketch phobia
design sketch
design concept* development
sketch* design process
design concept development
design development drawing
design concept generation
concept development sketch*
design epistemology
design drawing
design sketch*
design development sketch*
drawing design process
sketching design process

epistemology design drawing
epistemology design sketch*
design process epistemology
design concept epistemology

cognitive psychology drawing
cognitive psychology design process
cognitive psychology sketching
growth idea* sketch*
growth idea* drawing

visual semiotics, visual semiology
Required information:

Appreciation of organisation’s relationship with sketching. Place the importance of sketching in context of the organisation’s activities. Establish usefulness of organisation to the research.

Overview of how the organisation relates to sketching alongside other generation tools - illustrates importance of sketching to the organisation.

Open up dialogue regarding graduate skillsets and any shortfalls - does sketching/drawing appear here?

Identify issues of skill shortfalls, especially relating to sketching/drawing and how these manifest.

Establish whether there/has there been a change in trend in the need or preference for sketching skills within the organisation and from clients.

Establish if and where technology has replaced the use of sketching during design development and the chronology of this. Consider if technology has affected detrimentally the designer’s sketching skillset.

Attitudes of design graduates towards the benefits of sketching to the design process.

Establish whether the organisation rates sketching as important during the recruitment of graduate designers. Consider tools that an organisation may use to identify and assess sketching ability: is there a benefit to education here...?

Identify if the organisation is aware of sketch inhibition as a phenomenon and whether this affects their recruits

Establish whether sketch inhibition has a detrimental effect on the activities and output of the organisation

Does the organisation have a strategy for addressing sketch inhibition among its graduate designers

Establish if the organisation has any dialogue with educational institutions and whether their input is actively sought.

Establish the issues that higher education is not addressing in relation to the teaching and learning of sketching for design development.
Required information:

Establish the importance of sketching to the institution. How useful it will be to the research?

Is sketching considered to be an important skill for the recruitment of students and what level are they expected to achieve prior to starting the course.

Attitudes of undergraduates towards sketching.

Establish preferences for concept development tools and reasons for preferences

Establish whether institutions are aware of the differences between design as a thinking process and the visualisation of design solutions.

Establish is institutions engage in teaching sketching as a conceptual tool for thinking during the design process

Establish whether institutions are aware of application and refinement of sketching as a conceptual tool within the design process

Establish if the institution is proactive in using industry feedback for development of its courses

Does industry feedback actually reach the teaching and learning of the course?

Is sketch inhibition identified as a phenomenon within the institution or among its students?

Have sketch inhibition reduction strategies been applied: what were they and how did they work?

Consider if there gaps in what educators would like to see taught re. sketching and what is actually happening.
**Undergraduates**

**Required information:**

Establish whether individual has had a positive relationship with sketching during childhood/education

Establish if educational/personal/social issues have affected their relationship to sketching

Without prompting, understand how the individual goes about concept generation and development

Establish if sketching is used as part of the cognitive process of design development. What is the individual’s preference and why.

Establish if sketching is used as a means to offload working memory

Establish the individual’s confidence levels when using sketching

Establish issues of social/peer judgment as a causal factor of sketch inhibition

Establish to what extent sketches are used as a communication tool alongside verbal/gestural tools during teaching and learning sessions

Establish the type of sketching/drawing education the individual has received at the institution

Establish understanding of the relevance of drawing teaching and learning and whether it meets the needs of the individual. How they perceive the T&L of drawing.

Does the curriculum fulfil the needs of the individual and how addressing perceived shortfalls could reduce sketch inhibition.
### Appendix 4 – Semi-structured interviews

**Questions for education experts**

<table>
<thead>
<tr>
<th>Issues to be investigated</th>
<th>Data to be acquired</th>
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<tbody>
<tr>
<td><strong>Value of sketching</strong></td>
<td>Course &amp; institution ethos and attitudes towards sketching</td>
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<td><strong>Position of sketching</strong></td>
<td>Where sketching is used in the design process</td>
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<td><strong>Student issues</strong></td>
<td>How students present themselves to their course</td>
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<td>Attitudes towards sketching</td>
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<td>Attitudes towards digital methods</td>
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<td>Quantifiable data/stats for sketch inhibition</td>
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<td>Symptoms of sketch inhibition in design output</td>
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<td>Behavioural symptoms of sketch inhibition in students</td>
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<td>Social and peer related issues of sketch inhibition</td>
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<td>Cultural and religious issues affecting sketch inhibition</td>
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<td>Gender issues</td>
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<td>Age-based issues</td>
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<td>Impact of secondary education on sketch inhibition</td>
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<table>
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<tr>
<th><strong>Teaching &amp; learning of sketching</strong></th>
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<td>Teaching of designing</td>
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<td>Teaching of sketching for designing</td>
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<td>Maintenance of sketching skills</td>
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<td>Teaching of design and visualisation as separate entities</td>
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<tr>
<td>Current management of sketch inhibition</td>
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<td>Potential management of sketch inhibition</td>
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<tr>
<td>Category</td>
<td>Questions</td>
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<tr>
<td>Organisational relationship with sketching</td>
<td>Position and attitudes towards sketching within the organisation</td>
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<td>Changes in industry</td>
<td>Whether industry's needs for sketching have changed over time</td>
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<td>Skill set issues</td>
<td>Ideation &amp; development skills of graduates</td>
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<td>Skill-set shortfalls among graduates</td>
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<td></td>
<td>How graduates compensate for skill-set shortfalls</td>
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<td>Organisation input to reduce skills shortfalls</td>
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<tr>
<td>Human issues of graduates</td>
<td>Graduate attitudes towards sketching - current</td>
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<td></td>
<td>Graduate attitudes towards sketching - time-based</td>
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<td></td>
<td>Gender issues</td>
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<td>Cultural issues</td>
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<td>Age issues</td>
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<td>Operational issues</td>
<td>How sketch inhibition affects the activities of the organisation</td>
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<td></td>
<td>Quantifiable effects of sketch inhibition: HR/financial/project</td>
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<td></td>
<td>Client issues/feedback</td>
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<tr>
<td>Education issues</td>
<td>Whether there are skills that are required that HE is failing to address</td>
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<td></td>
<td>Alignment between education and industry</td>
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<tr>
<td>Management methods</td>
<td>Methods to manage sketch inhibition among graduates</td>
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</tbody>
</table>
Can you recall your relationship with sketching and drawing throughout your life? – describe this.

Describe any significant happenings that have encouraged or discouraged you from sketching and drawing.

Describe the process you go through to generate design concepts.

What methods do you prefer to generate design concepts - what are they and why?

How do you record your ideas and thinking during the design development process?

How do you feel when asked to produce sketch concepts?

How do you feel when showing sketch ideas in a group situation?

How do you use sketches in tutorials?

Describe the teaching of drawing and sketching you have received in higher education.

How has the teaching of drawing in your higher education journey assisted in your ability to generate design concepts?

Are there ways of being taught drawing and sketching other than those you have experienced that you feel would benefit you as a designer?
Appendix 5 -
Ethical approval documents

Application form for ethics committee

DE MONTFORT UNIVERSITY
Faculty of Art, Design & Humanities
Application to Gain Ethical Approval for Research Activities

All Research Degree Projects require ethical approval. Research Students in the Faculty of Art, Design and Humanities should complete this form to gain Internal Human Research Ethical Approval in consultation with their supervisors and submit it to the Faculty Assessor with their Application to Register for a Research Degree form (RDC-R).

Final year students undertaking a major project should also complete this form.

NOTE: If your research involves using human tissue or fluid samples or animals please DO NOT use this application form. You should seek guidance from the Chair of the Faculty Human Research Ethics Committee before starting the project.

1. Applicant

<table>
<thead>
<tr>
<th>Last Name: THURLOW</th>
<th>First Name: LISA</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMU Email Address: <a href="mailto:P1523114x@email.dmu.ac.uk">P1523114x@email.dmu.ac.uk</a></td>
<td><a href="mailto:lisa.thurlow@dmu.ac.uk">lisa.thurlow@dmu.ac.uk</a></td>
</tr>
<tr>
<td>School: Design</td>
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If you answer any of the following questions with "Yes", then specific ethical issues will be raised that MUST be addressed. You will need to explain in detail in section 3 how you will address these ethical issues.

Has your research proposal identified any of the following research procedures?

- Gathering information from or about human beings through: Interviewing, Surveying, Questionnaires
  - Observation of human behaviour: Yes
  - Using archived data in which individuals are identifiable: No
  - Researching into illegal activities: No
  - Researching into activities that have a risk of personal injury: No
  - Supporting innovation that might impact on human behaviour e.g. Behavioural Studies: No

If you answered NO to ALL the questions you do not need ethical approval, please complete Section 5

Are there other additional factors that could/will give rise to ethical concerns e.g. communication difficulties?

None identified

2. Ethical issues identified

Issues of personal privacy, informed consent and data protection are anticipated during the course of the research:

- Interviews with students, early career designers & questionnaires: Information relating to human subjects will be obtained and will need to be kept throughout the research for the purposes of cross referencing and identification. The information will relate only to personal information, and the need for use of sensitive personal information is not anticipated.

- Observation of human behaviour: as above, plus the recording of such activity using video/sound as necessary for research. The result of this will involve the recording of sensitive personal data relating, in particular, to race and disability.

**Interviews with industry experts: personal information, i.e. identity, position, location, would be useful to support the research argument. It will therefore be helpful to publish this information as part of the findings.
3. How these issues will be addressed:

Participants will be sought on a voluntary basis and supplied with an explanation as to the nature and purpose of the research and their role within it. Each participant will be required to sign a written consent form in order to participate in the research and for the retention of their personal information. The agreement will also enable them to withdraw from the research at any time should they wish, and to obtain a copy of any information they supply to the research should they request it. The use of participants from vulnerable groups is not anticipated.

Personal information will be used only for the purpose of identification of individual participants during the research activity and this will be collected and stored according to the Data Protection Act. This will be kept securely on an external storage system and not passed onto third parties.

**With specific reference to industry expert interviews: a separate consent form is supplied with this application for this purpose, (consent form B) to request use of name, position & organisation. This form allows participants to choose to allow use of their information, or remain anonymous in outputs, as they prefer.

With reference to sensitive personal information recorded during observations; this will be anonymised in outputs as it will not bear any relevance to the research. Recorded information gathered during observations will be retained during the course of the research. If it is deemed that such information could form a data set for future research activity, this will be handed according to Section 33 of the DPA. Once the research is completed, all information relating to human participants will be destroyed.

Note: You should consider the following:
- Providing participants with full details of the objectives of the research
- Providing information appropriate for those whose first language is not English
- Voluntary participation with informed consent
- Written description of involvement
- Freedom to withdraw
- Keeping appropriate records
- Signed acknowledgement and understanding by participants
- Relevant codes of conduct/guidelines

4. To which ethical codes of conduct have you referred?

- (2015), Misconduct in Research – Investigation Procedure, RBI Directorate, DMU
- (2015), RCUK Policy & Guidelines on Governance of Good Research Conduct, RCUK
- (2015), De Montfort University, Statement of Policy and Procedure on Conflict of Interest, DMU

Administrative Data Liaison Service, (2012), Section 33 of the Data Protection Act 1998, ADLS


UK Research Integrity Office, (sections 3.7, 3.10, 3.12 relating to human participants, intellectual property and data collection & retention).

List of accompanying documentation that MUST be submitted to support the application:

- Details of the arrangements for participation in the research by human subjects (including how participants will be recruited, confidentiality procedures, copies of consent forms, any questionnaires that will be used and other documentation as appropriate)
- A copy of all the documentation provided to the volunteer to ensure the clarity of information provided
- Copies of appropriate other ethical committee permissions (internal or external) or supporting documentation
- Other documentation as advised necessary by Supervisory team
- A copy of the research proposal (Application for Registration (RDC-R) form) if appropriate

Please return to Christine Richards, CL0.08 ADHResearch&Innovation@dmu.ac.uk

5. AUTHORISATION:

<table>
<thead>
<tr>
<th>Signature by Applicant</th>
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<tbody>
<tr>
<td>I declare that I have considered the ethical implications of my research</td>
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<tr>
<td>I understand that I must not undertake any research activity until this form is approved</td>
</tr>
<tr>
<td>Name of Student ______ Lisa Thurlow</td>
</tr>
<tr>
<td>Signed __________________________</td>
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<tr>
<th>Signature by First Supervisor</th>
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<tbody>
<tr>
<td>I declare that the student named above will be working under my supervision and that ethical approval has been sought where necessary. I understand that I hold legal accountability for the ethical acceptability of the work carried out by the student.</td>
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<tr>
<td>Name of Supervisor __________________________</td>
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<td>Signed __________________________</td>
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<th>Conditional Approval - Authorising Signature (FHREC Chair)</th>
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<tr>
<td>Ticked here if approval is conditional ☐</td>
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<tr>
<td>Note to applicant: If you receive conditional approval, you may proceed with preparing the project but you must NOT start data collection unless you have met the conditions and received full approval.</td>
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Conditions: |

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<th>Full Approval - Authorising Signature (FHREC Chair)</th>
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<tr>
<td>Signed __________________________</td>
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Recruitment of participants statement

Proposal for recruitment of participants for the primary research phase of the project:

1. **Interviews with industry & education experts:**
   These will be identified during the course of the literature research and approached initially by email or phone with an explanation of the project to establish whether they would like to participate. Each participant will then be sent the relevant consent form, (form B) and once this is completed, the interview can take place.

2. **Interviews with students & designers:**
   These will be recruited from DMU, Norwich University of Arts and University Campus, Suffolk. Course leaders will be initially approached with an explanation and if permission is granted to proceed, a set of questions will be provided to the course leader and classes will be visited in order to recruit participants. Once consent is obtained from each participant, (consent form A), the interviews can begin.

3. **Observation and protocol analysis experiment:**
   This will retain students recruited as above for ‘2. Interviews with students and designers’, who wish to participate further. An ‘Observation & protocol analysis experiment,’ document is supplied. A finalised brief for the activity is not yet available but can be supplied later if approval is required.

4. **Development and testing of a framework for the reduction of sketch inhibition using a questionnaire or Delphi study:**
   Participants from ‘1. Interviews with industry & education experts’, who wish to participate further, will be retained. Study details are not as yet finalised but can be supplied later is approval is required.
Custody & Preservation of Data Method Statement:

All information relating to participants of the research will be kept securely on an external storage system – no person having access to this other than myself.

No information relating to participants will be passed on or shared with any third party.

Any sensitive personal information relating to race or disability, (this does not form part of the objectives the research, and as such is circumstantial), that is collected during the video recording of experiment data will not form part of the research outputs: all participants will be anonymised with a codifier.

At the end of the research, all information relating to the identification of participants will be destroyed – information necessary for use in further research, should this be required will be handled according to Section 33 of the DPA 1998.

Lisa Thurlow
Research Project: ‘Designers Who Don’t Draw’

Lisa Thurlow BA Hons, MA
PhD Researcher, School of Design, Faculty of Art, Design & Humanities,
De Montfort University, Leicester LE1 9BH
E: lisa.thurlow@dmu.ac.uk
Ph: 0116 257 6024
M: 07702 084331

About this project:
This is part of a PhD level research programme being conducted at De Montfort University, Leicester, into the ways that designers use sketching as a tool for concept generation, and how this affects their performance.

Your participation is voluntary: there is no reward for your input, but it is hugely appreciated as part of my PhD, the outcome of which will be of benefit to the teaching and learning of design.

What you can expect of me:

- I shall keep your personal data securely, purely for the purposes of research, and once this is no longer required it shall be disposed securely disposed of. This is in accordance with the Data Protection Act.
- Your information will not be passed onto any third party.
- You will remain anonymous in all documentation I produce during the research.
- If you would like to have a copy of the research data you supply me with, I shall provide this to you.
- If you decide all or part way through the research exercise that you no longer wish to participate, you are free to withdraw.

What I ask of you:
Please read the information thoroughly. If there is anything you do not understand, please ask and I will explain. (My contact details are at the top of the page).

Read and sign the accompanying consent form and return to me.

Thank you for your time,

Lisa Thurlow
Introduction letter to educator and industry participants

Research Project: ‘Designers Who Don’t Draw’

Lisa Thurlow BA Hons, MA
PhD Researcher, School of Design, Faculty of Art, Design & Humanities,
De Montfort University, Leicester LE1 9BH

E: lisa.thurlow@dmu.ac.uk
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- Your information will not be passed onto any third party.
- You will remain anonymous in all documentation I produce during the research unless you specifically consent to your details being used – please see the consent form for further information.
- If you would like to have a copy of the research data you supply me with, I shall provide this to you.
- If you decide all or part way through the research exercise that you no longer wish to participate, you are free to withdraw.

What I ask of you:

Please read the information thoroughly. If there is anything you do not understand, please ask and I will explain. (My contact details are at the top of the page).

Read and sign the accompanying consent form and return to me.

Thank you for your time,

Lisa Thurlow
Consent form – student participants

CONSENT FORM

Research Project: ‘Designers Who Don’t Draw’

Lisa Thurlow BA Hons, MA
PhD Researcher, School of Design, Faculty of Art, Design & Humanities,
De Montfort University, Leicester LE1 9BH
E: lisa.thurlow@dmu.ac.uk
Ph: 0116 257 6024
M: 07702 084331

Please initial box:

1. I confirm that I have read and understand the information sheet for
   the above study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I
   am free to withdraw at any time, without giving reason.

3. I agree to take part in the above study.

Please tick box:

Yes           No

4. I agree to the interview / experiment being audio
   recorded

5. I agree to the interview / experiment being video
   recorded

6. I agree to the use of anonymised quotes in
   publications

Name of Participant  Date  Signature
____________________  __________  __________________
Lisa Thurlow

Name of Researcher  Date  Signature
____________________  __________  __________________
CONSENT FORM

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Yes     No

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6. I agree to the use of my name/position/organisation** in published works

(**Delete as preferred)

Name of Participant ___________________________ Date ___________________________ Signature ___________________________

Lisa Thurlow

Name of Researcher ___________________________ Date ___________________________ Signature ___________________________
Appendix 6 – interviews with educators

Interview with Anonymous 1

Interviewer: Could you just start by giving me a brief intro to you, and who you are and what you do and where you study just so that we have a bio?

Anon 1: Okay so I am currently Deputy programme leader of contour fashion, and I have been in the industry for a long, long time so I came to work here about 8 years ago and have built up from then. So in the industry I was primarily a bra designer but I work across brand, Valentino Warner’s and Triumph. I worked at Triumph which linked with Hong Kong for a long time so they did a lot of moulded products and that kind of thing. Warner’s was [unclear] of the moulded product with their [unclear] and moulding machines but we did lots of different types of lingerie. And [unclear] then run accounts for Cortiles Vera MNS, and did those links worked for Delta for a while in London. So then decided because a lot of things were going offshore they were making lots of redundancy. I work freelance for a while and then I was asked to come here. So I came here about 8-years ago and new to teaching, I did my pedia cert when my first little boy was 9 months old. So I came here and I had a baby quite quickly, and I had to continue but I did my pedia cert so obviously I passed my pedia cert and I am now looking to do further HEA accredited paper so that I can actually you know further my educational standing. So yes I have been here for 8 years and it's grown immensely from when I came to the door in terms if they [unclear] and the paperwork the aligned taught content. I think moving into this building again has been a huge move a step up in terms of the expected organization, the potential for cross-pollination linked with other courses. So I think yes there has been a lot of change in a very short period of time but the fundamental teaching follows the similar flow of the Contour.

Interviewer: Okay and how many students do you have on Contour?

Anon 1: So normally there is about 75 per year group, and I have got people who have taken a year out to do placement this year I think we have got 7 out on placement. So that skews the number slightly but yes it's quite large cohort which means that we have been forced in the past to rotational teach, which it is problematic because it's very quick and it's very driven, and they have to be ordered and on it straight away because it's a 6 weeks’ rotation and then you do something else for 6 weeks etc. as the terms flow on how to manage.

Interviewer: Yes, and from the student’s point of view.

Anon 1: A big ball rolling down the hill and if you [unclear] They can't have missed session and it's proven to be more and more difficult because the teaching within Contour is so structured and led by the building blocks of understanding to then move on to the next scale that if you miss a session out, you almost have to take them out onto that hub and individually teach to get them back up to be able to join the group again for the following session.
**Interviewer:** Because I didn't realize that Contour is so much like engineering.

**Anon 1:** It's so complex the patterns are incredibly complex; we map up you know a lot of tears here simply because the understanding takes a long time to embed. As soon as it has embedded they are on a different level, and you can see it happening but the actual teaching is so tough because there are no books to follow, there is a few that they can go and look on [unclear 3:48] pattern cutting but there is no intrinsic lingerie orientated written books available as to how to craft patterns. And we have got the Medora's Grading System, which is embedded by the technical staff which again is a huge area of learning but it's learning sort of as you go and the Medora's grading for level 6 the third years, is embedded whereby they have helped in the way that Medora is taught very generically these are the rules and this is what happens but when you have your own product it has to be graded in a certain way aligning with the Garment itself so all of the rules is slightly skew and broken, which is why they have to have individual tutorial with the Medora teachers so that they can plan their grading, very complexed.

**Interviewer:** Okay so coming back to just purely the drawing, the hand drawn manual sketching process. What is the kind of the [unclear 4:50] of the course towards the manual process development?

**Anon 1:** It's huge because it is embedded from level 4 which is the first year, whereby we have always said without the primary drawing and the primary reaction to something that you can see taste smell and touch, the originality of your creativity on the 2-day can't be embedded, because what they tend to do is download excessively from internet-based sites like Pinterest Etc. I think the head of fashion has bond Pinterest but of course Pinterest is obviously. [unclear 5:30]. But the hand drawn element, they are quite frightened of and I think it's the essence of a big blank sketchbook, “what am I going to do and how am I going to fill it?” I also think that it's embedded with school-taught creativity where they are taught to fill every aspect of every page which we don't do at all. So we try and say to them you have to grapple with the primary research because without it you haven't got that level of originality, it is somebody else's work. And even the developmental sectioning where by you go from primary to secondary awareness because of course they have to be aware of fashion and trend and what's happening. So I kind of talk to them about primary into secondary that then feeds Creative Design Development, and then finalize outfits that is the flow. It's quite hard for them to process the creativity that's embedded in their heads out onto paper, and it's a learned gradual skill and of course we have the situation with many students where they get fed up, they don't play anymore, but you can't not, because without the creativity and the flow you haven't got anything. So what we have done in our 1104 which is our Wednesday morning slot for all of the Contour Foster student on the Contour fashion communication, what we've actually done is split it up and we've got market research being delivered on a, this is on a 2-week rotation so it's 2 weeks of market research, 2 weeks of Sketchbook progression 2-weeks of illustration and 2-weeks of embroidery that they all then rotate in on an 8-week turnaround. So it's 2 4 6 8 and then all of the things swap over. And it means that all of those elements become part of their first Sketchbook and so they have to engage with the fashion illustration because they are doing 2 weeks of it, and they have to engage in market research because they are doing 2-weeks of it, which becomes part of the secondary research. And at the end of there we have a consolidation of 2-weeks where they can ask any member or staff we are going
to open up the studios, to actually formed their first Sketchbook that has everything embedded from primary right through to a 6 outfit creative outcome of a collection, and it's the first time we've trialled it.

**Interviewer**: And how is it going?

**Anon 1**: Very well because they know that they have got 2-weeks and they've got to deliver.

**Interviewer**: It so intensive you can't hide out for a few weeks and navel gazing.

**Anon 1**: No you can't because you haven't got time because you are on to the next one.

**Interviewer**: Yes, I have noticed that generally.

**Anon 1**: Now whether that's going to work or not I don't know but we are trying.

**Interviewer**: No it sounds good it sounds promising.

**Anon 1**: Yes, we try because it's, almost making them put pen-to-paper is really hard and the other thing that we try and embed, is that sometimes it's not all about just putting pencil to paper, could you put, you know, slice up photograph, could you photocopy it could you stretch it out could you double it in size, what about the scale and what about the form; mark making is as important as primary hand pencil drawn element, and it's trying to make the ones who are slightly weaker perhaps at that still feel empowered because they can be very, very creative in a slightly different way and then there is also the technical people who ended up doing technical in level 6, who approach it again in a kind of a rigid authoritative way you know sort of almost like an engineering type of approach. So we are trying to capture all of those students with all of those sorts of different learned ability, and their ability to be able to be creative but have level of confidence because they perhaps don't mark make how they traditionally see mark making and still keep it viable.

**Interviewer**: Okay so when your students come into you into sort of first year, have they generally done a Foundation do they come from BTEC or do they come straight from school?

**Anon 1**: All of the those.

**Interviewer**: Right so you don't have this sort of Foundation level?

**Anon 1**: Not necessarily some are Foundation and some BTEC and some are straight from school.

**Interviewer**: And how is their ability reflected those 3 sort of groups?

**Anon 1**: You know I knew you was going to ask this and it's a very interesting question because by the end of the first year it's very hard to tell between them, you would be amazed at how some of them really latch on, and suddenly at the end of the first year if
you actually said which one is the foundation and which one is the BTEC and which one is the school that you can [unclear 10:24] because they have been opened up to a whole gamut of possibility and I actually think that's quite interesting because you almost break the bonds of this is what you have done so far but this is new now. And you can see them sort of getting on the ship and sailing away with it a little bit which is really good.

Interviewer: So when they come in how would you rate, well it's a cool thing to ask I guess?

Anon 1: Always a spread of the very, very naturally gifted excellent fashion orientated you know very creative to perhaps people who have always struggled with the laying down of ideas, and struggle with the fashion croquis which is a fashion figure. However, I have really learned in the last 8 years that, that means very little because I have had people that chang over a summer. They were poor at the end of the first year and they get a bit between the teeth, and they say “I've drawn all summer Anon 1 have a look at this?” is it the same person I can't believe it.

Interviewer: Oh that interesting so the motivation is?

Anon 1: The motivation is definite, I once had a Fabulous student called Amber [unclear 11:35] who was one of the finest illustrators I have ever worked with really taught I should say, who was an absolute sit back feet on the table dangling the pencil in the air you know and did very little, and I said Amber you've got so much skill and very slowly [unclear 11:51] and I made her come to me every week. And the fashion drawings went from this to this, and in a final collection and she went back to this and she said I knew you would go crazy. But they were brilliant and she was such a gifted illustrator and she just engaged. And there was another girl Louis Barrett who won a competition for a wedding dress thing at the end of the second year about 6 years ago, and she used to have her feet on the desk and messing about and she used to do these little tiny drawings in the corner of her sketchbook, and I used to say “if you worked like that on a larger scale you would be phenomenal.” And in the third year it just went whoosh, the finest sketchbooks I have ever seen, they were phenomenal she is such a great illustrator. And for me it's a never give up because if you see that's sparks in a student and they run with it with your underpinning, the possibilities are endless.

Interviewer: It's interesting how students don't believe in themselves, and as soon as you have that belief in them, and that's so important.

Anon 1: Because I think people write people off and you can't because suddenly the cogs just suddenly turn and they are off running, and you can't guarantee who it's going to be, it just depends on the person and the time and what's happening and how they engage, so it's phenomenal really.

Interviewer: When students arrive and they come from their various courses and foundation and what have you. What are their attitudes towards sketching, what is the sort of [unclear 13:37]?

Anon 1: I think that it's a fear factor, we show them level 6 sketchbooks because we tend to keep the better level 6 sketchbooks, so it's always very unnerving for them. I
think some of them are quite feisty and think well I am going to have a go anyway. I think a lot of them, I used to teach on 1104 I don't teach on that much anymore because I am with the higher levels, but there was a phenomenal change from week 1 to week 6 when I finish with them. In terms of their attitudes and their confidence the extension of their creativity, and a building of confidence, sort of within their processing. I think if you can you really try to keep that going as it goes through the year groups. Huge mix ability with mixed levels of confidence but I think again once given an end goal and resourcing to reach the end goal with very clear briefings and marking criteria. They do tend to Grapple and do very well and you see it's already internally competitive, which you don't actually have to feed because it perpetuates.

**Interviewer**: Is that because of the layout of the way they are working?

**Anon 1**: I think just generally other people other courses working next door to somebody on a table of 4 that kind of thing, and your kind of start to see what people are doing, amazing really. So for example this year level 6 we gave a summer project out in anticipation [unclear 15:15] Autumn project for external clients we have never done that in the way that we did it this year, and the work that was brought in I think freaked so many of them out because some of them have done so much and it was incredible having said that collectively for the cohort, they were 10 steps ahead as where the previous year had been, because they hit the ground running so we are already twirling and that project finishes in week 10 and we are already twirling [unclear 15:43] second visit in week 7. So on depending again to support them and I kind of think that they are doing it without realizing it, and then they suddenly realize where they are because we have planned it in like that. So that starting to come to the floor a lot more because we are trying to be so much more on it.

**Interviewer**: Okay now comparing the sort of process the manual processes to the digital methods, I know that fashion is different from you doing a lot of hand drawn stuff, but are there different attitudes towards digital methods for doing the same kind of job developing ideas that sort of ideation?

**Anon 1**: There are, but the external examiner did say this year, that in leaving out sketchbooks and allowing them to hand things in digitally, she felt that we had lost some of the element of the primary driven creativity, and she wanted us to include those sketchbooks next summer so that the external examiner sees the digital version of like this.

**Interviewer**: So what did they do how do they do this what is this done on?

**Anon 1**: So this is Photoshop and illustrator, so she wanted both because she said she felt it when slightly cold, and when I went to graduate Fashion Week that sort of element of hand drawn creativity I felt was slightly missing because it had become so corporate, and that you don't see the realities of that student grappling with some very early conceptual processing via a sketchbook.

**Interviewer**: Yes, the focus is suddenly on producing sort of the finish Cad.
Anon 1: And it's all because of that journey you know we always talk about you are marked on the journey, it's the golden thread of the beginning to the end of your sketch book come back again that's what you are actually assist on.

Interviewer: Yes, I am trying to get that through to some of the EMA's at the moment and it's hard.

Anon 1: Very hard because [unclear 17:45] they are quite fixed, now I've taught [unclear] independent study very fixed but some of them really launched into it and did incredibly well but it was a bit of a battle.

Interviewer: Amongst your cohort I know that you don't keep stats or anything but do you have a sort of proportion, a rough percentage of student who you would say are sketch inhibited who are kind of they really are struggling?

Anon 1: Yes, I think some of them are and it's quite a battle sometime to break that mould because it is a confidence thing to enable them to lay down, you know processes of creativity and you quite often find it with the ones who reassess, and then they come back into second year and they still, and I would stay to them you are sitting on the side of the pool and dipping your toe in but you are not on that diving board and you need to dive in, and you need to. It doesn't matter if you think that it's not right, this is a Sketchbook it's not a picture book it's your creative flow, it shouldn't be perfect it should be quite loose. And I would say to them, “is everything that you have seen in the last 6 weeks in that Sketchbook, because it should be?” you have to build it with them really and it really is a one-to-one confidence-building. So for example by the second year they will come to myself and do courses, and we have week-on-week tutorials where I see everybody. “Where are you, show me your sketchbook, where is your pattern?” And I have to see them every week to make sure that flow is there. And you know lifting strength that was really can we have a bit more of that, and what should be done here that's not quite as strong why don't you try this or why don't you try that. I also find that in the tables group they end up being slightly group tutorials because other students listened to your advice and write it down. And when we did the third year when they all laid the work out from the summer project, I said even if you take one good thing from somebody else's sketchbook that's a positive because you won't do the same thing in the same way, you will have your own interpretation of it.

Interviewer: That's interesting what you say about students listening in on [unclear 20:00] and you are kind of.

Anon 1: We make them in level 6.

Interviewer: Actually that's a really good way.

Anon 1: To start with it's a panel of tutors and they all sit around and they all listen to each other, of course it's a huge driver of how much work have you done?
Interviewer: I know the kind of insecurities and the competitiveness that’s actually really helpful. Symptoms of sketching in their Design output. What would you say is kind of?

Anon 1: I would say limited shape awareness, limited colour application, naivety in terms of placement because they haven't thought about it because they haven't drawn it. So print, what print, where have you laid it on, have you tried it you know and again it's not the first one it might be the 7th go of where you lay that print. Are you going to play with the scale of the print again you need to try that because you don't know how it's going to look on the body so can you [unclear] it and stick it down because a print is very difficult illustrate. So for me naivety in the lack of drawing and therefore in the intrinsic detail of the outcome because they haven't thought it through properly from sort of having it in their heads to putting it on the 2D to then building it, that's my problem.

Interviewer: And do you see the same kind of sort of pitfalls being kind of met time and time again, that's interesting.

Anon 1: Because they’ve not engaged and therefore they haven’t played it out, so therefore the toileing ends up being worked, they are toileing but they are kind of designing it at the same time, which you can do, but they are finishing in that machine room because it's not really been worked out and they haven't done the trims and they don't really know, and it’s all a wing and a prayer to the end, that's the problem for me.

Interviewer: Oh that must be gutting for you to see.

Anon 1: It is because what they should do [unclear 21:58] properly is that everything is completed and they know exactly what they're going to do when they walk in that machine room because it's all been worked out.

Interviewer: How can you say it that's a jigsaw stage at that point isn't it, which it can't be really. Behavioural symptoms what do they do when they don't want to sketch participate and show their work, what kind of things do they do?

Anon 1: Very difficult quite I would say attitude-ey, that's not even a word but you know chippy, chippy, don't really want to talk to you about it and don't really want to do it, will scribble away as you just said and will try and avoid contact. They won't come in, if they are worried they won't come in and rather than beating it out they will disappear, and of course it's always worse when you see them next time, because they are on even more on the back foot. All of those classic attitudes that are sort of perhaps embedded, as they would be in previous education environments, where you haven't done your homework therefore you turn up. But yes, ultimately we try and capture that all the time by saying even if you think that it's Dreadful you have got to talk because without support the tutorial support you can't move forward, and we always say oh a door is always open and all of that policy you know.

Interviewer: Social and peer related issue. When they are in a group situation what kind of crops up amongst sketch inhibited?
**Anon 1:** They don't want to show the work because they've seen somebody brilliant precede them, so quite obviously physically they always look slightly damage before they have even started, because they realize that they've got to very succinctly talk through this sketchbook that they are not feeling brilliant about, in front of multiple staff members. Again, not turning up you know, because they don't want to face it so they don't come in, classic really, classic of not feeling great about the work, and then the other thing is wanting to see you after session, because they are not feeling good about it which again is a really difficult fallout because the numbers are so large to capture them.

**Interviewer:** And you see each of your students once a week you have so many tutorials?

**Anon 1:** Yes, we have tutorial after tutorial so we have, there is a staff member who is currently doing a follow session on the Wednesday afternoon for third year, because he teaches first year in the morning. He's part-time hourly paid and then he does all day Thursday with us, and that Fallout session increasing because I think that it's a one to one [unclear 24:41] safe haven before they go in for the big [unclear 24:42] on the Thursday with all of this stuff members.

**Interviewer:** So it's almost like a counselling opportunity for them before they kind of launch themselves into this is what I have done and this is who I am.

**Anon 1:** And of course the personal tutoring is like that.

**Interviewer:** Right okay here is a bit of a strange one, do you have any culture or religious issue affecting sketching inhibition?

**Anon 1:** You know that's very interesting, hardly any I can't think of anything.

**Interviewer:** What sort of cultural mix do your students comprised?

**Anon 1:** Mainly quite a lot of British White there is a number of foreign students who sort of from everywhere from New York you know pinging around. And we have I mean how do you describe it black Asian there's a few of those.

**Interviewer:** Do you have East Asian and Chinese students?

**Anon 1:** We have Chinese student yes we do. It's actually in Contour quite a strong mix and culturally there is not a lot to divide them, I think because we capture everything or try to quite early so you don't see any large divide per say.

**Interviewer:** Okay because I know on some courses certain students will disappear to the back and really not participate and it is hard, and when it comes to things like drawing there is an element of not wanting to take risk. And it's a cultural thing and I just wondering whether that kind of shows itself at all.

**Anon 1:** No and just to mention I have 2 Hong Kong Poly students who have really struggled in the corsets, they have been sort of adopted by the group and are very much
integrated, the group know that they find this very difficult they have never done sketchbook before. And so that's been really quite fabulous to see that little body of support, and I said if the girls need help with Fabrics [unclear 26:41] Molly could you step in and help Lily and Chloe with fabric orientated searching because they won't be up on that so you know quite an opening forum. Quite supportive open forum so that nobody is allowed to I don't really allow that in my classes, it's good to keep them in the fold.

**Interviewer:** Yes, keep the light shining on them they can't escape that way. Gender issues do you have any boys doing [unclear 27:07]?

**Anon 1:** Some is in level 6 so he's delightful.

**Interviewer:** Okay and how it his sketchy?

**Anon 1:** Struggled, really struggled in the first year and has suddenly clicked on with Sketchbook and he is now doing very well.

**Interviewer:** Okay age base issues do you have all of the students?

**Anon 1:** Very rarely do we have and normally they integrate very well we don't really have issues with that thank goodness, you know we don't really and it really isn't I think that we are quite looking, I think all of the students although there was a gentleman here who was very much older that I wasn't partake to but the older student was Amanda who I taught who was about 30, but she was wonderful and she just integrated into the group.

**Interviewer:** How do you separate or do you separate the teaching of Designing, and the teaching of visualization of the designs.

**Anon 1:** Right so currently 1104 which is the first year module the design illustration, challenging your illustrative fashion orientation, is being handled by our lovely new member of staff Emma. And it is very much looking at style and looking at form and looking at shape of the fashion illustration per se. However, the development of product within that rotational teach of the market research sketchbook development and primary extension and embellishment, is handled by the other 3 rotations so it is slightly a separate issue, but what we are trying to do is build the confidence of the sketchbook progression with a fabulous CAD stroke hand-drawn final outcome for boards, so that's how we've handled it. So they see it slightly segmented and you have got to think about your market so for example if you are doing sportswear what did your market research tell you, how does that feed in and how does that affect your final outcome and will it affect your final outcome, so we try and build that in as an understanding.

**Interviewer:** Yes, so we're kind of chunking it like but every chunk has its own sort of a definition really okay. Sketching skills are they maintained apart from doing the problem based projects, do they have to do any kind of additional as they go through the course observation drawing Fine Art best drawing?

**Anon 1:** Yes, so currently 1104 runs the Autumn term and the 1106 runs the spring term, that is more Trend oriented development but still with that primary element
of originality and then of course when you get into the second year, the course it's has got a Sketchbook bolted on a workbook, I am actually asking to put all of the technical in as well the kind of thing that you could take to a possible employer and say, I worked on a corset Sketchbook and this was my progression because it's so crafted. So we have got that [unclear 30:14] has a Sketchbook where they do one outfit and then the consolidation project which is the final year showing level 2, sorry level 5 year 2 where they all show all house Sketchbook elements linked in with it, so it flows all the way through the second year alongside the technical on a Friday which isn't Sketchbook, in Readiness for that summer project which leads them into the external client which is the first part of the third-year. It's embedded it has to be otherwise they won't improve.

**Interviewer:** Potential management of sketch inhibition, if you have got students who are really reluctant and struggling?

**Anon 1:** Try to do it on an individual basis, make them come in. I want to see you tomorrow with that sketchbook, I said it to a third year, she’d got stuff all over the place and I said, “look this needs to have a flow you are working on an A3 and it should be an A1, for goodness sake I can't tell what's going on here.” By Wednesday in my office 10 o'clock we are coming here and we are going to spread it out, and she came and she said I've done it well with 20 steps ahead because suddenly we have got this beautiful flow and she done all of these great things [unclear 31:31] and I say do you scramble scrambled egg I want smooth custard I don't want scrambled egg I want smooth custard.

**Interviewer:** But did the fact that you gave her virtually no time to sit and quantification?

**Anon 1:** I would say you haven't got time to [unclear 31:48] and I want to see that by Wednesday and there she was on Wednesday and it was done. So certain times you have got to come down with the big shutter and go, “alright, I am fed up of this now,” and they know I don't flannel and they know they will be further on and she is 10 steps further ahead, but only because we care, you know, we care about them and I think they know that, hopefully, so I think all of it is embedded with I would like to say as part of the team and for the team fantastic and defending [unclear 32:22] of the support and they feel that they can do it, because I've heard student say to me I would have never done it if it hadn't been for you, and I said all I did was show you the way. And I say to them you drive but I am staring in the bumper car [unclear 32:40].

**Interviewer:** No but it works doesn't it?

**Anon 1:** It does work because I think they feel empowered.

**Interviewer:** Yes, absolutely and finally just looking at secondary education generally. Does that have a positive or negative effect on student’s attitude abilities perception of using these kinds of manual skills?

**Anon 1:** I don't know because I've got a 16-year-old and he's just started A-levels and I don't know, I can't work out, you know, the artist, “fill the page, fill the page,” that kind of thing, and I can see what they are trying to do. And I also think there is a really hard thing here where there is a level of maturity in terms of your approach, and I think sometimes you can't reach it until you've had a bit more experience because then you
see a path that you didn't see before. And I think that's kind of a personal development situation, you can pump a child as much as possible with visuals and how to do it but when they actually start to develop it, and I think because I was so linked to 3D product as well, it's multifaceted and it's overlapped and over layered, and I don't know really. I think the school system has that element where it's a tick box because they have to meet the standards. Whereas here when they first come they are a little bit Fish Out of Water because they say things like, “what do you want me to do?” And we say, “it isn't about what we want you to do, it's how you develop yourselves,” and I think again it's a level of maturity to be able to take that on board and work with it which is why you show them this path really, with support all of the time, hard I don't know about that one.

**Interviewer**: No some people have got really strong opinions about, well it's all over the place at the moment really it's really interesting, but yes there is definitely some sort of connection there, for some people anyway others come through it okay but it does affect the tick-box approach definitely affects.

**Anon 1**: Which is great in terms of discipline but I think when it's creative you know it's sort of being able to handle your own creative progression I think it's quite a new thing that they take on board and they grow with.

**Interviewer**: And you are talking about the Sketch books at A-level, I mean a lot of them are so neatly produce they are not Sketchbook they are picture books, presentation [unclear 35:20] full of beautifully handwritten notes for someone to judge they are not done as a part of a process.

**Anon 1**: And this thing about annotating on lines, I even tell my teenager off for that, you know don't do that, make the annotation part of the sketchbook because it's just your brain flowing. And I once had an MA student who did triathlon and where she wouldn't let me use her sketchbook because she said Anon 1 I can't give it to you because everything I ever taught over that 2-year period is in that sketchbook and she had pages of just words relating to everything trying to get out of the head what was scrambling in there. So you know I think at every level it's a processed recognition before you actually find your flow really.

**Interviewer**: I think that's everything I need to know.

Audio Finish 36:18
Interview with Joran Booth

JB: I’m Joran Booth, I grew up in Columbus, Ohio, I studied mechanical engineering and after that I worked for a summer with a patent firm working on writing patents and things like that and doing patent research, after that I went to school at Purdue where I pursued initially, switched to a direct PhD and my focus has always been interested in designing things, actually making things so I studied design, so that is where you’ve come across my work in the past on sketching and also looked more generally on sketching, how do you abstract prior to ideation, the sketching is a part of that which is why I touched on that, and then towards the end of my PhD I was looking more at how sketching warm-ups affect ideation using something like EEG. Since then I’ve wanted to more into systems, so I’ve actually moved to a soft robotics laboratory and I’m working on a robotic skin.

LT: can I just start by asking, you’re at Yale, so you’ve only just arrived there, I’m just thinking about your kind of experience of teaching and this kind of sketch-based stuff

JB: that will be mostly relevant from Perdue I think

LT: okay, I’ll ask you about it in respect of that because you’ve got more knowledge, obviously you’ve been there for longer. Can you just start by giving me a bit of background as to how Perdue kind of valued sketching within the design process or positive very kind of technology driven institution and courses you were teaching on? Can you just give me a bit of background as to their kind of attitude and ethos around sketching during the early design concept generation, ideation, that sort of growth, the bit that you kind of interested in, the early stage please?

JB: so, a difficult question to answer because there are many different individuals that teach and they all have a different philosophy. With the laboratory that I was in, it was heavily encouraged to sketch prior to ideation, sorry, during ideation prior to any heavy engineering. The nominally was a class for all freshmen that was supposed to encourage to do the same, I never saw any students use that in practice, and that was at the freshman level, and the sophomore level when I would teach at that level I would often help students to do sketching, I have stories about that, usually by the senior level they were sort of using sketching but not much, unless they were involved in a class that (…) and for that class the sketching prior to design was a very significant portion of the class, so that was a class. That’s answering your question a little bit backwards I suppose because you’re asking at University wide level, I think that most novices don’t sketch before they design but in practice most experts do.

LT: okay, your teaching, what course are you actually teaching at the moment, what course of you most recently been teaching on?

JB: let’s see, it’s actually been over a year now, the last course I taught was sophomore level design, sorry second year design, and that course goes over entrepreneurship very briefly, business very briefly but mostly focuses on design processes, covers finding your customers, characterising your market, then you ideate and you create a design

LT: so, in that whole process, whereabouts is sketching used, is it purely when you’re talking about the design development stage, is it purely in the very early stages of the design development or is it something which is encouraged all the way through in terms of a
communication tool, a presentation tool, I mean our students encouraged to use things like
carton software later on or is it kind of left to them to find their own way?

JB: for the structure of this particular class there’s three rigid phases and it’s broken into, first is
the customer discovery characterisation, the second phase is ideation and the last phase, detailed
design, and that third phase, CAD is encouraged, it’s a requirement, but in the second phase
sketching is heavily encouraged, but I wouldn’t say sketching in the sense that you and I
research is formally taught.

LT: okay, so is this something the kind of sketching stage, the early ideation concept generation
stage, is that something whereby the sketching is assumed that it’s almost an intuitive part of
what a student will do?

JB: it’s assumed that’s what they will do, I knew better so I would possibly teach it differently,
saying that they had to sketch it, usually my students, I had, this is one of the stories I wanted to
share, I had a team of four students that had been arguing for two or three weeks about which
design they wanted, what they wanted to do with their selected concept, and I listen to them and
encourage them several times to sketch. One day they were arguing for about an hour and I sat
down and I said you, I think you all need to sketch it out because I think you will have a
different idea about what you’re talking about we sketched it out sure enough we had four
different ideas that they were arguing about, and they all thought that they were talking about
the same idea because it was only written down, it was never sketched out. So obviously that
happens a lot, that was a very poignant example of that happening. I encouraged it, I didn’t
enforce it by requiring assignments, I encourage them by reminding them often that they should.

LT: it’s amazing how students will come to tutorials with an idea in the head at the happy to talk
about for hours and hours, but they have nothing actually sketched down, and you end up
talking at completely cross purposes with them, and nobody has kind of dealt with that. It’s a
strange thing but it happens all the time.

JB: there is a paper you might want to consider, it’s Kathryn Henderson and it’s a 1998 paper,
 it’s a prototyping, it’s a paper on prototyping, I want to say it’s the role of physical prototypes in
the design process or something like that. The reason I point out this paper, it’s about
prototyping so it’s not exactly sketching but prototyping is a higher fidelity form of
representation, they’re both representations right? One of the points that she makes in her paper
is that prototyping is important along with sketching because there is tacit knowledge associated
with it. One thing that you could probably argue effectively whatever you’re working on is that
sketching is important because it has tacit information that verbal communication does not, and
you could make that point very clear.

LT: a lot of the research I’m doing with in interior and architecture students and teachers or
educators is verging away from sketching and into three-dimensional white card modelling, and
now I’m thinking, hang on the sketching process is embodied entirely by this three-dimensional
white card modelling which the students will do and then draw from, they would observe the
results of what they’ve produced said they are kind of going through a process of prototyping
and working purely in a sort of 3-D way to get beyond the sort of, I’ve got so far with 2-D I
can’t actually get beyond it because my head can’t, you know, I can’t turn a particular shape in
space or manipulate mentally, so yeah, I’m verging on the whole 2-D versus 3-D, it’s all
blending into one now. Can I ask, obviously your new at Yale, said you want to cast your mind
back to your previous university. With your students, they’re obviously arriving, they come
onto courses, how do they all how did they generally present themselves to their courses in terms of their abilities to sketch or their abilities to generate concepts within the minds, there sort of mental imagery and their ability to put ideas down on paper? What sort of things were student presenting you with the beginning of courses? And also I presume you go through some process of portfolio evaluation, or do they just come in with grades and you don’t look at the folio?

JB: yeah, it’s always grades, yes so engineering it’s not really a portfolio that kept and that’s very typical across pretty much every engineering program in the United States. I have a portfolio because I’ve interacted with design students outside of engineering, but that’s very unusual for an engineer.

LT: so generally, what are their abilities when they arrive? And they kind of keen or are they reluctant, just talk me to how they kind of arrive.

JB: that’s a good question, I might even have some data that I could share with you, I’ll have to ask about that and see if I even have it, I one point had a lot of sketches of what their abilities were and I would test that before and after. In any case the data that I’ve seen, some are very good, not very many maybe five or 10% of very good at sketching when they come because they’ve either taken art classes, the just do it, enjoy it, the majority are able to make vague representations but by far the biggest problem is that perspective sketching is very hard for all of them, and then there are some that can’t sketch anything and they truly are very bad sketchers not because they can’t improve but because that’s where their skill level is. Often I would say that their level of sketching, for the majority of students is mainly at a fifth grade level, fifth year in elementary school and the young children school.

LT: that would be around nine or 10-year-olds?

JB: yes, something around that, and I often find that although they are older (…), it seems to me I haven’t formally studied that part but it seems to me that sketching is better when they younger and then because they’re not practising as they get older, it doesn’t actually ever improve.

LT: yeah, so they’ve reached almost a plateau with their sketching developments, that’s interesting. Can I just ask you about, we have lots of issues with our secondary education, are sort of 11 to 18-year-old education and everybody’s got an opinion on it over here. How does, I mean in the states, how does secondary education impacts students in terms of confidence or skills or anything, anything which can relate to their ability to put their ideas down on paper as a working through them? I mean over here it seems to be quite an impediment really of students as they go through this system

JB: I was about to say the same thing. Generally, again there are a few students that have just done things on their own, the majority of students are very good at taking tests or doing homework but they are generally not much better at anything else, they don’t really have any, unless they’ve taken art classes or really focused on art and really made that part of their life it’s unusual that they have any notable skills in relation to design. (…) was talking about the US education system, about how kindergarten is, we’ve learned how to be not creative as we go through the education system, and if that’s true in the UK, it’s definitely true here.
LT: yeah, we tick boxes and as long as the students are seen to be, you know the boxes are being taken, their actual experience and what they come out with its irrelevant it seems.

JB: let me put a little bit more context just to give you an idea of why that may be the case, a very large discussion in secondary education right now is with regard to standardised testing and in the United States that is the only way (…) and there’s a program over here called the common core and this is a federally mandated core of topics that students have to learn and then be tested on, it’s a comprehensive enough thing that it takes pretty much the entire curriculum to teach them, this core, and in the standardised tests are often used as evaluation tools of the teachers, and so what ends up happening in practice is that everything is taught to the test and you only teach what is necessary to complete the test. A few teachers go above and beyond but it’s really just to whatever the federal standard is.

LT: yeah that sounds exactly as it is over here, that scary isn’t it? It’s so depressing. Anyway, your engineering students, what are their attitudes towards sketching, I mean when I think of engineering students, much like architecture students it’s like, straight onto the computers using CAD using any kind of digital method possible, and the idea of putting pen and paper is a bit Analog, it’s manual it’s boring, it’s old-fashioned. What kind of attitudes do they kind of have to begin with?

JB: what I’ve observed and what surveys we’ve looked at, when we force them to start sketching if you it is not technical, which is very big in the engineering world because if something is not technical, you kind of shy away from it, at least during school. Because it’s not technical, then view it is not an important skill, the other thing is they go to CAD because they view it as more precise and because they are so, they are numbers people, right, they like to know exactly the right thing, and so sketching is too ambiguous for a lot of them, or at least the view it is ambiguous, that’s me interpreting their view of it, but to me, I think they have a difficult time with the ambiguity and the (…) and the uncertainty associated with it.

LT: that’s interesting because I’m looking generally at product designers and architects are the most sought of, left brained of all the designers I’m dealing with, so engineers are you know, even more left brain, that the most left brained people I’m dealing with. Yeah, it’s interesting how there is this need for structure and sort of finiteness that you don’t get with fashion designers for example, they’re quite happy with the, like the ambiguity and, you know, it’s fine they love that. Okay.

JB: (…) I touched into the community and this is not a criticism one thing I’ve noticed about the design community is in general it’s aimed a lot heavier toward things like fashion design or architecture or whatnot, to the point, because it felt like they had to defend their abilities, their reasons to call themselves designers and what ended up happening is that they’ve stopped caring. It’s my interpretation of what’s happened, and so often engineers don’t think of themselves as designers, I think, because they think of themselves as engineers first.

LT: yeah, it’s funny how the perception of, they all design, everyone designs in this realm I’m looking at but the individual disciplines and perceptions of their own disciplines, if you see what I mean, is so different and yet they are all dealing with pretty much the same information and processes at that very early stage. That in itself would be another PhD, but, yeah.

JB: the thing about engineering as well that’s unique, and I don’t know how much this is true of architecture, but fashion design, maybe 50, 40%, or maybe that’s not fair, 30 to 50% of your
time is spent designing the idea and the other part is the construction. In engineering 5 to 10% is construction of the idea and the rest is the building, kind of through analysis and validation of the actual prototype, and so it occupies a much smaller portion of the design process.

LT: where I’m teaching a Leicester we have a BA in product design and we have a BSc in product design and the two courses are, they have the same sort of core subjects but one will split off very much into the engineering, prototyping, and the other one is very much more sort of user-friendly aesthetically driven. The differences between the two are, it’s quite telling, it’s interesting. Okay, comparing your engineering students attitudes towards sketching, can you compare that with their attitudes towards the digital methods when they come into begin the courses?

JB: most of reluctant with CAD at first but once they have learned it, if they have learned it well, they feel often more comfortable in CAD, if they have not learned it well, they often don’t feel comfortable expressing their ideas except in words only.

LT: words, verbal, or words written, textual, or a combination?

JB: I think it depends what’s required of them, so if they’re talking (…) If they required to submit something (…) LT: yeah, it’s interesting the way people kind of use different skills and different tools to get the same information over. Okay, do you have any quantifiable data or statistics regarding the numbers of students who kind of coming in the first year or so who are sketch inhibited and how that changes over the course of their four-year process? It’s a bit of a strange question I know because people don’t kind of record this kind of thing, but

JB: I may have some data on that, what I have this data for the individuals and I have a self-efficacy survey and they are first-year university to graduate work. Roughly half are in the first four years and the other half are on their postgraduate work, so it’s not a terribly large sample size but it’s at least a snapshot, I think we only recruited three freshmen though, maybe four or five in the dataset, most of them, I have the, I don’t have the ability to open it right now, so the data I have is still technically unpublished, which is fine, I’m trying to think, because it I have it in context in my head of a certain analysis I did, outside of that analysis I don’t recall if I saw anything but there is definitely a distribution of how comfortable people are with different things. I don’t remember if there’s anything related to how, what year in school they were though, I don’t seem to remember if that’s the case.

LT: in your paper, I’ve got two papers with your name on, and I don’t know which is which now, it does kind of talk about as students become more comfortable as they kind of go through doing the sketching, the workshops with various people, yeah but if you have any figures at all that you can rustle up that would be amazing.

JB: there’s two papers, one is where there’s the workshop where they are doing the sketching with the crayons and the finger paint, and any other race where we put a head cap on them to read their brain. I’ll have to look through that after the fact, let me write a note here to see if I can find anything here, the you’d like anything that shows self-efficacy like, in a range of ages, right?

LT: that would be helpful if you’ve got anything like that that would be great. Okay, can I ask you next about, are students who are sketch inhibited who really struggle; is there any
correlation between that struggle and that level of inhibition and their design output? I know you’re talking about engineering being more developmental and prototype-based rather than the sort of sketching, but is there a relationship there that you’ve observed? Students with a sketch inhibition issue who really kind of can’t cope, don’t want to do it will find any excuse, is it reflected in their design output?

JB: oh yes, definitely. I mean the difference between an engineer can sketch and an engineer that can’t is quite large on the design output side. Similarly, if they don’t have the technical skills to backup, I consider sketching a technical skill for an engineer, if they don’t know how to program for example they just won’t be as effective as an engineer is someone who doesn’t have to program, and I view sketching in much the same way, because engineering in practice, 60 to 70% of it is communication, so you’ll be writing reports, you’ll be drawing, you’ll be trying to communicate with people in the schemes. If you can’t sketch it’ll be a significant handicap and I definitely see that at the student level.

LT: and how does it affect the design, is it the quality of design solutions, is it the variety of design solutions, how would you kind of describe that?

JB: we should talk about metrics at some point because I have some strong feelings about that. It’s hard to say because it’s quality or novelty, they generally have very few ideas and the ideas that they generate are not well thought out. Not necessarily that an individual representation is in-depth, that’s not what I mean, I mean they have not gone through the effort of thinking through whatever the problems and their idea is until they’ve sketched it out, and then again until they’ve prototyped it they don’t see a lot of the other remaining ideas.

LT: so it’s almost a set of assumptions are being made about whatever it is the design because they haven’t gone further through the process to question everything they’ve done.

JB: Right, there’s a really good paper by Chrismond and Adams and they talk about some key elements that analysis often lacks, (…) The bottom of the table on the first page it’s pattern D, surface versus deep drawing and modelling and on the far left column proposed superficial ideas that do not support deep enquiry and then in the middle column it says explore and investigate different ideas, and then there’s an additional idea that’s been made in a different paper, let me see if I can find that, anyway the point about this one being that they are not really getting deep and I definitely see that as well. The point in the other papers that until you prototype you don’t see the problems between the elements you design, so the interfaces is where there’s always an error and until you’ve prototyped you don’t see that, I think that’s (…) you don’t see the problems with your (…) you don’t even see elements until you’ve thought about them.

LT: with your students who are sketch inhibited and do struggle what kind of symptoms, I was reading about the different types of symptoms of social and peer related issues, what kind of symptoms do they display? It sounds a bit of a strange question but I’m interested to know how students kind of…

JB: this is my paperwork, the interventions the teaching sketching skills reducing inhibition, do you have that paper up? If you go to section 1.1, factors inhibiting sketching, on page 3, so there’s a bullet list here, these are considered sources (…) as far as symptoms are concerned, I think this paper also talks about some of the symptoms, okay so, in the figure this metric was, this table shows what we have observed between novice and not novice individuals so
especially on the stroke length, that’s something that I found on another paper as well, inhibited students can have very short stroke length, especially for a large curve. Having a large spread of strokes or having a single stroke, a single stroke is kind of a medium thing, it’s not a major indicator, but having really really scratchy sketches, or having lots of tiny scratches are both indicators of feeling inhibited. I would say also at the very top, in this right column of the table, I think shows this, if they’re filling a small portion of the page, that’s also an indication often, similarly, if the lines are wobbly, that’s an indication that they are taking a long time to make the line, undertaking a long time because there’s so worried about the action of sketching, that they are not focusing on the feeling of sketching.

LT: do you also notice the more inhibited, less confident students are really into using erasers, they spend all their time rubbing out and erasing everything?

JB: absolutely, so one thing we do is we try and make them sketch with pencils that have no eraser and we don’t provide any, or we make them sketching pen. I had an artist back in high school show me that I shouldn’t use an eraser and I didn’t believe him at first, but eventually, because I started taking all my class notes in pen, (...) so a lot of the mistakes that they’re making are things that I kind of worked out for myself at high school, anyway at some point I realised that taking class notes in pencil wasn’t any good because I’m left-handed so I started using a pen but I also doodled during class so it meant all my doodles were coming out in pen, so that started in college and (...)

LT: students who can’t draw, they don’t like being made to used pen, it’s too definite, it’s too much of a kind of commitment for them, that split second of having to make a line, it’s too frightening. When you have students who are inhibited, do they behave strangely, do they disappear, do they invent illnesses, to they have all sorts of excuses, what kind of thing today do to actually avoid going there a piece of paper and a pen?

JB: usually they just sit in front of the piece of paper with a pen and then they’ll just start writing, so they won’t necessarily go away from a situation, but they will minimise the amount that they have to sketch

LT: do you have an issue with absenteeism with students who don’t want to do it?

JB: no, because generally in their class when they do it, if we have them go home and do it, it just often won’t get done.

LT: no sometimes we have students who will just stand up and leave all they’ll just become ill, although will just disappear for weeks and weeks and they turn up last thing with a few bits and I think that’s going to get them through, it doesn’t, it doesn’t, the lengths they go to is extraordinary. Your paper covers things like social and peer related issues of sketch inhibition but, I’m thinking about, and this is something which have only just started to realise exists, cultural and religious issues affecting sketch inhibition, I’ve never considered it until I interviewed the interior design head at De Montfort, and she has students who come from, well they are Muslim students…

JB: we don’t have a big problem with that

LT: no, well she hadn’t until she had lots of problems with the student having to put figures into images that she was coming up with. Are there any other cultural things, I know there are certain cultures where drawing and sketching and baring your soul on a piece of paper is
considered to be too frightening because it’s not conformist activity, is there anything like that at all? I don’t know where your students come from, whether they U.S.-based or whether they come from all over the place, are there those kind of issues?

JB: I haven’t noticed that, I haven’t noticed that, roughly 60% of students U.S.-based, the remainder are generally from China or India. Purdue has a very high international student population for a United States school. One thing I’ve noticed with the Chinese or Chinese culture students is that it’s common for them to draw one thing and put a lot of detail into that one thing.

LT: I’ve got a handbag designer and he will spend hours on the most intricate drawing, it won’t physically work, it’s not something he can make, but he will put everything into the fine detail. He’s from Taiwan actually, but yes certainly we have a lot of students from mainland China and Taiwan and also South Korea and they don’t like to be seen to not get it right on paper. They are very kind of anxious.

JB: I hadn’t considered that but that would be an element for sure.

LT: and then the Indian students, the students we have from the Indian subcontinent, there so kind of dedicated and focused, they don’t care, they will just go away and produce to make you happy with them.

JB: I hadn’t thought of that but I think that would be an accurate perception

LT: they are very compliant, not in a bad way, they are very compliant, there are slight differences in the cultural make up which make them quite interesting to observe. Are there, I don’t know what split of gender there is on your courses, I presume it’s slightly more male dominated than female being engineering, or am I making assumptions?

JB: it is roughly 90% male, 10% female. It is between nine and 11% female.

LT: other gender issues with students who, I think in one of your papers, the workshop paper, there were issues with female students being more confident in their work at the end of the, is that right? I’ve read that somewhere, maybe it’s not your paper, I’m embarrassing myself. It mentioned female students being more proud of their work once they had gone through the process of doing some sketching and having some kind of structure to their teaching. Are there gender issues, do girls hideaway, do boys hideaway, I mean how do sets work?

JB: so are there any issues? Yes. I don’t know if I can characterise them well though, there’s a lot of uncertainty in what I’m saying, I think it would be fair to say that females, one thing I observe often in our classes and I’ve read this in other papers and that’s also maybe where I’m getting the idea, females in the design groups tend to take on secondary leadership positions whether driving the project but they’re not actually in leadership, where they’ll take on something like a secretarial role, where they will end up becoming the core person to the team but they are often choosing or being forced into subservient roles. I think it certainly affects things, you’re asking in regard to sketching though and I do recall that at least one paper we found there was a gender influence, I don’t have any idea what that was, so we tried our best to interpret that and because I’m a male I want to be really careful about making assertions about what’s going on with the gender difference, because I don’t want to assume things that I don’t know, so that’s where the uncertainty is coming from. I wouldn’t feel comfortable in saying what is happening
LT: okay, that’s fine, can I go onto age-based issues. I guess most of your students are of the 18 to 22-year-old bracket age group, do you have students who are considerably older, more mature students or are they all within that sort of early to mid-20s bracket?

JB: if they are considerably older, they are about 22.

LT: oh right, so they are the oldest? Right, okay

JB: in the second year level they are all about the same age

LT: so do you ever have students arrive who are over 30, over 40? I guess not?

JB: I’ve never seen one in the undergraduate programme, in the graduate program that’s quite common.

LT: based on that very limited understanding that they are on the graduate programs, does the age of the individual enable them to overcome issues of sketch inhibition, of lacking know confidence, and ability to get ideas actually down?

JB: no, I wouldn’t say so, I’d say that it has (...) used it in their job, so, is to use it in their job a lot I think they would be fine, if they’ve not used it in the job a lot, generally, I think, from what I’ve seen and again this is a very limited number of cases, it’s almost anecdotal, it is anecdotal, I would say that yeah, if they use it in their job they have practised it they often value it’s, but if they have not practised it or they’re not comfortable with it, I think they’re even more resistant to it than the younger students are.

LT: really, and why do you think that is, based on your experience?

JB: I think, if I were to speculate, it would be because they are set in their methods and set in their ways, not that they can’t (...) but maybe they’re more comfortable not doing it, that’s purely speculation.

LT: can I go onto the whole kind of teaching and learning of sketching? This is a really strange question which a lot of people I’m asking are going, oh, I’ve never thought of that before. How do you teach your students to design? It’s always assumed, it seems to be assumed that sketching forms part of the early cognitive support process of design, and that the design process, from what I’ve seen seems to be something whereby you go through various stages of producing things, tangible things to prove where you are and to communicate where you are, but the whole idea of concept development is something that a lot of students can’t get their heads round, and it’s not something that is taught, it’s always assumed that it’s a kind of inherent thing that designers just can do. It’s an intuitive thing. Do you teach designing, do you teach that process or is this again assumed to be an intuitive thing that students will just do?

JB: for me personally, when I am teaching I am often (...) In engineering, modelling is a very significant portion of what we do, so doing some kind of analysis, and one concept that students do not understand about modelling or sketching or prototyping or any kind of representation, is that it has to be from a high level of abstraction, very back of the envelope sort of thing, so if you’re building a bridge, the very first thing you do this you get the equation for modelling a cantilever beam, or beam that is supported on both ends and you estimate roughly the weight of that beam and you estimate how many cars are going to go over it and you check it out and that should be a five minute calculation. And now you add an assumption, what assumption are you
going to add? You refine your model, and refine your model and refine your model until you have a very complex model that you eventually put into a computer and you refine it further. That’s a very common practice used by engineers in practice, that is often lost to students when the learning engineering. So when I teach them how to design, I teach them both that and the design part, by saying this is something you need to know, you need to stop with some very abstract thing and refine it, refine it, refine it. And I do that primarily through the vehicle of sketching. Once they’ve gotten sketches that are nearly about half of the way there, I start encouraging them to stop prototyping. And then I use those prototypes to say now you need to go back and refine them with sketching, now you need to go back and prototype, now you need to go back and you need to take this to CAD, you have some rough dimensions here, and I try to discourage them from using CAD until they have made a prototype because they’ve got to have at least a rough idea of the size and scale, because often if they just jumped straight CAD from sketching the scale is completely out. So I don’t have this answers your question but in short, when I teach them how to design I deliberately try to teach them how to do a model based approach, meaning that they start with a very generic model, partially to teach them how to design as well as to teach how to do analysis.

LT: it’s interesting the engineering seems to have a better, more formalised approach, I’m just thinking of, for example fashion and textile design, they kind of feel their way through, it’s a much more kind of touchy-feely intuitive thing. Obviously fashion designers don’t work with the same kind of calculations and structural engineers to, it’s a different process

JB: actually, that is the reason they’re different though, because when you’re in an engineering firm, you have to give somebody something at some point to say, your project is a multi-month thing, with fashion design you have three weeks, and because is a much longer timeframe the company wants to know what you are (…) make sure that all the steps are being followed properly, or the elements of their, all of these very complex frameworks that you have to design within to ensure that you’ve touched every element

LT: so, maintenance of sketching skills, ideation skills, do you actually have any formalised teaching for that or is it assumed that once students feel comfortable with being able to work with their ideas on paper, that they will maintain those by your project-based learning?

JB: we do not have any of those implemented (…) Is them required to keep a notebook, an idea notebook, not necessarily required that they do a certain number of things or even just deciding that they have to do something periodically, in the toy design class we did we did have a periodic exercise where they had to sketch things. That was partially implemented but it wasn’t fully implemented, generally though we rely on them enjoying it and choosing to continue practising on their own.

LT: how do you manage students who are sketch inhibited, or do you just ignore them?

JB: the goal of our sketch inhibition work was not to get every student to stop being inhibited, it was to get fewer students were inhibited, and so, yeah, at some point we just let students go because not every student is going to pass every class for example.

LT: you do sometimes feel as if you almost take on too much of what the student’s dealing with. You have to kind of step away and let them go don’t you sometimes?
JB: our goal from the beginning was never to make everybody a good sketcher, it was to make everybody a little better, and a little bit if they want to, so your question was (…) we just try to adjust those that we can and we kind of leave the rest to the wind.

LT: okay from your experience, this kind of the last question so, half there any potential sketch inhibition management approaches that you have found useful which possibly aren’t in your papers anything, for example I was talking to a lady from Montréal University last week, Tatjana LeBlanc, do you know her? She was talking about students having to produce quantity, they have to produce quantity of sketches, it gets them beyond this fixation and clinging onto the first idea. I just wonder if you have any other kind of tools or tactics that you apply to kind of help them manage the levels of inhibition amongst those who suffer?

JB: absolutely, if you go back to the paper I have, we have a list of things that we do, on page 6 and it’s table 1.

LT: I’ve been doing something similar to this not knowing that you had this. I came up with an idea from reading a lot of these papers I came up with the idea of making students have to mentally image and then place on paper, so they couldn’t just place on paper, they had to create a whole environment in their minds before they made a mark. Then the other way round, I made them make marks and then sort of tell me what they could see in those marks and develop those, so there were two separate, and you’re doing things which are kind of, almost a little bit painful for them, you can imagine them wincing at having to do some of this, but it’s so useful.

JB: well that was actually the purpose of these things was to make them uncomfortable, you can see in the purpose column a lot of this is to do something uncomfortable. So the thing that you just described is either in Robert McKim’s book or it’s in Betty Edwards.

LT: it’s actually based on Gabriela Goldschmidt’s work which is probably based on, because it was kind of written a bit later than Betty Edwards.

JB: I think Tatjana from Montréal, I think that her method is on point, it really is about quantity, there’s an anecdote about a sculpting class where one section they were forced to create a new sculpture every single session, and the other section they worked on a single sculpture for the entire semester. The difference in quality between the two sections was very different by the end. Enforcing a quantity is very painful for the students, but that will get you the results you want, it will give you low teacher evaluation, but will give you the results you wanted. The other thing you can do, the reason I bring up this, this chart, the most effective thing on here is number nine, to draw a person three times fairly fast, fast, faster, so the point of this exercise, let’s see, in the figure right above it, we have them draw lines first and so we get them practising lines before they start, I’m sure you do this in architecture as well, so we have them do that but then we have them sketch anything, and then they have less and less time to sketch the same thing. You can switch that up and it’s a different thing each time, but by forcing them to do it quickly, that will stop a lot of the inhibition, quantity is also part of it. Sometimes I think that there are people who go for the quantity maybe go a little bit overboard. When I was in senior design, they wanted us to make one hundred concepts before we could move on, and so we had five good concepts and we just made a bunch of BS for the rest. And I don’t think we even got to one hundred. I think that that if you give a number that the student feels as reasonable, it still pushes them a little bit, I think that you’ll still get good results.

LT: Right, so the speed and enforcing the quantity role is, yeah that’s interesting.
JB: but I don’t think there’s and needs to go much beyond fifteen in any session

LT: no, because I’ve seen students get to that stage with a kind of putting themselves and, like you say, you get to the point where you think, or my brains kind of worked out now I can’t do any more, but I’ve got to keep doing it so it’s just literally going through the motions, and you can see them switch from that mindset into this, I’ve just got to do this to keep the tutor quiet, and then you know that the game’s up then isn’t it really?

JB: have you heard of Barry Kudrowicz? He’s done research on ideation and his primary focus has been to the traditional ideation metrics actually measure what they’re meant to? And the short answer is no, they don’t. But he has a very interesting study where he looks at the quality of the concepts, and which concept in the sequence it is, and for most people he found that after about concept eight or nine, then he’d gotten some really interesting concepts. You have to kind of go through a few just to get warmed up, and then you have a limited window. An industrial designer I worked with, you wouldn’t know him, he kind of said you really shouldn’t brainstorm for more than twenty or thirty minutes at a time, I think barrister something similar as well, because you do get burned out and if you burn out then you can’t really recover that, that day. So forcing them, the speed is really important, but then after they get to a certain number, you want to get to the point where they can get to nine concepts, I find the rate at which students usually create concepts is about one per five minutes, whereas for a professional it’s about one every minutes, and so the speed is a really big deal there.

LT: okay, that kind of mirrors what Tatjana LeBlanc was saying about forcing students into this mind set of quantity and when they get to this stage when, they start out producing what they’ve seen in class because it’s easy, they kind of mimic what they’ve seen, and then they suddenly get to the brick wall, and that’s when they move into this stage of productive, being productive designers, and then now you’re talking about getting to that top end of the threshold and then your brain has burnt out and your, kind of, you come down from that really quickly. But there is this sort of little section in the middle of that process, which is, appears to be where the designs come thick and fast and that’s the most kind of useful part of the process. That’s interesting, thank you. Is there anything else I need to know?

JB: if you choose to use design metrics, the quality, quantity, novelty, elaboration, one thing you should know is that those are correlates of creativity, they are not direct measures of creativity, and so the only place that those have been validated as creative measures, and they haven’t actually (...) in this context either, is for diverging thinking tasks, so if you’re doing a problem-solving task, there is no expectation that those metrics will be useful. That said, everyone who publishes is going to use those metrics, whether it’s problem-solving or not.

FIN
Interview with Dave Bramston

Interviewer: Right okay so could you just kind of introduce yourself Who You Are you know where you are at and what you are doing just to kind of give a brief bio to yourself if that's okay?

Dave: My name is David Bramston, I am a principal lecturer in the school of design at the University of Lincoln. My background is industrial design and I am also the program leader for the MA International design Enterprise program. And my job takes me to China quite often so I work a lot with Chinese students in Chinese universities. So the question about drawing initially when you are talking about drawing, I think it's interesting to Define what drawing is, for me or traditionally drawing has being understood as somebody taking up a pen or a pencil and putting down an idea a thought or an observation on a piece of paper. And there are definitely students that struggle with that and it doesn't matter how much you teach them they still find this very difficult. I think that some students will design to their limitation, so they will have an idea but because they can't communicate it they can't draw it. They refined their idea on what they are designing which is a real shame, and this is why actually I see so many students that are now jumping straight onto the computer and I think that's a disaster. The student that jump straight onto the computer who is actually very effective on the computer is not necessarily a good designer they are not a good thinker, not necessarily a good thing and I've seen too many example of students work that has been produced on computers images visuals renders whatever you want to call them, where they haven't actually work through what the problem is and I think this is what traditional drawing with a pen and a pencil and paper actually gives you. Having said all of that I think there is drawing is not actually limited to just a pencil or a pen and there are many instances where people refer to sketching [unclear 2:36] using pen or pencil. So for example Martina Giampa a designer in London refers to 3D sketching, this is the sketching of ideas or the initial thoughts and exploring the language of thoughts by bringing objects together by bringing found objects together, and this was seen in his work 100 chairs in 100 days, a whole range of exciting ideas not finished ideas or not finished ideas as far as I understand but ideas which makes you stop and think and look at the narrative of what a piece of furniture could be. And Martina Giampa is just one example of many designers that are bringing objects together and have done over the generation to create sketches. So Castiglione famously did it with work such as [unclear 3:50] which was found objects the racing bike seat on a stick but that's not to say that he didn't sketch beforehand I am sure that he did, but he was using found objects in pieces that he was producing. So
when I am teaching I am trying to teach in many different ways I am trying to teach traditional sort of sketching and I am trying to get students to generate ideas I think this is really important to pick up that pencil and that piece of paper and to work with that, but I am also trying to get them to sketch with the found object. There are different terms that different design offices will use, they might call them dirty models or they might call them junk models and quite often they are finding things around the room to bring them together to create a representation of a thought or an idea which then can leads to more discussion within a team for an individual to understand more. I think the 3D sketching these junk models is actually really valuable assets it's a really valuable vehicle for understanding what it is that we are working with. For me I like the pen and pencil and sketch pad or a piece of paper I think this is really important.

Interviewer: What it is about that, that you like?

Dave: I think it's so instance it is absolutely instance and I think that there is a big difference I think anyway between the artist and the designer, and I think there is a lot of confusion here. When you go into a school and what I mean is a secondary school and you start trying to teach design to students, and you talk about asking them to sketch an idea they will do it as though they have got their art Department head on, so they will spend a long time in sort of putting down an idea and they are putting down too much information. Sketching and design to me is like shorthand it has to be something that is instance. And actually the more experience I get and the more work I see [unclear 6:21] the more I see the Sketchbook work being a sort of shorthand of drawing, and it's really important that we do that you know you go to a Factory and you have got to suddenly communicate an idea it's a shorthand version of an idea but it's enough to communicate to somebody what it is that you want. To give you an example I once went into a school and I asked the students just to draw a spider and I gave them half an hour to draw a spider. And essentially what I got was a body with one leg with lots of hairs on it and lots of detail and it looks like a fairy lollipop, but I give the students then 30 seconds to draw spider and they cut out all of the Shadows and the hair and the rubbish that I didn't actually need and they put down to the essential information which was a body and eight legs. It might not have looked like a very good spider but that information was there, and I think this is the key you know to what sketching is and what a piece of artwork is. Okay now you might have to fire questions at me as well.

Interviewer: Okay on your courses because you are kind of overseeing various courses I understand. Can you give any sort of quantifiable stats or
data for the numbers or proportions of students who are sketch inhibited those that will do anything to avoid it, those that are very happy and comfortable and will come with sketchbooks and you know anything with? Everybody is struggling to kind of convey that but that's the bit I am kind of intrigued about if you could pull anything from your memory.

Dave: Well we don't have stats on that you know it's sort of like you know I suppose it's like when somebody is teaching you to drive a car they don't keep stats on who is using the brake at what point or whatever so we don't have that sort of data. Typically, a student coming into an undergraduate program they will be set typically a 6-week project and part of that would include research and a part of that would include a series of design sheets and sketch sheets. And there are some that will run with that very, very quickly and very confidently and there are others that will not do much at all. One of the problems that we see is that a lot of the students will rub out an idea or cross out an idea, and at the end of the morning they may be exhausted and they've probably done 20 ideas but actually they have only got one on the sheet.

Interviewer: Right so they feel the need to erase.

Dave: They keep erasing or throwing away and I think this is a real shame because actually when a tutor or somebody else can come along and see that rough sketch, they might even interpret it wrong but there is an opportunity there for an opening for an idea to evolve and developed.

Interviewer: Yes, there is a point of reference a kind of avoid point in that process.

Dave: Absolutely and there's been many times where students drawn something and I have interpreted it wrong and have not really understood what they have drawn, but we have had the discussion and I said oh is that such and such. You know it's like the child talking to the parents you know from the primary school drawing, and the parent says oh is that a bus and they know this an arrow or something. And sometimes the sketching can be like that so even if something is put down it always ends up being useful, because it can always be a trigger to a conversation and something that can lead to possibly a different direction to the one that was initially intended. So I think we don't have stats as such but what I do know is that from what I've seen in the UK students can draw generally better I think out of their head out of their minds they can draw they are more confident in doing that, in fact they prefer that in most cases to doing observational drawing but then I am in the area of design and not in the area of art, and if I was
teaching art students they may say well I prefer observational drawing. But what I do see in China particularly the younger cohort so foundation courses all of the level 1 degree students, is that they are not so confident to draw from their head but they are very accomplished at following the master and doing step by step portrait of somebody which when it's finished they all look as good as the master that has delivered the class they all look amazing you know so technically Fantastic. The creativity is not there initially with what they are doing and it's the reverse from what I see anyway in the UK, what is nice is that these days you are getting the design offices which are the International design offices so actually you have a mix of all of these cultures coming together and I think that's where it's really strong you know because you have got the best of everything.

**Interviewer**: And can I just direct you back to your overseas students, you work particularly with Chinese students. What is it that makes them less confident obviously they are good at the copy and they are good at emulating and the technical stuff, but what it is about I don't know if you have identified anything or could suggest anything, but why are they less comfortable working from them of Imagination or their mind's eye or whatever you can call it.

**Dave**: Okay well firstly I will just go back slightly on what we just said. They are very good at following the class and the master, I think there is a you know copying is not a word that I want to use because there is a big impression I think in the west that a lot of the students in China are copying and blah, blah, blah. You go to these classes and you go to their exhibitions and I have been to many and very rarely have I seen anything I've ever seen before, everything that I see in their shows and their final shows as far as I am concerned it looks like original work, and I see a lot of work I see a lot of work in different exhibitions around the world. And so this sort of mind-set that we have in the West that everything's being copied I think that it's not correct but there is a lot of respect traditionally there is a lot of respect for the master or the professor in a Chinese Studio or a Chinese classroom. And the student has been well very respectful of that and what they are told to do they will do and they will do it well and the job gets done. It is changing as far as I can see it is changing very quickly I think that in the last 4 years it has been far more confidence amongst Chinese students. They are far more willing to offer up ideas and to speak out loud, they are still very respectful you know but the way you would enter a class 5 years ago where it would be deadly silence you know they would do exactly what you told them. Now there is a discussion an openness in the classroom and its very noticeable right across China because I work right across China. And the design schools are developing at a rapid pace and the final shows
in those design schools those undergraduate and postgraduate programs are Fantastic you know they are fantastic and it's a shame that more from the West don't go out to the East to see actually what's occurring because there is a lot that's occurring. I think that with this confident is becoming more confidence with their open drawing and their sketching, and I think that, they are certainly good at drawing but they are good at very directive drawing still but it's changing I mean in some of the higher levels program post graduate programs and some of the leading universities the sketching abilities of those students and creative ability is phenomenal it's right there.

**Interviewer:** I saw some of the design management conference in Hong Kong, and they've got their degree show and there are some amazing architectural drawings and model, looked stunned for an undergraduate it's incredible beautiful.

**Dave:** I think the universities have moved on and I think they are moving at rapid pace and they are being built at a rapid pace. The high schools have still had quite strict structure, and not that I've got too much experience with the high schools but I have seen High School's work in China, but when you see the students come onto the Foundation programs you can see that there is still a reluctance to try something new, but actually after a short amount of time their confidence comes out and they are not dissimilar to what I would see in a UK Studio.

**Interviewer:** Okay that's changing quickly then isn't it because you are talking about the last 4 years that's brilliant okay. Are there any issues of gender and we are talking about some cultural issues but are there any issues of gender or age around a fear of sketches or disinclination to sketch?

**Dave:** I don't think there is I can't see any difference whatsoever not at all, in fact no I can't see any difference there I don't think there is anything. Age.

**Interviewer:** Yes, sometimes more mature students have had slightly different approach, they have been doing their own kind of evening classes night and school and other courses so they overtime created quite a.

**Dave:** Age is related isn't it to the confidence really and I think that the younger students in education seem to have always have that confidence you know, and I think that if you've got confidence and you are enjoying sketching and you are happy to make mistakes and you recognize that
making mistake is just a part of the process then you move quickly. I think the older students when they come in they may have the skill-set because they may have developed it in industry but if they haven't sometimes they might struggle, it's confidence I think you often see sometimes you will see a student's maybe not often but sometimes you will see a student, as you understand what a sketch sheet is or what a sketch drawing is. They've gone through this process certainly in the UK which I think is very restrictive when they are going through A-Levels or they are going through GCSE, and look at their design work that they have done it's a sheet full of writing usually, with a few pie chart and a few images, and there might be one drawing in the corner and that one drawing in the corner represent a thing that they are going to make in their [unclear 18:38] technology class or whatever but that one drawing hasn't come about from a process of 100 sketches because design means to plan it means to plan, and sketching is part of that planning it's starting with something very vague and refining it continually or that's how I see it, but I do think it can be a mix between the found object and the junk models and the sketching, and there's a lot of people that are sort of doing that work.

**Interviewer**: Yes, and as the interior designer [unclear 19:14] very much into producing a white card sketch model very, very and drawing from that, if they have trouble visualizing you know with the mental imagery. So with that it's a kind of iterative process between 2D and 3D so yes that makes total sense. Have you got any ideas or thoughts about how to get around inhibited students, any practices that your kind of encouraged or things that you make them do, ways of doing things to kind of get them away from the fear to encourage. Just the sketching just getting their ideas down and working through as a process?

**Dave**: I think one of the scariest things for students is actually the white piece of paper that you give them, I think this is a very scary moment and you are then asked to perform and put something down on that piece of paper. And you have to, I think you have to try and lose respect for that piece of paper. And in fact when we've gone through when we've seen it sort of A-level work, there is a lot of respect for that paper there is too much respect, you know the best handwriting has gone on to there and it's all in columns. I know you are recording and you cannot see this, but this is a form of sketch and it's done very, very quickly and I don't know what it was about but it has communicated probably to others and idea and thought or a process. And I think that if students can lose those inhibitions and unfortunately that teaching that they have had pre-degree and feel a bit more open about they do. So good ways of doing it I think is to give them large pieces of paper you know so it's no longer as restricted form. If you
give somebody an A4 piece of paper and you say do a drawing on there it is actually very difficult, it's much easier to draw when you got a bigger piece of paper I find anyway. If you are starting off to try and lose those inhibitions give them and Implement them to draw a way which is unusual. So maybe a marker pen not something that's like a 9h pencil which is so fine, the young students will often use these architectural type pencil. [Two person speaking 21:54]. So they will come with their architectural pens to do their sketching and this is a disaster you know. I like students to use [unclear 22:05] or black pen because they can't rub it out, I like them to use initially quite big chunky pens maybe a Sharpie or something like that or maybe bigger so they've got that movement they have got that I wanted to put a few notes but limit it just to one or 2 words but not lots of language. I want them to pass those drawings around so maybe they do a bit and then they pass it to someone else and they add to it. And we lose that so at the moment somebody else is added to your drawing and it's actually quite good because in a way you have lost control of it, so it's no longer something which if there is a problem with it that the individual doesn't like they can say well actually you know that was a group thing that's my own. So I think working on big scales quite often you will see tutors get a long roll of paper and everybody would do lots of drawing on it, and I think that this practice is very good. I try to say to students also you know from a commercial point of view, if you do one tiny little drawing on one piece of paper and you end up putting 10 drawings on that one piece of paper your client might say well you have only done one sheet. Whereas if you work on a slightly bigger scale and your client might say well actually you have done 5 sheet so that's quite good, you know so it's sort of working on a biggest scale not only makes it easier to communicate to people but it opens it up so that everybody can see sort of what you have been doing. Cultural and religious issues I don't know.

**Interviewer:** Yes, I spoke to head of Interiors and with a couple of the Muslims, they couldn't just sit and draw human figure they have to go and get permission from their MR to do that which I never thought of. And some of the guys doing life drawing over in one of the other departments, so they refuse to use life models for their observations they would work from cost but you know they wouldn't be allowed to work from sort of Life Model so that was interesting but I mean obviously you've spoken about your Chinese student that you have observed over the years. I don't know if you have a lot of international students at Lincoln?

**Dave:** I think most of the universities have international students but my area is design and not art, and from what I can recall I don't think there has
ever been any sort of occasion where religion or culture has actually been a hindrance to anything that we wanted to do as far as catching.

**Interviewer:** Is there are other issues of confident around certain cultures more so than others?

**Dave:** Well as we sort of said people say about the Chinese that there's a little bit of confidence there, and we talked perhaps with an older student maybe there is a confidence sometimes but I mean that's pretty generic, but I think it is our job to instil confidence and you know we all have these tools that will allows us to get rid of those or build that confidence, so drawing on the big paper and using the bigger type pens and sharing the platform for people to communicate ideas. My own work I tend to use a lot of found object to develop ideas I am a big fan of that, I will use sketching you know I do like sketching but I will couple it very closely with the found object and I can work quite quickly in that respect.

**Interviewer:** You prefer it like a three dimensional approach [unclear 26:10] in 2 days?

**Dave:** What I like I like a mix you know and only this week just saying to students that my, post grad student actually if you are getting, finding a particular task card don't just stop full stop either tackle it a different way or do a different task, go or change the environment and go somewhere different keep moving forward but change the task. And I think for me making the generating the ideas with the 3D objects that I find along with the sketching gives me that sort of that mix and is able to then sustain interest rather than just days after days of sketching.

**Interviewer:** Okay brilliant right I think that covers my memory I think that kind of covers really, pretty much everything that I need to know, thank you very much.

**Dave:** Well you are welcome to have my email if you want to.

Audio Finish 27:12
Interview with Simon Downs

Interviewer: Okay oops my cat just jumps on here oh he's gone now. Could you just start Simon just for my record here by giving me a quick sort of bio slash, just a brief background of Who You Are and what you do and what your background is for my record is that okay?

Simon: I am currently an academic my teaching is I teach visual communication which incorporates graphics and illustration. I worked in practice as a designer and as an illustrator for about 10 to 15 years. Before that I did a degree in illustration before that I did a B Tech in general Art and Design and before that I was at school. My research was originally on the effects of production technologies on visual communication, and then I worked out but that was much too big, and my last taught papers have been about possibility of testing so basically about epistemology as a visual communication.

Interviewer: Okay thank you right, so you are kind of interesting because you come to this not just from an academic point of view but also with your kind of industry experience which is quite handy. The things that am going to ask you about are more to do with education though but if you have got industrial experience that you can drop in that would be great.

Simon: Well that's why I ended up in an epistemology of the subject because there are a great many in our field proposition statements about everything from education to practice, and there are very few evidentiary statement so yes.

Interviewer: Nice interesting okay regarding your sort of institution at the moment, could you give me an insight into the [unclear 2:16] attitudes towards manual sketching and manual ideation tools during this sort of early-stages of design across whatever discipline that you are familiar with if that's okay?

Simon: Yes, sure as an institution we are encourage stroke ordered that we deliver research-based teaching. I had been fortunate to be associated with a group of people who they operate under the title of thinking through drawing, and they have been heavily influenced by a woman call Barbara
Stansky a fine lady. And the interesting thing about Barbara's formal psychological research on the subject is that it pretty much evidences, and the evidences a lot of the practice that I was taught earlier on in the industry, so whereas certainly I was told that you needed to work through your ideas on paper but certainly up until I graduated never explain why this is a good thing, as opposed to sort of like I was told it was just a virtuous thing to do [unclear 3:39] work actually the evidence is that different part of the brain operating and different part of the thinking processes operate in response to a stock file that's making shapes on paper. [Unclear 3:54] across the board whether we have graduates who go into advertising which we have lots or animation which we have lots of, or I've just been talking with the guy that wants to be working in the junction of service design in the [unclear 4:10] so we had a lot of people to do that kind of stuff, all of these are processes where they outcomes are technically very heavily mediated and very expensive to get [unclear 4:20] whereas paper it's extraordinary cheap and it's a way that you can share it with a team, and as I have said Barbara Stansky evidence the fact that it actually does something different for the participant working with the piece of paper in terms of allowing you access to your interior dialogues in a tangible form and see if they actually fit the purpose. So we teach a lot of drawing we have people at the moment in our first year who are some, a third of them are doing life drawing to teach them how to observe. A third of them are working on a concept drawing because they are looking about the interaction of figure and ground in making somatically significant Communications design. And a third of them are doing perp drawing because they are going off and doing photography project, and this is standard everything that we do starts with drawing.

**Interviewer**: Okay for designers just talking about the observation side of their practice. How do you perceive the importance of observation drawing as opposed to conceptualizing through sketching?

**Simon**: Well they are different functions and the benefit of one of the things which I was told when I was a student and subsequently turns out to actually be you know evidence as opposed to be oppositional, is that I was told that the reason that things like wildlife and biological drawing were difficult to replace, is that if you looked at a rend, every rend if significantly different from every other rend but they all have the same characteristics. So by actually drawing from the word and teaching yourself to select those Elements which are significant, and then formally sitting down and editing and curating those elements that are significant and then making drawings from those, you actually get a kind of aggravate rend
which is more significant and useful and true than you know a photograph of a particular rend, thinking about of a small brown bird, so that tends to be true. The ideation process is really interesting because most of the students that I've work with are very sharp cookies and most of the time they get to the right idea or an unappropriated and viable idea immediately anyway but there is a significant proportion at the time, probably about 15 to %20 if we looked at it where they will get eventually to the right idea. So by forcing everyone all the time to actually have a process a time where they do nothing but sit down and think of a good idea and put it on paper and respond to it, it ends up as being quite beneficial in the end not least because every one’s ideas in their head are beautiful and clear and wonderful and [unclear 7:19] plastic as toothpaste. Whereas if you can actually put down a sheet of ideas and one of the words as a crappy and pointless little piece of a drawing that took you 5 minutes to do of no significant quality at all, but the idea just you know it look strong even at that level. Once you've actually spent the time and resources of a good design studio and you've mapped it up it all look absolutely amazing. So it's probably better cognitively since humans have very limited cognition, it's probably better to cognitive divide down the task into [unclear 8:00] and phases. Draw and think about the idea and then draw and develop the idea and then make in some form however expensive it happens to be but only do it once.

**Interviewer:** Okay asking about students in particular now, your undergrad How do they present themselves to their courses what do they kind of demonstrate or show you during the selection phase, and how do they arrive on the course what do you get?

**Simon:** Let me think I'll be trying to careful about this because I am speaking about institutional issues now. We have about as well educated and as socially advantage and intake as you could possibly get in a British Art School [unclear 9:00] the undergraduate level, and I have taught at De Montfort in the past and I am aware about the differences and it's a very significantly different group of people. We also massively over recruit every year which means that we have a right to say no to student in a way that you don't at DMU. So currently we take about one person in 9 from an interview.

**Interviewer:** Oh really gosh okay wow, can I come and work for you, I didn't say that, I didn't say that.
**Simon:** I am no longer program director but I could give you a names of someone if you want to speak to but.

**Interviewer:** It just sounds a lovely position to be in I am very envious of you.

**Simon:** It's really nice because most of the time you can challenge people to be better. I mean I don't know you've got nice things like the DJ Hotel building and it's very pretty, and we actually work in something that look like a set from Grange Hill but then that's because our Pro vice-chancellor said he would rather not spend money and spend it on people, but I am not going to actually get there I am not going to get into management task. So anyway so our people are they are very, very good they do tend to be rather nervous. The massively confident ones tend to go to London College, so the ones that actually believe and know in their heart that they are in fact the next great designer of the 21st Century they go to London, where as we get people who are very talented but what they do need is they need a lot of gentle persuasion because actually that have something useful to say, but they tend to be pretty good draftsmen or equivalent high quality in something like photography or digital art working or something like that.

**Interviewer:** Okay so you recruit I am understanding that you recruit, I am assuming here from B Tech Art and Design base courses from foundation and also do you recruit directly from A-level?

**Simon:** Yes.

**Interviewer:** Okay so all of those 3?

**Simon:** And wherever the current qualification is called from the University Art of London their Foundation and international baccalaureates. And we generally have about 10 to %15 of International students from places like India China and America, you know we do seem to get a curious number of Americans which is interesting.

**Interviewer:** Really we don't get Americans, we have I mean I am sure that you know at De Montfort we have an awful lot of Chinese Taiwanese Korean Indian students but %15 is I mean, I teach on a master and its fashion and textile I teach the modules, and I think over three-quarters of the students are overseas and yes it's an interesting mix.
Simon: That's what we have but postcards undergrad is as I said is doing quite well. Yes, well that's nice it's a lottery in my picket fence when I was a program director I have been told by a previous manager that, his quote to me was if I could get 5 or 6 ex or International students on a regular basis he would give me another Staff Post, and I did it and he did.

Interviewer: It's the same everywhere.

Simon: It is and we are [unclear 13:01] and we believe it.

Interviewer: I know you get drawn in don't you. So when students come for interview what kind of process do they go through and what do you look for in their portfolios, or what other methods do you use to sort of Analyse what they can offer?

Simon: Anyone who is predicting it getting the correct grades for a [unclear 13:23] driven course we interview now that process we are trying to see if we can change it now because we interview close to 700 students last year, that was quite debilitating for the program staff but so what we would do is we asked them to bring along a significant quantity of work about 20 pieces, and we give them some ideas about what we want and we ask for a mixture of finished pieces and sketchbooks and development work, because we like to see that people can actually think. Of course many people decide to ignore entirely on the advice of their staff and bring along everything, huge amount of work which we don't have time to see, we spent about we have a sheet which is less than 8 [unclear 14:20] where we ask them a series of eight questions which are rated from one to zero with one being little indication, I am sorry not one to zero sorry one to 5, one being the little indicator and 5 being excellent and only 3 of those things are directly about their work, then the confidence [unclear 14:40] like other students are going to be good so we tend to also place a lot of emphasis on the fact that they are committed as hard work. Now sometimes that is going to be things which I have letter personal interest in [unclear 15:03] of rewards scheme but a lot of the time it's going to be things like people who do stuff like they say, my weekend manager [unclear] next or something like that because that indicates people that can actually sit down and work as a team and do proper organize grown-up working. So as I said it's 8 criteria and it has to do with cultural knowledge and about how hard people work and how they engaged and are they committed. And again that goes [unclear 15:35] I really have no problem with I don't know if you know the myth that there was a guy called Schofield who was one of the first people
who set [unclear 15:46] in the organization and after the first award he believe that setting up an organization that active as a bridge between Academia and the real world to actually make shit happened. And from every straughter from the top down is about how are you making things happen you know real industrial work and real social stuff, make stuff real so that's a nice thing for designers to work in.

**Interviewer:** Yes, sort of gratifying. Okay how do you physically get through 700 interviews I am just curious how many of you do this?

**Simon:** I mean a colleague sat down and worked out not me because I was just so pissed off but a colleague workout and said that if we spend 40 thousand pounds in bringing in bought in staff to do the job. Now I am not sure that is absolutely correct but we got down to the point where the staff, actually the staff that we have on site full-time members of the staff could do about [unclear 16:48] interview about 350 hours or something a staff to do that and we had to actually pay bought in colleagues to come in. So we are active as a spine and we are active as the main staff I sign so a regular staff is acting as a spine with the colleagues doing the other interviews, it's a problem and my replacement is doing a lot of work I am trying to actually persuade the management not to be so bloody stupid and more [unclear 17:16] to them.

**Interviewer:** Nightmare, okay when your students arrive and they are all keen on their first day, what are generally their attitudes towards sketching, what kind of sort of things do they say and how do they behave, what kind of stuff goes on and when you mention the word sketching we are going to sit down and ideate using pens and pencils or whatever?

**Simon:** [Unclear 17:46] where this is coming from and you know well as I do that although Foundation courses are excellent and do a good job most students will still come from a previous a level position or B Tech, but I mean the High School courses confuse rendering with drawing at every level it doesn't work for my colleagues in fine art and it doesn't work for my colleagues in textiles and it doesn't work for my colleague’s visual communication. And so you get a lot of people who say that I draw or I sketch and a few of them know that they are actually recording information, most of them think that they are trying to get a life like rendering or something you know it’s not helpful. And for the record I have work I have been paid the consultant by one of the exam boards on this, and I was quite rude about a lot of the assumptions that they had when it
got to A-Level on drawing and working. If you want to quote me, you can 
say that the whole of the Pre-Foundation or the Pre-B Tech sector or Art 
and Design [unclear 19:02] drawing should be [unclear] to the ground I'll
have the ashes salted and spread to the 4 wings and they should actually
never do it again.

**Interviewer:** I may have to use that because this is part of the problem I
know this, thank you for saying that that's really, really helpful.

**Simon:** There was a gentleman call Robert Bob Steele who is a drawing 
researcher in British Columbia and he is a very elderly man now, but Bob 
Steele has been writing on the problems of drawing teaching drawing 
education and art about the age of 12. Also there are people I am trying to
remember there should be people with the designer associate Society
special interest group in design pedagogy. They've discuss this, oh God
what was it 2008 to 2009 something like that so there might be information
there as well. And then of course you have got John Stones and the John
Stones people have actually published some information on why early art
design education is [unclear 20:20].

**Interviewer:** When you are talking about earlier Art and Design education,
what pre 18?

**Simon:** Yes, Pre 18 yes or Pre B Tech you know what I mean into a lot of
the high school. I mean funnily enough I have seen one of the best design
project the school ever saw was shown to by a lady whose name I can't
remember, but at the time she was the brown government supervisor on
design education. And she pointed out with design education up to about
the age of 11 in infant and Primary School is rather good, and as an infant
she showed a lot of [unclear 21:00] project which was you know like here
is Jeremy The Spider and it had a list of characteristics of things that
Jeremy likes, go and design a room for Jeremy the spider I think it was
amazing you know it's a proper design tasks real problematics real possible
solutions and it was fantastic, and then something happens when you get to
high school and it gets very confused so real problem.

**Interviewer:** It's like the example my nephew did a GCSE in food science I
think it was food science or something. And it wasn't to do with food he
had to design a pizza box and it wasn't a design module it was a food
technology type module and I never quite understood what he was
supposed to gain from that so yes. Okay so student attitude can you just
compare the attitudes of students between the Emmanuel and the software
Cad based approaches to developing ideas?
Simon: It's something that we used to say I'm sorry I used to say open days, student I would say a lot of you guys are going to be very good at computers, and I would say to an audience show the hands of who love computers and people put their hand up and I go a lot of you who you be very good at drawing so up hands, and they put their hands up and I go I don't give a damn about either one of you groups because the people that are going to be competing are going to have to be drawing, and people that are drawing are going to have to be competing because they are both [unclear 2234] and foundational skills in the current world that we get in so we treated it in that kind of way that It's almost like an initiation that they have to go through so everyone has to do everything it's like basic training in the forces, no one gets to get away with anything because otherwise it hampered Armstrong as practitioners. So now the interesting thing is the thing that I find amazing is I will let you into a secret I find typography something as useful but quite tedious, you know I admire the skill and I look at it and I just go well alright I know enough not to be interested but we often find people who come in and they will actually do one of the induction processes and we run them through, well I will describe notebook and if you want induction processes and they come away in the second year and they go I really like layout I really like typography this is fantastic, and he go but you came in here and you only wanted pencils, pencils where your friend and nothing else actually worked. So it is a educationally valuable resource but specifically how we deal with it is my observation coming from industry was that a lot of the stuff in art design education didn't pull in the best practice from industry, and one particular practices from industry is people looking at things as integrated workflows, so they don't look and say I don't know I am preparing something as an obstructing apart from I am preparing something to design a poster campaign, they look at that as a unit 3 activity. So when I was early here I actually change the module and I was module leader for so that they actually from integrated [unclear 24:25] of practice that seems to go down well with my colleague when we rewrote the entire programs. My contribution wasn't the only contribution we all contributed important things, my contribution was insisting even in things like technical induction rotation so the had to be built a small [unclear 24:45]. So we got more students at the moment and once we are doing life drawing if they ask about it it's pedagogical it's an illustration workflow so we get them doing the Life drawing and we teach them to actually record things which are significant about the model, they are finding significant important character thought about the model. And then at the end of that they do development drawing but then they actually do prints we teach them a small fashion colour graphs because there is no
way that you can make a realistic colour graph. So we get them doing choreography and we get them doing prints derived from the model. The photography people are actually drawing to a brief, this thing called an environmental portrait brief where they have to actually go and find someone out of the university who they can actually [unclear 25:36] their environment and their portrait to actually make a character for communication but again that comes to the drawing development and the bigger groundwork ends up with something pretty much like a logo in Adobe Illustrator and the same deal. So what we do is by the time they done the rotations they will actually have practical experience of photography and digital editing process [unclear 26:05] editing processes. They will have process of Illustrator life drawing manual printing but all of them are actually in and organize work flow that starts with drawing as a common ideation and development ground, and my colleagues do a similar thing in the second semester with all of the stuff like animation or web design. So everything is based on a human being actually manipulating stuff through drawing, so hopefully by the time they are finished in the first year they will no longer see drawing as a synonym for rendering.

**Interviewer:** That doesn't go away easily does it sometimes?

**Simon:** It clearly doesn't.

**Interviewer:** No interesting. Do you have and I know you probably don't have but do you have any data around the number of students that you have observed on your undergrad courses who are sketch inhibited who struggle or avoid or just don't want to be a part of the hand drawn?

**Simon:** [Unclear 27:10] I would say it's probably about 10 to %15 and what I have found useful in the past is do you know the photographer David Lachapelle, he does some really it's quite difficult to find pictures of it, he does nice development work where he will use combination of drawn imagery and [unclear] and compose imagery and we use a methods like that so if we've got someone who is drawing inhibited and even of with explaining to them we are not looking for a beautifully rendered finished product we are looking for what you can explore how you might organize position makes it exactly significant from what you are doing, but they still actually say my drawings are shit I can do them, and we actually suggest that as a method so you know it's sort of like get the bit you can draw you know there is no point in putting a city street if you don't need a city street get the a picture on City street and draw on top of it which you need to
have in there which are yours [unclear 28:10] so yes we get quite a number who are drawing inhibited and I like that.

**Interviewer:** And how does this sketch inhibition or drawing inhibition affect their design output or because of this method that you are kind of insist or encourage them to use does it completely negate that type of issue?

**Simon:** Well I am a gentleman I don't really assist on anything, the problem as I've said is that skill takes you so far and we do get people who are really beautiful art workers, and it's an idea about what your end process is. Again part of my research as I said have been about technology and communications, and I have been predicting for a good decade and more than anything that could be algorithmically around ordered will actually be run by a computer program, because I came out and I could render very well and I have seen lots of computer rendering and computer selection and editing tasks back in the day. And those skill-based activities are being replaced and will be replaced in an increasing rate in speed. So getting the ideas down is a very important thing so we lecture them about this and we talked about this. Mostly the student understand eventually because we are very explicit about why we want them to do this that getting a final drawing rendered result is in anyway significant most of the time, obviously it is if you are an illustrator but a lot of the time it is and we talked about results and the ideas and that's explicitly again because as a group we decided a long time ago that most of our students are going to end up at lead creative in teams, so they tend to be the idea people pushing stuff and that doesn't seem to be [unclear 30:22] we got a lot of [unclear] the head of this so we aim the people who were going to be the brains on the top. I can see that it would be a considerable problem if you've had an illustrate that couldn't develop a personal visual language but even in that case my colleagues who are better drafts man than I am, like my colleague Alistair Adams the portrait painter even then he is a guy who understands the real nitty-gritty and he doesn't talk about drawing for drawing's sake, he talks about visual languages and developing appropriate visual languages which is to work for group. And so you can often have people like Chris Gillian a very nice illustrator you might interview you might notice his work. And Chris's style is all digitally or digitally rendered illustrator and so there is not a drop of hand work in there but knowing Chris it would all actually be completely worked out on paper first and actually organized so he knows what size the task is and what he has to do, and then away on the illustrator and he does a beautiful job.

**Interviewer:** Okay just going back to your schedule inhibited your 10 to 15 which is really low you are so lucky. What kind of Behavioural
symptoms do they display when they are avoiding having to pick up a pencil?

**Simon:** Well you had it they are embarrassing and they don't want to pick up a pencil. And you have done this long enough and you have seen the signs and now that's where you are getting into pedagogical things and I teach in a way which is broadly like I have been described by the student has been like an inappropriate uncle. So I will actually push to work but we will also explain the reasons why and what they are going to gain from the activity, so I don't know when you were asked or for me it was always that magic and bullshit people would actually tell you stuff was going to happened and you know if you do this it's wonderful and then things will happen and you go really you know some of them did and some of them didn't. We spend a lot of time trying to explain to people about what the intention is, I'm sorry one second [33:08] So yes so we talked about it and we are explicit about it because I am very lucky that my colleagues while we might not all be sort of like Huggy and warm and lovely and we are like any other bunch of people, we sometimes get on each other’s nerves. Fundamentally we have all started as drafts to people one sort or another so we can actually talk from that command grown and the students get a common idea. Occasionally we do and one of the reasons I was late talking with you I had someone coming along for they had miss their midterm tutorial and I needed to actually fit them in. And he is a guy who is a very fine art worker on a computer and was very reluctant to actually ever try and work through ideas. And he is about let me think hundred and something people in his cohort I put it about 120 people in his cohort, so there is him and it's probably him so it's about so it's about %.8 of the people, and he has been completely reluctant and got through on the skin of his teeth on the basis of his excellent other characteristic. I am still like an inappropriate Uncle poking him and telling him that he needs to be working on his ideation in order to actually have a longer successful career. So it helps that we are all speaking from the same point of view so we have an established culture. If you are looking at acculturation to be honest it's like a cult you isolate people and you actually give them all the same message, and we are aware of what we are doing.

**Interviewer:** This is slightly strange but bear with me. Amongst your sketch inhibited guys, are there any culture or gender or Age based Factors which you think might be?
Simon: Yes, boys and I am using the deliberate immature boys don't like drawing. Now that has changed slightly in a negative way we have started seeing arrival of a generation of young woman who are very, very technically proficient. And the university here has done some research which obviously everyone knows about the gender divide in engineering. So we have people that are acculturated to believe that technology is for man and craft is for women he is retarded [unclear 36:10] the engineering department tend to not have enough women, we have being giving brief recently by the centre because about %80 of our school are woman and they want to know why they are not more men doing Art and Design subjects, but as I said recently we have started seeing where a lot more women are actually Tech gurus which is nice to see and equally they seems to be [unclear 36:34]. Culturally not so much no not really I mean I can see people across different cultures and racial groups who have different reluctant and the same sort of reluctant to draw, and I am not even sure that it's a class thing though if you are to go to a public school and a lot of our people are public school boys and girls, they will actually be taught drawing in a more formal and traditional method. So we get a lot of people that come in not from public school and we are the first people that ever set them down and done life drawing with them. And but if you get people from public schools they've all actually attended life drawing classes. So one ex-student she had been to study in Italy down in Florence.

Interviewer: Wow.

Simon: Exactly well that's someone that left school at 16 and went to a B Tech in East London I look at people like that and I'll go right okay I would like to go to Italy in Florence for 6 months it would be awesome but yes we get a few of those but that's a very specific matter of issue.

Interviewer: Okay right here is something that I have been thinking about based on my research so far just to see what you think. You are talking about the teaching of design and you did mention the teaching of enabling students to understand the reasons for using these manual ideation techniques. I have been looking at this sort of microprocessor like Barbara's work and looking at the cognitive support that sketching offer. Do you think that sort of inhibited people would be more likely to try and engage with sketching if they understood the micro processes and the cognitive benefits of what they are doing because the moment, in my experience and from what I have seen and read about that side of sketching is not actually taught, I am sorry go on?
**Simon:** One second I am sorry I have a particular persistent student. Okay no I think you are right I think the micro process to me that was the mixing element which came into it. As I've said if you and I were to sit down and design a fully valued study 3000 or more people got statistical significance across different British universities about drawing techniques, which would be a fun thing to do. If we were actually [unclear 39:13] we would find lots and lots of evidence which would be fairly meaningless for the people on the ground, what Barbara's work does is it gives me and I am conscious in this I personally buy into it but it gives me enough of an anchor that I can actually use it as a tool together with as I said the acculturation that we do to also the sceptical.

**Interviewer:** Yes, it's like a bait isn't it for them really?

**Simon:** Well it's a cover a research led cover for what is otherwise history and experience has told us it is [unclear 40:04] activity and Barbara would probably want to punch me for actually saying that but I mean I say I buy into it, for someone like Herb Grohl and his work. What I think is a big problem thinking back to what you were saying about acculturation it's the reluctance is about fear, and it gives an assurance that there is nothing to be afraid of off doing something which doesn't involve beautiful rendering, it gives a rationale for what you are going to get from this process even if it's not a render thing, so some people can see value in it but also it undermines their arguments about why they are not going to actually do it. And my experience of students is I can't even think of an exception is when they say that they don't want to do something or the very middle class ones referred to and they frame it in the bases of I am a perfectionist therefore I will not do this because I am a perfectionist it always comes down to fear, and this is where generating the Persona of like a slightly cranky Uncle who is going to actually keep poking you if you don't do it, it works because we actually remove their ability to complain that it's not actually a [unclear 41:39] with Barbara’s work. We have a cultural to continually giving them the same message and it's about constantly [unclear 41:47] and recently it's only in the last couple of years I suddenly come across another pedagogical arm-twisting methods which is in the last year or so in fact, if you look at someone who is really rot and really rotten, and it works in design field I don't know if it would work as a tool in the art but you look at some of them and you say how much do you like being publicly embarrassed, and you do this in front of all of the students because they will think that sounds like a threat. So it has to be among them when you are quietly working with them, and you say how much do you enjoy being publicly embarrassed, and with one exception which is actually yes but I've never had a student that said they quite like it, and I worry about that student that
say they quite like it. And he says okay right so he goes now here is the thing everything else that you are going to do in life you run the risk of being publicly embarrass, and we talked about that video with that young woman that was asked to, who was proposed to in a basketball match it was on before the social media a few months ago.

**Interviewer:** I didn't see that I missed it.

**Simon:** It's terrible poor woman she run away sort of like this crying because it was emotionally. And I think the design is the only field where it's actually part of your job to sit down and to actually work through to a state of good modelling where you are pretty damn sure that you have resolved all of the issues, and so like you say that you are a perfectionist but the reality is that you are terrified, and process of drawing and working through problems through drawing should help you to remove the fear because you are going to face up to all of the problems in a quiet and private place on a piece of paper, which if you do something wrong I will give you matches and you can set fire to it at the end.

**Interviewer:** That's an interesting approach I like that. I'm trying to think there are other things that I think I need to ask, I am just going through my list here because I've got a list and I'm kind of guiding you through questions but not necessarily going in a proper order I can't work in a proper order. Okay if you were to have a voice which you obviously have had in the past in terms of addressing designers of courses or designers of higher education. What would you be kind of say to them in terms of the importance of this manual process and the importance of being able to hopefully manage the inhibited section of that group. Are there things which aren't being done which you would like to see done or introduce in an idea world?

**Simon:** I think to be honest if we are talking about fancy possibilities I think across the sector I see really excellent teachers in further education at high schools who are horrible inhibited by a terrible curriculum. And I see the art design sector in the UK across the board, and we all know there are prima donnas and lunatics and bad people out there but as a field we do very good work which explains why the UK creative industry punch so high heavily about their weight. I think that the real problems are actually unfortunately at further education and it's in the curriculum. And interesting I talked to friends in other fields like engineering or business and they say similar things. The UK further education sector has not been well served by A-Levels and working backwards to GCSE we choose people to, we force people to choose too early but then subsequently I mean if we were to go
even further back, up until the age of 12 or 11 or 12 drawing is taught as and as a way of communicating things so if you are at school you are writing a and as a way of communicating things so if you were at school and you are writing a report on Thomas Becket, there undoubtedly be something in there that will say Draw Something like Thomas Becket and it's all function and in the same way you would hope that in the same way the English is this way and when you went into a Secondary School they are actually then teaching you some formal ways to communicate better in English first of all before actually expecting you to write free-form poetry. You would think that it would work in that kind of way but we then suddenly divorce people from a simple act of articulating and being able to explain things clearly. And we thrust them into a world where they are supposed to go and observe some artist who may be alive or may be dead, and derive some information from actually doing some stylistic mimicry or if you look at some of the example they are some things like in my fields there are expert knowledge of all sorts of production systems and application would be too much to ask for PhD students but they ask it of people at 15 or 1. So the problem seems to me to be largely one of the curriculum and the demands of governments on the curriculum people that age so I think that if we were to given fashion textile yes.

**Interviewer:** Yes, well I am an interior designer but I have been teaching fashion textile yes.

**Simon:** So my bet would be that if you faced to people who came and if they could do nothing else but draw to ideate well or Draw to develop an idea well or lovely as it would be to actually maybe render well, at the age of 18 or 19 everything would be so much easier and you will be able to teach at the University level to a much higher level, but I mean and it's funny because there is so much out there that we already, that clearly is almost like you know linguistic they talk about pragmatics there has got to be some research about pragmatics of drawing because if you go to someone and you say how do I get to this pub that we are going to meet at tomorrow night. And they will pull out their receipt from their pocket and they will draw you a little map on the back and somehow you will find your way to the pub, and everything will be okay but as I see for me I think there is too much art in the education and there is too little about it and applied too for thinking or explaining yourself.

**Interviewer:** Okay so it's about the artefact rather than the process and it's the process which kind of creates the quality of the artefact at the end of the
day?

**Simon:** Again I would rather that we have who could you know we expect people to be able to write clearly, and to be able to used commonly understand forms, we have an equivalent of that at 18 where you could demonstrate that someone could draw clearly and do assigned tasks in a way that the [unclear 49:36] be working really nice simple stuff the sort of thing that, I am sure that you are familiar everyday seat descriptors if you look at some of like the seat descriptors for Level 3 but currently if you look for A-Levels [unclear 49:51] to the exam board but what they are asking for matches level 6 and 7 seat descriptors and that's insane you can't ask people for that kind of stuff they don't have no maturity to actually do it.

**Interviewer:** No I was going to say they don't have the maturity at that age to understand why they are doing it so it's just kind of paying lip-service to it. Okay I think that you've covered all of the areas that I needed to ask you about. And thank you because it's been massively interesting I have been scribbling notes down as well as recording because I am writing a paper for the design conference in Dubrovnik next year I am trying to get it finished in 2 weeks, so there might be a couple of juicy bits that I can pull out from this which I can then use that would be fantastic right. Yes, if you do have any thoughts about maybe collaborating on a bit of research or something in some way later on you know bear me in mind.

Audio Finish 50:54
Interview with Rosemarie Fitton

(Education expert – pilot)

RF: My name is Rosemary Fitton, I’m subject leader of interior design and programme leader of the BA interior design. My research specialism is in sacred space, particularly around multifaith space as a means of increasing community cohesion but also, most recently, exhibition space within the sacred space of the diaspora. I recently gave a paper at an international conference on the future of museum and gallery design, in Hong Kong, which is going to be published as a chapter in a book from the conference proceedings.

LT: Can you divulge the name of the book or is it secret?

RF: We don’t know yet, it seems to be a long drawn out process but I’m still waiting for them to get back to me to see if there’s any changes to make.

LT: I’ve got about 12 questions and they kind of lead on from one another so I’m just going to prompt you with a question initially…

RS: I’m also the co-owner of Faber Design in Birmingham which is a design consultancy which specialises in hospitality and leisure projects.

LT: Is that a different company from the one you…

RS: It’s the same company…

LT: But you’ve rebranded?

RS: Renamed yes.

LT: That’s lovely okay right…

RF: …much to my chagrin.

LT: Oh dear, I liked the previous name, I thought that was quite good.

RF: It was a marketing issue because nobody could stay it, nobody could spell it.

LT: I thought that’s, that’s what made it so good.

RF: Yes, so yeah.

LT: Okay first question, what is your institution’s relationship with sketching and drawing for design undergrads, particularly your course I’m thinking of here not just the institution as a whole because obviously varies according to course, what is your relationship?

RF: It is something that we have embedded in the curriculum we have a module which is essentially a support module of cross media techniques, so the
students are taught manual techniques, hand sketching, perspectives, colour rendering, but also CAD skills, 2-D and 3-D, and editing-type software such as Photoshop, In-design et cetera. We feel the manual techniques aspect is incredibly important because it's something that you need in industry and designers need to be able to sketch things out quickly in front of clients, if clients want to make a change, you know, “what would it look like if we just moved that thing there, if that was put on there?” So you have to have the confidence to do that, we do sell this to the students but one of our challenges is that once students, they have this sketch aversion, phobia and one of the issues is that they’re scared of sketching because they don’t think they’re good enough, and also once they CAD skills become proficient enough they then design and the process of design is done entirely on the computer, which is infuriating and challenging, and we are trying very hard to adjust that thinking, so placing more emphasis on manual techniques. We had some successes last year in our third year, where a number of students were actually, did a lot of manual techniques of rendering combined with, on an overlay of say a CAD wireframe, and then they’re doing the manual techniques. We had some beautiful sketchbooks which, even though they were absolutely fabulous, the students still didn’t think they were very good, but I actually photocopied, got photographs taken of particular pages and used it to take to, I did a talk in Hong Kong in April with agents for the University for recruitment, and I showed a number of those sketch elements. So it is something, you know, we’re showing the students, we have a bank of materials from previous years that we showed the students to try to encourage them so, it’s their perception of what is a good sketch because they think it has to be the most amazing Leonardo da Vinci-type sketch. Instead of it’s a working idea, a methodology to discuss your ideas from your head, and it doesn’t have to be perfect.

LT: When students arrive and they’re all green and keen and et cetera, what sketching skills to they arrive with bearing in mind they usually come from A-level or do they have to have done foundation or diploma before or something they come here?

RF: Ours come from a variety of backgrounds, so we get a mix of A-level students who could have done, they could have done three-dimensional design, they could have done fine art, they could have done textiles, we’re not specific about what they have to have covered. They might come from BTEC, we have quite a lot of students from BTEC, and we have quite a smattering of students who come from foundation. We do place a heck of a lot of emphasis on their sketchbooks when they come for interviews, it’s one of the things that we talk about in the open days, we say how much we love the sketchbooks because we looking at, you know, the germ of an idea, that blossoms, then the process so want to see those working drawings, and in fact we almost tell them that that is more important to us than the finished products.
LT: The process and the understanding of the process?

RF: Yes, so they do, you know, we’ve seen all the sketchbooks, and taken them on and said your sketchbook was fabulous.

LT: And that sketchbook is an essential part of their application process.

RF: Essential, essential.

LT: If somebody comes with no formal qualifications, the sketchbook is kind of the clincher sometimes do you feel or…? Sorry that’s a bit of a leading question…

RF: Yes, we have taken students on who have not done A-levels in art, not done, because there are, sometimes cultural reasons why students have not been allowed to pursue an artistic career. Because of the perception of their parents they want them to go into medicine, et cetera. But it’s something you can produce in your own time, you know, if you are so interested in the visual world, then why wouldn’t you be able to produce a sketchbook of drawings? And its practice and it’s evidence of the practice and engagement, and so we have taken students on before who have just brought sketchbook. They haven’t produced finished pieces.

LT: Can I just go to cultural issues? I haven’t got a question here about cultural issues but I know that that is potentially, it’s a bit of a loaded gun really, because I don’t want to turn this into an issue of culture or people from different countries, but I know that I issue certainly with the teaching I’ve been doing, are there cultural issues or particular nationalities of overseas students, are there problematics within students from other cultures and other countries in respect of sketch inhibition and this kind of phobia and aversion?

RF: There is a bit of a, I don’t how to describe it, or whether to describe it as a conundrum, because with students who are from an Islamic background, drawing producing images of people, things, is against their religious practices and beliefs. I have spoken to our students about it and because they are studying a particular subject, I think they must have had advice from the Imam or through various elders in their community to so that they can produce images, because it’s…

LT: I know it’s forbidden but, yeah, but I didn’t think anything beyond that, I thought, where they come to college, to university, and it’s assumed that’s what they would be doing and it wouldn’t be an issue, but of course it’s an issue because it’s such a fundamental part of the culture.

RF: Yes, because it’s, you know, Islamic artist geometry primarily is geometry and calligraphy, and not producing images because only God can produce the perfect image.
LT: Are there any other cultural, language-based barriers, nationality barriers that you can think of?

RF: Actually no, it’s like music, it’s a global communication tool, so actually sketching, drawing, their language skills don’t need to be so strong. It’s only when they have to be producing the written work around their design and verbalising the processes that, you know, you can have a really productive session with a student who’s got limited language skills, through the medium of drawing and sketching.

LT: What are the attitudes, you’ve kind of covered this but I will ask explicitly, what are the attitudes of undergrads when they come in, when they come for their first drawing and sketching kind of session, what kind of attitudes do they come with?

RF: From the start, they think their sketching is rubbish.

LT: Why is that, do you feel?

RF: Because sketch isn’t a final finished, polished, I think they spend so long at school, and yep, I’ll do it in two parts: they spend so long at school working through a process to get to the final element, and being told that needs to develop, that needs to develop, that needs to develop, just do this, do this, do this, you’ve attained perfection, and the whole emphasis and the grades are based on the end product. Because there is no weighting given to or enough waiting given to the process and the quality of the sketching, I think that is the issue. So they don’t recognise any strength in those, it’s not acknowledged as a viable thing to be assessed, but we actually have it built into the program, where the quality of their sketching, and the amount they produce is actually assessed, and so we, that was one of the things I did in the revalidation process was, I have modules which are project centred and then the other modules feed into that project. Instead of having, what used to happen was we had separate projects so everything suffered, so now the students have to produce the design, we’re assessing the quality of the design, you know the spatial design the economics the cultural references et cetera, and then in the other module, it’s the quality of their drawing in their backup work, which they can’t hide from. But they are equally able to pass, you know, they could fail a design project module, but they could pass the other module, but we have to be very careful about how we did that, that if you fail that what one you’re automatically going to failure. But with marking a different element and it should actually be easier to pass the sketching, the process as opposed to the project one, but they still place more emphasis on the project module, because they don’t want to sketch. Once they are to their CAD, boy is it hard to get them to do anything.

LT: In which brings me onto the preferred tools for design development…
RF: Once they’re proficient, it’s CAD, but they know that I’m, and it is coming through, it worked, we had a fabulous third year last year absolutely fabulous, and I have banged on and banged on and banged on with them about sketch modelling, and also as a tool, sketch modelling to realise ideas but also sketch modelling as a tool to assist you in the sketching, because sometimes trying to get that amazing idea out of your head into a drawing, because they’ve got this phobia, will, “can you realise it in three dimensions, can you make a sketch model? Okay, now you can draw that model,” you can draw that model and then you can alter that model by drawing, have an idea, try to do it hand-in-hand, and we saw a lot of that in our third years this year, which was wonderful.

LT: Do you think then, that there is an issue, or difficulty, you know things like drawing are considered to be, some people are good at it, everyone can draw, some people, like playing the piano, everyone can do it, but some people are naturally incredibly gifted. Do you think the concept of visual imagery, perceiving something in the minds eye, then being able to put it on paper, to have that clarity of visual image is something inherently equal in all designers or again do you find some designers just visualise amazingly, mentally, mental imagery, visualisation, and others can’t unless they put something on paper first?

RF: There is, I mean I’m a case in point, and I see this a lot, a lot and I think it’s a rarity for somebody to be able to have something in the head and be able to produce an incredible sketch. And I’m not talking about a finished one, I’m talking about a fluid very quick, “oh wow I can see exactly what parts what you’re talking about.” I could, I did A-level art, I could draw anything, if it was sat in front of me I could draw it beautifully, I could do transpositions, I could do all of that stuff, if it was in front of me, and I got amazing marks. As soon as I had to get something out of my head, and I have amazing visions, trying to get that onto paper was difficult, so what I did was, I sketch modelled, and then started drawing from that, and then changed my sketch model and sketched, then sketch modelled and sketched. I can visualise something much easier in three dimensions. And I see that so much in our students.

LT: How on your course do you separate, and you’ve kind of covered this, how do you separate the teaching of designing and the teaching visualisation?

RF: Yes, so we have separate modules that do that, so we have projects, so we have, you know, about the design process which is about the design process so were talking about all of that kind of area, within that module, and then they practice their projects in that. But then they have the visual communication module which is where we talk about the quality of drawing, the quality of a line, using all the different mediums, using different methodologies, because I think also they tend to stick to one thing. “Oh I can't draw, I can’t sketch,” and they just use one thing, a pencil and so we encourage them to try, “Well, maybe
you’d be better off using a huge stick of chalk to do your sketches and then you
can always scan them in and do it,” so that is something we also mark in that
module, we say they have to try variety of different methodologies because
we’re hoping that they find one that they can do it better in. Or, some students
draw really, really well, really tiny, and we say, “all you need to do is blow it up,”
or if someone does something really, really big then just shrink it down, but it is
a plodding process trying to get them to realise that can…

LT: It’s like pulling in lazy horse along, it’s got kind of feeling, and that’s
something I’m picking up on across the board asking people…

RF: You know, you could go through a student’s sketchbook and you can go,
“Oh, that sketch is just beautiful. Why don’t you, why don’t you produce your
visuals like that, why don’t you do your visuals?” it’s such a, because, you know,
one of our selling points in the courses, because we say it’s about the individual
design personality, that’s what we’re trying to bring out, it’s not a clone, it’s not a
house style, it’s individual, and employers say we do that so well. And they go,
“Oh no, that’s not very good,” and it’s beautiful, you know, you look at some and
you just, “I wish I could do that, I wish I could have produced something like
that,” but they don’t recognise it.

LT: Okay, so teaching and learning methods to impart sketching skills, you’re
talking about using different media and encouraging students to be process
orientated using, you know, a specific module for that. Do they have any other
things, do they have specific workshops or things which are there to impart and
maintain…?

RF: Lots of workshops within the visual communication modules. And this goes
all the way through three years, it doesn’t go, “First year, stop,” we go all the
way through.

LT: So, almost recapping on what you’ve already said, what feedback you
receive from industry in respect of the sketching skills of your graduates?

RF: We generally tend to get more feedback in terms of their openness to
communicate, they can talk to anybody, the individuality of the work, their
amazing ability to visualise their ideas, but not necessarily about their sketching
skills. But when you’re having conversations with someone, say at an event,
“Oh yes sketching is really, really important, we want them to…” But that’s not
the feedback that we get.

LT: When you do receive feedback from the industry regarding drawing, which
isn’t very often, do you impart that, do you actually sit down, “Okay there is an
issue of something being, not as it should, or something needing to be improved
or built upon.” Do you feed that back into the teaching and learning strategy of
the course?
RF: Yes, yes.

LT: How do you do that?

RF: I find that if you talk openly to the students, you know it has worked, the third year, you know they’ve had me banging on about stuff, and they’ve said, “I get it now,” and I’m like “Brilliant you’re just about to leave, I’ll have to start all over again next year.” But I find if you talk about how important and why and what you’ve done in industry, you know, there’s been a number of times I’ve been sat with the client and they’ve said “It’s great but, you know that doorway there what would it look like if you moved it over or you had an opening, more elaborate, you know,” and you can say, “Yes, well I will go away, and I’ll get on my CAD and I might have something for you in three or four days.” Their perception is you’re brilliant, you can do this, and they’re expecting you to draw over what, you’ve, you know, your presentation and go, “Right so you mean like this.” And they’re amazed because they can’t draw, at all. They can’t draw at all and so it doesn’t matter what you produce…

LT: I was going to say, you can be quite poor at drawing, and the fact you’ve had the confidence to take out a pen and a pad and sketch something…

RF: Yeah, if you just pretend your confident about doing it, they think you’re amazing, they think you produce the most amazing thing. If you get an idea across, it’s not showing, “Oh, my God, that’s photorealistic,” all you have to do is do a few lines, a little bit of shading and people can understand that suggestion, you’ve done it. But I have talked to them about it.

LT: How do you feel sketch inhibition is manifested amongst your students, what kind of behaviours and things do they do?

RF: They don’t, they avoid.

LT: What lengths do they go to avoid, what kind of tactics are there and what behaviour?

RF: They will go to the extent of not having produced any sketching and, so, not coming into tutorials, because they’re embarrassed because they haven’t got the work, and we say to them, “That’s the time to come in, if you haven’t done it we will talk to you about what the issue is.” Then they present their sketchbooks and we can have students who have got as few as four pages of drawings…

LT: And that’s it, for a module’s worth of a project?

RF: For a whole module’s worth of development sketching.

LT: Have you applied any strategies for reducing that kind of behaviour?
RF: Yes, the sketch modelling, three-dimensional sketch modelling, drawing from that, giving them, giving them a lot of feedback and a lot of praise for, when they have produced sketches, so someone who’s sketch averse, when they bring something in you go, “Wow, yeah, this is it, I can see exactly what you’re doing,” so you’re really go over the top, but I’ve been thinking about it, is to put up in the studio examples of what the staff think are amazing sketches, and I’m sure, and then talking to the students about it, so right saying, “We’re going to put up an array of amazing sketches from this project and we want you to have a look at them and get your feedback what you think and why they’re amazing,” because I’m sure they will look at them and say, “What’s amazing about those?” So that’s one of the strategies I’ve been thinking about, just because I’ve been thinking about your project and, so I think that could work, it’s having examples of saying, “This conveys an idea, it is not Michelangelo’s Sistine Chapel ceiling.”

LT: So this bubble of fear that they’re kind of cowering in has burst and something which is visually strange, not fantastically brilliant scale, whatever, is considered a good sketch, because of the idea it contains, they then realise it’s the idea, the dialogue they’re having is the crucial bit and not the line width or the straightness of the line or anything.

RF: But it’s just that fluidity that’s, as well, and there’s some really good examples put up from industry as well, you know like the architects you just do, I mean some of that are just absolutely appalling, but you only have to look at them and go, “Yeah that’s the Guggenheim. That’s the germ of that idea for the Guggenheim and someone has taken it forward.” That’s all you need that’s all asking for.

LT: Some of the architectural sketches have been looking at for this, I’m just thinking, you’re an architects, you’ve trained for like seven, eight years and that’s what you produce, and again it’s because everyone is trained to think of sketches as being artefacts rather than products of a process, and what’s contained within this sketches is fascinating and there are so many layers, so much information from one scribble…

RF: It’s not supposed to be shaded and…

LT: And these guys think it’s rubbish and it’s not, they’re kind of missing, missing the point it’s such a shame.

RF: I had a student last year and she had some beautiful stuff in her sketchbook, and it started to blossom, she was saying, “I can’t do it, I can’t do it,” and it started to blossom, we get them to produce a model of their building in the first eight weeks, so they have to produce all their 2-D and 3-D drawings, so they build their building that they are using for the major design project in CAD, and they’ve got, so it means they have all their 2-D drawings ready to scale
because how many of them do space planning not to scale, they have no excuses, it’s there, they’ve done it, it’s handed in before they start that further process. They have a building. So I said to this student, “Why are you not using…” we talk to them about using this model that they’ve made to rip it apart and to put bits in, bits of cardboard, I’m saying, “You’re being too precious,” cardboard boxes, cereal boxes, egg boxes, shove stuff in, photograph it, don’t like that, take it out, put that in, actually, looking through my photos I did actually like that better than this idea, let’s put that back in, and I said I had one model that, you know I talk about the practice I did, I had one model that I used, it was ripped apart and it was struck down with bits of masking tape, and this that and the other, and I produced my project from that model, because it just built up and got taken away again, but they expect to have the final solution incredibly quickly. When we say to them, “Do you think you do in industry?” Yes you get faster and faster, but she had done this, this particular student had done a brilliant, she did my pathway the second year she produced a beautiful sketchbook, but even when she went into the third year, she thought it was rubbish. So I said, use this model, start putting things on, because she wanted to put an outside area and this curve, this sort of, it was like a wave coming out of Martello tower, and she didn’t know how to draw it, and I said, “Well start, get some card, just do it,” and that she started sketching from that and it really kicked off her drawing, her sketching and they were pages and pages and pages of beautiful sketches.

LT: it’s almost like the 3-D modelling process is something which can then feed that mental imagery where that ability to kind of rotate in 3-D, because when I kind of visualise things I can walk through them in my head, but most people can’t and I don’t realise that a lot of people can’t do it or they do find it hard, but as soon as you’ve got something it goes in and then you feel a part of that environment in your mind and it’s almost kind of pre-cursing that mental imagery by using a 3-D structure

RF: But there were a number of them this year, as I say our third years were fantastic, there were a number of them who did that this year. “I’ll do some 3-D sketch modelling,” very reluctantly, but then saying, “I can see how it works now, I can see how it works now.”

LT: It’s a nice process to engage in as well.

RF: I used to be told off for doing it when I was a student. My tutor said to me, “Why do you spend so much time sketch modelling, you won’t be able to do this in a design practice, you’ve got to just draw it into your book.”

LT: Some of the best designers I know who I’ve seen in practice secretly have little cardboard models on their drawing boards and their benches, because that’s how they work. There’s this glossy clinical CAD environment, but actually, it is the egg boxes and bits of old UHU which is the thinking process before you
can even get to that. Design disciplines generally, I know you’re an interior designer, but you’re clearly not stupid, this is one of the issues that I’m having with my project. Peter is saying, “What design discipline are you’re looking at, what is the design discipline for your PhD, you’ve got to have a discipline,” and I’ve got this problem one of the other girls Alis has the same problem with her PhD, and there’s an increasing amount of literature to support the fact that the design process is universal, the thought processes, the cognitive processes are universal regardless of discipline. Right, how have I written my question? I’ve just put here similarities of design ideation across design disciplines, are there commonalities?

RF: Yes

LT: What are those commonalities?

RF: The process, the process that you go through from generating ideas, where you get your inspiration from, so we talk to the students about how to get inspiration because you’re not going to get it from sitting in your student bedsit, you’re not going to get it from, inspiration, starting to do the sketching process, getting an idea that you then take forward and then you start developing that, it’s the same, if you’re designing a washing machine you’re designing a chapel, you’re designing a ring, it’s the same process. I don’t care what, we say to their students when they have their pathways, because they think, “Oh, if I do spiritual then I’ll be missing out because it’s not proper,” that’s what’s gonna happen when they go out into industry and I say to them, “It doesn’t matter what you choose because you are doing your inspiration, your research, your design development, you’re thinking about ergonomics, you’re thinking about psychology of materials, finishes, colour, lighting,” and that is, it doesn’t matter what you design, and it’s not a step-by-step process, it’s an iterative process and everybody does that, everybody does that. But I understand what they’re doing because they try to tighten your PhD.

LT: I completely understand that, but actually reading a lot of the literature, it’s almost like a bit of, it’s a false assumption to assume that the way teaching and learning is going, is becoming cross disciplinary anyway, designers will the designers of all sorts in the next few generations

RF: You are seeing it now, you have cross disciplinary practices much more now than you used to years ago.

LT: Big time. So I think it’s almost like taking a step back to say, “Consider this in terms of three-dimensional, interior and architectural design,” so why not textiles, why not fashion, because I can prove it is all part of the same process
RF: And you’re not going to analyse, you’re not going to be writing up about the interior design course, the architectural course, you are talking about the process and sketching within that process.

LT: It’s a PhD about designing, not design not to the artefacts, the product, it is the designing, it’s the process that the designer engages in, and that, from what I found so far is irrelevant of discipline, it’s the materials, it’s the processes later on which turn it into a discipline, but I haven’t got to that, that’s not where I’m at with my research I’m at that very initial stage.

RF: And if you think about product, they blue foam everything and then they draw it up… They are doing sketch modelling and they’re altering their model, they’re sanding it, they’re shaping it, they’re cutting it and then they’re drawing it. But we’re going to be, our first project is plane, form and line. When I was a student, our course was three-dimensional designed, interiors, product, furniture, but we all did three-dimensional design. We all did plane, form, line, drawing and, we had to make this stupid engineer’s clamp so we had to engineering skills. Plane, form and line, the basic principles behind everything that you have in the world and we all produced for that project, we all did it together, product, furniture, interiors.

LT: It would be lovely if design teaching and learning could be like that

RF: Yeah, so now…

LT: It’s a brave step but…

RF: But it was quite ‘90s, ‘90s thinking, and everyone then went off into their own, “No, were going to start off with this,” but we are now going to give the students, because for this first project it’s about workshop practice, it’s about learning how materials work and how you fix them together, and so we’re actually going to give them, before they can choose anything they were like making stuff out of plasticine, things with no value whatsoever, and I said to Nicky, even though it’s her module and her project I’ve stepped in and said, “I would really like them to have to do the form out of timber, line out of some metal rod, and the plane out of plastic,” so they’ve got three materials and then they can, you know, “How to drill a piece of plastic what you have to know about plastic To be able to drill it?”

LT: And do they actually engage in workshop time to learn about plastic to learn about wood so they understand

RF: They have inductions, we’ve spoken to the induction workshop manager and said this is the project we want them to do, these are the materials you want to work with and this is why we want to work with it, these are the processes I would like them, I would want them in the form, I don’t want them to add, I want them to take away, I want them to have a block of wood and I want
them to drill, cut, slice, sand, shape, I don’t want them to be gluing bits on, because that’s a completely different thing. I want them to only be able to do their model in the workshop. We’re going to give them, blue foam, we’re going to introduce blue foam to interiors, because they can do some of the processes and then the line project they can use thin wire, they can’t use that to make their final model because we giving them a material has to be in a workshop setting to be able to bend it, to weld it, because you can’t join two pieces of metal that thick with a glue gun. So this is what we’re trying to, and then the plastic, so how you can mould and bend, cutaway, join, but it’s all about, it is really trying to reinforce this sketch modelling and sketching what you’ve done, drawing more ideas alongside it so I’m hoping this year is going to be much more successful.

LT: That’s going to be interesting, and is this a term one, semester one module?

RF: Nine weeks

LT: It will be interesting to see what they come out with, with their block of material.

RF: I’ve also got somebody coming in, a part-time member of staff who has worked in schools, she’s a designer but she’s worked in schools, she’s desperate to work in HE and she is really into sketching and she’s quite, sort of bullish, and I think that’s going to be, I think she’s going to push this process along as well, for me. Because I think we’re all a bit timid about pushing students to do things that they don’t want to do, and I think you have to, I think you have to, you’re giving them the tools, and you’re getting them beyond their phobias.

LT: I know it’s a kind of commercial thing, their nine grand a year, you’ve got to spend the best way you can, giving them the best skills or better skills than they’ll have somewhere else possibly, it’s almost like a kind of parenting thing, your wisdom is being imparted to them.

RF: Yes, and sometimes people have to do things they don’t want to do because it’s good for them.

LT: I think you’ve covered, you’ve been massively helpful, the most helpful so far.

RF: Are other people, are other people sketch averse themselves?

LT: I’m not sure, they don’t talk about themselves.

RF: Because I am, I know I am, much more, it’s taken me, it took me two years to feel much more confident about sketching myself in front of the students, because I thought mine were rubbish, but they think it’s amazing and they say,
“Can I keep that?” and you go, “I don’t really want you to keep it because it’s rubbish, I was just want you to throw it away.”

LT: I did something, I did it on a whiteboard, I scribbled it down and then during the tutorial she asked me about it again so I said, “I’ll just quickly,” it was just a project pyramid thing I’d done just to show them, and then she emailed me, “Can I use this in my dissertation,” and it just got more and more ridiculous.

RF: But they think that the stuff you do is amazing, the grass is greener, “Oh, I can’t do that.”
Interview with Nicky Harding

Interviewer: Okay right I am not kind of asking too structured of a question what I am going to do is ask things and if you can just talk around through things so it's more kind of guided conversation thing where it's just for me to get as much as I can from you but I've got to kind of guild us to what I now I will need to cover otherwise I am going to get stuck. Okay right can you just give me your name and position and what you do on the course here just so I've got a reference.

Nicky Harding: Okay so I am Nicky Harding I am senior lecturer in interior design, my main roles and responsibilities I look after the first year but I am not like necessary use to be a first year teacher I teach across all year groups, but a lot of it is project designed based work. And in the first term with years and then exhibition pathway for second years, and then usually major design project [unclear 1:00] exhibition again because that's my background so we normally focus on those particular projects [unclear] and a museum exhibition design module.

Interviewer: Okay just going to the BA interior design course, can you just give me a kind of talk through of the kind of [unclear 01:19] attitude within and the way the course and the way the course kind of present itself around sketching manual kind of design development?

Nicky Harding: Yes, that's no problem just because I do a lot of the open day talks so in terms of getting new student in. And we pride ourselves in the fact that we think it's really important that you can draw and certainly by hand before you even embark on any card work so deliberately we ask students to buy a drawing board, we teach technical drawing in first term and then they move to card so it's about understanding those conventions. Alongside that so that's the kind of the scale drawing aspect, alongside that we have a module that's specifically about sketching and design expiration through drawing and experimentation. And that's something that run not just from first year but run right through the 3 years and supporting project design module does that make sense.

Interviewer: Right so that runs every year, is it raining sort of one semester per year or is it just constant?

Nicky Harding: Constant yes as a thread so in first year it's 1100 is the module number it's 200 for second year and 300 for third year so you can see that hierarchy in position through the years.

Interviewer: Okay and what is the module actually called.

Nicky Harding: Oh now you're asking I would have to check.

Interviewer: I am sorry I never remember the module codes that goes out of my head I can remember the names but never the codes it's slightly embarrassing.

Nicky Harding: No exactly it makes the code for me and not the names but I can check that and feedback.

Interviewer: No it's fine, okay right within the course where is sketching used in the design process amongst your students, where do you teach them or encourage them to use sketching or manual representation technique?
**Nicky Harding**: That's really interesting so obviously at concept stage definitely but right through that the whole design development is not expected but preferred I suppose that you are sharing that idea generation through drawing. And then it starts to work towards kind of coloured maybe and then with the Photoshop skills sort of come in later as a finalizing design more for presentation they would use the card skills. But we don't say you know it has to be card for presentation it can be hand drawn and a lot of student like that so hybrid of the two things as well which is quite interesting. And so if that's their skill base if that's where they want to go we would put that design process if you would like rather than computer generated.

**Interviewer**: Okay literally from the very kind of outset a brief they are encouraged to pick up pencils pens whatever. Okay now just focus on particularly student as they represent themselves to the course when they come in because obviously you deal with that kind of new student. How do they present themselves to the course in respect of your skill sets with regards to sketching?

**Nicky Harding**: Well I mean even at interview stages we expect to see some sketching before they even come on the course we expect to see that, and that is more than some criteria what we are sort of rating them against so we fill in a form and it has sketching in that. But then they do this part of 1100 module they start looking out sketching in each strange way. So we show them perspective drawing shading using different media and that kind of thing so it's literally from Week 1.

**Interviewer**: Okay and what kind of attitude do student come with regarding sketching?

**Nicky Harding**: Sometimes they think they already know how to so what's the point in doing it again, and sometimes they think well we have already done this A level or foundation so some of it they feel is a little bit repetitive. But I think they understand because we are pushing it we want them to obviously improve and we also in this module we mark the quality of that drawing. So it's not enough just to be able to draw something in perspective it's about how good it is does it communicate. So you can't just get away with a little scribble you know you have to really work at some of the drawings as well. so I think the student starting to realize that there is more value than perhaps what they originally thought when they started out.

**Interviewer**: So that sort of intelligent around them the importance of it grows throughout their experience. If you were to give a kind of two ends of the same skull if you've got a coloured student coming and you've got the really positive ones you and you got the really auntie ones what kind of attitude either end have you see [unclear 6:00]?

**Nicky Harding**: Well interestingly at the moment we have problem with our second years who seems to be incredibly against developing work through sketching they don't come to some of the session that we got on, because they think they know better they think they know how to do it already and even very recently in the last couple of weeks we've had just terrible attendance around it because they think that it's almost like beneath them because, they know how to draw so why do we need to have lessons of drawing. But yes the way that we would manage that is would say you can't go to a client meeting and not be able to free hand sketch stuff because you haven't got time to say well I'm going to go home, or I am going to go back to the office I am going to revise this visual and then I am going to send it to you in a couple of weeks’ time they want a more of an immediate response. So they sort of having that being able adapt and change design straight away in front of a client is so important. And I think they are starting to learn that but it is a
stumbling block for some you think that I can reserve that through card so why do I need to do it by band.

**Interviewer**: Do you get students arriving who tell you that they really don't want to work in sketching I mean obviously they know that that's a part of the course and there's these criteria set down but do they kind of show resistant at the very earliest stage?

**Nicky Harding**: I don't think so not so much because I think they realized if they've understood the structure the course they know that year one is essentially about gaining skills and knowledge and learning those skills and perfecting those skill, so hopefully not it seems to be more of an issue in the second year where they've had a taste of using computer generated software and they think well we can resolve design through that so therefore we can stop drawing we can jump straight to card, so we see more of that I think as they are getting into second year.

**Interviewer**: Okay I am going to ask you to kind of quantify you got about 40 students per year or 50 students per year. Can you give me some sort of numbers if possible regarding the proportion of student who are resistant the proportion of those who really struggle and will hand in a couple of awkward pages of something because they have to, can you just sort of give me a sort of range and rough idea?

**Nicky Harding**: Yes, if I based it on you know yourself as a so sort of lecture and tutor that if the students don't come they don't learn enough or there's no outcome at the end of it or very little. So based on that with the sketching here and with that manual techniques that they are supposed to be doing we are getting as little as half attending, so if it's attending that makes me thinks that maybe half of that group aren't confident or either the other way they just think that they don't need it because they can already do it.

**Interviewer**: Yes, so that could represent the other super confident end of the scale who feel that they don't need to be taught because they've got that skill set already.

**Nicky Harding**: But I certainly think there is some in there that are maybe even embarrassed about their so they would rather not participate because of that reason as well so it is a bit hard to quantify in that sense.

**Interviewer**: Yes, because you don't know because they are not there so you can't get the answers.

**Nicky Harding**: Yes, exactly but it might be useful for you to say interview Sophia Mitchell because she runs that particular module.

**Interviewer**: I have been hearing about Sophie she does the drawing she's a drawing tutor and she is really good okay yes I will bare there that one in mind.

**Nicky Harding**: Yes, because she could give you a really good sense of perhaps the quality and maybe that resistant that you are talking about, she might be able to talk about it first-hand because she has seen it.

**Interviewer**: Sketching tuition symptoms you are talking about student who kind of leap from the initial idea straight onto card thinking that card is going to do their designs for them so it's an interesting one isn't it. Can you talk me around some of the other symptoms of sketching ambition how it actually manifests?
Nicky Harding: Yes, I think it's interesting so say for example we took the pathway the second year seems to be a really good example actually so working with maybe six or eight students in the tutors we will ask them to show their development work as a group and often does very few sketches in that and I don't really know the reason why. And even the sketches that they have got they are either horrid or they are not well formed, and that's not to say all students are like that of course but sort of the weaker students the one that only have these two or three sheets that they are bringing to the session and they are quite painful and they've not really explore perspective drawing even though they should have been taught how to do that, so they are not using that prior knowledge. And I think it's because they think that they can produce it in another way and we are obviously encouraging not just drawing aspect but are so the sort of sketch modelling. So again if you are struggle to draw the best thing to do is to model it and then you can use that as a form to help you draw so I don't know if that answers your question.

Interviewer: It does so we've got the concept of jumping straight to card before the ideation process has been going through fully not attendance and obviously looking at the quality of work when it comes in.

Nicky Harding: Yes, and I think confidence as well if you are not confident at drawing it is quite difficult in that tutor room situation to show that little scribble sketch, although sometimes within that there's a really great idea.

Interviewer: This is it this seems to be the problem that students are equating they are looking at sketches as artefacts rather than symptomatic of a cognitive process a dialogue. And once they start to think that it is a dialogue and it is not being judged as an artefact or doesn't need to be judged as an artefact suddenly they've kind of relax and they realized that it’s and not the finish thing which is necessarily important it's during the design process.

Nicky Harding: Yes, so I often show I mean in fact during this week I showed students a series of layout drawings with some little thumbnail sketches not beautiful but they were getting an idea across and I was going there is this one and there is this one it's there is probably 12 to 14 drawings just form one area of a gallery, and they were like well that's a lot of work. I say well not really because you take it and you trace it over the top of it and then you do another one and then you do another one and you change it that's the process that we are trying to get them to do and they don't seem to quite get it.

Interviewer: Again they are seeing it as a quantity of finish work quantity of artefacts rather than a demonstration of a process there is a kind of serial processed that you've gone through and it just happen to be on 12 sheets of paper.

Nicky Harding: And sometimes a lot more, so for them they think they can just do one sketch layout plan and that it resolved I don't know how we get them out that, but I mean that's part of the development process as much as it is about sketching.

Interviewer: Preferred tool for design among students is there a kind of preference I mean I know card is always kind of seen as being more exciting and spontaneous and glossy etc. But are their preferred tools for design amongst the students that you can sort of identify?

Nicky Harding: I think what happens I think they like to be in the Sketchbook so what happened is I think they get boned into Sketchbook into whatever size that might be and we will need to break free from that so we are trying to encourage them to use layout paper so
that you can do those overlays that we talked about, you can create lots of layout and you don't have to be too precious. Whereas in the Sketchbook they are either really, really constrain and very, very neat and it just doesn't feel natural.

**Interviewer:** Yes, it's interesting you mention sketch being bound by the size of the [unclear 14:19] that seems to be a massive problem which I hadn't actually identify but the quality of the paper in Fine Art Sketchbook is usually pretty good paper. And you feel as if you can't scribble you can't make a mistake where as soon as you get on to lay out pads marker pads that preciousness is gone.

**Nicky Harding:** I think that they do prefer to keep it in the Sketchbook maybe because they thought it might more contained and they can't do these big statements because they can't break out of that and we really want them to, we encourage for them to do an [unclear 14:57] Sketchbook so working on lots of different sheet and then bringing it together and having that bond we try to avoid that being locked into a smaller page. But then some of them are very effective with the tools in terms of it's just pencil and sometimes it's very light torch it's not even really there.

**Interview:** And do you feel that too much pencil can raise like a timidity in terms of their confidence so symptomatic of what's going on in their head. Okay I probably need to ask your colleague Sophie about this but how is sketching taught I know that you are talking about your module that runs how are those tools kind of converse within modules?

**Nicky Harding:** Okay so in terms of the project module I can talk more about those one of the ones I do it's sort of like the design one, so the first year first project we asked them to do development sketches obviously are there final designs what they are doing is there are working in the workshop to create 3D models, but behind that they have to be looking at research for inspiration so often they will choose something like nature, say they've might chose a leaf and then they might create three models out of different material based on that and abstracted it or something. So we get the process started we give them a series of images so it might be natural forms it might be a [unclear 61:29] forms and we ask them to get the layout paper over or tracer paper and go over that shape and expand on that form because they are drawing from day one. So that's something we do with in the design modules and we make them draw quite a lot actually even though they don't always want to. And then of course there is the drawing modules that's the manual techniques that they then support what we are doing but that's more about learning how to do perspective drawing and learning add tone and working with different media.

**Interviewer:** It's technique base I supposed to design process?

**Nicky Harding:** Yes, so they are doing two things they are doing design process sketching and then they are doing skill based sketching, and the idea is the skill base will support the design when they get to that right moment in time.

**Interviewer:** Okay how do students maintains sketching skills, is that something the course consider the maintenance of skills?

**Nicky Harding:** I suppose what we would say we do this in a valuation actually on some of the project and someone will say they recognize it they need to draw more to practice I know myself if I don't do it for ages then I find it really hard to pick up a pencil and have that same confidence but the more you do the better you are. I think because the manual technique is something [unclear 17:49] because throughout the three years it is being maintained through
the natural need and the lessons that forms that activity as well as the design work where we are saying the development work is so important, and you would never expect to see you know page 1 in development Sketchbook shouldn’t be card I would be horrified to see that.

**Interviewer:** Do you see that?

**Nicky Harding:** No more so in second third year but certainly not in first year.

**Interviewer:** Okay and if that happen in second and third year what do you do with students if they come in with a development work and as you say the image is something they’ve gone straight into card to make it do their thinking for them, how do you deal with that what process do they have to go through?

**Nicky Harding:** Well I think we would probably point out that by doing that they are not going to developed their ideas they’re just going straight and they are relying on card to resolve issues and we would probably say you need to be doing some hand drawing stuff before you get to this stage. Because there is this sort of illusion that if you create these sort of glossy visuals then the design can resolve, and you have to work through the problem but then you look at the planning and the planning is terrible. So we would probably say go back to the basic go back to planning go to sketching.

**Interviewer:** Okay and to what extent do student believe that by going straight onto a computer their design will be resolved their design problem will be resolved?

**Nicky Harding:** I think probably a percentage would think that would be that would be sorting it.

**Interviewer:** That the computer will do process.

**Nicky Harding:** And even though we say that card is just a design tool computer aided design it’s a tool it’s not the thing that’s going to reserve it for you, you still got to do that planning and that is really why in first year it all start with this initial drawing board for technical stuff so that they can work on things in scale they can understand the distance you need between things to make things functional card you can do that but you still need to know what sizes things are, so I think it’s really important.

**Nicky Harding:** That’s interesting are the students aware and do you kind of push this the difference between the process of design and the process of visualization because that seems to be something that student can’t pull apart very easily, they believe like you say the glossy visualization animated whatever is the design and they are produced their design all they’ve done is produce an image with no design in it.

**Nicky Harding:** I think that’s quite interesting because it’s funny when we do a feedback for any design project we always find it hard to separate what we are seeing in the visual [unclear 21:02] got some design in it and then you'll find that you have to go back to the development work to try and then pick that thought process to sort of see where the designer ideas come from.

**Interviewer:** Is that thought process clear or do you have really kind of?

**Nicky Harding:** Not always.
Interviewer: So there is some time little connection between the development work manual work and then the visual?

Nicky Harding: Yes.

Interviewer: That's interesting why do you feel the students who are so kind card led and absorb in card and computer base design do you think there are reason for that what it is about that, that attracts them?

Nicky Harding: I think in some ways perhaps the less confident designers [unclear 21:49] what look like a visual that look quite impressive, so it's only when you go to that backup work and you see that there is little depth and you really do investigate those visuals and you really study them, you know on face value your visual can look quite impressive and you can be quite seduced by eye glossy visual, but appeared to resolve an issue but you can't quite simply uncover that by the lack sort of backup and support work that really shows they've investigate it and come up with a good solution. So I think in some ways it's the weaker student hide behind the fact that you can create a sketch model and what looks like an interesting view it's got [unclear 22:37] in it and actually no design and we see that quite a lot, and that is students that unfortunate that are very middle of the road haven't the ability or the confidence to really, really resolved a design. And it's even more apparent when we ask our third year to extract something from their scheme to detail, so this is taking them into sort of like the really technical aspect. And then when you look at the they haven't actually resolved a piece of integrated furniture enough to be able to.

Interviewer: So they couldn't pick it apart and producer a construction drawing because they've not got to that.

Nicky Harding: So they actually having to go back to what they led you to believe as a completely resolved scheme because we've see it in a visual when you look at reception say reception desk area it's really just really just a shape that's being [unclear 23:30] or something to look like a three dimensional form in a space but has no.

Interviewer: Haven't actually being resolved.

Nicky Harding: No it's not quite.

Interviewer: Which sketching ambition generally most of your student are there methods that imply to kind of minimizer that to kind of encourage the discouraged or to give confidence to those with no confidence are there methods your kind of employee to get beyond that [unclear 24:04] nailing them to a desk and making them draw.

Nicky Harding: Yes, which interestingly we've had this module the two 100 where the second years do seem to be resisting, we have had a few students come in and say I find it very difficult just to draw in this time slot between 10 and 12 because you say I need to. So it's when it goes from beyond being skill based form of practice to actually sitting with the design, so you are saying I want you to draw today but it need to relate to your projects and then they going yes but I haven't thought about the design yet, and then they got a stumbling block because they don't know what to draw. So then someone like Sophie comes in and she's trying to she's being told they need to be drawing they need to be practicing they need to be generating lots of things, and they are stuck with their design so therefore they didn't produce anything. So what we are trying to do and what we've done only of this week we've said okay what haven't you really investigate yet, and they say we haven't really planned or
layout we got a sort of initial concept but we haven't work out how people use this space. So in this time we've got now we will give you 20 minutes to bash out five version of a plan and see what you can come up with, or if we took your drawing and then pass it to the next person and then ask them to add something to your drawing how might that evolved in your design in a way that you are not thinking, and I know that Tim one of our part time stuff has been doing that today with them just to get thoughts on a plan because they are not doing it. So we are trying to put things in place where we are making them work very quickly again emulating industry they might come to you and say can you do a design in the afternoon, and that quite scary so you got to react. And last week with our first year so we're doing this architecture project in group at the moment so they're coming up with one design that they're going to build, so rather than it just being perhaps somebody who is the strongest in the group say no I've got a great design let's do this we've said no let's look at everybody design and see maybe if we can create one scheme from little input from everybody. Again putting a time scale on literally with the timer in the room and saying alright we want you to do 5 sketches in 15 minutes. All of them have to be different sketches so it's five different ideas, what they might they be and share that back with the group. 

Interviewer: It's almost like the fear of not completing the task then becomes the issue do not fear of having to put something on paper.

Nicky Harding: It's not about the quality of drawing it's about the quality of the idea and feeling that they can do something quickly and they are generating stuff that's value.

Interviewer: And interesting what you said about passing work on to the next student, do you feel that kind of reduces preciousness that people have with their own work and this whole fixation on that is my idea I can't move it on because that's my idea.

Nicky Harding: I think it sort of gives you more of an open mind I think hopefully it make it makes people might say not so precious about what you are doing and the more willing to share as well because often I find that with tutorial student we are just [unclear 27:22] but it will be very just for me to look at not for the group to look at because I guess they are worried that their ideas might be pinched by the others or they might have an opinion on it and they don't want to share so in that regards doing the sharing of drawings and adding to I don't know what the feedback was from that session because I didn't the lady that did it but it would be interesting to find out how it went down.

Interviewer: Okay this is just coming to my head as we've been talking but with regards to I don't know whether you get feedback from student or whether you get people coming for references for employment, are there any issues in relation to sketching ambition and the inhabited student and they're prospect for recruitment into design, is there anything around that, that you've noticed or anyone has notice.

Nicky Harding: I haven't had that as a direct thing that's come, however you know I think pretty much we would expect our student when they go out for interview to also have that development work with them to show that idea generation because if you haven't got it then again you are talking about the finish piece aren't you whereas if you've got the ideas behind it so I don't know whether students do but I certainly think it's a good idea to take some development work therefore which are skill.

Interviewer: And do you feel that the sketching inhibited students are disadvantaged or less likely to be employed in the design industry?
Nicky Harding: Not necessarily I think it depends and what kind of practice is like and what their preferred techniques are for delivery the company that I used to work for they had two key people who did that the visualization so the sketch work we are talking about you do that for idea generation and then thankfully we had a team that did the whole [unclear 29:22] visuals which is sort of quiet normal for a medium sized company but they had two different styles so they had the computer generated visual studio max kind of presentation versus the drawing and they are much softer perhaps, what would it be almost like the lass kind of polish visuals. And I think certainly from when I worked within that industry things that were drawn by hand seems less stepping stone so from a client perspective there would go okay so this is just a sketch that means I can input I can change things even sketch [unclear 30:04] sketch elevation whatever it might be they felt that wasn't completely resolved in finish and done and they couldn't comment where is the card drawings look like nothing is going to change same with the visual. So I don't know for sure but I wonder whether that's why they have those different approaches to suit different client need.

Interviewer: This is it I've had situations where clients come and could said really nice visual but with this stone floor we've got now looks nothing like the visual you did for us and the visual it's almost like a specification. So yes that does caused problem. I think I've ask everything I need to ask but do you think there's anything you need to tell me.

Nicky Harding: No.

Interviewer: I think that kind of covered everything I need to know around the issue at the moment that's brilliant thank you I will switch off now.

Audio Finish
Interview with Stuart Lawson

**Interviewer:** Right just to start with can you just tell me your name the course you lead your position and things that just so I've got a record for you?

**Stuart:** I am Stuart Lawson I am [unclear] Design Products which is a collection program so that's product design BA, BSC and products of venture design and also MA product design as well so I am administratively I do all sorts of things I teach research but I don't teach skills anymore.

**Interviewer:** Okay thinking particularly about the product design BA BSC which is where I am going to start to find and pull the students to work with find them as I go along. With the product design and regards to sketching when I'm talking about sketching I am talking about the early design ideation stage sketching as opposed to sort of rendered perspective production of prototyping sketches that kind of thing, not the presentation stuff but they thinking stuff what is your courses attitudes towards sketching and the need for it or maybe there is no perceived need for it I don't know?

**Stuart:** We are talking about BA or BSC or both?

**Interviewer:** Both because I don't know how the two courses I know there is a slight difference in the course but I don't know how that relate to the use of things like sketching for design ideation.

**Stuart:** Drawing is fundamental and I don't know there is nothing clever about it in itself it's the most useful sort of development communication so in terms of recruitment it's not such an important skill for BSC as it is for BA but BSC students still need to be able to develop ideas and communicate through it but I guess the distinction would be a command of perspective and also the ability to render detail, so for BA that's fundamental because as well as development of principal you also need to start communicate certain details to do with aesthetic so it's useful in either program but it's more acquired in one then the other.

**Interviewer:** And how is the BSC different from the BA in terms of in place of sketching or instead of sketching and the need for it as a process drive of process and communication what is in its place is there something in its place.

**Stuart:** There's not a lot between so both courses in order to develop ideas originate them and develop them drawing is a fundamental part in order to develop and test and prototyping is a fundamental part of those. BSC will more likely and the assessment criteria and everything is more focus functionality principles, and BA is more focused on functionality and customer and Market a bit more so electronic prototyping mechanical prototyping fully functional rigs is a proven point that principle in BSC that's where the depths of requirement is and the depth of need and the [unclear 3:30] it's also about function but it's also about other things with these drawing other research for that.

**Interviewer:** So would you say the BSC is more kind of driven by an engineering approach?

**Stuart:** Yes, it's engineering design.

**Interviewer:** Okay and the BA is more driven by the kind of user and the acetic and the user experience.

**Stuart:** You can say softer and hard skills those are misuse as much as these but you know what I mean.
Interviewer: Yes, absolutely okay with the BA and the BSC if you can kind of computer the 2 as you go through this. Where is sketching use in the design processes within each of those courses you were kind of talking about ideation but are there specific points at which student have to produce sketch portfolios or sketch work is it an optional thing?

Stuart: It's compulsory for both and they both in the initial ideation stage and also concept development stages so the quality of the drawing will be different but what happen is in the later stages due to detail development requirement, and as I said the BSC will use maybe Electronics maybe more Cad because they are less concern with this new [unclear 4:43] appearance whereas drawing has longer purpose within the BA but also so does Cad and Photoshop all this sort of beautify and realize all that kind of stuff.

Interviewer: Okay so with the BSC just too kind of clarify it is the early ideation process with the BA it's transform the whole process of drawing throughout but it's a kind of organically developing?

Stuart: BSC will use it for longer but I think it become a smaller component part of the later stages but it is always partly tutorial?

Interviewer: Okay and when students come for tutorials are they expect to produce sketches in front of tutors or do they have to arrive where the collection sketches.

Stuart: They Kind of arrived with them but increasingly they will turning up with the technical drawing or a model or a film or a photograph so sketches are initially use to bring ideas and then they are more use as a discussion tool a development of problem so that's happening all the time but I think they are more discursive later on as you progress through project and more sort of the presentation idea lead work you've been doing elsewhere and the later stage of the project is the [unclear 5:54] you know do this do this and that's more towards engineering for BSc and more towards aesthetics and consumers and functions for BA there is a lot of crossover in middle.

Interviewer: Okay when students arrived to do the BA or the BSC how do they come equipped with sketching skills or do they come without any sketching skills how do they present themselves to their respective courses?

Stuart: 20 years ago half of the students [unclear 6:29] foundation and now it's about for us about %15 something like that. They would have done drawing so within A level which is where neither of them come from they do no observational drawing so the only drawing they bring with them if they are A level is drawing from their imagination of think of ideas which is good to a point but also lacking seriously lacking, so what they're lack is observation and through the observation the ability to represent refinement and details. If they'd done art they would have done a bit of that but they are used to [unclear 7:01] of education to do life drawings so there's nothing more. So their drawings are of the wrong sort so they don't want to approach the design process in the wrong way but they also don't do the observation aspect that enables them to reverse engineering but we don't beat them up for that that's dedication system but that's what we have bring out of them their ability to observe and render details and command perspective in a way that they haven't had to do because all they been doing is trying to master perspective with their ideas and their imagination so the illustration is a thought it's more than a presentation it's an object.

Interviewer: Right so they haven't had to go out and look at something to understand how a 2-point perspective drawing works and to follow the vanishing point.
**Stuart**: Chinese students for instance don't get taught [unclear 7:50] generally get taught quite traditionally in terms of Art and Design so their drawing cannot always but more often is better than the UK in observational. They [unclear] at a more traditional education but their education doesn't nurture renovation.

**Interviewer**: Okay that's interesting what are student’s attitude towards sketching when they kind of begin these you course are they kind of really empty are they really keen to learn; do they think they know how to do it so they don’t need to be taught anything?

**Stuart**: So we don't use the BSc to draw so the modules has drawing within it rendering is not some part of BSC. Their attitude I think everyone understand that it is a fundamental part of being a designer, everyone understands how important it is for your own self-worth and for people's opinion of you and so it's difficult because most students aren't particularly good at beginning so that module is hard work for the first term. They did do 2, 3 hour session one of them in drawing one of them in Photoshop 3 hours in the studio doing rendering and then do a 2-hour session and are asked to do it a bit more separately so you it's hard work and it's tough I never really got any better really and it's hard so that constantly remind you of their lacking so it's difficult to encourage but they get very well taught, so the quality of the teaching and you can get people to fill in space [unclear 9:27] it doesn't necessarily improve them so I think that they see the benefits certainly halfway through the term but it's tough.

**Interviewer**: Okay that is earlier on in the first semester?

**Stuart**: Yes, first semester and the first year and they didn't do any drawing the second year it just becomes part of it, but they should be spending 3 hours or even 4 hours of drawing 2 hours out of that is tutor and there's an hour lecture with the demonstration so it is a big part of the week in terms of commitment to something.

**Interviewer**: Student with sketching ambition can you quantify among your cohort your student cohort, what sort of numbers appear to suffer from sketching ambition anxiety avoidance etc. roughly I know it's quite difficult sort of.

**Stuart**: I would say %25 are comfortable drawing to a point and %75 to varying degrees for varying reasons struggle with it, and I think that's because there's a big difference between some student.

**Interviewer**: what is it they struggle with are you able to identify?

**Stuart**: Drawing subconsciously so these drawings are this morning I was quite pleased with it in a way because the reason was sensitive but I was talking to someone and all of a sudden I am doing it and I wasn't thinking about drawing I was trying to illustrate. And that detachment from the consciousness of drawing is really important but you also had to concentrate at the same time so it is a quite difficult frame of mind to be in a way the children draw freely. And so it is quite difficult for them to learn I think I also a lot of them don't learn, now I prefer people to draw in fluid movements dynamically and make it in any accurate perspective but still produce a dynamic drawing and then they work on the accuracy of it later that's more expressive than it is accurate it completely communicate its profile are rolling around, so I think that's the issue it's genuinely in and out equally.

**Interviewer**: Yes, so do you feel that student instead obviously you say tuning out and having the stream of kind of subconscious ideas coming through the pencil or pen, do you feel that when they come to sketch they are more concerned with sketching as being an artefact as producing a picture of something as opposed to it being demonstrative of a process, do you feel that they are more anxious about how it appears really?
Stuart: Yes, so the drawings I do tutorials [unclear 12:16] I'm conscious and I'm trying to make their drawings look good really I am trying to communicate something that they may not understand because I [unclear] explaining it very well so I find it quite hard tutorials to be very specific because my drawings becomes a bit worse over the years they used to be right but I am not so good at being accurate now, so it is really hard and I think they're concerned is it a good design is it a good drawing and it's easy for that model to cloud out where is it the seam line going to run over this profile it's a bit of a wood inside it it's square and I [unclear 12:57] for instance so I think for us it's very clearly I am trying to communicate a point but for them they're not always but I think quite often are focusing on the wrong thing which is I want to do a drawing and I am tired of doing a poor drawing. We had a guy doing a lecture today doing [unclear 13:15 work in Hong Kong he is going to get a great job in Europe he's just gone back there, his drawing he said it wasn't very strong but I thought it was alright but it wasn't very good and yet he is a very good designer he's been working in Cad so he's made up those in other ways but it is quite unusual, he is not a poor drawer or anything he is just not great so that's quite unusual.

Interviewer: Is there a correlation between students who are poor with sketching skills and their levels of success as designer producing good design?

Stuart: There is a like there are probably exceptions but generally speaking I think that you get that to a certain standard that it is okay and acceptable and at the acceptable standard you will have the very best student as well as some mediocre students. But I cannot really think of anyone who is terrible because I think they would have work at it. So there is a link between drawing and ideas but as I said earlier on it's not clever in itself the application and the Improvement of it takes a lot of work. So when people arrive they [unclear 14:21] of being good at drawing at school first instance and like in all other things thinking and Cad and all these other stuff there's a momentum behind people to overtake those early high performers particularly in drawing that's what I think, but some people are always perfect drawing they can never become anything else an average and I think it's sort of [unclear 1439] skills as much as anything else some people, a girl who teach cannot draw her idea are okay but she cannot draw she never done a good drawing in her life.

Interviewer: Can I take you back you mentioned the kind motor skills this is something I've picked up on with another interview, do you feel that there has been a change over time in the motor skills the kind of dexterity of student when it comes to using manual pen based, I no idea about A levels or GCSE at a all.

Stuart: My impression is that people do it less and within what A levels would have been if design technology didn't exist people would have done art and they would have done other things, and so drawings is always there problem solving wasn't within the curriculum so I understand why it has come in but I think people just lack the experience of it, and perhaps to some extent the younger you learn something the easier it is to sort of developed that momentum so the education it is definitely something in there some people are just wonderful at drawings.

Interviewer: Yes, it come from somewhere and you are not quite sure where yes.

Stuart: We teach them to draw in a certain way I never got taught to draw, so you can get someone who is okay %-40 on the way to being %100 good and making into a Professional Standards drawer not the front of the team or the best person, but I say %20 of people let's say can never draw well and I am guessing at that but I think they just never draw well, they also never get really good grades and they never really apply themselves. I think it's very rare to find someone who just cannot improve their drawing who has good ideas and does good design work.
Interviewer: This is a slight strange question, with the manual skills is it reflected in things like hand writing I know everything is produced using software know?

Stuart: Well me an example my handwriting is illegible and it's become more and more so and my drawing is less good than it was and I think that is practice [unclear 17:02] to be clear I was really concentrating on this and if I have to right focus then I can do it but I think it's because our minds are elsewhere I think that there is a link between tightness and handwriting, it's interesting if you look at [unclear] someone's who draws dynamically but not accurately.

Interviewer: I haven't looked at whether there is a correlation between their manual skills and their handwriting that's something that just kind of cropped up and I am thinking it's obvious than it probably would be.

Stuart: So when you get someone to write a notes at a lecture meeting or do sketches and things that they are on screen it's slight psychologically conducts some experiment.

Interviewer: Okay sketching ambition amongst your inhibited students the kind of majority who showing ambition of some kind, how does that manifest what do you see within that group students in terms of inhibited behaviour?

Stuart: I mean I don't teach drawing but a lack of concentration you know say we are doing a session and we ask them to do 6 drawings within a certain phase, getting some of them to do that 6 is quite hare and I think it's because they are not focusing how they draw in front of other people I think it is important so we tend to draw in the studio, we got fear amount of space but similar distance between us, but that performance I think it's good also but I think that affects people so it depend on how people process that.

Interviewer: Do you have students vanishing doing not doing the work turning up with excuses even just thinking of all the different sort of things that other people have mentioned it's just examples of sketching ambition and manifesting itself a quite extreme level?

Stuart: Within drawing modules people tend to do all sorts of things and people don't intend to design module for one reason they can't module for another, but I guess within drawing the intense effort that it can take I mean thinking maybe it takes more effort than drawing but actually improving your skill drawing to do a presentation render so we are talking more about rendering now that's more intimidating, but I don't think people don't do work because they can't draw they just do bad drawing, but what they don't do is progressive ideas because they can't draw things accurately so the good drawing is a really great developmental tool or lens you know.

Interviewer: So is there a correlation between how prolific student is in terms of their sketching whether they are sketch inhibited, do sketch inhibited students turn up with fewer sketches a smaller body of development work, and the ones who won't bothered will quite happily produce sketches.

Stuart: And I think that's because they're not thinking of the drawing so much.

Interviewer: Okay preferred tools for design are there students who just don't sketch don't want to sketch or do you have student who prefer to use the manual approach within the course, when everyone is kind of in courage to use Cad and the software packages but you get somebody who are I'm not actually going to do everything by hand?

Stuart: It used to be that we would ask people to go and do a technical drawing that was drafting just line and they can make a model in the workshop, 2 weeks later they are still doing
the drawing because they are modelling it in 3D so they waste a lot of time doing that, so I am going off what the question which is?

**Interviewer:** Student referred tools for the design what's the general consensus?

**Stuart:** We try and discouraged them from using Cad. There is a student in third year he is very, very good who goes into Cad quite quickly and uses it as a really good developmental tool without very much drawing he does it successfully but for most people that's not a good idea partly because you are trying to work out an idea in the form and the detail and the Cad slows you down. So we discourage them doing Cad and drawing is a fundamental part of the course because it is undermining all sort of things if they don't draw a lot.

**Interviewer:** Okay and do you have an issue of beautiful Cad drawings [unclear 22:05] interiors you know beautiful lovely walkthroughs but actually the design content when you sit down the nice shiny surfaces they don't actually designed anything they just put some things, I am just intrigued to know if that happens in product does they really know anything about products does that happen when you actually strip down a Cad drawing or a visual and go actually I haven't got anything there is nothing there, did student mistake visualization for design?

**Stuart:** Yes, to a degree depend on what it is there is quite a lot of work in graphing and modelling something in 3D and Cad, and in order to do that you have to decide on dimensions and farm so there is actually quite a lot of progress made it is like modelling in the same way like skull [unclear 22:55] in a clay model but I still don't know what goes on inside the structure the materials and stuff [unclear 23:06] I think modelling Cad modelling generally is as useful as modelling except you can't interact with it. What was the question?

**Interviewer:** Preferred tools for design?

**Stuart:** But there is a point when it's useful simple objects unless you can draw really well that is my concept unless you can draw well it looks like none event, and Cad is very good at illustrating simple things and a lot of the word is very simple so that is a very [unclear 23:44] tool because those you don't have the drawing skills so for some they will carry on drawing longer and others will start to use Cad more but it was a complex thing it's often better to work out the functions and remodelling and testing a prototype so depends on the project you take the case studies and it would be easy to explain.

**Interviewer:** So sketching is taught in the first semester of the first year or those sort of ideation skills, and are they maintained throughout the course or is it assumed that once they are up to a certain level they will maintain their skills themselves by doing this sort of problem based.

**Stuart:** There are sorts of sketches within modules but drawing sketching rendering it's only 2 the first term of the first year. We did various reason in the second year do some drawing [unclear 24:32] what are we doing because they may need to improve but they need to improve through the project work so it becomes simply a tool. But within design projects to a point we are looking at their development and that development largely is drawn particularly BA and even though we are not given them a mark for the drawing I will give them marks for communications and [unclear 24:57] and so good drawing generally speaking in the majority of cases illustrates good work but you know nothing can be perfect, but generally because there is a link between an ability to draw it reasonably well, and the good ideas and the good work good the work ethics and all these things. but generally if someone is well presented and they are showing your development and showing you development [unclear 25:22] around the page they are actually doing some thinking occasionally you get people taunting stuff up which I understand why they do it you might need a boost and you like drawing you know.
**Interviewer:** Absolutely do you separate deliberately or do you kind of embed the 2 that comes up to teaching a design ideation process and the visualization, is there a point which student understand that, that is not to do with presentation it is purely thinking or does the whole process kind of marry into one when you are teaching and getting students to work on their projects?

**Stuart:** The drawing that they do within the first year first semester as a BA is about respective it is about creating the impression in 3D rendering tone and surface, but they are not doing developmental ideation drawing but they are doing that in their design module on a different day of the week, and I don't think they are necessarily connecting the two things but then again it comes to presenting their ideas than the two things align, but we don't teach developments sketching in a way because that is just about confidence communicating ideas I think.

**Interviewer:** Does the ideation sketching is something intuitive?

**Stuart:** Yes, I think so but we are teaching them because they can be untidy and messy and still productive what's hard is to produce illustrative sketches and renders that sell a precise idea so that's where the effort goes into [unclear 27:00]. So there drawing is a part of the design module sketching developing ideas and yet you are not really assessing on them. I don't know whether you can't teach ideation sketching drawing because you need to master perspective and you need to have tricks for rendering details and that's it.

**Interviewer:** I've been looking at tools and practicing kind of using fashion text are amaze, nothing to do with sketching, sketching is just a manifestation but getting them to think in certain ways to kind of engage in creative thinking of different types and then manifest it so the sketch is not the issue the thinking is the issue and the sketch just happens kind of come out at the end and it seems to take the fear away because they don't then see the sketch as an artefact to be judged it's just kind of a manifestation of the taught process it's kind of rebalancing the process and getting them to be aware of what they are doing rather than what it ends up looking like.

**Stuart:** Quite often I am talking to people got my pencil down and ask them to draw it, and generally they really don't want to do that.

**Interviewer:** Yes, I've been doing that with students a lot and they would kind of panic and fall off their chairs rather than pick up a pencil.

**Stuart:** I am not particularly confident in my drawing Nicki is very good at drawing clearly and diagrammatically and he draws brilliant not in the product design way this sort of technical creative engineer ways he is brilliant at all aspects of it. But I never was particularly good because I never got taught to draw so I think the methodology and the technique really important because it gives people confidence and motivation and motivation and it relaxes them then you see their true form. Drawings can be exciting in a way that if I don't do it that accurately it might look rather dull.

**Interviewer:** This is it the more developed a drawing becomes the more kind of rigid in a way stilted it can be where stuff like that for me is so much more exciting because it goes straight up.

**Stuart:** [unclear 29:18] actually came I kind of wanted to carry feeling the age.

**Interviewer:** I know you do don't you sort of get excited by the fact that it is not entirely resolved it is kind of pushes you forward. Can I ask about sketch if you do have any inhibited students are there anything you do anything you get them to do to sort of manage that anxiety, or is it a because that you've just got to do it because sometime there isn't anything you can do?
Stuart: They have a lecture or demonstration with someone doing something and then they do that and all the aspects of it and so they will have [00:29:56] going around so they won't get much time during the day but they will have lots of short input so I think the teachers got to be encouraging at the same time also got to be honest and harsh when they need to be so I guess they could do with more encouragement, but equally I think people have to build up their own confidence by doing it independently so I think the balance is about right we could have someone else test copying and we puts more money into it. Well look at the results they are totally different this year less time same tutors as the previous year roughly the same kind of ability [unclear 30:38] and that part of the discussion is it did work because the big discussion lunch time was students changing we've got students with a150 less points than they had when they enter, so someone with CCD as an average student rather than 3D so where you think the difference is going to be they can't learn they don't apply themselves.

Interviewer: Just very briefly the concentration issues you mentioned earlier on, are there issues of concentration generally amongst student or compared with when you first came teaching way back whenever. Do students concentrate do they find it more difficult to attach to a task and maintain that level of concentration?

Stuart: I think it depends what is if it's unfamiliar then drawing I think most markedly probably yes I think it's [unclear 31:35] of people interest actually maybe that's our student and I am being very general and most of our interest with that.

Interviewer: It's just when you go into Cad labs it's silent everyone is focused and fixed.

Stuart: Yes, and I can spend 12 hours doing Cad I used to not move pretty much just a bit grim, but in a way that you could not draw it's like there is a thread to you with the Cad model and you are drawn and connected to it in a way that is hypnotic and yet I think drawing requires a different kind of consciousness and involvement. Maybe if I was at 30 years doing technical drawings by hand or very good technical sketches I can get in the zone Nicki does a lot of this he's just done 26 design variation for a client and he has done them just over just a day so I think he is connected to drawing. Nicki is a good person to talk to an actually Nikki is the upper tough I really like his drawin... But as an example of someone old school he draws like a machine in a very productive way and he resolve stuff with his drawings in the way that he is so much quicker than Ca. And so the old things work better and yet these other people do the Cad for him because you know it is important, he would be good to talk to.

Interviewer: Okay thank you for that, that would be lovely thank you. Do you have any feedback from the industry about the quality of drawings or ideas from your students once they come in the industry, or is that something you've kind of quiet distant from because you don't come across people like that? I am just wondering if you ever get anything feedback and if so what it might be?

Stuart: A pretty average compared to all the institutions I think generally the standard drawing isn't as good as it would have it would have been previously I have never had any poor feedback because the ones who get the jobs are the ones who can't do it. But a lot of people go into using Cad much more and so their drawing skills just aren't [unclear 33:42]. For people to go into proper design job in consultancies create a new product [unclear 33:52] those are the ones who can't draw like Tom who is here today who says he can't draw very well he is doing first [unclear] work after 2 years so he has overcome that. So it is interesting all these things you're saying are causing me to think a bit more about but I think it was better when we didn't use Cad to point because people had much more ability to progress and develop ideas with drawing, I mean that Cad is wonderful for one end of it it's remove people's ability to draw like a machine in a productive way.
Interviewer: And also what I found from the literature really more than anything is that the process of keeping sheets of paper everything is there; with the computer you are constantly you don't have a record of what you did 2 days ago it's going because you have saved the new version it's not a serial process anymore.

Stuart: [Unclear 34:52] 3 year Harris he has lots has lots of drawings and they work very quickly on Cad he just got an ability with it [unclear 35:00] but he will come back with sketches and Cad versions of them so together he can progress many ideas.

Interviewer: So it is kind of moving between the two processes very easily.

Stuart: But he has got a sharp mind and I think a lot of the student here that they get taught Cad are still pretty slow with it because you can't freestyle.

Interviewer: But they feel that they are good with it because everything they do is based on electronic media and social media and computer so it's assume that if you use it then you are good with it and the reality is kind of not quite the case most of the time, thank you very much.

Audio Finish
Interview with Tatjana Leblanc

TL: I’m a professor at the University of Montréal in the Department of industrial design, or design, called design now, we have different programme not only industrial design but also interior design and so on so we call ourselves now the School of design. I’m working there now 15 years as professor, associate Prof, September I will also be taking the director position of the department and I am basically teaching industrial design at undergraduate and graduate level anything else more specific?

LT: what is your background? Did you train as a designer or have you come to this as an academic I wonder? If you could just give me a bit of background?

TL: I did actually come from a design background, so I started in Germany, in the industrial design programme from a Bauhaus perspective in Germany in Berlin. (...) was my alma Mata. Afterwards I did my graduate studies at Ohio State University in the United States and there was focusing methodology, design methods, and afterwards, after my graduate studies in the US I worked at (…) In the US, at Fitch, but the time it was called (…) And has now been transformed to fetch, following that went to Europe, I practised several years in Europe at Plan Creatif design agency, so I’ve been especially specialising on product language, brand language, design, design meaning and things like that so this is where the Gestalt and semiotic aspects I’m talking about in some of my papers come into play. And after that I went back to the states and I have been working as a director in the design department at Plan Creatif for several years. In 2003 I came, I started my academic career.

LT: could you talk to me about your institution at the moment, of Montréal could you just tell me and talk me through how your institution and your course in particular, what their relationship with the value of sketching is, and what ethos it was an institution and of course has with sketching, particularly during design conceptual ideation stage.

TL: we start with the undergraduate programme, and what is interesting compared with many European schools or private schools, students are being admitted without necessarily having a portfolio, so they can come from different backgrounds, it could be someone where, during high school, the whole scientific direction taken, because they can choose the high school level they make it more scientific or mathematical or technology driven, or they can make also and literary arts and that kind of thing. So at the University we are not against discrimination as such so the only criteria that students come in, is the academic performance, so therefore we have different levels students with different abilities and sensibilities for sketching and the whole visual matter. So therefore our first year education, and a bachelors degree, it’s a four-year program at our school and we did reform in 2013 and we maintained the four years because many students from when, before we did the reform, many students who compared or were asked about changes, should we go back or should we go to a three-year bachelor’s degree as many other institutions do the students write rather the idea of being a programme of four years it gives them bigger advantage, the come out of the programme with more maturity, more confidence in their skills and so that’s why we maintained that. So the first year is actually dedicated to acquiring a visual language, a visual vocabulary and abilities to visually communicate, so basically manipulate sketching, as much as rudimentary classic sketching and drawing, as well as starting slowly but surely also to look at the digital tools. So versus what we call the 2-D communication and of a 3-D communication which is also shapes and forms and mockups and
things like that, paper, or type of material, even wires and things like that, so that is not only the representation, the two-dimensional presentation, but also more to develop the ability to see and to communicate and to represent through their imaginal ideas. Then we have courses that focus on structural issues, that they see and experience, the possibility to rigidify papers to hold a package protect something. So basically all those kind of first year exercises which are pretty good, which are, let’s say for our students we observe and we see it more of a deprogramming their brain, because we are really forcing them to really to do something as basic as the very first exercise for instance to give them a sheet of paper and say make a fish. How to do something rigid, two-dimensional, flat, something organic looking, basically the idea is not to illustrate or present the fish, basically with all the creativity, and starts getting into it, will how can I use that particular material, the constraints that are coming about, so how could I creatively create a shape that potentially has some kind of organic look to it, or structurally all rigidifying it by doing loops, and so there’s a whole abstract notion, this is during the first year, whole visual language being acquired through all kinds of exercises, either by adding, subtracting, drawing two-dimensional, by looking, rapid sketching or digital sketching, light and shadow sketching and all this kind of stuff. And in fact in the second year we have started introducing actually real projects, they are more associated to products and the second year is focusing in general into some kind of product design, is focusing on the development, the methodological skills, so what is the process to get from point A to point B, how to discover and need, or how to identify need and how to resolve it and how to communicated and things like that. The third year programme and exercises are all dedicated to discovering different domains of design interventions. It can be data visualisation, it can be medical equipment, transport, er, transportation design, furniture, packaging, and so on and so on and so on. So on several levels, sometimes on the second, many of the studio classes but mainly I’m specialising now on the third year studio class and the article in your reading was actually referring to the is within the programme we have theory classes like the one I developed which is called semiotics and design and then I have a studio where we did projects which actually allows, it follows the trimester before the theoretical course and this is where students learn to apply, this is a studio class, product semantics, we are talking about. And then they are learning to use signs and cues and how to give meaning to the product that they are developing, and how they explore it, how they explore the communication aspects of the ideas, how to communicate visually certain qualities, like fragile or playful, or professional or sophisticated, macho, feminine or whatever.

LT: the semiotics and the Gestalt issues you were teaching, it’s not something that seems to be taught to any great extent, I know fine art is different thing, that the design-based courses are taught on they really don’t go into that kind of theory, but students seem to really enjoy learning the theory, it gives them something to grasp hold of. Okay, that was really interesting. Can I just redirect you back to the way students present themselves when they come to applying and beginning the courses, you’re talking about them coming from a, not necessarily a design or art-based background, but assigns engineering-based background, what physically, I mean you’re not talking about some students presenting portfolios, it’s an academic decision that he make but, those with portfolios, what type of information do they contain at that stage when you’re interviewing?

TL: that’s the point actually, since you are asking, before 2003 we started to, or we had portfolios that could be submitted, but at the end we realise that the way the university was set out, it didn’t have a significant impact, the portfolio compared to the value of the academic results in itself. And then on top of that we realised also that it’s not necessarily always helpful and it’s discriminatory, because those that never had any art class because they went the
scientific route, well they didn’t know already what the portfolio is and what to show that they had extremely good intellectual skills and grades associated to that, but they never did a sketch in their lives. So we kind of, at the end, through this kind of, since the profile is so variable of all the students that come in, we decided to stop it altogether, but before we did allow pretty much anything the students wanted to put in and some would actually doodle some sketches they did and some would do tattoo type of design and others would do photography, some already as a designer maybe did some kind of furniture themselves will build something and then they took photos and put them in the portfolio. Others that actually did some painting, worth an artistic thing, so was very very mixed but didn’t necessarily, at the end we didn’t see as much value in it because we consider we need to teach them from scratch, a subtle entry into the subject matter, so some that would take classes of course and we always would have students that were already at that level but still throughout our courses and with the way the exercises are designed you were actually more design and deprogramming them from what somebody may have learned from some kind of art class, you know arts and crafts. Actually, everything related to arts and crafts, actually they didn’t even want, they didn’t even like, also those type of students that came into the programme thinking that design is something decorative, but it helped us really, don’t request anything.

LT: your first year students, when they arrive and they have to obviously go through the process of you training them to do this process and sketching, what are the attitudes, what is the variety of attitudes of students towards having to sketch? I’m talking about manual sketching during the ideation stage. Can you talk me through that little bit?

TL: so those who expect, who have a little bit more of an idea about what design is and sketching is involved and don’t have sketches, well, of course they naturally start to do the exercises academically. Others really learn to actually hold a crayon, if you want to say so, and some are so mathematical and they see themselves, see all those exercises so intellectually, that they sometimes want more rational ways of approaching back so, and that’s kind of interesting as you’re saying, because it does create a dynamic in the group, we have big groups, we have 70 to 80 students in the first year and this is where you have a group of 12 or 15 with one sub teacher in a way, so they are those big groups and individually one teacher may be better for some students and another for others, to make themselves understand in terms of how to bring them in there. We usually even hire teachers with two profiles, as someone who is more of an industrial design profile and another with a more artistic profile because we are teaching them as much as, look at that in your hand, and how you grab the thing, look at the face, look at the proportion, if you want to represent product in relationship to a body or a chair where someone sits or stands or holds, just to try and represent, to see and learn those proportions, this is basically that kind of analytical sketching and drawing, those first nations being around light and shadow, or the proportion of simple geometric shapes, the second level comes into where they start already drawing the object and include the perspective, that type of thing. The third level is where we bring the human body into a relationship to something, and so all these things, some are extremely analytical and all of it, and are frustrated that it’s very mechanical, others that are more loose in their whole approach, they seem to have more pleasurable experience of the whole thing. So it’s a very crucial year because, yes and during that first year, some think I don’t have what it takes, I don’t get it, why they don’t like my sketch was put the project on the wrong aspects, they don’t see the important of overall rightness in terms of perspectives or things like that in the first place and they focus rather with the crayon or whatever to colour it right within the lines or make it a little bit more ridiculous. Anyway, this is where the attitudes can be, from people who don’t take it seriously, if it looks easy. Some that see it very analytical,
and they want it as an exercise because they are coming from a more sensitive background and they see the university level should be way more serious and they are, are there more shortcuts are there more efficient ways of doing things? Several instant when it comes to 3-D sketching or 3-D, even the modelling to do for paper shapes and transitions, someone says well you could just mechanically, or using geometry and calculations do that. And I say no, you’re not supposed to calculate anything, you’re supposed to draw it leisurely and explore it, so somehow we have all those profiles.

LT: okay so in a group of students where you have this very, sort of disparate mixture of people who sketch very easily and people who want to apply some kind of theory and rationalise everything, do you find, is there a positive effect on students who are more inhibited from being within a group where there are very sketch fluent students?

TL: not in the first year, and sometimes even quite a while, I think this is someone that really touches into the pedagogic approach, it’s up to the teacher I think, to make someone understand how to get loose enough. When students get examples they look at the examples and they want that exact sort of repeated way and sometimes we have teachers that say, (…) Make it different, and even among the teachers there is not even a coherence that jumps out. How exactly do we want them really, literally, exactly repeated or let them loose, give them new ways and possibilities to explore things. Assuming the very first year, in the very beginning as you say, the problem is when you have the students that are very very strong and the students are mixed up with those that are strong, they are inhibited, that’s a very good point, because they don’t want to expose their weaknesses and actually although we have the studio class where there all day sitting there sketching and there is a teacher walking around, to sketch around with them, they’re still very very hesitant and sometimes do not produce enough or do not put the effort in that day, go back, maybe at home, and next day, homework, where they are without, someone looking over their shoulder, observing, they can screw it up and do it over, so it’s a very good point, shall we be mixed up shall we protect the other ones to let them at their own rhythm discover (…) And things like that. And I must say I have for instance, it’s a very very good example, I had a student, a third year that came into my class where I have only 12, 15, because at the third year level we are very condensed and very more hands-on and accompanying the students, and that student she was very brainy intellectual student and she sketched horribly, horribly, and it became then for me a challenge, and I said, you know what, if you learn something in my atelier it will be at least (…) to sketch (…) Better and become more comfortable with it. I forced her to change tools, I said well okay now we are taking tracing paper, now we are taking bigger, get rid of your Sharpies, or those heavy (…) You’re drawing way too brutal, check something thinner. We did it together and I think this is the way, where you have to let them do, and it’s also interesting because that student, she told me, when she went to the classes levels I’m describing to you, one of the responsible teachers told her, you know what, you don’t have what it takes to do design, you should maybe consider changing it, changing subject area. And then in the third year, and even in the fourth, she was my best student. She had the best grades, and at the fourth year, her diploma project, was a top-notch student. Imagine, first year, someone told her to go away. At just so frustrates me, you know, you have intelligent and creative students, they need just the tools and we need to be able to teach them how to get there, how to be (…) And she was a kind of a brutal type of thing, plenty of ideas, but none of them initially bringing to a stage that could be a seductive, sensitive, sensible and she understood each time she said something, but she did, basically, when you sketch, you know, in my exercise, explain the methodology, the evolutionary aspects of the sketch of the shape and discovering and observing and seeing the nuances, she would really just
go from black to white, from triangle to circle, circle no good, square, okay, and nothing in
between. During that third year only I got her to discover all the shades of grey.

LT: that’s interesting because your paper talks about students making this leap, if they’re not
happy with something and have seen it myself with my own postgrad’s even, they don’t, as you
say, they don’t work through the problem to get to the end, they jump to the next, it’s all very
lateral, and that’s really frustrating, so okay, tools are really important. Okay, can I ask you, and
I don’t know if you can give me an answer to this, do you have any quantifiable data or statistics
for the sort of percentages numbers of students who you observe for you to believe to be
inhibited or to be averse to using sketching tools in their design ideation?

TL: in the first year, 80% are inhibited, because everybody has the idea of what cool design is,
what cool design sketches are, car styling and all that fancy stuff, and everybody comes of
course to school to learn that, so in the first year nobody finds himself sufficiently adequate, and
then even comparing from one to another, some discover, oh I’m not so bad, compared to
others, but even those that are quite good, I feel they need really and lot of patting on the back
and saying, that’s good, that’s interesting, you know, and do that, and try that, and that’s pretty
good, don’t worry, that’s fine. Students don’t see the value that we sometimes, even see as
teachers, and something, to discover they have some kind of style that they didn’t know or
consider, there is a style of drawing. For instance myself, we have one teacher that teaches them
to draw everything in one line, and you have to master the line and with one line. And then they
come to me in the third year and I say forget everything you’ve learned there, and I showed
them my own sketches and say look at my sketches look at what I’m sketching, I’m a very
biodelic sketch, to sketch with one line, it’s just like, for me, a definition and I’m discussing and
really debating with the teacher myself constantly, and I keep telling them, drawing with one
line, you can do it on the computer in the first place and it means exactly which line and where
you want to put it, and when I sketch, I don’t know exactly which line and which proportion, so
when I sketch in terms of looking, searching and exploring, I need to be loose enough get over
it, maybe one circle I feel is not circley enough, I go over it with a heavier line to rectify some
of the other, and this is almost learning as I go, but I think this is just the way of learning or
teaching from one or another. And I am personally, as much as a designer, as much as a teacher,
consider, you have to teach students a variety of tools which they can explore and that’s where it
comes to even the digital drawing of the virtual tools, I consider them also sketch tools, because,
even if it’s linear, even the linear more mechanical type of software, even they can methodically
try, make it longer, make it higher, make it change proportions, change shapes, and that tool
what ever tool they are using and any of the tools that can be this kind of intuitive, explorative
sketching process, that when it comes to the one line as I was mentioning, for me it’s just a
definite, whenever you are just allowed one line, then it’s like my gosh it must be the right one,
and this is what is inhibiting the students. And the other thing, even to get them away from (…) I
say okay, to the first one, you don’t like it, but don’t know exactly what, if it’s the right thing,
then I encourage them to work with tracing paper. I go over it with tracing paper to rectify the
lines that you see that you would want changed and then you can (…) And when you’re on
tracing paper it’s not as imposing, is not as frustrating because you don’t want to cut out a line
you don’t want to go over it and it looks like so definite and tracing paper doesn’t have that
effect on the definiteness, or any other kind of simple paper, you know a little sketchbook or so,
the less precious the paper or the tool looks, the more open and loose you’re attacking the
sketch.

LT: when you teach, do you physically sketch in front of your students?
TL: yes

LT: so you actually partake in sketching and they see what you’re doing

TL: in a studio class, yes, and afterwards I have also classes where I give them a, show them how to illustrate the iterations and things like that, and each of the cases I bring a lot of case studies and examples, not my own, my others and say when I do it that way but these are all possible opportunities and even in terms of sketching I say look you can sketch that way and that way and I show a lot of different styles and try to explain them what that drawing is all about and what style that is all about and at the end I say pick one that works for them as long as they can communicate the idea with it and are comfortable enough, and I say, when you are stuck with one, try another, and then when you’ve opened them really to that point try, try it, change tool, something else, take a book, try to master, so this is a way we allow them really to not just oblige and complete an exercise, but you give them the time and opportunities to explore and to start over and then it works I feel.

LT: with students who are inhibited, for example when you get to the third and fourth year student who’s been with you for a while, they still struggle possibly with sketching, they’ve really resisted and they much prefer using digital tools, you know they just don’t want to have to put a pen onto a piece of paper. Do you find, is there any observation you’ve made of how their sketch inhibition has a negative effect on them as designers and the quality of what they designing, or is there really no correlation?

TL: I don’t think there’s a correlation, and this is actually something that I discovered recently, it’s a good point, because I think this is where it comes down to again, pick a tool that works for you, because at some point I tell them, you need to learn to become efficient and comfortable. If it comes down to exploring ideas, sketching, whatever tool you are using, even a model, I said now, okay, you do not realise the perspectives are always corrupt and if you don’t realise there’s something wrong, take a piece of paper and do it in 3-D, so they sketch the lines on a 3-D model, cut them off and do something else and from that 3-D mockup, they are bringing back on paper, and then sometimes I say, when I see that the shapes are, as a volume, too complex, I actually push them, I force them to draw an elevation, top view, side view, things like that. I say, look you can start and I teach it intentionally, I asked them, the more complex the form the more I oblige them to work with elevations and draw through elevations, so that they really see and understand first (…) And they see the impact of each line extension and the proportions, and so that helps a lot, and actually this year I had a student that was really having quite a bit of trouble, but I must say, I don’t give them too much, at third year I don’t give them much chance to get, to go around the sketch. But before I allow them to go anywhere else but sketching, they have to get to a point where they put their ideas on paper one way or another, they can get into the 3-D with the paper exercise and things like that, but only to have them visualise and draw some conclusions and they have to go back to the sketch, and draw me that up. And I accompany them all the way along, so they found an efficient way of drawing it out, not a very specific way that I require, but find a way to express their ideas through the sketch before it goes any further, and I must say, eventually all my students get to a point where it’s quite satisfactory. And why I say there is no correlation is because I have students through other exercises, on the theory course for instance, where it’s not all about sketching and the process, some that really quite horrible very quick doodles in the sketchbook and when I try to to work in the 3-D and it was the most sensitive and most sensible 3-D representation but I could have imagined. I mean look at the sketch, I have a feeling that they have no sensitivity and then when
I see the 3-D model, it was just, wow, where is that come from? And so, it’s interesting because you’re saying you’ll discover a lot of architectural drawings and a lot of architects, they don’t put that much time, my younger son, he is studying architecture now and I realise they are not teaching as much sketching and whenever we go to the architectural sketching we see a lot of architects cannot draw. They do very very minimalist doodles, and sometimes really, you barely recognise there is the sense of an idea, and then they go to do the proportion studies, volume studies, but they sketch through models. That’s what I would consider, because I found out about a hundred models to make all about one and the same concept, just variations, configurations, minimal, no nuances to change, it could have been so easy through the sketching process, but now they taught them and they forced them and they tortured them with 3-D mockups, and that’s why I’m saying sketching, with a crayon or some kind of drawing tool is one thing but as soon as you open up the other tools as another extension of this exploratory, iterative process, then it could work through. Actually in my example in the paper, you see those little pattern things that the students did, of course initially I started telling them, go ahead and sketch a couple of ideas, and then actually the sketch wouldn’t be a good tool because they each then have to start over when I asked them to multiply something, a revision, take the same shape, change proportions, multiply, twist it, or something like that, so the badly mastered line or the thickness of the line has so much to do with the space between and so much to do in terms of perceptual feeling, it just makes more sense, so there, the sketching process should be actually very very quickly, going on the computer and doing it in 2-D, (...) And exploring extensively.

LT: so, with your model making, your students who prefer to make models, what kind of materials are they using to that process?

TL: initially it’s paper, cardboard, and all the classic stuff, also some big award or, anything they can use they put their hands on, when it comes afterwards to a static model, for me it’s mock up and exploratory, it’s everything like it, material (...) And that works for us. Of course we are becoming now, another danger we always consider, we have a new (...) We are now in the era of laser cutting, so of course they are very quick when they’re in 2-D they are very quick to put it on the laser and they cut it out, already even the mock-ups they look so perfect like final things, because they want to go very very quickly for the effect, instead of getting the time to explore. They want to be efficient in terms of time, they are lazy of course, because they didn’t want to put that, neither the mental effort nor the pleasure of, is this nuance good enough? oh, shit I already cut it and lasered it, I know or cost me another sheet of paper, all those tools, those heavy efficient and costly tools, they make it so gratifying to get so quick into 3-D in terms of make the, as they say, put lipstick on a pig, so, and it, that’s why, when I do the studio class I really actually accompany them through the process and I say, for three weeks we will be really just sketching and loosely exploring and doing iteration before, not really 100% sure, that’s exactly what you want to do. And then we will see what the new tools are giving us, what options they’re giving. If they are then giving us the options to explore at a different level, the nuances of colours, of textures, of lines, of partitions and things like that so, this is a graphic sort of problem and things like that, this is a whole new ballgame, if you from the beginning start decorating the whole thing, and we’re not getting it.

LT: can I move just slightly towards the more human issues that you might of observed with your students. It’s like peer issues and social issues and, I’ve read about something called social loafing, and I can’t remember who wrote about that, but basically being lazy in social situations
and group work situations. Have you observed anything like that amongst your inhibited students?

TL: it’s an interesting question.

LT: what is it they actually do when they are avoiding sketching, that’s kind of the crux of it I guess?

TL: we have this kind of thing to, but it depends on the teacher, and I think this is more the relationship teacher students, where we need to work, if you expect them, and I kind of insist on the fact that I will be evaluating the student and the process, and I tell them, I want you to see me as your coach, not as someone who evaluates your work. In order for me to evaluate how you got from point A to B, even if point B is not good, compared to others, but the step from point A to B was significant enough for me as a learning process and my objectives, the pedagogic objectives, I see them there, how they get to the process, maybe they cannot comment exactly to the conclusion or (…) But still for me it’s the process, and that’s why put in the grading the evaluation of that process, in order to develop the idea they have to be there, so I observe of course, that other teachers which are not as severe, understand, sometimes they themselves are not 100% there, the initial hour, someone having question, yes or no, if not they continue (…) And come at the end of the day, some of the students then go and drink coffee all afternoon, or do some kind of other homework for other courses, so this can happen of course and then they have a rush before the deadline and they do it when they are at home, but weekend at night when nobody can accompany them, and that’s what I keep telling them, I don’t want to see a work fait accompli, it’s like you know, I haven’t seen how it evolved and then the day after tomorrow (…) And I have absolutely no idea where it comes from and how it got there. So this all depends from one teacher to another, there are some teachers they are just happy that it’s a gorgeous result there, and especially when they work with partners at the third year level, we work with industrial partners and sometimes others, so I have also design agency professional designers with whom I work with in my studio class, so they come to the critics and things like that, and each time I keep telling them, I’m here is a teacher to accompany you, let the professionals at come to the critique talk about it more objectively how they assess your work, I assess your process and your skills and your methodology and how you get wherever you want to get. So this is one way where it helps me, or puts me more into their camp and the way, so those who really want to learn, they will then come and say, what can I do? I don’t get it going, and then stuck with ideas and I will brainstorm with them, (…) At least 30, 40, 50% of my input in this thing, so that’s why they realise what it is, trying together, and I keep being extremely constructive when I critique and I say, well you know, this thing sucks so it doesn’t work, it’s too heavy, why is the idea, how do you justify it? So whenever you get to really justify whether it’s a line, these are proportions, where are the features, the ergonomics? This is where a student, where it helps when they can feel that constructive thing, and it’s not every single time a judgement to call in terms of my inabilities, but how to get me from one point to another, so when I see that their sketches are bad and they’re really handicapped and are not advancing, I actually even put them on the spot and push them even more, I’ll say okay for the next week, you do that look, you do that black, I don’t like that and you’re going copy and tracing paper and I feel when they are inhibited, when I observed that aspect that they feel they are lacking the tools, I put in my efforts rather in that moment teaching them (…) To new tools, or I accommodate a different way of getting there, so in this particular way they feel, they feel more empowered and they feel they have more latitude, it’s not just only one path to get to the result. But otherwise, what can I say, there are some that will still go up to the third or fourth
level which are all along were just getting by, inhibited, do quite aware of their lack of skill, sometimes they are just the minimal effort. This kind of students you have all the time, and they, you’re right, they tend to disappear, show up last minute, do the minimum, (…) but for me this is a lack of, lack of interest, motivation and you can’t do much about teaching that. This is something, some personal skills that need to come and well, even myself, I consider, I am there, I am passionate about my work, and I’m there for the students that want to learn. Those who come have nothing to show, well, I will give them comments about it’s not sufficient, it does that, … And try to figure out what’s lacking, if it’s just laziness, well I’m not going to spend more time than that on those. If they want to learn, and I feel they’re inhibited, then I (…) more time than for others (…) But you’re right, this is the personality aspect, you cannot 100% avoid people, all this stuff in a group, and I tend to have, like actually, in my group of 15 last time, I had one that was really sketching badly, the others were quite sensitive, I had others, because in the particular year we had exchange students coming from foreign countries, so from some schools I can see some that come only for doing tourism, so they are not particularly interested to get into that more, because everything is new, the teachers are new, the way of teaching is new, the core theoretical courses, there are some not accustomed to, and they don’t want to work the weekend because they are already planned a trip to New York, or that so, when you see that, you see that everywhere.

LT: I’m assuming the ages of your students range from kind of 18 to 22 and possibly a little bit older customer is a correlation between age or maturity of students and their ability to overcome inhibition with their sketching?

TL: usually when they are more mature, they are willing, more eager to please and to accomplish, so inhibition, I would not necessarily make a connection with the inhibition, sometimes the younger ones are more soft sided (…) The challenge. See this is an interesting point because we have students, you know, we have already design programmes are more in a high school level, it’s more the technical route, some will take the technical route to become a design technician and do the (…) So they come already with a degree as a technical designer, so these are the ones that master usually the sketching will have learnt sketch, 3-D modelling and some basic technical aspects of designing, and they come as more mature of course, and it’s interesting enough, most of them we give the chance to enter the second year, not to do the visual thing and curiously enough these students have the bigger problems into the really creative mode, the whole creativity exercises, the deprogramming of the rational mindset in terms of creativity, exploring, sketching, modelling, things like that, so we see, as we consider those visualisation skills will give many of them chance to enter the second year, so they continue doing it extremely mechanical. Yes, you can, some are sketch, yes, could you beautiful modelling, but they lack the creative curiosity and the intellectual curiosity. Sometimes you have more trouble down the road with them, I have students in the fourth year they say, why do I have to look for another one, this idea is good enough? I say, well if it’s good enough it’s not good enough, is it the best one you think, the most appropriate one? That you look somewhere else to say that this one is good and maybe you had some others, some others that are much better, even just this conversation in the third or fourth year, it’s actually impossible. Students say, how can you talk to me like that? How can you tell me the first idea is good enough, so I look nowhere else, it just doesn’t work in the design process. I say imagine you’re in the professional field, you bring your first ideas, you think you are convinced, you love it and it’s nice, looks cool etc, and the first client says no have you got something else? You he can’t even tell you why or what’s wrong or he doesn’t like it, so, you need to have a variety of ideas, even yourself to be sure that that one is the better one among all the thousands of ideas that you may
be able to put on paper. So this is kind of curious and the younger ones that didn’t have any (...) And that’s why I keep telling them, not having really the portfolio at the very beginning or any kind of drawing classes, it’s not as bad because, we really kind of start with a blank page.

LT: are there any gender issues associated with those who struggle with sketching? And what sort of weighting, male-female weighting do you have on your course?

TL: it’s very mixed, I would say 50-50, and no difference in terms of inhibition, actually no, female students tend to be a little bit more patient and tend to put a little bit more effort, and easier get into the mode of really exploring and iteration, but otherwise no, I cannot say there is a particular, if someone loves sketching, he sketches, he sketches an idea, he sketches more, and I had the guys, I actually had the diploma students (...) I had the female, I put them together, as a diploma project, that we did in the team first year, and there were two students, one was extremely perfectionist, very ideation, very creative, very sketchy and everything, and every single thing he sketching, but thinking and sketching and thinking new and sketching differently, and sometimes I asked him, what happened with that idea, that was really awesome, and so? Well, just because he was just overwhelming with ideas and he wants to do them all, and the girl was more the rational one that said, no let’s stick to it, that’s what we decided, why are you ready to change your mind, and so on and so on? So there was another interesting anomaly as we were teaching, so actually, no I cannot really say very clearly that girls, guys approach it differently.

LT: you mentioned students coming over for, kind of, exchange visits. Do you have students who are international students i.e. not sort of native Canadian? Are there cultural, it’s kind of cultural issues I’m interested in. For example where I teach, we have a lot of students from East Asia, Chinese, Taiwanese, Korean, and their whole, kind of social setup and where they feel they have to conform, it makes it more difficult for them. I’m just wondering whether you have come across things like that, or anything else, you know, cultural issues which affect the way students kind of engaged with sketching process?

TL: yes, this is very evident, you can see it in the sketch you can see it in the tools are choosing, you can see it in the shapes they prefer to draw, and so it’s kind of interesting. We don’t have as many Chinese or Asian, we have more Latin Americans, which is kind of interesting, so those students that come, they definitely come with a whole different cultural background, and it’s more decorative than we are teaching with design. And it’s quite interesting, and it’s a good challenge, and in terms of sketching, yes they are far behind and not as, because when they are applying for the exchange here, they are aware that we are looking at the portfolio, but more in the sense to see, could they withstand our rhythm and our requirements, so they have some (...) A successful experience, because we don’t want them to come here and then get them not feeling great, so that’s why we look really, at least communicates efficiently, can they do that, do they know delete the methodology, the design process involves, can they do a visual, can they do 3-D rendering and things like that. So basically, this is why we look at the portfolio as such, we definitely see the sketching level is extremely variable and we, really a lack of sketching skills, so I don’t know if it’s just only one class they’re taking or how much they are putting in afterwards and so one, and this is also interesting because also many French schools and Italian schools, also Italian students and coming from Spain and from France, in France they are doing more sketching and they are more artistically inclined, so there is a lot of latitude, less precise sketching and things like that. And this is where the cultural aspect comes into play and I sense that least I, teaching the whole process thing, and the thinking and the meaning and
expression and the semiotics and the sign, whether it works and what it makes you think of, and analogies and things like that. So actually my teaching for the design, I keep telling them it’s a new design for others, it doesn’t mean we have the same cultural background, not the same sensitivity to artiness, to judge is this better or that, or something, (...) The things they don’t know, they don’t have to express, so that’s why I need them to understand, when you design for a brand, when you design for a different culture, you design, so you need to understand, what I call the mental model that they may have of something that is decorative, or luxury or things like this, and this is where I teach them to take into account those cultural differences, especially from my professional background where I was working as much in the states as in Europe, I had for instance Korean LG Electronics was one of my major clients, and they came actually to me (...) As much in both continents and I had them as a client for years, as their brand developer, because whenever they wanted to come with their products, Korean products to either European or American market they had trouble to sell them because they said, while that’s not appropriate for Germany or Italy or the United States and because Korean like for instance, they love to add on lots of shiny stuff and gold and staff and they like those cutesy shapes and forms and some, and this is where the we had to teach them where the product semantics comes into play, how to, what is the cultural patois, so how to design the shapes that justify, so this is the whole form language which is a problem for those international students that come, they learn basically to do that way, and that was an interesting challenge I gave them, I said that we had a topic, for instance, Canadian winter, that was our topic of the atelier, so I had the Canadian students, international students, Italian, Spanish, Belgian, France and so on, all round the table, so a really mixed group, and so the very first thing was that, how do they associate, and especially I like the idea that the foreigners do the research, the work or exploration in terms of what is the Canadian stereotype, or how they see Canada and how would they reflect the winter and whether the signs, and the logos, because they had to create the brand, they had to create a brand language, and other products at the student designed was supposed to fit one and the same brand that they have created. So basically you have to think that all the products that each student is differently, and different functions, different features, but all go in the same catalogue and the same brand, and this is where I taught them to find those cues and the values, those signs that work to represent to make as a credible product that worked, that one would expect to find under the brand, and then I had, and actually figured, in the design programme, and there was one student who said, oh, but I don’t do products, I come from a graphics programme, and I say, so, okay, let me have a look at you, so I say, all right then, what’s your design programme? So she was actually the one where I gave her then the job to do the whole visual identity of the brand, so you have to create the logo, you work to create the mechanics, justify the whole colour scheme, to develop a catalogue where all the students will give you the visuals, you are producing and so on and so on. So basically she went through the whole same process as the others, it’s just her output was two-dimensional.

LT: finally, I think you’ve kind of covered everything I needed to ask you about but finally, I know you have a kind of ongoing and hands-on approach to getting people to sketch who perhaps don’t want to, but are there any tools or techniques that you would like to see implemented, not just necessarily on your course but generically across higher education, to kind of encourage sketching or to reduce or manage sketch inhibition at all customer log is there anything you can…?

TL: yes I think one of the conclusions of my paper to, is the quantity. In terms of seeing quantity and so on and so on, the quantity is necessary and this is just, over the years I observe it each time and I tell them yeah, to make 200 iterations, they first look at me like that to say,
what? How many hours, backspace? 200, can you imagine? And then I show them, like in five minutes I fill up a page, I can show them in front of them, and then actually, most of the time, even present the paper that I presented at, I use examples from my former students where I describe and show it, and in the paper I show them all these iterations, this 12 pages, on the page I had 20, and I don’t know how many of those squares, I say, look at that, and systematically I cannot. I flipped the sketches from different students and say, systematically, the first pages, everybody fucking repeats what they’ve seen in class, and look at that, it’s only after the sixth, seventh sketch page and each of them, they start to think, they start finally to adopt a methodology that actually gave them, because, and I told them you have, when you start sketching, you have to come to a point where you say, okay, what the heck am I going to do now? Putting everything I can imagine, what am I supposed to do now? And I say, only then do you really start creatively thinking and explore, and actually you’re not just doodling, because before it’s only an illustration, and only at some point when you really don’t know any more, nothing is in your head to put on paper to visualise, then you actually start sketching in the sense of exploring. And then I say, you see your hand by accident does a little bit something else, I say, ah, that’s not there, and I turn it around, ah, that’s not there, and not to jump from one to another, but find yourself some kind of methodology, so that’s why I keep telling them, when you ideate, I’d like you to find some concepts. You say like, for instance, one could be like, from a semantic aspect let’s say, something structural, something geometric, afterwards you say, okay, maybe I can try all those shapes are very crystalline, and all this stuff, maybe I can do something more softer, so I get more sensual, okay, sensual, now I am maximum sensual what I can do, and then okay, but when I don’t know anything anymore about sensual, so this is where I have these concepts, and I suggest that start up and develop from between, it’s like mixing colours you know, so you have the shade white and you bring them to the deep red or something and between you don’t want the shades that you have in Pantones, you don’t want to have a rupture, so you want to make all those iterations, you have to sense that there is a methodology, so when you multiply colours and patterns, when you stretch them slowly more and more and more and sometimes you try from linear becomes a circle first and then you actually double or triple or you go positive to negative so instead of the line being (…) And only when you do those quantitative elements and you look at them and then, ah, I forgot something, I could have done that, so then you really actually feel and discover and explore, and another thing that needs to be suggested, whenever they are working even in a book, in a sketchbook, you cannot put them next to each other and this is very important to be able to look how things look next to each other. When you model something they do one iteration, sometimes it do improvement on top of it and they scrap and you don’t have the trace of the intermediate steps. This is where it is, you know, to look, to compare, go back, this you cannot do when you’re changing all the time, and this is where the digital tools are sometimes not good unless you were doing them in a way so you can keep each time, each iteration, and then you can put them all up on the wall and then look at that and then say, what is it that bothers me here, but is it that bothers me here? And ah, if we combine these two, you cannot do it on a computer.

LT: I don’t know anybody who works a computer that way, and I don’t know anybody who teaches students to work that way with a computer. It’s all about the final image, it’s kind of worrying. Right, okay, I’m just looking down my note here, I think you’ve covered everything I need to ask about, I think you have.

FIN
Interview with Claire Lerpiniere

CL: I am senior lecturer in textile design, I primarily, in the studio teach on undergraduate first, second and third year studio modules and on postgraduate, MA modules. I used to run a dry module in the first year which was kind of visual research, I don’t run that any more, they don’t teach that any more but I did do that for a number of years and then my biggest teaching, studio teaching modules is a second-year module when they do interiors projects, they go from initial drawing through to final like a wallpaper and colour separated length of 3 m with repeat, so there’s a lot of drawing through that entire process basically.

LT: and what is your background?

CL: I trained as a textile designer and then I did an MA, did a PhD, PGCE, so my main interests are, in terms of my research are visual methodologies to help people experience textiles, how do all the senses interact with textiles and it was the main subject of my PhD, looking at, because a lot of, particularly with textiles, a lot of what we are doing is very tacit, it’s very, it’s not expressed. It’s not like it is where you can go to a library and get a design book on something like interiors or graphics or architecture. So we do a lot of experience teaching, a lot of teaching through doing, through learning, learning through making basically, and obviously drawing is really key to that because it’s the starting process, but for me because I teach printed textiles, drawing as a visual research tool, they have to draw all the way through, the final artefact would usually, unless is completely abstract or photographic print it would usually have an element of drawing.

LT: so, just coming back to the courses you teach on at the moment, and DMU in general, what is the kind of ethos and attitudes towards sketching, hand drawing and manual ideation techniques, the sort of early thinking processes, what is your courses ethos and thinking?

CL: we tend to, we tend to do, like, creating, using drawings to create an artefact, so for instance if you’re drawing a flower, you’re drawing that flower because you think that’s going to end up as a print, so it’s kind of exploring the motif and the form of say a floral, and so then you’re thinking about the style of the floral, you’re thinking about the market, you’re thinking about you know, how do you approach the, how do you approach the weight of line, and you approach the colour and how do you approach the style of drawing for different genres, because obviously if you’re doing a wallpaper for a very fashion forward kind of contemporary floral it’s going to be different to a very traditional market, so you have to think about how a little bit of like, thumb nailing towards the end, whereas the design developing, you know I do things with my first years where I do a, I have a little piece of paper with some squares and rectangles on them and I say just draw up some ideas for prints… layout before you get into the print room, an aide memoir… I mean obviously things will adapt when you get on the table, it’s just like a starting point, a plan.
LT: so common with regards to drawing to produce an artefact, is there are lots of observational drawing involved and how do you go about encouraging students to be observant and to understand, because students seem to like to design but sometimes they don’t know what they think very well because they’ve not observe the world around them in order to go through that process to create something that’s valuable.

CL: again, it goes back to the style journey you’re doing, because if you want to be quirky hand drawn illustrative style, you won’t be necessarily observing things like, your ellipses won’t be right, and your angles on your, you’re not doing five point perspective, or your perspective is absolutely correct, and we don’t have time to teach them that type of drawing, that observational drawing, the just have to go out and do it. We have drawing workshops but we don’t have time to show them how to do a five point perspective. To be honest we like them to cheat, so if they want to do five point perspective but they are not very good at it, we let them trace things, because is nothing wrong with that. I’ll say “go and take your photographs and trace, if you want to do that, architecturally, just put it on the lightbox and trace over it”.

LT: and do they use, some of the architecture guys use perspective grids and things to work with…

CL: no, no, because what we tend to find this if they draw like that, the reason I encourage mine to trace is because when they start to get, they start get very anxious about their perspectives and proportions in that way, unless they have had a lot of background experience and a lot of different experience in terms of… they tend to get very stiff and you end up with a really odd, clumsy drawing, and things unfortunately, or fortunately, things on textiles have to be attractive, or beautiful, or thoughtful. You know, if they’re meant to be ugly or controversial they need to have an aesthetic quality about them, that’s what you’re doing so we don’t, we don’t tend to let them get to, we try not to let them get too het up with observation, we do insist that they get flowers, I keep going with flowers because we are… if they going to bring the flowers in and draw them from that, but then we have the intention that we are not drawing pictures, where drawing for design so, you know, if they put flowers in a vase, you don’t often have flowers in a vase, on a shirt, on a dress, so there’s no point doing that, so what we would do is, if we had flowers we would do like an all over, we were tend to get this fabric and lay the flowers out flat and draw them that way, so the already starting to be as a design layout. Otherwise they’ve got, if they’ve got flowers in a vase they’ve got to learn to extract that flower that they’ve drawn out of that’s, unless it’s for a very traditional flat repeat where you’ve got a flower in a vase… but why would you want that? So we are constantly having to say, “well would you wear it? Would you put it on your arm?” so it’s great to go out and draw just for the sake of it and that’s great in terms of building your skills, but you have to be selective, you have to select what you’re doing, you know, you will always get a student who goes “oh, I’m doing a project with crystals”, and it’s like, well, a lump of rock is a lump of rock, you know and it’s very hard to make something that doesn’t really, especially if you’re putting things in repeat, heavy lumps of rock in repeat, so you have to think about that and the end-use and the market.
LT: okay, so sketching in the design process is used, I’m assuming initially for sort of thought-provoking and gathering and generation…

CL: we do encourage them to have a little book that they might take out with them where they words, you know just draw things that are interesting to them, so have a little treasure book almost of things that they, you know it might not be for working on a particular project at the minute, but just to visually, just to improve their skills and improve the confidence

LT: okay, so that early ideation stages when this gripping their ideas, then you’re talking about the thumbnails, the sort of pre-manufactured type thumbnails is the main, what is used in between, do you use, I mean for sort of presentation of ideas and working into that presentation level and working out repeats, do use things like manual processes or is it all done on Macs, how does that work?

CL: we do a mixture, we have, what I tend to find is that you have to be really experienced to do a repeat on a computer, you have to be really, you have to know what you’re doing, and I always say to them “think before you go on the computer, don’t just go on the computer” because the screen is so small, even if you’ve got huge screen it’s never to scale, especially when you’re dealing with wallpaper when the repeat is 52 cm wide, you’re not going to have any, unless you’re going to have a wall of monitors and you go blind anyway, so we tend to, particularly if it’s a large-scale thing, we still work on paper so when I teach them how to do repeats for wallpaper, and get them to take their motifs from their sketchbooks, they would have done a couple of weeks of drawing and looking at different styles and different motifs, and objects that they might want to include in their wallpaper design, and it can be something like to mask, it could be something like a flower, it could be an insect, it could be any type, it could be something… that has non-typical motifs, you know like shoes or lipsticks or buildings or, you know something with architectural details, and then from those drawings I get them to do dozens of photocopies, cut them out and lay them out in a repeat square and then start building up physically like that, because you have to, with a wallpaper particularly, because it goes on a wall, this is really obvious but until somebody tells you this you don’t realise it, you have to put it on the wall and step back from it. If you do it flat on the table it doesn’t work, if you do it on a computer screen it doesn’t work, so even when we get, we get people in from industry, with got a woman who works with us who is one of the industry’s best wallpaper designers, interior designers, she’s brand director and creative director for many of the major brands and she still does it on paper and she brings in her traces, because we all work on tracing paper to start with and she says, you can see where she’s wrapped it out with a rubber and she’s drawn back into it gets, to have the beautiful hand drawn… But we dealing with then is an actual tracing with a pencil to get the shape, and then you take that motif, that’s just too small, go and enlarge it on the photocopier to get it to the right size and I sometimes get them to do it on acetate because then they can flip them, because with flowers you want them going towards and away from each other, you don’t want going in the same direction as they’ll have a diagonal to the repeat, and these are all the little things that
they can’t see that I know as soon as they show me a flower that’s on a stalk, they’re just going to have a series of stripes, unless you move that stalk, you have to curve that stalk, or if you going to have this, we had a student last year who, she ended up winning a big prize and she did her, she did all, she did a thing called bracelet shading which is a very time-consuming type of drawing, you go from dark to light and dark to light so you kind of get a very three-dimensional, but there’s no grey it’s black or white so you get no sense of, it’s like an etching where you only have a mark, so it goes down completely black and white, but how fine the line comes towards the middle makes it look three-dimensional and so she spent hours on this repeat, hours and hours and then she went and printed it and I hadn’t seen it and I went to see her, and by the final major project in the third year I don’t teach them on that module that much so I hadn’t seen her for weeks and I just happened to run through the studio and I looked at it and I went “Sophie, that flower” and she done this orchid that kind of, it wasn’t an orchid, it was a Magnolia, you know have Magnolia’s overlap on each other on the branch, but the way she had drawn it look like bat had flown into a window, it was like, that flower, and I thought “that’s taken her over a week to do” because she had the colour separations, but she hadn’t seen it, because your mind is somewhere else and you see what you expect to see with textiles and you have to, you have to be about the silhouette, and the silhouette was a flying bat flying into a window, and she went “oh I know, and only when I printed it did I realise”, she said “what can I do?” and I said “you can either leave it or you reprint it” and she ended up redrawing the entire thing and spent one extra week and then reprinting her 3 m lengths of wallpaper to get rid of her bat, and that it was beautiful and she won prizes and she’s got a job now, and it was completely worth it, but other students would have cried, they wouldn’t have the resilience to just, “you know what, I’m just going to have to redo it because it’s not right” but she had really high standards which obviously that helped her. We had a student a few weeks ago, and you think about the shape and to just see what they see, they see it as an object and they don’t see how it’s going to look and she had only exposed a screen and all the students were killing themselves laughing and she said “Claire, can you look at my screen and tell me what you think” and I’m like “why?” and she was “I don’t want to say anything, just your first thoughts” and so I looked at the screen and I really tried not to laugh and I went “remind me what this is for” and she said “it’s for children’s bedrooms” and then I just lost it, and what she had done, she was doing a whole, she was building up this whole like a fairytale bedroom for a child and she wanted to have these like woodland creatures and flowers and, you know, grasses and different foliage and different animals and she would print the thing separately, and she did an entire screen of woodland mushrooms and toadstools that she had chosen the tallest thinnest mushrooms you’ve ever seen in the looked like an entire screen full of penises, and it was for a children’s bedroom and I was just like “you can’t put that”, they were the ones with like the little long thin heads and some of the mushrooms were actually called fallace or whatever because they are the look like penises, of course they do but she couldn’t see that and she was just thinking mushrooms because she saw what she had in her mind, and she had like twenty of them on one screen because she was going to block them off and they look like willies, it was
just, and she’d ruin every wallpaper you put one of those on… no parent is going to buy that. Or you can do it, some places will do it as an erotic print like… as a women’s pyjamas, you think it’s just a nice damask and then you realise it’s full of genitalia, but that’s not for children so, and they just get so, they get so involved in what they think they’ve drawn that they don’t see. And they don’t have the experience as a designer, if I was, you know if I said to a student “yeah, go and draw something else and stay away from mushrooms, stay away from…” but they always want to draw roses, and you have to be really good at that, that’s the hardest flower because you went with the cabbage, nine times out of ten you end up with the cabbage, so it’s just kind of helping them through the same pitfalls that everyone’s taken.

LT: talking about your students, your undergrads particularly because I’m focusing my research on third year undergraduates you’ve been through the process and are going off into industry and how sketch inhibition is affecting them and will affect them in the future. When you have students come into your undergrad courses, with regard to their sketching skills and ability and attitude, how do they generally, or can you give me examples of how they present themselves to the course when they come for interview or when the begin the course?

CL: I think it really depends what school they’ve gone to, sometimes they’ll be naturally, they just can’t stop drawing it’s like an obsession, but a lot of it is about what happens at school, and so it depends on the teachers and the teacher’s competence at drawing, the teachers style of drawing, with teachers background is, how they are encouraged.

LT: are you talking about secondary school as opposed to…

CL: yeah, or A-level or BTEC or…

LT: do they do foundations?

CL: yeah, the ones who do foundations obviously have a much better grounding because they do, they do life drawing they do you know, and it builds up the confidence doesn’t it? But sometimes we take students from both backgrounds, and sometimes they’re ready to do a degree after A-levels, it kind of depends, so when we are looking at potential in the portfolio, but then we have to do, almost like that the start of year one they do like a five week block of drawing, almost like a mini foundation to get them up to speed.

LT: you’re talking about students who turn up mad keen because they’ve had the support and they’ve had the experience

CL: other students can be very lacking in confidence

LT: what are they like? What are their sort of attitudes?

CL: will sometimes they’ll do everything they can to avoid drawing
LT: and how does that manifest?

CL: they want to do things like they want to work with photographs or they want to just collage, or they’ll say “oh, I can’t draw” and I’ll say “well you can otherwise you won’t be there because we won’t take you if you can’t draw at all, there’s got to be some potential there”. So what they tend to do in the first year is to really do a series of very directed workshops and very directed days of drawing, whether they’re going out or working in the studio with them and very direct tasks, and so today we are going to do this, and we show them techniques, and this is how we draw with dyes and inks and resist, just a kind of, because if you say to a student “everybody get your sketchbooks out, we’re going to start drawing” they absolutely freeze because they’re all scared, they don’t want to look embarrassed in front of the others, you get the odd one who is really confident but the majority of them will do anything but show you their sketchbook if they can get away with it. So it’s better to give them a task to do and everyone does it the same, “and we are all sitting here in front of this and we are drawing it now and we are going to draw it in this style” just to force them.

LT: quantifiably, what sort of proportion of your students are like that, is it the majority, is it half and half…?

CL: I would say about 80% are lacking some kind of confidence with their drawing, they are not fully like “oh yeah, I really want to do this now”. They would much rather not, not that they don’t want to draw, it’s just that they are very, they’re not sure, they need a lot of reassurance in the first year especially, “is this okay? Is what I’ve done right?” So they do a lot of group tutorials just to show everyone’s work and go “oh, this is good isn’t it? This is interesting” and just build their confidence.

LT: does that get rid of the anxiety to a degree or does the anxiety kind of run all the way through, but just not to such an extent?

CL: obviously some students are just going to be naturally better, they have more finesse and some students will just, however hard they work at it, it just doesn’t quite, there’s something heavy-handed about it, and they tend to naturally select certain approaches, so they’ll find certain ways of compensating I suppose, so with print you have to draw, especially with wallpaper, but other students just love printing and they love layout and composition… and they kind of get around that by doing abstracts or doing textures or working with photography all, you know, they’re not drawing a flower at tangible.

LT: what sort of things to students say, in terms of your sketching exercise today, what kind of things to they come out with, what kind of excuses do they make, what do they tell you?

CL: they might say “I’m not good at drawing, no one’s ever said” and I’ve said “that’s lovely, you’re really good at drawing” and they say “no one’s ever said that to me before” and it’s because their expectations are, that if you’re good at drawing, you’re
good at photorealistic pencil shading and I’m like “why would you do that, you have a camera, what’s the point of that?” Unless you’ve got a very specific illustrative project where you want to do a portrait of someone and shade it in pencil, there are much more interesting ways of drawing and different things that you can do, and this is, you know, obviously in print you can get things that are quite quirky and illustrative, so I might say “actually, there are different styles of drawing, you’ve just got to find your own way” but there is a real tension there because they can’t get too stylised because if their style goes out of fashion, they’d lose all their money. They need to have what we call a versatile hand. We had someone come in from another studio to do a project with us and they said they had a student coming from another university with a really amazing portfolio for graphics and illustration, and they said we hired him as a freelancer for that project but we couldn’t hire him as a designer because he only had one way of working, and we knew that that was perfect for that project but for the next project it wouldn’t work, so that’s the thing, if you only have one style of drawing. He was a textile designer but he had a very illustrative way of working, a very particular drawing style so we try to encourage them to be, it’s difficult because they can’t be everything at all times. 2445

LT: because when you’re doing things, I mean I’m an interior designer and there is this school, this style of architecture, interiors, you don’t emulate, you don’t copy but you work towards that sort of standard and I didn’t realise that with textiles, surface pattern things, a slightly different thing.

CL: well, 1950s style prints, graphics, prints, quite flat, quite, you know, areas of pooled colour rather than lots of shading are quite in fashion with heavy outlines, and the next thing that’s in fashion is a very kind of painterly much maternal style, watercolour a, you’ve got to be able kind of do both.

LT: with interiors and architecture, students are taught who are sketch inhibited can’t wait to get onto the Macs, then sit and do nothing and as soon as you say okay you can go on the Macs now they back the Macs and that’s all they work on. Do you have a situation like that with technology in your particular world of teaching? Are students dependent and reliant on computers to the detriment of their design?

CL: yeah, and sometimes they’ll try and do something, a drawing won’t be quite right and they’ll spend hours trying to correct it and I’m like “if you put that on the lightbox and just traced over it you could have done that in five minutes”, and they just kind of get this that the computer is going to solve their problems for them.

LT: so they kind of believe that the computer is like, the problem-solving thing rather than what’s inside their head

CL: a magical box, it’s very controlling, but that’s especially true of the features that you use to do a repeat on computer, because we teach them how to do them on the computer but also by hand, and I can always tell, if we’ve got something going through on the table upstairs on the digital printer, whether it’s a fashion student or a textile
students, because the passion students are taught all the different ways of doing the beads and they tend to do a tile so it’s just block, block, block, block, or a mirror repeat and if you do a mirror repeat you end up with little monkey faces where you get these weird, if you can imagine if you mirror something, elements will repeat inside and they just looked really odd, like odd shapes and were always saying like “the shape, the silhouette has to be attractive”. So we tend to encourage them to be quite critical and engage their critical senses, don’t just switch them off using a computer, so sometimes they print something off and I get the scissors out and move the motifs apart and change the direction of motifs and say “you know, this needs to be better to get the flow of the layout and then go back onto the computer”. So, but they have to of master that ability to hand do repeats even though we sometimes teach… but they look at that repeat and “that is terrible”, and “yes it does”.

LT: when you have students who are sketch inhibited, the ones who will throw themselves out of a window rather than, what kind of symptoms today, what kind of behavioural symptoms do they demonstrate?

C L: will you always get the “I’ve got another sketchbook at home, I’ve got loads more work I just didn’t bring it in, I’ve got a brilliant idea”. No one does that, no one does that! Unless I’ve actually seen a sketchbook and they’ve said “oh I forgot my bigger sketchbook” and I’ve said “that’s okay, I’ve seen that I know it exists”, but they think you were born yesterday or they just say “oh, I can’t do this” and I say “yes you can, just do it” and then you have to be really, not like it was in my day where the staff were, they could be really horrible, you have to be really encouraging because if you say to a student “oh that’s awful, what are you thinking?” of course they are just going to switch off and not listen to you, even if you’re thinking “Oh God, that’s the worst drawing”. I mean I had a student who drew a house and I’ve never seen anyone do it, she put the apexes on the house pointing outwards and it look like the roof was an upside down and I was like, I said to her “did you observe that as you drew that house?” I made her like, go on a roof, I said “get your pencil, hold your pencil up and look at the angle” and she’s holding the pencil up and the ankle is going inwards and I said “look at your one” and she said “oh!” and she couldn’t see it and she was one of the weakest, in terms of drafts people that I’ve ever taught, I think she was one that we encouraged towards tracing. We had one that just couldn’t draw but love doing the print, because she would go out, she did quite a clever thing, she’d go out and take photographs and then she would print them on to nice quality watercolour paper and then she’d cover them in like black ink and then, because you can still see the toner through the black ink she would bleach over them and they just turned into really painterly images, and it worked for her.

LT: rather than going “oh, I’m going to use a Mac now because it’s easier”

CL: because Mac doesn’t draw for you, it doesn’t, that’s the thing and if you can’t draw with a pencil how you going to draw with a mouse or tablet? We don’t tend to, apart from when we use Illustrator, but they would tend to start with their own drawings first
before they went on to the computer so they might take a line drawing and doing image trace on it and then make it bigger or smaller and move some of the guidelines.

LT: so they’re starting with their own reference to begin with?

CL: I don’t think ours really draw on the computer much, partly because until recently we did have Wacom tablets but they all went missing, so we’ve got some small ones now but, and I think they can draw onto the computer but that’s different then expecting the computer to do it for you, because you still like, manipulating the media, it’s just with a Wacom tablet rather than a pencil.

LT: so do you have students who disappear and don’t come in for sessions because of this inhibited sense of, can’t do it, don’t want to do it?

CL: to be honest, the ones who would do that would be the ones who were not that engage with other things as well, so they would also miss seminars, and I wouldn’t say you get a student just missing the drawing sessions, because they tend to, they tend to have, even the ones that are weaker know that they need to get better, but I wouldn’t say that they wouldn’t attend because we were doing a particular drawing session, unless they are a weak student in terms of their engagement in the course, like the ones who rock up late for the lectures briefs, you know those ones.

LT: I’ve got here, social and peer related issues of sketch inhibition. When students are working in a group, studio situation, you’re talking about them being anxious to show their work in front of their peers and tutors and the anxiety around that, are there other issues, do you ever have other students making, for example, remarks about the quality of somebody’s work? I know that’s obviously discouraged.

CL: though they never do, because if we going round the table, there are going to say things about each other so they tend to be, in some respects, too lacking in criticality and actually I say “yeah, you’re right, that colour is right but I would have also done this” so you’re having to, because they want to pat each other on the back because they know their next.

LT: yes, there’s a bit of self-interest there.

CL: absolutely

LT: do you ever get the stronger students mentoring the less strong students? Does that ever happen, or does everybody kind of contain themselves and get on with it?

CL: what they’ll do is, they’ll give more like design advice “why don’t you take this to make this bigger, I really like this drawing”. It’s almost like little bits of like coaching, I had one student a couple of years ago who was hilarious because I called him my teaching aid, because every time we had a tutorial and we had a group review of the projects, I’d say “I think this this and this and does anyone else have anything to say about this project?” and they all go, “oh that’s really good, I really like that” and I would be “can you be a bit more specific?” and they are “yeah, yeah, I really like that”,
and she would be like, “why don’t you take that motif and put that in repeat, and take that and put on that machine, and why don’t you do this, and I really like that bits and bring that colour from that piece…”, and she would just do like a tutorial with them every single time, and I’d be like “ooh, get you” and she wasn’t naturally gifted as a designer, she wasn’t the strongest of the group but she could just, she just had that ability like a natural lecturer, she could just see the potential in other people’s work, and strangely enough, well not strangely, she ended up working as a licensing designer, so she takes other people’s work and she puts them into different products, so she works in licensing, because she is so outgoing, because in licensing you have to really develop your relationships with your clients, it’s very social, and she was very outgoing so that was perfect for her.

LT: gender, what split is it roughly?

CL: in a year, in this year in textiles we’ve got fifty students but no boys, we do have the odd one, I don’t think we’ve even ever had two in a year, if we get one, as we won’t even have one every year.

LT: can you correlate any kind of issues with sketch inhibition or sketch fluency, is there a difference between male and female students? Do the odd guys that you have, do they have different issues or do they have different approaches or different techniques?

CL: in fourteen years of teaching undergraduate I’ve maybe had ten boys, so it’s difficult to like draw any conclusions from that, but from anecdotal, from the ones I have had, they’ve been more confident in their drawing than the average.

LT: and can you pin that on anything?

CL: honestly, I don’t know, I don’t know whether it’s a girl thing, whether boys are naturally more confident. If I had a larger pool to work with, because that’s so anecdotal, you’d have to look at things.

LT: age-based issues, I assume most of your students are in the 18 to 21 age group, do you ever get more mature students and how do they function with sketching?

CL: the more mature students tend to be a bit more confident in their drawing because they tend to have, we occasionally get like a woman who has always wanted to do it but for whatever reason, twenty, thirty, even forty years ago was encouraged to do secretarial, or to become a dentist will get a proper job, but they’ve always had an interest in the easiest way into visual creativity is drawing, so we tend to get a lot of students, not a lot but the ones we have have been doing like evening classes in drawing and embroidery, maybe a screenprinting workshop, maybe a bit of hand knitting, machine, get them on machine. But they tend to have maybe ten, twenty, thirty years’ worth of drawing behind them before they apply, so they tend to be a bit stronger and a bit more confident.

LT: and do they have a greater motivation as well, because of the age?
CL: personally, I would raise the entry age, this is controversial, I think if you send them off at 18 to work for a couple of years, and I really notice a difference with the students you’ve gone out to placements for a year, they come back and they are so much more driven, so much more directive. I just think they’re so young at eighteen. I think in terms of confidence I think it’s one of the issues is that, particularly in textiles, if you’re really, really outgoing you’d want to do something where you are the star of the show, if you had that kind of personality where you want to be the great, if you go and ask a student “who’s your favourite textile artist?” and nobody knows any textile designers, only people in textiles know textile designers. It’s a question I ask at interview “who’s your favourite textile designer?” And they’ll say “Grayson Perry” because he did embroideries or tapestries, and I’ll be like “no, not a textile designer”, or they’ll say “Tracey Emmin” because she did embroidery, and I’m like “yeah, but still not a textile designer”. They tend not to be that confident.

LT: you mentioned secondary education, are there any issues, generally, within secondary education that you feel effects, I mean you’re talking about things like how students relate to their teachers, about encouragement, is there anything you like to say about secondary education and whether it prepares students for the higher education thing with regard to their skills?

CL: I think it’s really difficult because obviously, in textiles, what you’re dealing with is, you’ve got all the background like the drawing and visual research but in order to create the textile you need facilities, and they don’t have the facilities at school, they don’t have an entire room full of looms, you know, they do a bit of screenprinting, but I think the teachers are working, I think it’s quite difficult for them, it’s good to have a textiles A-level but I would prefer, personally, to see at that level as though it’s a drawing, because we can teach them how to weave and we can teach them how to knit. It’s an interesting subject and they are interested in doing it, and some kind of textiles experience and some kind of design experience, like product design, but really it’s about the potential. If it’s something they want to learn, we teach them all the technical, you know they do rotations in all the areas and they choose which one they want to specialise in.

LT: so it’s the core skills that they need before they come in rather than…

CL:… maybe once every year I’ll have a student who’s done some weaving, and it’s not a proper weave anyway, it’s just a little thing, so it’s not essential it’s more about their aptitude and their interest.

LT: do you separate the teaching of design from the teaching of visualisation at all in any way?

CL: not really, no.

LT: I know with architecture and interiors there is this a slight sort of separation that can happen, but yeah, it seems to be, given the nature of your discipline…
CL: …the only place that it would slightly separate out would be, perhaps, we were teach them how to do a garment sketch which would perhaps be a layout for an outfit, and then they would put their designs into the outfit and that would be a, that would be a CAD lecturer would work with them to do that rather than a studio lecturer, but it’s also intricate, isn’t it, and one of the things that we have to kind of work against is the fact that they might have a drawing in their sketchbook, but you can’t put it straight onto fabric, they have to design develop it, you know, it might be scale, it might be drawing style, even little things like if you’ve got something that creates an awkward silhouette or you’ve got something that creates a weird line in your repeat, so it’s constant iterations of the design.

LT: you teach sketching skills very early in year one, is there any maintenance, obviously the students are using those skills all the way through but is there any specific, taught maintenance of sketching and drawing skills throughout?

CL: we don’t, in the second year, we might do a setup where we go out drawing somewhere or we bring in things and we sit around to draw them, but we don’t do directed workshops in drawing, but then we are constantly, when I do group tutorials or group crits, constantly saying “have you thought about this, have you thought about that?” What I have to really worry about with a student is when you, if you use screenprinting, you’re drawing something that might be three-dimensional, it has to be black-and-white, and they tend to then, obviously they using a Rotring pen or a dip pen or whatever, it has to be solid black ink like India ink, and we tend to have to teach them to go back to other types of drawing and don’t just draw in black because it’s quicker, you know, why draw a flower twice when you can draw it once in black and put it straight onto a screen? I think having the digital is quite helpful for that because whatever you can see you can print, you don’t have to translate it into screenprinting and then colours, and I had one student and she said “the trouble is when I draw it it’s all black and white” and I’m like “but you’re going to put it on the screen, it can be any colour” and she was “oh yeah, I forgot that”, that’s the whole point.

LT: do you think there are any particular materials within your teaching of sketching and drawing for the undergrads, are there any particular materials that benefits them being less inhibited, for example, one of my interviewees was talking about workshops she is to run whereby students were discouraged from using sketchbooks because they were too precious, they were bound, they were books and if you made a mistake you had ruined your book, so she encouraged things like newsprint and sugar paper and that’s how she was getting students to be less inhibited. Are there any materials or techniques that you used to get away from that “I daren’t make a mark on the page because it might be wrong” kind of thing?

CP: what I used to do when I taught in the first year and we did a trip out to the museum, was I would make them do twenty pages in a sketchbook of grounds, so there was already a colour on there or texture, or, you know, just do some collagen those
pages so you’re actually drawing over the surface of something just to get that, away from that white page.

FIN
Interview with Paul McNicoll

(Education expert - pilot)

LT: What is your institution’s, or in particular your course’s relationship with sketching, design sketching and drawing for design students?

PM: I think the two main points, maybe, one of them is using sketching to consolidate ideas as part of the design process, and then the other one that is really important, is being able to communicate ideas, so the first one being something that helps you to develop an idea or maybe resolve what that thought is when it has to become reality, and the other one is being able to show it to someone else, maybe a client, maybe a manufacturer, not in terms of, “this is exactly what I want you to make,” but in terms of, “things like this…”

LT: What sketching skills your students tend to arrive with?

PM: Some, depending on their background and what their particular educational style and experiences have been, some quite a fine art style of sketching that’s very shaded, very thick line, or sometimes not even line, just shade. Everyone seems to have CAD skills, not necessarily a particular style of CAD like very technical or very creative with mark-making other digital style, just that very sort of middle-of-the-road, generic, I can fill a shape with pattern.

LT: What are the attitudes of your students towards sketching?

PM: I think generally people are terrified of the word drawing, I think, thinking of taxonomy of, around sketching drawing, I think drawing is a taxonomy that everyone shrieks with terror at, and, I don’t know, maybe from the UK point of view the word sketching sounds more fine arty and, but the word drawing, I think people are terrified that it’s a very personal activity and I think there’s a lot of mythology around the ability, where that ability comes from, you know is it a learnable skill or is it a dark craft?

LT: With your students what are the preferred tools for design development and why?

PM: For fashion, when I use the word fashion I mean wide fashion, that might mean textiles, clothing, menswear, womenswear, accessories, footwear, intimate apparel, the big fashion word, I think there’s two main approaches that work together. One of those being three-dimensional experimentation and that doesn’t necessarily mean sewing a garment, it might mean using a piece of fabric on a stand, or sewing a particular technique, idea, shape, whatever and then working with that on the body, whether that’s a stand, and from that being able to, and I’m going to use the word draw, as in with a stylus of some sort, being able to draw and record ideas that can become resolved designs from that experimentation.

LT: How do you separate the teaching of designing with the teaching of visualisation?

PM: Thinking about undergraduate courses, I think they are quite separate. I think there is a process of design that’s taught around definitions of keywords, like, research, mood board, concept page, design development, textile experimentation, things like illustration. And then there tends to be other people that come in, all of a sudden, and take over, “and today we’re going to illustrate,” or disappear after a well lit CAD lab
somewhere and, "we are now going to do a technical drawing." I think it is quite separate, I'm not necessarily saying that's a good thing.

LT: What teaching and learning methods are used for imparting sketching skills to design students?

PM: I think that they are maybe, I don't think that they're explicit in terms of learning and teaching styles, I think they kind of happen within other activity. So maybe during design tutorials for group activities with design, the how to record and communicate drawing, things may be picked up and touched upon where somebody is showing a challenge or problem or an uncertainty, but I think that kind of happens, rather than necessarily is a targeted learning activity.

LT: What teaching and learning methods are used for maintaining existing sketching skills amongst design students?

PM: Existing as in from level to level?

LT: Yeah, the kind of skills that they come in with, are they upheld using a particular type of activity or teaching and learning process?

PM: I think there are two points that question, one of them being that for the majority of students, the skills that they arrive with either need some manipulation in order to be able to contextualise them effectively for a fashion product anyway, subject, or they need development, in terms of maybe materials skills. So I believe that there is a consistency in process in terms of how a designer works between the different levels, so there is the opportunity to, once experienced that process, it will happen again, and so there is the opportunity to develop through revisiting familiar process.

LT: What feedback if any do you receive from industry in respect of sketching skills of your students?

PM: I can't answer that for where I work now, because I haven't had any feedback related to that. From where I used to work, the constant ask from industry was, “we want a student be able to draw it, not CAD it, I want to be able," they always used to say, "I want to be able to sit in a meeting, or we've gone to a trade fair in Italy and I want them to be able to draw it on a piece of paper right then and there, so whoever I'm talking to, or I can understand what this is going to look like.” But at the same time then, when the same industry people start employing students, even for a short-term contract, they want them all to have CAD skills. So I think, equally, a version of this questionnaire with industry, industries, would be interesting because I think depending on who you ask, quite often the CEOs and owners, the design directors, their experience of education in the ’80s and ’90s or whatever, they actually fall to that. And then the people who have to turn the product out in six weeks’ time and get it delivered to the other side of the world, they want other skills.

LT: Do you receive feedback from industry about the teaching and learning of design drawing and how do you impart that into your teaching and learning methods?

PM: Well for me, all of the feedback, whether it was the operational manager who’s got to get a product out or the CEO who has an idea of what designers do, it all came down to two things. One was skills that could be applied to a situation and the second one, which was the main point for everything, communication. So they became the two key focuses for me. Everything is about communication and along the way a variety of techniques of communicating which can be applied as per the need.
LT: Do you feel sketching inhibition, i.e. a fear of sketching, is an issue for your students and if so how does this manifest?

PM: Yes, it is an issue and it usually means that they, if it’s a session with an activity, they just pretend they’re doing it, don’t do it, or do just a part of it. Or that they sometimes they stop coming to their sessions. I think it is a problem, and even in the UK there has been a shift in climate of experiential context to fall back on, and you can’t say about, “what about when you…” because people don’t necessarily use the word “draw,” or what we would think of a drawing activity any more in their lives, and there is like this weird mythology around it that it’s some kind of witchcraft trickery. “How can you do that with a pencil?”

LT: Have you actually applied any strategies for reducing sketching ambition and if so how have these affected the issue?

PM: Well, for the subject area of fashion, and I imagine other ones would be the same, trying to concentrate on what I tend to call a design sketch, which is maybe something in between a quick little reminder doodle of what you do on the train on the way back from maybe a trade fair, so it’s a cross between a doodle and a fully loaded technical drawing. By focusing on something which is actual, rather than reliant on a creative flair, I think that helps, because, even the worst drawing, bits of it can be right because it communicates the right thing.

LT: Are there any teaching and learning strategies that you would like to see employed to address sketching inhibition?

PM: This is a massive question mark in my head as well, but I think it would be interesting to do a study around, if there is an easier transition to sketching or drawing, if it was, so it’s still the hand skill of drawing, but maybe in a digital platform. You know whether it’s with a tablet and a digital stylus or a three-dimensional virtual environment, or a touchscreen, well, I must admit I’ve not come across anything think-touchpad or screen which is controllable enough, but I think it could be interesting, and whether technology filter makes it a little bit less scary.

LT: Do you feel that the materials, and the substrates of sketching, design drawing, they are part of the problem?

PM: I think a lot of them are alien in a very contemporary developmental culture. I think a lot of those tools are alien now, not that that’s a problem, I don’t have a problem with that we aren’t all walking round with 4B pencils, I’m certainly not, but if it’s the first time it’s going to be scary whether you’re good at it or not.

LT: Are there any other questions or any other issues you feel I should be asking about relation to this? This is piloting what I’m doing and this is taken me a while to put together, based on the purposefulness of the questions, am I asking all the right questions?

PM: I think it would be interesting to, maybe again a cross-section of people, a bit like how we were talking about the different levels with the business, to have a glossary of terms and just asking people, not do you know what it is not, maybe on a scale of how much you do know from, “never heard of it,” to, “very confident of what it is and I’ve used it.” That could be quite interesting because that’s really difficult to contextualise, but there is this sort of myth around, not creativity in general, but particularly drawing, because drawing is the visualisation of creativity.
Interview with Michael Powell

MP: I became an art student by lack of being good at anything else, I went and did an art foundation and then discovered I was no good at art, so then I did photography because that was the least difficult arty thing I could do, did a degree in photography, had a year out between foundation and doing my degree which I’d really enjoyed, and I went to Nottingham Trent Polytechnic to do a photography degree and hated it and got a 2.2 and that I try to get into the film and TV industry with hardly any success but it was an interesting experience, and actually became a foundation experience which talk about in a minute, and then I sort of wandered into various jobs that were creatively orientated but increasingly technological and one point I realised that computers were going to become a big thing, I was working for a guy that did film editing and had a computerised edit suite because it was all mechanical, and I thought “oh, oh, this is really interesting” so I went back to night school and did basic computing courses for a year or so and I managed to persuade people that I was good enough to become technical computer support here, when it was the polytechnics, so I supported computer users, sample phone call “my computer doesn’t work,” “what sort is it?” “A grey one” et cetera, did that for a number of years during which time I also did a part-time Masters in multimedia design here, which was interesting. Still not really flicking my buttons, not really what I wanted to do but it was interesting, and what it did lead on to was an opportunity to do some teaching and then I got very lucky and became a lecturer in multimedia design in March 1999. And then within a few weeks, I think with even two months the course leader left to become a mediaeval re-enactor and his parting shot to me was “well nobody else wants to do it, so you are course leader” so I inherited the course leadership from him because nobody else wanted to do it and I just dived in and have been a course leader for the subsequent eighteen years, or something like that. I was told at the time it would only be for two or three years because people rotated but eighteen years later I finally got shot of it to somebody else. So then I ran multimedia for four or five years and it was apparent in the last couple of years that it wasn’t really hitting the mark and my conception was very good students were not really coming out being that employable, we were getting a lot of feedback from industry said they were nice kids, they’re really smart but they can’t do what we need them to do and we haven’t got the time to retrain them, and it reminded me of when I graduated from a degree course with no useful employable skills at all, I vowed that students from any course I ran wouldn’t be in that position, so the number of students was falling and the projection was that within a year or so multimedia would probably die just the lack of students applying for it. So the Dean of the faculty said “well, you better come up with a plan then” and I did, so looking at where our students are trying to get hired, there’s clearly a demand for students who want to go into the games industry, clearly a demand for students who want to go into the animation industry, and they are distinctly different, don’t assume that they are the same, and a third are still going to be interested in the kind of multimedia interaction and web kind of stuff, so I proposed three courses and to my surprise they said “great, do it, and you’ve got until, well, a year’s time to do...
it”. So I took on the games thing because I was interested in it, that was the specialist pathway I’d been teaching on whilst I was in multimedia. I wrote to various people in the UK and around the world in a couple of American colleges replied as did Jolyon, the man that I passed your details onto, who was working for a company called Codemasters in Leamington which I visited yesterday to speak to one of my graduates who is now a senior there, graduated seven years ago, and Jolyon just said “great, at last, somebody who is trying to teach games is asking us what we want, come down for the day show you what we do”. It was a revelation, suddenly I understood exactly what was required and it was brilliant, he just outlined everything they needed, so I designed the course from his feedback and also, there’s a thing called the international games developers Association, at that point, and this is the year 2003, 2004, they had a draft curriculum proposal which is what games course should look like, and now of course is pretty well established but at that time they went really many courses, there were only two I think in the UK at that point. So I followed their guidelines, his guidelines, and government got involved because industry was complaining that graduates were great, but they’re useless, we need them to have X, Y, and Z skills, so the government set up Creative Skillset for what was required for film, TV, advertising, animation, games and they produced a kind of accreditation guidelines, so I took that as my third kind of touchstone for curriculum, designing the curriculum to meet those three points and got it validated in 2005, first intake 2006, with about fifteen students, so here we are eleven years later, 200+ students, five-ish staff, ten years plus of successful graduates into industry. At that point really where we are thinking where are we going in the next five years, so we’ve, I’m surprised we’ve lasted ten years, an absolute flash in the pan but it’s growing and there’s demand for some niche specialisms to grow from it, so from that point of view it’s been a huge success.

LT: so what are these new specialisms that have come out?

MP: game art is the so-called generic descriptive for people who make the content for games, the characters, the environment in which you play, all that kind of stuff, they don’t design games, they don’t programme or code games but they make all the visible content. On top of that we’ve got some, most of the tools that are being used in those areas are now starting to be used in other areas, so one area is visualisation, so companies like BMW, Jaguar Land Rover and so on are using the same production processes and the same content management tools as games companies to produce content based on their products. So a student who’s just completed a year with BMW for his major project, his major project was taking BMW cars and locating them in a very realistic representation of a street in Amsterdam where there was a cutout and the cafes and stuff and allowing the user to change the location so he could see the car in context and also change the appearance of the car so he could change the trim and the colour and that sort of stuff, and those previously used to be done using bespoke, very expensive, very difficult to use tools. Now you can do all that work with the sort of stuff that our students are using, so companies are getting very interested in employing those kind graduates in the visualisation teams because their skills are very transferable, so that’s a great one. Talking to the games companies we went to see yesterday, there’s a
great need for artists who specialise in user experience or user interface. When you came in I was basically watching a TV channel streaming people playing games, and so the whole user interface, user experience staff is a really great area of that. What else? Animation, specifically for games which is different from animation, visual effects, all those kind of things, small, but growing and so, but talking to companies, the generic skills that we’ve been teaching over the last ten years are still in demand but they’re not hugely growing, but in that time we’ve gone from, I think when we were validated, I think there were about five or six courses in the UK and now has nearly 200. The industry has grown hugely, it’s increased its numbers slightly but what it has done is the medium/biggish studios that we used to get most of our students into have fragmented and broken up over the last few years and there is a lot of very small-scale stuff so students have to have different skill sets. Now, the slightly contradictory thing is, companies are saying “we want more specialists” which is where we can do that, but they’re also saying “we also want more generic people as well” so if you’re a tiny company, you want somebody who can do lots of things, if you’re a bigger company you want somebody who does UX. So looking forward, is clearly a kind of general course curriculum we can offer but then there are specialist pathways that we also do, just really to keep it current, so that’s where we kind of at the moment. So again artists are people who have, ideally a background in traditional art skills, art A-level or art foundation. In the old days we would have gone straight into graphics or illustration, and I’m talking about commercially orientated artists as distinct from fine artists, so probably graphics and illustration, maybe if you would have gone into product design, a very small number into fashion and textiles, crafts, that kind of thing, and what we do is we take those fundamental art skills and then add all the technology and industry specific stuff on top of that.

LT: so, with regard to your courses here, so you run a BA in games arts, that’s just one course, you said you’d got three courses?

MP: yes, so game art is one, and when we set them out we thought that in order they would be game art is the smallest because it’s a niche, animation would be pretty big because everyone wants to do animation, so we thought, the third course was interaction design which was mostly designed to appeal to either people who’d previously done multimedia design or international students who were very interested in interaction design. What transpired was interaction design, nobody really loved it and so it died, the faculty of Art killed it after a few years, animation never really took off, I don’t really know why, but compared to other areas that ran it’s really not that popular, the numbers are tiny, sixty-six students across a three-year BA course, weird. Games went bananas, just ridiculously successful, massively over successful, possibly because we got accreditation straightaway, within the minimal time span we could do it, essentially, accreditation required you to have at least a three-year graduate history… Animation didn’t get its accreditation and it’s going to go for accreditation this year, that will probably drive up the numbers because industry are telling graduates “we are really only interested in accredited courses, because they guarantee that you have the skills that we require”. They may hire from non-accredited ones but they’re much more likely,
when they’re doing that initial cull of CVs and portfolios, and they can’t really, and you also find accredited courses are the ones that tend to have very close links with industry, as we do, guest speakers, briefs written by industry. We compare our curriculum regularly against what they require, so it’s a good safety net. So yeah, of the three courses there’s only two left but between the two of them they have maintained at around about a 200+ student cohort that multimedia had when we started back in the early 2000’s in art and design. So from the University point of view, we’ve done exactly what they asked us to do which is keep the student numbers up, and were also bucking the trend a little bit because the trend is slightly downward in student applications but animation is up and games has remained static so, yeah, we are a rare area of stability and potential growth in the student market. Now that’s slightly problematic because the industries aren’t huge and they are increasingly outsourcing a lot of material that former graduates would have done here to foreign companies. So the market for graduates from animation and games is not vast, it’s really quite small.

LT: but then the transferable skills that they come away with potentially are very commercially desirable

MP: they going to be more employable I suspect then a very old-fashioned kind of fine art graduate I would have thought, simply because they have an industry focused to their courses, curriculum content and contact. But yeah, there is going to be a problem in the next few years because the number of games courses and animation courses and undergraduates going out with BA’s and BSC’s in those subjects is nowhere near matched by the demands from industry, so the first thing we’ve noticed that our graduates start salaries have gone down hugely, so in the ten years we’ve started, so whereas it wasn’t uncommon ten years ago to get into a job at twenty-two or 25,000, now you’re likely to make 18,000 and these are hugely, hugely skills students and the money is dreadful. That won’t change anytime soon, so again that’s one of the reasons for driving the niche markets because visualisation artists are likely to get 30,000+ because it’s very different working for BMW or Jaguar Land Rover then is working for… in Leamington with a hundred staff. UX and UI artists are almost on horrible in the UK, there are none, so every company we visited want technical artists, UI artists, UX artists, even more so than programmers, because the programming things started to be dealt with because obviously they changed the national curriculum to pump the stem subjects including physics and maths so that’s not really an issue now, but technical art has disappeared, there are no technical artists at the top, there’s hardly any technical artists in the sector. We’ve graduated to people in ten years as technical artists and one of those comes back and teaches two days a week with us, but firstly it’s not widely understood and secondly, students misconceptions of the industry are paramount in what they tend to do is they conceive of the industry incorrectly and they hook their aspirations onto things that don’t exist. So if you come to one of our open days, and I do my “hands up who wants to be a concept artist”, everybody puts their hand up. One of the companies you went to yesterday, it has 300 employees and not one single concept artist, they don’t need them, so that’s an issue we have to face and one of the things we’ve got to do here is to try and refocus with “the reality is if you want to work in the
creative industry you need to be technical, you need to be artistic and you really need to
start focusing on quite high specialisms” like, technical artists can command any salary
that they want because they are like gold dust.

LT: it’s pretty much like that in interiors, the visualisers are, is a separate industry now
from architecture, interiors, you’re a visualiser and that’s what you do.

MP: so the issue I have I guess is that by the time most of the students come to our seats
in many ways too late to address their deficits in terms of their fundamental skills and
that’s a point of pressure that we are experiencing. So that ecology system that used to
exist to drive our students into degree level and that state of readiness has disappeared,
so we are increasingly struggling to recruit students who are even moderately close to
what I would regard as fundamental technical skills for any artist, fine art, graphics,
fashion, whatever you want to do, I think there’s a kind of fundamental level of skills,
equally if you’re going to be history graduate or music graduate, there are things that
you should have at the point you arrive at University and our students increasingly don’t
have those, and that’s where the sketching comes in.

LT: okay, so what is your course or in terms of your courses, the things you oversee,
what is the sort of ethos and attitude towards manual sketching and where it is used in
the design process with your undergrads?

MP: yeah, it has two roles really, one is that it’s kind of evidence of the mode of
thinking that’s very important as an artist, so to give you an example, sometimes you’ll
get a student go “I’ve got a great idea for a thing” and they’ll give you some rambling
story and it’s like, “well, you’re not a novelist, I don’t really care, you know, show us
some pictures,” “oh no, I haven’t”, in terms
of thinking and articulating ideas, I’m
always suspicious when a student can’t give those to you, because it’s your fundamental
skill. The scenario is you in a lift, there’s a person that has got loads of money to give
away and you’ve got a great idea and you’ve got ninety seconds to scribble the idea on
the back of a fag packet, and you go “what do you think, backspace?” and they go, “oh,
that’s really cool,” or you can go, “oh no, I’ve got a great idea but I need you to come to
the studio when I load up photo shop and give me about an hour,” and so it’s rapid
transmission of ideas but it’s also a mode of thinking, I’m absolutely convinced that
good creative art students can’t help but think and express themselves visually as they
kind of primary form. I still expect them to be able to write and communicate in other
ways, but it strikes me that if you don’t have that relationship with the visual world,
you’re going to struggle to make the kind of decisions that companies will employ you
for subsequently, so yeah, it’s fundamental, it’s like grammar is to English students or
musical score is to music students, is how you communicate. The other thing is, I
suppose that translates across all the art world, where he would have a slight nuance a
slight angle on that is we also particularly value objective realism, so we’re not really
interested in people using art for expression, it’s not what we do, what we do expect you
to be able to do is analyse how chairs look or how a room is organised or how physical
space might be arranged or what people look like, how hands work, and that’s because
people anticipate games now as looking, generally speaking, either cinematically realistic or stylised in a way which is convincing, and so that fundamental relationship to the physical world, the visual physical world is paramount so as well as having a basic expressive capability we also use sketching as a way of starting to discipline people in terms of what things actually look like, because it’s usually important, because we always say that people outside of our world who don’t know about and don’t care about the technology and how complicated it is, they just go “that doesn’t look convincing”. I’ll show you some examples in a minute of what things look like, so as well as it’s a way of communicating ideas and way of thinking, it’s also a way of getting people to understand that the most important skill you have as an artist is to look at stuff and when I did drawing at a level and at foundation it was drummed into us that what it was teaching you was how to see properly. You can take away all the preconceptions and you look at staff and the action of concentrating on something and trying to capture it in drawn form it’s a discipline of mind and seeing, and it’s a skill that every creative company we deal with, all of them, tiny or huge, value to the point that they’ll pay people to be good at it. So, oddly, even though these are very technical businesses, they absolutely revere fundamental manual drawing and painting as valuable skills, and that’s really interesting because that kind of, you don’t expect that to be part of it, but it is, firstly it’s an appreciation of its learned craft skill, so you can appreciate it at a craft level, but also, it later transpires in, or shows itself in relation to making decisions, so if you’re looking at a bunch of character designs, there’s a point beyond the technical, the merely technical where you start to make judgements about “that one is better than that one”, and that discipline comes again through understanding the current fundamentals of visual arts, and the best way to do that is to draw. You can read books about it, you can listen to lectures about it but the action of actually doing it yourself and understanding that physical skill and how the brain works is training people to make really quite high level judgements, relatively unconsciously. This guy Jolyon that I’m hoping to hook you up with, he describes a good game artist as someone who has the knowledge to see when something is “woahh!” and the judgement to see when something is wrong, but also the technical skills to put it right, and that’s really the kind of core ethos of the course, is that, you know, you can do a thing and go “that isn’t right” and then know how to fix it, and that’s essentially, you know, what our kind of artists do, that’s why we, we try to be very clear and go “we are a commercially orientated art course” it’s not fine art, we don’t care what you think how you feel, “there is a car, what’s wrong with it?” and that sometimes as a point of friction as well, but that’s understandable, but even though we are very 21St-century cutting-edge technology, blah blah blah, we are just a logical extension of all the other craft arts that came before us, you know a logical extension of illustration, graphics, a logical extension of product design, all the way back to kind of sign writing and all the other things, and I’m very convinced that it’s worthy of having that tradition as a kind of core that runs through us all. You know it’s cool, you talk about drawing to students and you’re showing them sort of Botticelli, Michelangelo and stuff and going "these guys did the same as you do, same equipment, and wow, isn’t that cool?" And the other thing that’s important about it is that it’s remained unchanged, so the technology comes and
goes, the end products, go but that fundamental relationship of person, pen or pencil, piece of paper, and that ability to capture something, and people go “wow” that is so fundamental, it’s almost as pure as music, not quite. And I think it’s important for students to kind of buy into that, because the other thing that drawing and sketching as part of is, is not from their point of view but certainly from mine, but the more I’ve studied what we’re doing for my doctorate, I’m very aware now of how much of what we do is about enculturation, so we’re going “look, if you want to join our club, this is what you have to do” and that’s half the fun, right? You don’t get to play football for England because you like watching TV, you get to play football for England because you’re good at football, and the same price, you know you get to join our club if you are good at art and you appreciate art and you understand the way that you fit into that kind of long history, and I’m absolutely fine with that. When I was reading this book about, against value in the arts, they didn’t like kind of stuff they said “no no, that’s all part of the same problem”, and I go “that’s fine, we are commercial artists, this is what we do”.

So it’s an interesting one because that’s a battle that we are finding harder and harder because the earlier enculturation processes haven’t taken place. They aren’t at school any more, there are no more A-levels that teach you traditional art, I bet your early experience of art was quite regimented, “studio, regimented still life, draw it, I don’t care what you think or feel, tough”. And that was based on, you know, up until the 70s, the art curriculum in the UK was mandated by the government, there were the government schools of art and their purpose was to produce good craftspeople and I can cope with that because that’s what we are doing. Now I’m not saying that other kinds of art are wrong or bad, but being overt about that is really important, and what I’m finding very difficult, and I think the students struggle with it, is that early part of enculturation, because it’s not there now, you’re kind of going to students “I don’t understand why you’re not good at this, why you’re not interested in this, you should have done all of this, you know, in fourteen years of school, you can’t draw?” When we interview our students, we are lucky enough, how much longer I don’t know, we are lucky enough at the moment to be allowed to interview our students and part of that process is to do a still life drawing test, we don’t call it a drawing test because we are not allowed to call it that, because the word test frightens people. Nonetheless I had to do a test to get into foundation and I think I found, almost as a moral level, people who want to become artists in this course, in this industry should be made to go through a certain process as part of joining the club. What’s interesting is that how untutored they all are, almost none of them have any technique by which to approach drawing, they are, random. The more worrying thing is that the other part of the process we do, we will put a piece of art projected onto the wall and get them to do a quick presentation. What we looking for is as an artist how you respond to something, on two levels, firstly, immediately and emotively and whatever you’ve got, and in doing that to you then use art terminology and allowing for the fact that our students are probably slightly on the awkward end of the spectrum and don’t always enjoy talking out loud to other humans, that’s another area that’s worth studying, even allowing for that I’m shocked by most people who are approaching a degree level course and the inability to respond to and articulate using correct terminology that piece of art. I’m pretty sure if you did the same process to
history undergraduates or law undergraduates they would probably have fairly good grasp of the correct, I may be wrong, maybe all students are hopeless and immature.

LT: that sort of level of motivation to get you into a law degree or a history degree, you would have, something would have stuck at A-level, terminology and just a kind of vague understanding.

MP: I think possibly that’s because the academic A-level structure is still oriented towards, essentially critical thinking. It doesn’t really matter what the subject is, it’s the application of research processes, critical thinking and then writing your results and stuff. The problem for us is that early stage has now gone and so we are sitting here thinking “wow, we have three calendar years, but effectively sixty-ish weeks, and not much more than a year certainly under a year and a half to take you from inarticulate, inexpert, to industry ready?” And that’s a big ask, and so for us, one of the things is we can’t fix everything, so we feel that it’s right to ask at least at the point of entry you should have some relatively strong drawing skills, because drawing skills are very accessible aren’t they? You don’t need lots of equipment, you don’t need expensive software, you don’t need complicated instruction, it’s the most accessible form that you can be engaging in art as a young person, and I think that’s the real issue we have is that quite a lot of our young people are arriving and being very very poorly prepared. On top of which we then go “oh, wow, okay, now you need to do this as well”, and I mean, no wonder they’re upset and miserable which is what my thesis will be looking at. And so that’s our kind of philosophy to it I think is that we are an art course but we are also a technical and professional orientated art course and that puts certain constraints in place. I don’t like constraints, I was never happy when I, I was on foundation and I was finding my way to the arts and very quickly became aware that I was not a fine artist and wasn’t comfortable in that role…not very good at any other form of art either, but that’s okay, I’m not an art practitioner I’m a person who facilitates other people becoming practitioners, so I’m sympathetic to their needs but I’m not an artist myself.

LT: so, where in the courses that you run is sketching used? I mean I’m looking at this from the point of view of the ideation, the early concept generation and development process, I’m guessing that applies to animation and game art?

MP: yeah, predominantly that, so early stages of idea generation would be, our advice to be done in sketch form because it’s fast and portable, and certainly there’s no need to be spending hours and hours and hours labouring over a kind of photo shopped digi-paint when a three-minute thumbnail sketch would do. So for us as part of the process, it’s usually the very early I dear iteration and then subsequently it supplied to a later stage where you might go, you might screenshot a piece of work in progress and go “I can’t quite figure out why this isn’t working”, and we encourage students to work over the top of that, paint over, that’s what it’s called. Those are the two primary mechanical art parts of the process.

LT: and are they engaging in observational drawing at the beginning of the course?
MP: yes, we do two types, one is traditional studio life drawing

LT: do they like that?

MP: no not often. Still lives in naked people, and then we also do a small amount of external environment drawing, but what we try to do is identify these things in relation to their particular industry application, so life drawing is clearly key for character artists which is a surprisingly hard sell. Sitting in the landscape and absorbing the kind of atmosphere and being able to rapidly sketch it and understand how, you know, the change in the light changes the mood, and all this sort of thing is very important for environment artists because when you’re making characters and environments, even if their standing on planet whatever, you still have to apply the visible laws of physics that we all live by so you understand that mountain is far away because it’s hazy and blue, that one is very close to you because I can see more detail et cetera. So again it’s trying to, we try to explicitly link it to industry things in order I think to partly overcome resistance on behalf of the students which is “why am I doing this? Why am I looking at this that old naked woman when I want to be a character artist?” It’s like “really, I have to explain this to you?”

LT: I was talking to Pamela Schenk who is a big sketching person, she’s published a book on it, sort of thirty years worth of stuff and she was, she was a fine artist and she said the whole fine art thing for designers is wrong, it doesn’t work for them because they don’t see how it affects them, it’s just boring stuff you have to stand up to these and do, where she’s been teaching them to do practically the same stuff but selling it to them in a way that, you know, you’ll be able to draw a hand or foot because you are a footwear designer or a fashion designer, and suddenly the light goes on and they become engaged with the whole concept of life drawing, so it is sort of, the pertinence of it in the relevant soffits which is the important bit. Okay, so, when the students arrive, you’re talking about them coming from, I’m presuming a mixture of either A-levels or foundation or…

MP: allsorts, A-levels, foundations, BTECs, randomly, are, if you needed to know I would be able to look into the stats, but I would predict by and large the bulk come from BTEC route

LT: okay, so they’ve done, what is it a national diploma in something which is equivalent to a sort of A-level and foundation type thing is that right?

MP: don’t use the word equivalent, we all know they’re not! They’ve be made to stay on in some form of education post sixteen and that’s now the gateway into a degree course. Our preferred route tends to be good traditional A-level art and traditional foundation course. Those students tend to be better in culture rated, more grounded in the fundamentals and therefore more able to take on the extra stuff. People who come in straight from A-levels, have lots of other issues that need sorting out, and gets in the way they degree, I mean I’m generalising hugely but this is broadly true over the ten years we’ve been running the course. BTEC students are the worst
LT: what is it about the BTEC or the FE students?

MP: two things, one is that they’re not the most academic students in the world, they’ve been driven down that route because they’ve got no other options. So the way it works, and it did when I was a student and it’s even worse now was that if you are smart at school you will forced into the STEM subjects or the academic subjects, if you’re a bit less smart you go into the humanities stuff, as you go down the “what is important to the schools rankings”, you start moving people down to whether doing you no damage and they underpin the arts. So it’s always been the case the arts is the bastion of the ones who really wanted it because there are tea, the ones who are hopeless at everything else and people like myself who don’t know or who are too lazy to do anything else. That’s got worse now because in the old days that kind of smorgasbord filtered out later, you didn’t get to do not foundation if you weren’t actually quite interested in arts, you definitely didn’t get onto a degree course if you had no foundation, so there was a later filtering process. Now, all of those barriers are away, so it means you can be very poor at school, very disengaged, end up doing a BTEC arty route, and what they’ve done is they have introduced some new BTECs to try and persuade young people to engage and the call things like game development, media production and they’re all shit. Shit content, badly taught, disengaged students, then they go “oh, I’ve got a qualification, so I’m going to nip off to uni and do a degree in it”, and “oh my God, really?”. So they are not bad because of the people on it, they’re bad because of the way their setup and the reason they’re set up, and the fact that the curriculum generally doesn’t contain anything of any value to any subsequent degree course, no drawing, no proper 3-D modelling skills, they are just time wasting. So a large proportion of our applicants come from those backgrounds and very few of them make it through to the course because we eliminate them at the point of, first off, “have you got portfolio?” A lot of them haven’t, “wow, okay, you want to do an art degree but you haven’t got a portfolio”, so that’s that, the second stage is “is the portfolio good enough?” If it’s not, when not interested, there’s plenty of other courses you can apply for. If it’s good enough will go “well okay, you need to come in for an interview and at that interview you need to bring a wider selection of your portfolio because we’ve just looked at the edited highlights and we’ll set you drawing test and will talk about art”. So we try very hard to be selective on the basis of factual evidence, physical evidence of their engagement in and their skills at art. That’s deeply unpopular and hugely unfashionable

LT: I can imagine it is but I’m getting a really good feeling that this is actually a really good way of wheedling out the…

MP: yeah, but you can see with the conflict lies, because one immediate thing is that game art attracts between 500 and 600 applicants a year and, so the University is going “oh my God, why are you throwing away all these opportunities to make money?” And I’m going “well, the first reality is of those 600, we ask them all to provide us with a portfolio - 400 drop out instantly at that point” so really only 200 people apply. Of those 200 people probably about 50 to 60’s portfolios are not ready. Now, we don’t say “you’re rubbish go away” we say “at this point, not ready, here are some things you
should probably do to improve, you could do a foundation or whatever”. So we never make people feel like they’re wasting our time, we just go “no, you’re not ready yet” and that again is based on our practical experience. If we take people on who were not ready, they have a miserable time and everything ends badly, so we don’t want to do that, so we encourage them to go and do things and a lot of people do, a guy he is now very successful in the industry, I remember seeing him up at QE, Wigston in a classroom full of people who were throwing things around, not paying attention, he was the one guy who was listening so I did a presentation to him, anyway he asked questions afterwards then he came to an open day with his dad and we looked at his work and went “you need to do other stuff, you’re not ready” so he came and did a foundation and he came to another open day, still not ready, and he worked like a Trojan for three years to get on the course and he never gave up and that’s why we do it the way we do it because the reality is at some point, somebody is going to get “you’re not good enough, we are not having you here”. I’d rather do that to people at seventeen and eighteen when they’ve got a chance to change direction than to graduate somebody who goes “I’ve got a first in game art from De Montfort University and I’m off to Ubisoft” and they go “no, that’s crap, we’re not hiring you”. I don’t want that to happen to our boys and girls. So that does cause tensions and conflicts because clearly a university looks at one set of data and we are looking at the lived experience and there is a bit of friction. And being at the level I am in the University I painfully see both sides of it because I’m not abstractly removed in higher management, I am a little bit distanced from the operational teaching side of things so I see both pictures and both have legitimacy but the reality has to be I would rather disappoint people and give them options now than graduate them and go “ha -ha, now you’re screwed, fifty grand in debt and no one is going to hire you”, because that’s outrageous. So that whole kind of fundamental art thing is our whole sticking point, you know, it has to be there, and were not unique or particularly dogmatic about this. If you looked at every game and animation course of worth in the UK and the US and Europe and Asia, they would all have the same basic requirements: you’ve got to be good at art. Now, how we define that tends to ebb and flow a little bit but essentially will be talking about is at the point of entry you can draw, not brilliantly, not Michelangelo, but enough to get ideas across, enough to understand that when you draw a circle to look like a sphere, you know the shape, basic stuff that you and I will talk when we were fourteen and fifteen on O level art. Now that’s my real bugbear is that stuff is been stripped out so at some point we need to campaign to put that back into schools, you know, stop short-changing the art students. Okay, so they are not academically gifted the not going to Oxbridge but they deserve to be as good as they can in the fields that they want to get into, so teach them some fundamental skills.

LT: okay, so when they arrive, generally, I know it’s hard to generalise, but give me some examples if there are any in particular, but what are their attitudes towards sketching, the need to sketch?

MP: it depends on the prior experience. So art students, foundation students get why they do it, everyone else hasn’t a clue, roughly speaking.
LT: what are their attitudes towards the digital methods?

MP: oh, they think that’s going to save their arse, because the machine will do it, yeah, “oh my God, all I need to know is the magic key combination to be amazing in photo shop and it will do it for me”. And what we try to get is “no, photo shop is just another tool, it’s no different, you still need the fundamentals”, and it’s easier to teach the fundamentals without adding on a layer of software, because what you learning here? Are you learning how to sketch you learning how to use photo shop? Actually you’re doing both. Trying to learn to sketch through photo shop is a cock-arsed way of doing it. Teach you to draw with paper and pencil and then go “do you know, you can do the same in photo shop and what’s really cool is that because of the way photo shop works, you can layer stuff and sort layers out, that’s amazing you can’t do that in drawing”. So, it tends to be, for want of a better expression, conventional/traditional art students get why we do it, everyone else doesn’t. And the more technologically focused and less art focused the courses are, the less that culture is in place.

LT: do you have any stats or quantifiable data as regards sketching inhibition within your courses? Percentages or rough proportions?

MP: probably we can deduce it from the module scores. It will become easier because what we’ve done, which is kind of interesting is from this year onwards we are splitting out traditional art digital art explicitly at the point of the module, so at the moment within visual studies you’ll do some traditional and some digital, and what we are finding is that the students are confusing why they are doing the two things. So we’ve taken the decision to split them into traditional art is about these skills and this is why they’re employed and digital art is about these skills and this is what they employ. So from this year onwards are able to get an explicit breakdown as to how people respond to sketching. It’s hard to quantify but I always say at the first point of contact which will be the first sort of assessment in January, of their first year, you’re probably looking at about 25 to 35% of students in visual arts probably failing the module at that point in relation to their fundamental sketching skills

LT: okay, so then they have to resubmit so it is a bit of a mountain for them to climb, okay

MP: and bearing in mind that that is people who have been selected on their ability based on portfolio. What’s interesting and one of the imperfections of the portfolio system is that, the reason we make them do the drawing test is that, it doesn’t happen all the time, but we certainly get people whose portfolios are arrived at through a process which is not necessarily evidence of actually being able to do certain things. So of course then what happens is “okay, so yeah, you have a nice portfolio and some life drawing in it, that you’ve copied it from photographs, now guess what, here’s a naked fat woman and an easel and a pencil - knock yourselves out”. It’s a very different activity, so that’s quite interesting, and generally speaking by the end of the first year, previously we had managed to either get people up to a reasonable level of competence or people have gone “this is not for me” and left the course. Now the University is
slightly changing its regulations regarding attainment levels and progression levels, we are losing a lot of the wriggle room, so students are beginning to be allowed to progress through to the second year with inadequate fundamental skills. It will bite us in the arse one day.

LT: when you have students with these sketch inhibition issues, how does it affect the design output, how does it affect them as designers and what you actually get to see?

MP: everything is butt ugly, yeah, it’s like, sit in a presentation sometimes and somebody will present a piece of work and you can hear, particularly the part-time staff who are less inhibited, go “God, are you blind? That is really ugly, that’s just wrong”. A common one is, particularly when people start to do stuff in 3-D, people get very fixated on the software and forget that what their modelling is a thing that supposed to look like a thing, so they go “all right, that’s a hand”. “Oh my God, nobody’s thumb looks like that, you do life drawing every week, do you not spend time understanding how hands are articulated, how big a hand is?” They have always doing like, this looks like an extruded pipe of plastic and the hand is a tiny bunch of bananas, a tiny bunch of bananas, do not ever look at the different sizes of things in relation to, so that’s one thing. Fundamental proportions are one and that’s not even negotiable, that’s factual, and the other thing is that judgement thing, “that’s ugly, those colours are hideous, why have you put that in front of that so we can’t see this?” that kind of stuff.

LT: what about their behaviour? Sketch inhibited students, what kind of behaviour do they exhibit?

MP: cross, frustrated…

LT: cross, do they vanish? Do they invent illnesses? Do they lose their work? I just wonder what sort of range of excuses and behaviours you’ve come across.

MP: essentially, I understand it because they feel like they’ve been caught out, and is now, being young they don’t have the wisdom to go “Right, okay, I need to fix this”. Most of them go “oh, I’ll avoid it”. A small number do and in fact the guy that we went to see yesterday who is now a senior at Codemasters, he was a very poor aesthetic artist all the way through his first and second year, a real kind of middle-of-the-road, ooh, dear oh dear, and he worked really hard in his end of second-year and third-year. He had a kind of epiphany and he went “oh, I totally get it, I need to be on board with the aesthetic side of things” and he really really worked hard, soaked up everything we threw at him, all the criticism, all the carping, all the negative shit that you throw at an artist to go “Jesus, can you not see this?” He took it all on board and he worked really hard in his end of second-year and third-year. He had a kind of epiphany and he went “oh, I totally get it, I need to be on board with the aesthetic side of things” and he really really worked hard, soaked up everything we threw at him, all the criticism, all the carping, all the negative shit that you throw at an artist to go “Jesus, can you not see this?” He took it all on board and now he’s a senior artist, and when people have the fortitude and the wisdom to kind of accept what you’re trying to do, they do blossom, that’s the frustrating thing. What you find is, particularly at this stage that you’re talking about, is a huge resistance to “stop telling me that this is a thing, I’ve had fourteen years of being told I’m great, I’ve passed all this and I’ve done that and I’ve done really well, and now you’re telling me I’m rubbish”, and yes, well “sorry, you’ve been lied to for fourteen years, and you are now at the point where
there’s no hiding place”. We are always deeply suspicious of portfolios that only have digital art in, how much of that is a photograph? How much of that has been photo collaged? If I sit in front of a blank piece of paper with a fat naked woman, or a fat naked man, all thin people, and you have to make marks on a piece of paper which make me even think about that, then that’s what you can do, and I think at that point a lot of people suddenly go “oh shit, I have been faking being an artist”. It happened to me the same way, this is why know what’s going on because it happened to me, when I went from my A-levels to foundation I was faking my way as an artist. I was a photograph copier, I was quite good at sketching, completely hopeless at painting, colourblind, hate colour, but quite a good pen and ink artist, probably would have been quite good as an illustrator, when I went to foundation it was easel, subject, pens, and my painting tutor essentially went “your shit, stop it, don’t waste your time, you’ve got no interest or feel for it, do something else”. He didn’t go “you’re a horrible person you should now go kill yourself”, he went “this is not for you, find something else”. And I went, “oh, okay”, turned out to be rubbish at that as well, but that’s another thing, but that’s where the sticking point comes because what we’re finding is that with the current generations are, rather than go “oh okay, I hear what you’re saying, I’m feeling it, I’ll act on it”, they go “no, no, it can’t be true, you’re lying, you’re wrong, I’ll go and listen to these people on Facebook instead”. Classic case in point, student who has graduated this year, very mediocre, horrible artist, shouldn’t really have got through the third year, suddenly decides he wants to become a concept artist on the basis of “oh my goodness, why would you, you’re hopeless”. But no, his family and friends on Facebook telling him he is really talented, so we’re going, well, fine, I hope your family are going to… Your family tell you you’re the greatest thing, you’ve got the X factor, and no one will pay you to do it. Interestingly, as an aside, the last couple of years running in the induction week, one of our colleagues from CLASS would do a presentation and one of the questions they used to ask was, to the incoming first years, “whose opinion do you value the most, experts, or your own?” and 95% of the people in that lecture hall said they valued their own opinion, and then she said “will why are you here the n? What possible reason can there be for you to be here?” and that’s a really interesting thing.

LT: And an arrogant attitude as well when you’re coming in

MP: I think so, I think the people who want to be artists it’s an excusable because surely one of the things about art is respect for the craft and an interest and curiosity in doing stuff, but no this thing that you’re describing, this, almost a phobia about doing actual art is really, it’s worrying because what it does is, they are trying then to build a huge torturing tower of technical skills on top of really shaky foundations and it doesn’t work, because what we get in from industry people is that “we don’t want people who are good at software, because we can send that out to Kuala Lumpur or Pune in India and places, and they are great and they’ll do all that stuff for us and they’re actually now getting to be really arty as well, so what are you bringing to the table as a British graduate? You’re really expensive to hire, you’ve got a really expensive education, a boatload of debt, and all you can do is push software? It has to be this kind of stuff, because it’s the human element isn’t it? There’s no hiding place with it, that’s normally
we value it and that’s why students are resistant, because they know what’s up, they’re not stupid, they know “oh, we’ve been caught out” and at that point they then get really sniffy about it, quite angry

LT: bit of a strange question, this came up with one of my pilot interviews so I’m going to ask you about it, are there any cultural, religious or gender-based issues around students who are sketch inhibited? For example, particularly with the East Asian students they are very disinclined to put pen to paper and when they do it has to be absolutely perfect and, you know, they have a very different attitude to experimentation and the ideation process. That’s just an example, that’s the sort of thing I’ve seen with the interiors and fashion students, I wondered if there…

MP: a very small number of students object the life models on religious grounds, so we have to provide them with other exercises which tend to be plaster casts, but that’s a tiny tiny minority, we do get that sketch inhibition in relation to “oh my God, it has to be perfect”, and it’s like “you haven’t got time for it to be perfect, just do a thing”, that is universal and part of that is driven by the rise of photo shop and the rise of deviant art and other online fora where people show off their amazing digi-paints and they’re like “oh, that’s what I need to do”, and it’s like “no, no one’s interested in that kind of crap, if you want to do that sort of thing go and do an illustration degree and paint greetings cards”, that’s not what we’re about, so that’s one of the things that inhibits them to is they are constantly comparing themselves to that kind of high-end outcome and judging themselves, sure, and we are “no, we’re not interested in that, please will you stop doing that and just sketch the thing”. So that’s an issue, and I think, so that’s a digital culture, and gender not so much, I mean we have very few inter-gender population anyway so, are, we’ve got quite a lot of transgender and transitioning gender students and no one seems to regard that as a particular issue.

LT: what about your male/female balance on your course, is it 50-50?

MP: er, we’ve got slightly more females than males at the moment, again because I think because of the process we go through, people who might be objecting on specific grounds have long since fallen by the wayside, so yeah, very small external thing, so a digital culture thing and a very tiny number of people on religious grounds.

LT: okay, what about students, older students, more like mature students coming in, because occasionally you get the 40+ students on other courses

MP: on a very very small number of occasions a mature student will approach us and I will say “don’t even bother, just don’t, just go get a proper job, honestly, this is not a job for somebody with a wife and kids and a mortgage, the money is shit, the chances of getting a job is virtually zero, especially as an older person, almost zero, just don’t, just don’t even waste your time”. It’s harsh isn’t it? What’s the point?

LT: okay, the teaching of designing the teaching visualisation, often are kind of intertwined and students often don’t understand the difference between when they’re
doing designing and when they’re doing visualisation, and they think that visualisation is a design, where it is the one end and the other begin? Do you, within the course, obviously you are talking about the individual modules and what’s contained within, do you make that quite clear?

MP: I don’t think so no, it’s one of the reasons for driving the modules apart. No, it’s not explicit enough and we need to make it explicit. We do art for a particular purpose and that purpose is generally process driven. “I need to know what a thing looks like, can you knock a quick sketch for me? I need to make a model something, what does the back look like”, et cetera? So one of the things that makes a course like this relatively easy compared to more open-ended art courses is we are process driven and so that’s part of driving the modules apart and going, no, this is a very particular process and so is this.

LT: okay, so the thinking process and the visualisation process are going to be in due course separated more, okay.

MP: yeah, and if we go down the pathways route then it then further becomes complicated because visualisation as we all know in relation to product oriented companies, it’s a very particular thing and sometimes there’s a kind of hazing of the word visualisation which is not applicable to our industries where you go “no, visualisation is that job”. BMW for example have a visualisation team whose function is to sit between the designers and the engineers, they have a very particular focused role between those two parties that aids those processes, so the designers make the design, the visualisers visualise it for them in context, the engineers and the client can then look at it and judge it and then make changes, and that’s the visualisation role. And so that’s something else that we need to tease out because again, one of the reasons I’m concerned about the haziness of the terminology is ensuring that staff and students are using the correct terminology because industry will expect you to understand what you mean by certain things, and again it’s like, you have to know what these things are and they are industry focused and industry specific so part of the remit of the course is to enculturate people in “okay, what does visualisation mean?”, For some people it means this, other people it means this, that’s not well done at the moment, it kind of evolved though, when we started game art ten years ago a lot of these things didn’t really exist and so there’s been a feeling of our way forward in relation to, the industry evolved as well.

LT: the kind of digitisation of everything has meant that the design and the visualisation bit of kind of become intermingled very much and need to be demonstrated as separate entities. How would you manage students with sketch inhibition, or how would you like to manage sketch inhibition amongst people with the issue?

MP: in an ideal world, I suspect if I were running a fine art course where art is about a particular set of attributes, largely sort of person driven, then there would be grounds for saying “no you can’t be this”, like I wasn’t, but if I’m looking at people who essentially want to work in an industry which requires them to have some sort of art skills and a
kind of art, artistic outlook, I think we can actually teach a lot of that and so what I
would do in an ideal world is employee a lot of very old school, old-fashioned
government art school taught lecturers who will go “okay, I’m going to teach you how
to draw. It’s very simple, there’s a few simple rules that you need to understand and you
apply those rules to things you’re looking at and suddenly things become really simple”.
And the difficulty we have is that those people are in short supply so the visual part of
my course is run by people who graduated from fine art courses in the 90s, nobody
taught them how to draw, so they are now trying to teach people to draw on the basis of
no technical or theoretical framework, so I would just go “no, let’s go right back to how
it used to be done when you and I, certainly for me, you were taught to draw in a very
systematic, very straightforward, very un-arty way, and it’s fine” and that’s what we
need to go back to. “Here’s a sphere, here’s a cone, here’s a cylinder, here’s a cube,
those your basic forms”, so in an ideal world, that’s what I would have, a systematic
approach to teaching drawing specifically for industry and make it very clear that we,
drawing in a fine art context is a different activity, and that’s fine, that’s valid in their
sphere, this is what we require and, you know, don’t try to conflict to because the
problems there is been in the past is the continuing battle between fine art and applied
arts and never the twain, it’s like “stop arguing and just coexist. Leave each other
alone”.

FIN
Interview with Gillian Proctor

(Edited transcript due to length of interview)

I’m an associate Prof and I oversee the contour fashion and contour fashion communication courses and I’m the subject leader for that and I oversee the MA contour fashion.

The first thing that I always did was establish the importance of conceptual links through visual observation and drawn translation. That is my basis and that is the basis through which the contour course runs. We are renowned for the strength and diversity of our sketchbook work and our various external examiners are wowed, because they come from the fashion industry, but we have these incredible sketch books, but we work on the basis that it’s the wealth of raw material and expression and translation and observation that you have and can utilise.

I taught some of my staff team, and heard one of them, a couple of weeks ago saying “when I was a student, I remember Gillian instigating the importance of drawing in the sketchbook format and this is the basis on which this course runs.” It’s quite nice that this has perpetuated.

This year’s collection has been very much governed by drawing as the basis, and using line and scale and colour. One collection which is quite simplistic but very beautiful was based on line drawings of the body…

When we publicise a course…we talk consistently about the importance of drawing and visual translation as the starting point for everything we do, to the point where we will actually say to applicants, “if you can’t draw or you won’t draw, we’re not going to take you,” because it is the cornerstone of everything we do and how we approach everything, be it an aesthetic solution or a technical solution, it’s all developed through using different formats of drawing, it might be collage, it might be working with line, it might be layering things up, because some people draw automatically, graphically. Technical students tend to draw in a very diagrammatic kind of a way and will convince themselves they can’t draw and won’t draw and you can’t expect me to do it and I say, “everyone can draw, all children draw, until they are about eight and someone says, “you’re crap at drawing,” and they stop.

I always say to the technical kids, “well, approach it like a diagram,”… And often they come out being stronger than some of the aesthetic students because they are trying harder to find a methodology that works.

There are the ones who say, “I know you’re going to make me but I don’t really like it,” and I say, “it’s no surprise, it’s not as if I’m suddenly saying, oh by the way you have to draw, because it’s been there from the offset”. It’s like the first years, so, for example… we take them out to Chatsworth house, we take them out for a drawing day and preliminary to that is we might do some drawing exercises to really heighten observational awareness, so for example, I play games and I might put them into groups, blindfold one person and give them a piece of paper with three columns on it and give them something to hold like a cabbage or a number or something and I say, “you have to describe, using your language, the sense of what you’re holding, so is it warm, is it dry, is it wet, is it cold, is it sharp, is it smooth, is it textured, whatever,” and what we get the rest of the group to do is to write the descriptive words and in the second column they think of a media that would reproduce that, so, say they’re holding a mushroom and what paper, media can you work with that looks like a mushroom, so blotting
paper, or chalk. And in the third column we get them to think a better technique so it may be pleating or pin tucking or embroidery or laser cutting to try and get them to be aware about how things translate from 2-D to 3-D.

Drawing is 80% observation…If you don’t know what you are drawing, how you going to get the best information from it, because it’s a process that leads onto something else.

In their sketchbooks we encourage them to write as much as they draw and that they make collective links, so like, joining the dots… You have to exhaust potentials, so we encourage them to draw the same thing maybe ten or twelve pages, change the scale, change the media, think about the negative of the paper, about cutting pieces away… I’ll also get them to make notes, so how would you translate this into a garment situation? And encourage them to do little thumbnail sketches, this might be part of a bra or it might be a colour, or it might be edging and make little notes to self that they can go and pick up… It’s mainly little notes to self, aides memoir.

Some students think sketchbooks are presentation books and they like to mount their drawings with a nice bit of edging and a bit of lace down the side and I just rip it off and say, “useless piece of work.” To me a sketchbook is an ideas book, so it’s a big messy sloppy book, it’s full of colour, full of line, full of ideas, with bits hanging outside of it.

We keep sketchbooks back and we showed them to them and the best ones are the ones that are falling apart. I don’t want something that looks like a presentation book or portfolio, or a scrapbook, it’s not about sticking things in, the secondary research, tear sheets, or photographs, that’s irrelevant, a monkey can stick something in. If you can’t link the process and showcase the origin and the development of something then it’s a useless exercise and you’ve wasted your time.

If you reach a point where you think, “what am I doing, this isn’t working, I don’t know where to go next,” the answer is to go and draw it more. Whether it means picking up these little aid memoirs and fully developing them or whether it means you change the scale of the colouration or the media that you’re working in.

On the drawing days, you get the classic, “there’s nothing here to draw, this is really boring, I don’t understand what you mean by asking us to draw.” We take them to Versailles, you get the odd one saying, “it’s really boring here.”

We draw without taking your hand off the paper, or do a three second drawing, how much information can you get down without looking down to looking at the object your drawing.

You don’t have to draw all the detail, you don’t have to produce one fabulous drawing and spend hours doing it, you need to record the given information, make a note of the colours and you can go back into it later. We don’t want them to do is, “haven’t done any drawing I’ve taken lots of photographs.” You’re just translating 2 dimensions into another 2 dimensions, you’re not addressing what’s at the side, what’s at the back of that.

Nine times out of ten it’s a lack of confidence, they’re not very confident about the drawing they are loathed to draw in front of people they don’t know, there’s also this thing of big fish little pond, coming from school where, “I’ve always been the best at drawing and there are seventy odd people in the room who can draw just as well, if not better than I can,” and that’s daunting.
You get them saying, “what you want me to draw?” “Well, what excites you?” “What you mean by that?”

Why don’t you share your equipment? So someone takes pastels and someone takes watercolour someone takes something else. So the fact you working with someone else’s stuff means you might approach it differently, prepare some different surfaces, so don’t just take a sketchbook with that horrible cartridge paper, why don’t you take some aluminium foil, some gift wrap, some brown paper or some sandpaper or some tissue, take a lot of different things and see what happens if you drop the same thing on different surfaces.

We try to inspire them but at the same time give them, I guess, direction that they look at it and we try to make it exciting.

The industry make a beeline for the sketchbooks, they don’t look at the garments, they look at the sketchbooks.

Would rather see sketchbooks in an interview than portfolios because that shows the real you, it shows your mind processes your development process.

We try to make more about you from your sketchbook we can about you from your portfolio, because anyone can put a portfolio together, and someone can do it for you, no one can fake a sketchbook.

When they’re running out of time at the end of a project and they have to do presentation boards, illustrations, and they will forget all of the skills they’ve developed, however good they are and they will knock something out at 2 o’clock in the morning on Photoshop because they know they can do it, they learnt it in the first year and it’s easy, and I will say, “why, when you’ve got all this fabulous stuff in your sketchbook have you come up with that?” You’ve got something that is flat, repetitive, lacks soul, lacks impact.

Nine times out of ten they revert back to using digital, and we’ve had our new external in last week who said, “I’ve heard so much about the sketchbooks from your previous examiner and I’m really disappointed to see how boring and old-fashioned the boards are,” because again, they too, have reverted back. But when you show him the other ones who haven’t done that, then it’s, “yes, I see exactly where you’re going and that’s much better.”

Their excuse is, it’s time, but it’s not, then they’re selling themselves short.

Stop doing things like A-level textiles, it’s a waste of bloody time, leave it to the experts. Teach them how to draw, encourage them to draw, all this farting about. When people come to interview and I say, “rate your drawing skills one to 10,” and they say, “oh, well, maybe six.” “It can’t be a six, you’ve only got one drawing with you.” That drawing is either a life drawing and in certain areas of design that is extinct, and in certain areas is absolutely applicable, but in terms of us, we don’t really use it.

If we go to talk to schools we say, “look, just get them to draw, because you might have a degree in textiles, but it’s all moved on a bit since then.” We want them to come and have a really good basic skill… And we can put the finishing touches to things like that. I have a real bugbear about it, and I will say to kit it interview, “I don’t care if you connect, I don’t care if you’ve made something for a play or if you’ve made a corset for your best friend, I don’t care about that because that’s what this course is about. What I want to know is are you able to
translate something and are you able to put it down through line on paper, and that’s what we need to know.”

I often say to people, “if we don’t offer you a place, nine times out of ten it’s because your drawing skills aren’t strong enough, and that’s what you need to work on.”

Certain countries, India, China, they have no culture of drawing, their culture is copying traditional formats… And we’ve had to work very hard with our international agents to get them to explain, to the point where they take a portfolio and say, “this is drawing.” And even the good students that we offer a place to, I will still say to them, “you need to work on your drawing, because this drawing standard is not good enough for the devil we expect.”

I ended up teaching at a textile training school in St Gallen whether design students would sit all day copying historical embroidery, and I would say, “what is this teaching you?”… I took to taking sketchbook work with me and actually got them to draw… They were terrified, they weren’t sure how to do it, but after a while they would start to deal with it, and suddenly within their companies they would be coming up with stuff. They had never seen anything like it, it wasn’t part of their cultural history and they would look at it and say, “how do you do this?”

Often I will say to students, “if you haven’t drawn for a long time, you leave school, you’ve had all this time off, you’ve had a year off between or the summer off between second year or third year and you’ve got to start again, you start with a piece of paper and that scary, so time yourself, give yourself three seconds, cover the page, get your hands dirty and just put colour down or blocks of colour down and work the drawing towards you.”

I used to draw all the time, I used to draw every day… kids don’t do that anymore.

I say to them, “you should be drawing every day”… and they get it, they do get it in the third year but they don’t get it until the end of the third year and the ones who get it are the ones whose sketch books have got that vitality, that energy.

We do expect them to get on with it… we will walk round and have a look over their shoulder and say, “okay, think about having a go at this, maybe think about using this media, maybe focus on that line.”

A lot of the time they look to see what the person next to them is doing… they are very much influenced by what they see around them. We continually show them examples of good practice.

It’s getting them to understand how little things like the thumbnail sketches, how the notes and the aides memoir, it’s not just about, “I’ve done the drawing, tick, I’m going to get the marks for that.” It’s a visual language and the visual language processes through how that then informs what happens next…. It’s getting them into the thought process of using that visual language to not only explain to people what they are trying to do but to explore what the potential of something is through line, through word.

To me, design development is the development of drawing and it’s not just about how many garments you designed, it’s about the process through which you have exploited your drawn potential in order to create garments.
Interview with Pam Schenk

LT: if I go straight onto student issues, I know there’s going to be a lot of disparity between how students present themselves to various courses that you’ve taught over the years, but in terms of where they come from kind of skills and education they have had at the point that they come into university courses, also to have got experience of?

PS: well, two different things really. I taught on foundation courses, and I taught on the foundation course in Singapore up until 2008 was very different from when I used to teach on foundation courses, though obviously most students were from schools and they came with very little experience of drawing perhaps more than they might do is, I think they did more in schools than, we are talking about the 1960s. The foundation students, or first year programme students in Singapore, there were two kinds, the ones who are college students who have done quite a lot of drawing, the students had been to polytechnics who had done no drawing and were all digital, so that was quite interesting, that the two struggled with it in different ways. The students that had had an art and design background were mannered, they had set pieces, they learned set techniques and it was a bit difficult to get them, initially, to draw more freely, and to do what I call transparent drawing, drawing that you see through, rather than at, look at. And the one from polys again would struggle, partly because they couldn’t stand it if things weren’t neat, and that was interesting because they were both brilliant students, really, absolutely brilliant students in Singapore, very hard-working and very keen to get on, but that was that initial difference there. With MA students, again with two lots of students, people who have done at BA in some art or design subject, and usually, I mean the way we taught MA was they would each have an individual programme of study and their drawing would be commensurate with the requirements of that program, or part of it. But then we’ve had more international students of late who might very well have not had the background in doing drawing at all, and that can be very difficult for them, even if it’s only a small part of what they’re doing, that can cause problems.

LT: and how do those kind of problems manifest, what you actually see coming from them, or not coming from them?

PS: well, I think, the thing is, the way ideas are done. There is a limitation on the amount of ideas and a limitation on the range of development of ideas, the capacity to try things out, it’s all affected by drawing issues.

LT: and when you were teaching in Singapore, what with those dates you were talking about?

PS: Singapore was 2005 to 2008, and I taught the first year programme and I taught and artists books course there.
LT: so you’ve got this disparate body of students, very digital or very fine art based. With their attitudes towards having to use sketching as part of the design process? I’m thinking of the two very different groups, how did they come across?

PS: well, I suppose it might be a bit of a digression, but knowing it was an issue I always started with the same project which was intended to break down particularly inhibition about drawing, tightness in drawing, and I called it make your mark, the idea being that even if people can’t write, read or write, they can make a mark, and so they might not have done any drawing before but they make a mark and they just spend the first session starting off, I always say make your mark, and they always start with a little (demonstrates drawing), and then we just go on and I just provide lots of cheap paper and paint and sponge, brushes, and then we have a lovely big studio is by the end of it the walls would be covered, and they could just see by example how very varied that something apparently so simple could be and how the actual process of making the marks, you got variety, and also things like, I also find it very useful teaching about scale, because people used to working digitally almost don’t notice, I find, because it’s so easy physically to change scale, they almost are not aware of what a profound thing is happening, whereas with this because we were able to get close to the drawings and then move right back from them, they could actually see the effect of how, really quite beautiful the drawings were from a distance.

LT: yes, because when you’re sitting in front of a screen, and I know you can zoom in and out using, but it is a very different process from being away from an artefact on a wall, that’s interesting, I hadn’t thought of that actually

PS: because I say, we got, we’d been doing this for a couple of hours with a group of about 15 and I gave them little tasks like say pick something you’ve done and blow that up or take something someone else is done, and we do lots of exercises and have the walls literally covered, and then as I say we just walked to the other end of the studio, turned round and say just look how very beautiful your drawings actually are. And the last thing we were trying to do was make a beautiful drawing, and something like that, as I say with graphic design is obviously very important, and the same with textiles, scale is very important, so that’s I suppose where it was an issue, so from day one trying to tackle it, and that helped enormously. It was also quite good getting to know them exercise, and they couldn’t hide from it.

LT: they work individually or did they, I mean I know there are examples of people producing a drawing and you pass it to the next person so you’re dealing with a complete new set of information…

PS: they worked individually but I think one of the things that get them to do was to work from somebody else’s drawing, to put everything on the wall and go and find something, and work from that and reinterpret it. So it became, because it was a group achievement, was the wall really, and then we photographed it and edited it in different ways and then we looked at it on the screen, because we had all the gear there to do that,
and which say look at these really finished fine looking things and they are now digital images that they’ve got sort of used to doing.

LT: so, the process of going through that and then seeing, if you have an inhibited or very kind of nervous student and they go through your process and then you’re putting their work upon, you know, maybe projecting it on a big screen, something like that, what was the response to seeing their work after initially being quite inhibited?

SP: once they got into it and I knew I wasn’t going to let them off the hook and they knew they were going to have to do it, there was a certain amount of hiding, they quite enjoyed it because it was very physical, making crosses and doing different things, and I think as I say first of all the scale thing was an eye-opener and then actually taking some of these things and cropping, not necessarily one person’s work, it might have cropped, you know we just looked at that wall as a source of imagery, and a different things and then looked at it again, I think it made them see that they were capable of a lot more than they thought they were, not necessarily in the way that they expected. But as I say the students were so keen, they really were keen and an element I suppose of, of course, this was, a lot of art schools in Singapore, I don’t know if you know there’s a lot of them, and this was a university, and it was the first art school in a university, and I think for them to have sort of got there, and to have persuaded their parents that yes they were going to university they were going to do art design, I’m sure you’ve come across that one before, they were really keen, so they were an absolute treat to teach. They did, we obviously had I think it was a five-hour class but we had lunch somewhere in there, if I could get them to stop working and leave the room which wasn’t easy, and then they would, I thought made great progress, but then when they had say two weeks to complete their folders before assessment, and it was twice as much. I’ve never known students so, you know obviously they were individuals, but groups of students so absolutely determined to do well.

LT: with the students you’re kind of dealing with more recently, I know this whole thing in the last 20 years since the sort of polytechnics into universities and then everything becoming digitised and everyone forgetting sketching generally, however attitudes changed towards digital methods do you feel?

SP: that’s a big one that, term, I think it hasn’t exactly come full circle but I think it’s not seen by that many people as the be all and end all, it really has become what a lot of people said, it is just a tool and I think it’s probably, it’s one of the things I say in the book, it’s an environment you inhabit, you do think differently and act differently in a digital environment. But, I still think a lot of fundamental things about drawing are carried over into it, depending of course on the software on whatever, so I think it’s, I don’t know, I think it’s, it has its place now rather than being the only thing, it now has a particular place and sits well with other approaches to drawing. I think when computers first came in there really was quite a big issue, and there was certainly an issue within industry but it was very competitive, obviously always was, but about that time it was very competitive, graphics was very competitive and the people in industry
wanted to be sure they recruited people who were computer literate already, and the computer software so user-friendly, so it took a big chunk of time to actually prepare students for it, and it was a difficult time I think the drawing then, and then of course it was that kind of phase which would be about 2004, 2005 when handmade graphics got back in again, and I think since then it’s been reasonably balanced. I think there were good reasons why there was the pressure to, not we wanted to but why there was the pressure, but again it didn’t happen until about 2004, 2005 that kind of thing where we didn’t have to have computer classes. They used to have to be computer classes and a significant part of the curriculum taken up, and that’s partly because, well, largely because it’s just more user-friendly and because of course my students come up to the courses already computer literate, that made to be different. We you computer literate before you started?

LT: only with word processing, but not with design software, the back in the 90s when design software was kind of early, the teaching and learning of that kind of thing was miserable, I hated it, but as you say with your papers and things the amount of investment that universities and colleges put into teaching the software and it’s assumed that students will be able to design and sketching work through their designs, that’s just the kind of assumption. If you can breathe and you’re a designer you can design you don’t have to worry, it will just happen, but it’s interesting how it’s perceived as to, I know it’s two very different things, you have to invest so much time in this, but nothing in this

PS: I don’t know how many courses actually teach drawing, I think drawing is still on a lot of courses, it’s still on a need-to-know basis, as you, you know

LT: I remember doing one afternoon a week of life drawing in the first year of my degree and we all hated it, we’ll hated it because we couldn’t see why we were doing it, because I don’t want be a fine artist I want design, so it was a frustrating process and being marked on the quality of the artefact rather than the process you’re going through

PS: it’s in the book somewhere, I certainly talk to young designers and they’ve said that that put them off drawing because they saw drawing as life drawing and it put them off and that’s terrible, and I agree, I mean it so often you know when students are perceived that they have, the students have asked for life crosses and I’ve said know that’s the last thing, because life is so awkward to draw you have to stand up, and nobody draws like that

LT: when you’re designing you don’t draw like that do you? You’re literally sort of…interesting process. Do you have, this is a bit of a tricky one, do you have any figures or quantifiable data regarding, where you’re teaching at the moment possibly, students who are sketch inhibited versus those who are, there doesn’t seem to be any kind of information

PS: I mean I’ve taught, well I haven’t taught undergraduate this last year, I’ve worked with them on this copying project and they were second year textile print students so as
such, reasonably confident already withdrawing because that’s basically what they do, so that wasn’t an issue, er, we get them a matrix of words and we said we want you to produce six drawings, we gave them the original, we want you to copy it in response to those words, you know first one was trace and it went right through to memorise and became increasingly less to do with producing a facsimile and more about seeking inspiration, and some of them struggled with the vocabulary a bit. The one that got most people was emulate, they couldn’t get emulate, whereas if you ever had anything to do with, like you know with Japanese people, Chinese people, we talk about copying, because it’s obviously culturally a different thing, that’s where they use emulate, we don’t copy, we emulate. I don’t know it’s a bit of a funny one, but it didn’t mean anything to any of the students, it just didn’t mean anything to them. All the others did, I mean deconstruct, interpret, that type of thing

LT: how strange that that tripped them up…

PS: yes, as I say it’s been a great project, it’s at the top of my mind because we were looking at it yesterday and the kind of drawings they did, and I don’t know if you’ve come across it I’m sure that whole issue about practice-based research in art and design and justifying the intellect in practice, and I just thought looking at these drawings, very simple pencil drawings, we only said pencil, the intellect in translating that image with that word into a series of drawings to me, to me that is practice-based intellect, so I’m very interested in that

LT: I’m having trouble with the MA students doing their major projects at the moment, there is this kind of block between research which in their minds is the boring bit in the library, and there is the design which is the fun bit, and it’s all, practice-based research doesn’t…

PS: that was my role on the main programmes was to do the research methods, introduce the research methods and then get them working through them, the research methods. It is difficult.

LT: I don’t know how to kind of get it to go in and be understood, because I’ve been trying for years and it’s not working, nothing seems to work

PS: I think it’s by example really, I mean as I say, I’ve obviously got lectures and things about drawing and sketching and lots of images and some imagery relating to practice-based research so I think that probably, where they can actually see it

LT: talking about actually seeing work, when you’re in a workshop situation with your students and making them do these drawing exercises, do you actually sketch with your students, do they see your work?

PS: the only time I would do that is if I’m trying to explain a design theme to someone and I would just almost inadvertently scribble, you know you can’t help that, but I wouldn’t draw with them no, I might show them my drawings, I might show them some of my drawings have done for various things as an example
LT: so they would see your work?

PS: they would see it, but as I say to try and demonstrate practice-based research with some of the drawings I’ve done

LT: students who are sketch inhibited or are anxious about sketching, can you kind of quantify or correlate that inhibition with the quality of the design output?

PS: well I think it stops them really experimenting, and I think the ones that are really wedded to digital software, I think there is less, this is my personal, but the work is less creative because they have not got an easy method of exploring, I mean again back to the book, but one of the things I think that’s happening, particularly I suppose with the whole, there was no such thing as web design before, my feelings are that there was a shift towards variant than generally, as I say in the 80s when I first started, design groups which show numerous early ideas to a client for example, and nowadays for various reasons they wouldn’t, partly because of good management practice because you know, the client is very likely to say, well I’ll have that there, put that there, I’ll have a bit of that there, it’s just not a good idea, really, you show them what you think is the best solution. But that’s not, to my mind the same generation of several, lots of ideas even within the studio environment, very soon they decide on the major structure of what something is going to be like, and I think again there are good reasons for this because that’s the cost, I mean like for example, the appearance of a website, the cost isn’t getting the overall thing right, but there’s a lot more about the environment and changing in detail, so I think there’s more innovation perhaps than absolute originality, because of digital things. And I don’t know that that’s inhibition, I don’t think it’s inhibition, I just think it’s the nature of the media that makes that happen.

LT: do you find that, slightly going off track here, it’s just come into my mind, when I did my degree years ago it was very much you were either a graphic designer 3-D designer textile designer, everything was delineated, all the different disciplines were delineated because of my PhD and trying to propose that this methodology that I’m hopefully going to develop is suitable across all design disciplines, are you finding more, or not, that the disciplines are becoming more sort of integrated in terms of things like graphics web multimedia, video, photography, are they becoming…?

PS: I don’t think so no, again from this work doing with this colleague, we started off the first phase was where we copied the same image and when we got together and discussed it we were worlds apart, just completely interpreted it absolutely differently. So I think there’s quite fundamental difference between textile designers and fashion designers. I think, well obviously I can’t say that product designers have got more in common with fashion designers because that a lot they don’t have in common, but there is that sense of, you know a drawing creating, envisaging a three-dimensional object on the flat that they both have, which is quite an interesting and difficult drawing scale, and textiles don’t have it and graphic designers don’t have it, so when those things start, I don’t know whether people have a particular propensity to work in a certain way and
that’s why they want to be textile designers, I really don’t know, but they are different, they think differently through drawing.

LT: I’ve always thought in 3-D. I could never get on with doing things like graphic design because I couldn’t, it’s flat, it’s flat it’s going to be flat, and I found it really frustrating, but to work in 3-D and in my mind to be in this three-dimensional space I kind of walk through it in my mind, that’s how I work, and yet, some of my colleagues in the research centre at Leicester, brilliant graphic designer, everything she does is like you say on the flat, amazing stuff and I don’t know how she, her brain works differently to mine. It’s a real fundamental thing

SP: I think it’s very fundamental whether or not you are like that, are born like that or become like that, I don’t know, but I do think they’re very different, and the other thing of course is drawing the time, which is a very interesting one, I’ve got a colleague as an animator and he has two kinds of drawing, one which is sequential and the other which is character, which are, albeit that animation flattens there is still a sense of them being three-dimensional things. So they are quite different when he’s described his work he is completely different

LT: so his mind is switched into two different kind of disciplines almost, that’s interesting.

SP: I think animation is a very interesting thing to look at from a drawing point of view

LT: I’m going to hopefully be getting some 30 games design and animation students from Leicester, I’ve made inroads in that department, it takes a bit of time to cultivate these relationships, but that will be interesting to compare with the 3-D and the 2-D

SP: it will be interesting to see whether they only work digitally or they work in sketchbooks. I mean whenever I’ve interviewed somebody I’ve always asked them, I either go to their desk or I say would you bring your drawings with you, so that you can discuss what you mean or mean that, it makes it easier

LT: this is a slightly strange one, behavioural symptoms of sketch inhibition, in my experience students who disappeared to the toilet and don’t come back or will disappear with a mysterious illness, all sorts of tricks, things they do, they are so cunning, students, they are becoming more cunning. What kind of symptoms of sketch inhibition have you kind of observed?

SP: well there’s the classic one which is I don’t think you probably get outside of school where (leans forward and puts arm around head)

LT: I’ve got MA fashion and textile students who kind of work that way, please don’t look at my drawings, don’t stand near me, don’t look over my shoulder

SP: and this is a classic one of not wanting people to see your sketchbook or whatever your preliminary drawings, I think that’s still the case with a lot of people really,
because those are the drawings that I’m interested in, persuading people to let me see them is quite difficult

LT: I find it interesting when you do a tutorial with a student and they are working through a design turn up to a tutorial with nothing, except this thing which is in their head, or does it exist somewhere, and you don’t get to the bottom of it because they keep coming to tutorials without the stuff

SP: you must be very firm with them. I did quite a bit of external examining for graphic design courses and I always insisted for final assessment that there preliminary drawings, the layouts were there, find take it away from the show but I always insisted, in the end they did it.

LT: they squirm though don’t they?

SP: well they squirm, they know you’re going to do it, so they get used to it and perhaps put a bit more effort in to that part of the work, I don’t know. But it is private isn’t it, those kinds of, you know the drawings you do for yourself, thinking things through, they are private kinds of drawings

LT: it’s kind of like singing in the bath, stuff your happy to do but as soon as you know someone is listening, people become very self-conscious. I found a couple of good papers by a guy in America who I interviewed in last week, joran booth, he is now at Yale. A couple of papers specifically related to tools for sketch inhibited students, his an engineering designer though, but it is kind of, it all rings true so it seems to work, he was defining the social and peer issues of sketch inhibition which is you know, this need for privacy are not wanting to share. Other things that you’ve noticed or experienced, for example with my interviews with students, their biggest fear is to be judged harshly by their peers in the studio situation, they’re terrified, and actually in asking them, no one had been harshly judged or criticised by their peers. This fear is kind of their but it’s never manifested as anything in particular. I mean what kind of fears and anxieties to they seem to have, obviously apart from being judged by their peers, are there any social things which you can kind of…?

PS: I think, when I say it’s something that we used to teach graphic design students, we used to put a lot of effort into joint crates to get used to that, because it’s clearly a situation that the face all the time in industry, so they have to get used to that, and, I never particularly thought about it being judged by peers, you had to be careful how you were critical, because they could get upset about that but they got used to it and in fact got to the point that if we didn’t too many crits they would complain and say that they wanted it. As I say I’m aware of inhibition and I’ve done classes and done projects and workshops to try and get over it, but I never particularly thought of the social aspects to be honest

LT: that kind of lead me onto a slightly different question, still about the social aspect, cultural and religious issues, now you for visiting taught in Singapore with a culture is
very different in East Asia, compared with here in the UK, does anything like that have an effect on whether students are inhibited, for example, with the loss of the Chinese Taiwanese students we have Leicester the culture is very much one of conformity and they are very conscious of not stepping too far away from what is considered to be acceptable, we also have students who are Muslim and I hadn’t thought about this but drawing the human form is not acceptable to Muslims and they have to go get permission from their Imam to come and do things like that, life drawing and what have you. Are there any sort of cultural and religious things you can think of, or just the difference in people, are, because I’ve not taught out in the Far East before, or East Asia

PS: well the Chinese have a different approach, there would be Chinese, Malaysians, and some Indians in the class in Singapore, I think probably the Malaysians and the Indians were more used to drawing than the Chinese, but they do will come from a background where they certainly have done design before and some drawings, the biggest difference from my point of view as the ones who had come from the pollies who were computer literate and had done little drawing and the ones who had come from the junior college where they had, if they were good at art they went on to special courses and did special classes, everything was mounted on black, you know, there was kind of, to get out of that, I mean they were more worried about not producing good drawings because they only would show good drawings and whatever, so it was getting that

LT: so they were very driven on the sort of perfectionism

PS: on finish, or only showing finished, so that inhibition, it’s a type of inhibition to get over that, but I think you get that in the UK as well, it depends on what they’ve done just prior to coming in. I’m just trying to think of my Malaysians students, we had a few Indonesian students who might have been Muslims or might have been Hindus, very few of them but brilliant, but naturally, I think probably they’d done art, they’d only done fine art and they were very creative, I don’t know

LT: have you ever had students from Australasia or Europe?

PS: no, not there. American students at college, again perhaps more likely to be digital than drawing on paper, but no I’m sorry, I’ll email you with any…

LT: if anything comes to mind let me know, that’s absolutely fine. Another kind of social think, gender-based issues, I think one of Joran Booth’s papers refers to warm up exercises that they do with engineering students to kind of get them into the feel of putting marks on paper and the female students at the end of the process seem to get more from it in terms of how they felt about their drawings, or they were more aware of improvement in the drawings. Are there any kind of gender issues do you think?

PS: well, there were very few blokes on the textile courses

LT: his courses engineering and 90% male so this is really another completely different issue I’m kind of straying into
PS: was it someone from the Bauhaus did that, didn’t he? They did exercises to start off with, I can’t think it was one of them

LT: so most of your students were female?

PS: they are, the girls mainly girls but, I think probably the boys are more technical than the girls, in general, I mean they tend towards wanting to do different subjects even the first year students which I taught a lot of the time in Singapore, they would be, you know technical want to product design or something like that, and consequently that’s where their strengths would be in that kind of drawing

LT: okay, so the more technical product or engineering students were…

PS: yes the thing is as we said, is somewhat able to draw spatially than others and some are more able to be decorative than others, and it doesn’t entirely breakdown in gender terms but there is that, some are more interested in things another is really

LT: and with, I know most students are kind of 18 to 22-ish on undergrad, the time you do get a significantly older, at Leicester on some of the amaze we get people in their 40s who are kind of coming back from industry after many years in industry, they kind of are more socially inhibited than technically inhibited which is kind of interesting. Are there any age-based issues, anything to do with age, do somebody become less inhibited as they get older, are they more mature in terms of how they can deal with the situation?

PS: I think confidence, I think drawing is something that you get better at with confidence and experience, so people are less inhibited at drawing. Again that was something that went through all the years of research I did as to whether or not you should draw in front of clients, and there was a school of thought that you didn’t draw for a client because practically you might get stuck with an idea you don’t want if you’re given it more time, and also that you didn’t want to look unprofessional like showing a little scribbling drawings. But then there were others, a smaller group, but others who absolutely would draw with the client and felt that that was one of their assets, but it was always clients they knew and they’d established a rapport with, but they felt that from the beginning, from that first meeting they would be drawing with the client. And again I found that the last piece of research I did, some of the clients drawing.

LT: I’ve not heard of clients drawing, I’ve heard of…

PS: clients drawing yes, and I did some research with a web design group in Manchester, and they talked about their sessions where they would all get round and the client would be part of it, and they would all just draw, and that, they felt was terribly important, not just in terms of the design but is a social thing and for the group to get to know each other, and again engineers now are part of those teams, and again engineering, engineers drawing in a way that graphic designers would understand, that kind of language across those disciplines, that was interesting
LT: clients actually picking up a pen and drawing, I’ve never seen that before, but I’ve been asked in the last few years to do not even final drawings but just sketch drawings with a bit of colour and that’s all clients want, and they like that sense of unfinished, fake, potentials and possibilities of different directions to go in rather than producing what we used to, I mean originally when I first did my degree it was producing the visual, you had to produce the visual

PS: and as I say, the skills, so that when I first did my work in the 80s, the skills to do a final presentation of something like a range of biscuits or whatever, you know, they’d probably be 20 different things and you draw the box, how it looked in all this kind of thing, blimey the skill in that

LT: hand rendering at that time with markers and ink and airbrushes

PS: markers, very difficult to use. That was one thing we used to get in those days from students, they wanted a workshop on using markers

LT: it was a real kind of aesthetic, I’ve got Dick Powell’s book on design drawing, I’m hopefully going to see him in a few weeks actually, I know it’s dated now but that aesthetic from the 80s, early 90s, the marker visual for interiors, graphics, everything, it’s just kind of gone now. I think it’s kind of come back a little bit. I’ve got a colleague used to do that, he was absolutely blinding with those kind of visuals he now works in Maxwell render, so his visuals are kind of so lifelike it’s frightening, all on computer now

PS: but if you’re not able to use it in the first place, I mean this is it, to really use digital people need to have that with drawing.

LT: he thought in 3-D, everything was beautifully rented and all is done is transfer that thinking into a digital process, not put one set of skills away in favour of another, it still same process, it’s just marker pens out, well he gave some to me but they’ve all gone a bit dry now. Secondary education, obviously in the UK I’m thinking of particularly here, how do you think that’s had an effect on the ability of students or the aptitude or attitude as well of people coming into higher education being expected to put pen to substrate in some way?

PS: when I think is very little, on the curriculum now

LT: I remember reading something you had said there was something like a single sentence in the QAA secondary, and I’ve got to go and find it, but I was stunned, and I have been reading things like that, and there is no specific, and it can be interpreted very vaguely and…

PS: I mean icy drawing is a bit like a fundamental human capacity for doing so many things, and for one thing visual memory, you… (inaudible) your visual memory through drawing, so for it not to be seen, you know, obviously now in the UK, writing and arithmetic are all favoured, but I think drawing should be favoured as much as those. I
think the problem with drawing is, it’s my hobbyhorse, is the association with fine art specifically, and talent, you’re a talented artist and your individual and being creative, and I think that association means it’s just for those few people who are kind of like that, and I think it’s just fundamental for everybody, and that education loses from not being seen as a fundamental thing in class. But I think there is less and less of it, it’s that intrinsic nature of it that I don’t think

LT: no, when I was school used to have handwriting classes and I absolutely loved handwriting classes, and penmanship, and we were taught how to write, and people not much younger than myself never had that, so they don’t have handwriting, they don’t have any, they don’t know how to write they’ve just had to find their own way and it’s much harder for them so, yeah I wonder, there’s a parallel really, I guess with it

PS: but you see you’re holding your pen in the way I would hold mine, but if you see (demonstrates with pen)

LT: all sorts, and you can’t write like that

PS: so they obviously haven’t been taught

LT: my sister-in-law is two years younger than me and her handwriting is appalling. She is really well-educated but she has never had any instruction on how to write, and I can’t imagine what that would be like

PS: my handwriting is appalling, my sketching and handwriting are very similar

LT: but it’s your language though isn’t it? It’s your processes

PS: let me just show you something (leaves room). (Returns), is a paper on copying, Parker Harley Shank I think it is, it’s about they did a project in China where the students copied lace and they did the same thing in Scotland, I’m surprised to see these because I did them ages ago, (open sketch pad), anyway, as I say we were copying this textile and I just couldn’t get it at all, such a shame I can’t show it to you because it makes a lot more sense if you can see what we were working on, but I had to do it like this because it was a sort of flattened townscape and I couldn’t do it without thinking what it was, so I had to think that those marks were intended to be a row of terraced houses and that, and thinking that the plans, I just couldn’t get into it at all. That was me copying the image, a bit disappointing that really, and that was me copying the image like that, and seeing these again are not seen them for a while, but this was me, trying to make sense of it in my way, you know very much really, that’s me copying it, but I just thought I can’t get this at all, it doesn’t mean anything to me, until I started to do those other kind of drawings, and yet when I see Mark’s drawings, because he’s a textile designer, his copies, their perfect copies of it, and he saying things like the gouache isn’t very flat there, the things beautiful, you know just different ways, I really struggled with that exercise, I really struggled with it because the original image, when I thought I wouldn’t mind it as curtains, but it’s used up, there is no inspiration in it for me, and as I say, the only way I could find a way in was to think well actually what is it, it houses
and it’s meant to be like that. So as I say, to me that is what drawing is about, thinking
your way through things and planning, whatever, so my drawings are all like that, they
never get any better than that, they are just scribbly

LT: but they all serve a purpose

PS: they serve a purpose, and seeing a drawing is that kind of mental, to facilitate
certain kinds of mental activity, and if people are not drawing at all and don’t have that I
think that’s a big loss, I really do

LT: it is so hard to manipulate in 3-D in your mind or in 2-D, the amount of information
that you can contain on a drawing however it looks doesn’t look to anybody, it’s your
thing, your language, it’s very hard to manipulate that information in your head
meaningfully

PS: or if you jot something down, then it’s that whole thing about reinterpreting
drawings, that’s important, but I think that’s perhaps a social thing that I’m trying to
think through there, but I think drawing is undervalued because it’s associated with one
group of people who are artists and who are particularly talented in that way and are not
part of the general crowd, where I think it’s general crowd stuff

LT: it’s almost a shame that the fine art world has kind of, not hijacked it but

PS: I say some very rude things about in my book, there’s a lovely quote by someone
called gowns I think, about fine art and how it’s kind of hijacked drawing

LT: and then it becomes instantly kind of, there is kind of lovey-ism about the fine art
world which makes it instantly inaccessible to everybody who just doesn’t get it

PS: are you in the drawing research network?

LT: in Loughborough? I go to their website very often and I look to see what they’ve
got but I don’t actually belong, it’s a research group isn’t it?

PS: you can easily join on the website. It used to be design, when it was Steve Garner,
you know Steve Garner?

LT: I don’t know, I’ve heard of him but I don’t know him. Right, going on to the
teaching and learning of sketching, the teaching of designing, I’ve got this theory that
design schools, sketching being an extension of designing, the process that goes on
inside the individual’s mind, but designing in itself is not really taught, it’s assumed
again like sketching, it is a kind of intuitive thing that’s within people who are design
courses and is a lot given to the different stages, the staging post of by week X you will
produce this, you know the products of the process but the actual thinking, that kind of
critical analysis, I’ve got MA students at the moment who can’t analyse, they just don’t
know what to do, they can collect pictures but they can’t analyse or do anything with
what they’ve got. I’m just wondering whether, how you feel about the teaching of
designing, is it something that needs to be talked or is it something that comes through the right sort of practice-based activities?

PS: well, the classic way is, you do, you do increasingly more complex briefs with them, which are meant to be

LT: like an Atelier system?

PS: well this is how design is usually taught isn’t it? You do increasingly difficult or complex projects with them and then through a process of joint discussion and critique in the brief and whatever, they learn designing, as I say it’s like that kind of Atelier. I must say where I’m working now, I can’t speak with expertise, because I have nothing virtually to do with the undergraduate course, but where its modular, modular schemes seem to be, have more definite content in a way because you have to justify one module being different from another. Presumably its modular at Leicester? So I think more than in the old days I would have the impression that courses are more, have more specific content than they used to have

LT: I suppose previously everything would be kind of embedded within

PS: previously for four years, well for three years, you would set a project, but you teach typography and you teach printing but design was more, as I say, you set a brief, you do it, you’d get together and talk about it, I think it’s probably more scientific now than it used to be

LT: what kind of teaching of sketching for designing do you feel is the most appropriate?

PS: I do think one thing that is very much necessary, and I don’t think happens very much is copying. Working from official sources which all designers do and that sort of scene, and its complexity and all possibilities of it, I think that should be taught more and can be taught more. I think the difference between working from observation and working from official sources is quite, because I do think designers should work from observation, but not life drawing, and again I think it’s quite interesting like for example interior designers should be working from interiors and scale and space, so work from observation is important. So I think both those things, sensible teaching from observation, you know where it’s grounded and the reasons for it are clear and it’s linked

LT: pertinence and discipline specific, you talk about it being discipline specific, but yes that whole life drawing afternoon was a wasteland of misery

PS: I’ve had designers say to me, quite a few city put them off drawing because they associated it with that, but I mean like for example, an ergonomic designer or product designer, something like that, it would be very useful to draw hands and how they work because as I say it’s targeted observation I think it’s important, and really being very well aware about all the different responses to visual sources, and that is the one that so
easily done visually, you know it so easy to copy something and kind of think you’re manipulating it but don’t do very much, I think that is, copying on paper still worth doing. But another little interesting thing that Mark and I discovered talking to the students, one of them was actually, had got a phone, was using a phone, I wasn’t there, she was talking to Mark, and he said what are you doing, you’re supposed to be drawing on paper and she said, oh yes I know that, it’s just that I’ve photographed it and I’ve blown it up, I’m going to copy the blow up, and I thought that’s interesting, using your phone as a drawing tool in a way.

LT: I’ve just got an iPhone, I’m really resistant to any kind of new gadget just for the sake of it, but my old phone died I had to get an iPhone and you can just literally photographed as you go and then email things off, so easy, it’s changed my life, but I can kind of, yes I can kind of relate to that thinking it’s so accessible and easy to integrate into what you’re doing, and moved between the technology, the image that you photographed and your sketchbook your paper, it’s not a big performance any more, it’s actually become seamless

PS: again, a lot of designers have told me that this whole thing about the relationship with the client, and keeping that going and making the client feel part of it, they would, you know they did some drawings or whatever, they would photograph and sent the client just like that. Very different, uninhibited use of drawing the client than would have happened 30 years ago.

LT: when I first started designing, everything was, a brief was written down, you went away, you came up with an idea, you visualised it, you were back to the client, it was a very protracted process, and you didn’t sort of deviate from it, but like you’re saying, being able to photograph an email things across, that’s almost like, technology is actually quite a nice thing in that respect because you can move the information around much more quickly. Can I ask you about the quantity of sketches that students produce? Talking to Joran, he was talking about making students produce a number of sketches rather than just, obviously the first one is sometimes, they grasp onto that for their life don’t they customer Tatjana LeBlanc is another lady at Montréal University, she was talking about making students produce maybe hundreds, it’s as a bit excessive, but on a pad hundred thumbnails, and they get to the point where it’s like, I don’t know what else to do, I haven’t got any more ideas, and she said she reached the point of frustration and suddenly they’ve broken through that wall of, I don’t know if it’s laziness or lack of stretching your mind, so do you feel that quantity…?

PS: absolutely quantity, I would definitely, one of the things would be, I want 30 and you’ve got an hour, or in my case half an hour

LT: so is there kind of, like an optimum number? I mean are you talking like, beyond say five or six, suddenly they break into this creativity, or does it vary hugely

PS: do graphic designers still use a layout pad, I don’t really know?
LT: I use a layout pad, I love layout paper

PS: layout pad, I mean some of the drawings I’ve got, that be a hundred ideas there, and another very interesting thing, that kind of (...) about drawings when somebody’s then come back to it and drawn over it, and that’s the thing about inhibition, I talk to an artist actually, and he said he always started a new drawing, a new piece of art with a drawing that is already done, to get into it. And that’s the other inhibiting thing about the big blank piece of paper, and what I personally do is I will scribble on what not paper, in fact some of the best drawings I did recently for projects I did a while back, a couple of years back, I used diaries, and then I thought oh blimey, that’s just the drawing I want but it’s on an old diary, but I think that the actual thing isn’t an expensive, clean piece of white paper, that it’s quite informal

LT: I know people keep going on about making students you sketchbook, and I actually think a sketchbook with, you know expensive cartridge paper, I think it’s too precious

PS: oh I agree with you

LT: okay, so what kind of paper are you talking about?

PS: just newsprint, big children’s jars of white paint, children’s jars of black paint, as many cheap drawing implements as I could find, that was it

LT: so nothing was precious?

PS: absolutely, definitely not precious or expensive, that I would find inhibiting to drawn a blank sheet

LT: I find when I buy new sketchbook and it’s got beautiful paper you don’t want to spoil it, and that is completely the opposite from, and also working in a pad, working in this linear, you know, next page, next, there’s a chronology to it, do you feel that has a bit of an inhibiting effect?

PS: if you do a rotten one you spoil your sketchbook, that kind of thing is terrible, I agree to get rid of all that kind of thing would be…

LT: so you would be, I’m thinking of just like tearing pages out and then collating

PS: yes I think so, yes, I can’t think I’ve ever, I have got sketchbooks I’ve had forever

LT: I buy them, beautiful ones and I don’t use them because I don’t want to spoil them

PS: I worked at Glasgow School of Art for a while you know, and you forget sketchbooks with Glasgow School of Art, but you certainly didn’t draw in them

LT: no, no you leave them on your coffee table, it’s crazy isn’t it? Design and visualisation as separate entities being taught, do you think that universities need to make it more clear the difference between learning to design, producing design based
drawings, scribbles, things on a computer and using a computer or producing a finely rendered image. There seems to be a confusion the students that I’ve observed

PS: when I think designing, I use a drawing to visualise potential design is important, I do think you need to make the distinction between, do you know Kirby Lockhart? There will be a reference in my book to William Kirby Lockhart who was an architect, quite old now, and he talks about design drawings and identifies, defines a designer drawing as being transparent, you see through it, and that’s what designers need to be able to do, to draw in that way, you’re not looking at the drawing looking through the drawing the concept. So students certainly need to understand that, and the difficulty, and another thing is, were talking about reusing, that whole thing about emergence and ambiguity, a digital drawing looks finished even though it might not be a completely usable design, it might be nowhere near being a finished design, it looks finished. They have to be very aware of that I think, but it’s a complete falsehood, but a finished, digital drawing represents the finished thing. There might be one at the end of the process that does but I think that’s a bit of a problem with digital drawing

LT: are there any tools or things you would like to see included in the curriculum to help manage sketch inhibition, anything you would like to introduce, or things that people aren’t doing that you think they should be doing?

PS: we said, that whole issue of copying, you know copying used to be what design students started, essentially copying and obviously there were problems with it and it became a mindless reiteration of what they see is, it’s a problem you don’t want that, but I think the conscious dealing with working from sources, because it’s so varied our reaction to sources, that should be taught, I would agree with that and I would have said exercises to get people thinking, numbers, lots of things, you know let’s, I’m not interested in how good they are, I just want lots, and cheap. Those are the three things I think of now that we’ve already said, quantity, cheapness, and certainly observation but purposeful observation. But I do think, one of the things that I started in the book and I hope to do some more work on is that idea of what is the studio now? Because with a student, it could literally be the laptop, the library, the sketching the design, the Museum, it could all be on the laptop, and that in itself is inhibiting in that it’s not, you’re not getting used to a public discourse, I mean it’s one thing about the drawing classes, you did at least see what other people doing, now you don’t if you’re only working in digital environments.

LT: and there was this kind of tendency as well the students to kind of scurry often say I’m going home to work, bring my working next week

PS: things that make students work in a studio is important as well

LT: you do think very differently when you’re in that kind of environments
PS: when you learn from other people, and I think, as I say, industry is like that, you can’t, I mean no doubt, people do spend hours but even so, part of the job is interacting with other people

LT: and other people from different disciplines as well, not just your own

PS: being able to read their drawings as well being able to communicate, so I think public forum is another thing I would say. Seeing a lot of drawings is something that is easier now because you do get books on typography sketchbooks and things like that, you never did, ago when I started my research I really couldn’t find genuine design drawings, I could see ones that had been clearly done specially for the book, and the only thing that Abraham Games, and that was the 60s Abraham Games’ book, over my shoulder, while that as I say was published in the 60s and that had all his early sketches the designing, the only ones I saw until I actually went to studios. The other thing with studios in the 80s they did have these things which were unfortunately called job bags, they kept them and they would have a whole room with a kept all the past work and they would do, and they often would go back over old work because of course with, one of the reason why designers drawings were kept so secret was there would be a hundred ideas on a page of which one eventually, and of course there’s a lot of intellectual property

LT: I was going to say that’s a huge amount of information in terms of the potential value of a job bag or some sketches to somebody else, you just think, oh they’re just sketches

PS: because I had to, formally in some places, I had to be careful what I revealed from what I’d seen on drawings, I don’t know that anybody was going to torture me and say you know, what did you see, what are those designs for biscuits like? Give us the info, but in fact they were very conscious that they, first of all, had a lot of potential in there and then also this thing which again, I’d never heard a design mentioned never ever, that capacity in a drawing to see something that wasn’t intended, I’ve only ever heard researchers talk about that, they do it all the time, and again a lot of designers that I spoke to initially, they said they didn’t draw, that’s what artists did. Of course they were drawing all the time, most days, but that’s what artists did, so this isn’t coming out in a very orderly way is it?

LT: it doesn’t matter, it doesn’t matter, I shall transcribe it.

Pam’s biog: I worked in Manchester Polytechnic and I think I worked for four years on the foundation course there, a brilliant course, and then in graphics there for a long time, I can’t remember how long, for a few years, and then I went to Glasgow School of arts and was there for three years in Birmingham just two years. Glasgow I was the director of first year studies and strangely some of the postgraduates as well, a bit of a bookend kind of, I’ve always been interested in foundation first year. When I was a student I did fine art, this is why I don’t feel guilty about being rude about them, I was at Newcastle and at that time a very famous first year programme with Richard Hamilton and it had
been started by Victor Passmore he’d set it up, and it was very much influenced by things like the Bauhaus and I got rather interested in that kind of thing at that point, and, so when I first went for a job I applied to a foundation course, as I say that Manchester was brilliant, it was very good, and I was at Manchester probably until about 92 or 93 and then at Glasgow three years, Birmingham for two years, and then Dundee for about five or six years and then I left and retired in 2003. And then I went to Singapore for three years.
Interview with Martin Stacey

(Education expert – pilot)

LT: First question, what is your institution’s, or I’m thinking particularly the students on the courses you teach on, what is the relationship between the course and sketching and drawing, particularly to undergraduate design students I’m talking about here?

MS: Okay, the stuff that I try to teach, erm, that, where sketching gets to be relevant, is that I teach courses in human computer interaction, specifically the next one up is iMac 2610 interactive systems design and evaluation. It’s essentially human computer interaction for second year computing students and some of what we get people, so I stand up and give a lecture on prototyping and what I’m trying to do is one, explain about storyboarding and prototyping different kinds of prototypes, the value of creating a paper prototype, in other words a prototype with an interactive system where all you’ve got is cardboard and paper and sheets of acetate, but nonetheless is worked out in enough detail that you could actually play-act using it. So you can do serious worthwhile usability tests without having written a line of code, and that can get to be a very useful thing to do if what your users tell you, because they can point out a lot of usability problems, but what’s not unknown, is that the users turn round and say, it’s rare I suppose, but it does happen, that, “You’ve misunderstood the nature of our problem. We don’t want a system that does that, we want a system that does this,” and you stop going down a wrong track so, erm, paper prototyping can be a very useful technique, storyboarding is also quite valuable to explore ideas, so what I try to get across to the students is that it pays them to do things cost effectively so I try to tell them to, erm, not worry about whether or not they can draw well because it doesn’t matter, and to draw the quickest and roughest sketches that they can get away with for their current purposes, because it’s very important to get across that they need to explore different ideas before they’ve put enough work in them to start getting ego invested, because the moment they start putting sweat into elaborating details, they’re going to be reluctant to throw away their first ideas and reluctant to have other people tell them they’re terrible, which is necessary, so, they need to, in order to get them to try and explore different design alternatives and, so I find this a bit hard but I can get people to produce very rough pictures and not elaborate them, so this includes showing them PowerPoint slides with some pictures I drew just as teaching examples which look like I’ve scribbled them in a couple of minutes, because I’m scribbling them in a couple of minutes because that’s what I wanted to show, and what is also important to try to sketch for interactive systems is enough information that you can, or about how the interaction with the user takes place, erm, that you can actually see this is what the user is going to do, this is what the response is going to look like, and something I find quite hard with my students is getting them to see beyond a static picture of the interface, to think through how the interaction is going to happen. That’s a lot harder to get across as a message, so some of the tutorial exercises that I do are trying to get them to sketch in the direction of producing a storyboard that ends up being, detailed enough that it
will give you a sense for what size and shapes, say an Internet radio is, and what the controls look like and how you use them. So what I would like to do, and one of my tutorial exercises for getting the students to actually get that far has been hard is to have a storyboard that’s detailed enough that people can do a conceptual model extraction, in other words you show people a prototype or a picture of a prototype and, or a reasonably detailed storyboard and ask the user or representative of the users to explain how does this thing work? How do you carry out an operation, say to set the presets for the radio, so how does this interaction happen so that you see how the users interpret what they see in the interface into develop an understanding as to how the thing works and how they interact with it, which is a useful way of evaluating interface even before you’ve got as far as something you can do a usability test is a paper prototype to see how the structure of the interface conveys information about how to use it and how the thing works to see if it enables people to develop a correct in inverted commas, mental model of how the thing works, a useful mental model of how to interact with its. So that’s something, an idea I’m trying to get across and would like to push people with their sketching far enough to do in a couple of lab exercises, so designing interactive systems, yeah, you sketch because you need to explore design alternatives and what you ought to be doing is thinking, not just about static appearance, but also how the interaction proceeds, what the sequences are, what the feedback looks like. Not the easiest idea to get across, but it’s something I try to convey. So that’s one place in which sketching matters. The other kind of sketching that’s relevant to my students that they might do is trying to sketch out the structure of a piece of software in terms of how the data is organised, what classes you’ve got in an object oriented system, and how you, erm, connect things up, what entities you need to have in order for the thing to work, so what you’ll find if you, erm, looked at a paper we wrote on a bunch, on different types of sketching in different domains, is the picture of a relationship diagram that I drew as part of supervising a final year project where what I was trying to do was explore what data structure, what data design that you could implement in a relational database would serve to do that data persistence that the student needed for, erm, whatever it was that she was building a system for. So, this is constructing an entirely formal though incomplete representation of a relational database, but in sketch, because I’m thinking what do I want let’s draw a line, is this, then we go and change it to, if stuff needs to get added to it, or it’s wrong.

LT: Right, brilliant. When your undergrads arrive, generally, what kind of sketching skills to they come with?

MS: Probably none except what they learnt in doing art in school and these are unlikely to be people who are especially talented in sketching, because they wouldn’t be, because is not an activity that either requires or selects for sketching skills or is the kind of thing you will be attracted to if you’re particularly good at art, you’ve realised it, so the answer is essentially none, but then, I don’t know if you need sketching skills in the sense of being able to control a pencil, what you ought to be trying to develop is not to have inhibitions about scribbling and worrying about whether your lines are straight. The skills that we would like you to develop, and again you’ve only got a couple of lab
exercises for this, so maybe two hours total education in this, ever, and that’s from me, in thinking, okay, how, what am I going to put where, let’s just scribble something that’s roughly like a circle or roughly like a rectangle, and imagining what this represents and putting the minimum amount of work into suggesting the right idea. So that’s the skills, not, I wouldn’t even call it skills, I’d call it lack of inhibition about doing that, and then the students, if they’ve got a practical reason for needing to, can draw much more detailed drawings. I don’t find drawing skill remotely a problem because students can produce pictures that are as neat as they need to be, and what we want them to do is make sensible choices about how much sweat to put in. The question that is a live issue for the students is when they use pencils and when they go to some kind of drawing tool even if it’s something that is as rigid and not terribly complicated as say PowerPoint. My attitude to this, which I think is very old-fashioned, is that trying to produce something that is more technological than just using a pencil and a ruler and maybe some coloured pencils or something to give you some colour, and building a serious mock-up in HTML or visual studio that looks like a real interface, that anything between those is going to be a bad compromise between rigidity and realism and you shouldn’t bother to go there. However, what I find is that my students are often remarkably fluent in using tools like PowerPoint and can create corrections and rectangles and bits of text and so on, erm, much more rapidly than I could, and I start thinking that the efforts to results ratio and the flexibility versus effort curve starts looking rather different than from what it would look like from me, and may be using a computer drawing tool for sketching purposes isn’t as bad an idea for them as I think it is. But nonetheless, I’m very concerned about the influence of having a rigid tool that restricts what you can do, since I’m concerned about the influence of unevenness, in other words, the tendency of a tool to push you into doing what the tool makes easy.

LT: Okay. Are there, right, let me just think here, because I’ve got three extra questions I’ve added to this just by talking to Rosemarie, and they’re great questions because they’re covering issues which I know I need to cover. Right, okay, how do you feel when students come here, they’ve obviously come from I presume A-level or some kind of FE institution, so they’re coming from that sort of situation, how do you feel, is there a relationship between the education that your students receive in that situation, their sort of primary, secondary, FE-type education, and their relationship with sketching and their sense of their ability to sketch or their sense of inhibition. Do you think education has…?

MS: I don’t really think that it impinges much on me in that I don’t have too many demands. I suspect that there are people with particularly strong inhibitions about drawing stuff because they’ve had discouragement, but I don’t think I could point to any anecdotal evidence for this. Because I don’t get to see a vast amount of sketching, and I try to make it very clear that drawing quality is not where it’s at, erm, I think that, how much is that stopping people from over-elaborating when it doesn’t pay them and producing pretty pictures when pretty pictures are either unnecessary or counter-productive at that particular moment in their lives, I think is rather more of an issue, and whether that can be directly attributed to anything that they get in school is very
hard to tell, because people in primary school at age maybe seven, start thinking that their very early scribbles or conceptual artwork isn’t good enough and they need to actually draw well in order to have something worthwhile, this is very, very restrictive. Whether that anything that can be directly attributed to school or is simply, maturation, that people are simply older when they’re eight that when they’re six is hard to tell, though it might be the case that people are being rewarded for doing things neatly and properly. I remember having a conversation with a friend of mine once who was commenting about her son, he is now 18, but what she thought was, she had very, in primary stage education you had sort of female teacher values being imposed on kids when people being pressured into putting work into making everything neat and tidy and pretty and looking good, when this simply wasn’t necessarily what kids, especially male kids, valued or ought to value, and that, and it wasn’t obvious to her that pushing kids like, for example, her son, into producing neat and tidy perfect artwork, or perfect products at the investment of a lot of effort was either educationally valuable or imposing values that ought to be imposed. So of course there are times and places for putting hard work into getting things right, the trick is controlling that and, but I think that, for what I’m doing, influence of school is much less than it will be in something that’s very visual, design oriented and actually requires some special thinking talent.

LT: Cultural issues. Do you feel, I don’t know whether you have experience of this with your own specific set of students, there are cultural issues and circumstances around cultural issues which affects students wanting to sketch or creating inhibition. Do you feel that is a, I mean from my point of view having taught master students from all over the world, I know there are cultural issues but I would just love to know what other people’s experiences are of teaching possibly overseas students, from different cultures and nationalities…

MS: I don’t think I see, I don’t think I’ve got the competence to comment, and I think that the people I’ve seen are simply too individually varied for any patterns to show up, even if there are patterns. I don’t remember any special problems with trying to get overseas students to produce design sketches for me, or any particular group of identifiable or category of people to produce design sketches.

LT: Just thinking about the design, I mean you come from a digital design background…

MS: I wouldn’t say that actually… I understand something about design processes and, but I do have is getting people to produce webpages, where I don’t push people, okay, in my teaching people to use HTML incarnation which is a rather different business from teaching them HCI, I try to get some HCI into them and I do stand up and give lectures about writing webpages and doing, and graphic design issues, but nonetheless when I’m teaching HTML which is the closest I get to digital design, I try and get the techie stuff into them and getting them to think about the design issues is a bonus. I don’t push sketching, and I certainly don’t want to see any sketches, though it wouldn’t be a bad thing if they, erm, scribbled some stuff, I should maybe talk to them actually
about doing rough scribbles of layout and not sweat, and I certainly wouldn’t encourage them to do anything at all in the way of design sketches that involved putting effort into neatness, that I would only tell them to produce sketches that took them two minutes at the outside to explore radically different layout, to explore layout decisions.

LT: I don’t if you can answer this question then: do you feel that there are commonalities, I’m being forced, not forced, but I’m being suggested to go down the road of discipline-specific for my PhD knowing that I can’t do that, I can’t do that because the design process that I’m looking at, the early stage, the ideation, development of ideas and the dialogue using sketching, it is generic across design disciplines, it’s not until you get to the later stages you become discipline specific. What are your opinions on that, do you have any opinions on that, the similarities of design ideation across design disciplines, do you feel that there are commonalities, do you think there is an issue for, not necessarily framing design with a particular discipline? Do you think that’s counter-productive? Sorry that’s a very long winded question, but…

MS: I think it’s totally counter-productive in the sense of narrowing the scope of what you need to know about, that absolutely, human beings are human beings and design problems are design problems, and if you’re looking at sketching there is no way in hell you can avoid looking at a lot of sketching research done on architecture, and you shouldn’t be avoiding looking at some sketching work done on product design, but I think most of the interesting work’s being done by people who are ultimately architects. She certainly should be paying attention to the rather smaller amounts but interesting nonetheless, work on sketching and engineering, and the work, and the stuff done by Claudia Eckert and me and allies on comparing sketching much more broadly, I think is something to at least sift into the mix. So, however, I think that it is something that is worth thinking about is what kinds of relationship, structures and relationships do people need to think about when they’re doing sketches, is that going to have an influence on what people do? So, in your classic view, your classic architectural sketching stuff, what you have studied by the likes of Gabby Goldschmidt, you’ve got people thinking about static structures and the relationships of different elements to each other and that the move, that dynamic aspects like the movement of people around spaces is going to be largely tacit a lot of the time, because there is a lot we basically know about how human beings move around buildings, and because it’s so obvious to us, we’re not going to be thinking terribly explicitly about that a lot of the time. We might some of the time. I don’t remember the relevant stuff in enough detail to know when in, say, Gabby’s data or say anybody else’s data, there is explicit consideration of movement around spaces. You do certainly have consideration of sight-lines and people for instance, worrying about how Frank Lloyd Wright designed buildings, need to be conscious of Frank Lloyd Wright being keen on the idea of rooms having focuses and that’s why, and liking fireplaces for that, and people who don’t buy the idea that a room needs to have a focus are going to come up with different buildings. So, on the other hand, if you’re doing mechanical engineering then you need to be very conscious of how moving parts move, and that involves a different kind of thinking so, what you’re, what’s involved in reasoning about movement and how much that needs to feed into the
sketching is probably going to depend on your original design problem, and on the individual designer, it is very central. But it’s also going to depend on your particular design problem, whether you can have very schematic outlines of solution principles, erm, to just indicate you’ve got that kind of thing going on, versus needing to care about, “is this geometry really going to work over and you into trouble?” There are also other phenomena that designers are going to have to care about like heat flow and stress patterns and while really understanding this is going to get them into doing modelling, but thinking about it explicitly might influence what kind of sketching they do. Also, how you’re thinking about, you can think in different terms about how your design works, and where you’re actually going to think in different terms to explore different aspects of your design, and this is going to have an influence on what kind of sketching you produce. There’s a nice paper by Susan Finger and Rinderley I think it was,

LT: Say again…?

MS: Susan Finger is the name I definitely associated with this and I think Rindlerley is the other name, the name of the other author you can check that.

LT: Okay that’s great. Yeah, some of these questions here are very specifically tailored for visual arts, design…

MS: That’s fine, go on.

LT: Teaching and learning methods used for imparting sketching skills among undergraduates, that’s the kind of question I’ve been asking of…

MS: Showing people very rough sketches, getting people to produce very rough sketches and repeating the points that they need to explore quickly so that they don’t have inhibitions about throwing away a bad idea or accepting other people’s ideas as well as their own because it’s okay if the ideas are cheap enough. So I say that several times, and then the other thing I do is, at least a couple of times in their education, trying to get them to do it, but essentially this is reduced, slightly reduced to essentially a couple of times in one course, getting people to do design sketches and while I should, for in my teaching and web publishing incarnation I haven’t asked for or encouraged design sketches at all. It will probably be worth explicitly commenting on, at least in the advice, saying draw very rough, very quick sketches to explore different layout opportunities and don’t put sweat into, don’t put sweat into sketching.

LT: Okay, that’s great. Thank you for that.

MS: And, what I would want to do is encourage people to use diagram formulas and to try and sketch how software systems are going to work since what we, what I do when I’m teaching systems analysis and design, is mostly teaching people how to draw diagrams to describe particular types of information about how software systems work, and understand how the diagrams fit together and give you different perspectives on how the software system works, because one description is not enough, so you’ve got
diagrams for how the code is organised, diagrams for what data goes where in a relational database, diagrams for sequences of operations and what thing is responsible for which operation, and some of these diagrams anyway lend themselves to doing some sketching to explore ideas of how this, of how things work, and what I can’t very easily do is push people on using the notations as sketching media. What I would like to do is at least get across the idea that you can and give people the understanding of the formal notations that will equip them both to produce complete systematic models and to construct rough diagrams that are incomplete and with thoughts as ways of exploring ideas and seeing if it can work this way.

LT: Sure, okay.

MS: And saying more about that would probably be a good thing, but there is, though, with the normal notations what we want people to do is produce diagrams in case tool we use enterprise architect which is a serious industrial strength case tool and this is great for connecting up all your elements of different diagrams, you can trace relationships from requirements down to, through to specifications for exactly what methods ought to exist. But it’s less good at, it’s a pretty good tool, it’s less good at, but it’s not great for scribbling, but nonetheless, if you understand how the notation works you can scribble
Interview with Neil Stacey

Interviewer: It's recording that's good these aren't very structured questions it's more of a kind of conversation things that's the best way for me to do it. Can you just start by telling me who you are, what position you is he there what you do just so I've got a background?

Neil: My name is Neil Stacey I am a senior lecturer in the School of Architecture within the faculty of Art and Design art design and humanities. I have been at DMU for 9 and a bit years I teach predominantly on the undergraduate program, but actually I am pretty split now between the undergraduate and the post-graduate program. And I currently teach I oversee third year design module and post-graduate practice management module and contribute this technology. And then over the last few years I've done everything from [unclear 1:08] leadership to program leadership design teaching tech teaching.

Interviewer: So you've seen everything from every angle base during the course okay brilliant thank you, right with regards to the course here and what you are doing what is the course ethos and attitude towards sketching because I don't know much about architecture because you are very sort of separate from the design school?

Neil: I mean how we approach sketching or hand drawing generally is that we try to focus on those skills on the first year so that students develop those skills and improve those skills, so if they haven't got them they develop them if they've already got them they've developed them further. And at the same time in first year we start to introduce digital drawing, as they move through the years and indeed into post-graduate we expect their sketching hand drawing skills to continue to improve but we are hoping that they eventually develop exceptional digital drawing skills what we want them to have a sketching sensibility to that as much possible. So we talk to the student about eventually obtaining hybrid skills where they are comfortable drawing by hand and digitally and they see the two is part of the same process and intermingled them, but at the moment we are currently focused on hands drawing sketching the first year, partly is trying to get an even playing field by the end of first year so they are all up the same kind of skill level although that isn't really what happens unfortunately.

Interviewer: So your kind of covered it a little bit already but where is sketching use in the design process, is it an intrinsic part is it something which is optional?

Neil: As a consensus amongst the staff it is an intrinsic part and we try to communicate that to student, nevertheless at the moment it's very clear that some students are you know they go to tool is digital it is a digital interface. And the strongest students are able to do that and still have a sort of sketching mentality you know their fluidity with digital ways of drawing is good and they retain their fluidity of you know their creativity is not impaired by the use of digital. But we see the intrinsic part of design and both at the front end of the design process to get initial ideas down on paper quickly but also as a critical tool. So you might draw something precisely digitally but your analysis of it is much quicker and much more fluid and better sort of sketch you know you diagram over top of digital. And we try to communicate with student although I don't think we do this perhaps as much as we should but they need to understand that when they get into the professional environment that their ability to sit in front of a client or an employer and sketch out their ideas is really critical. And we have this fantastic thing in third year where the students if they put themselves forward have mock interviews with usually about 10 Architects come in and volunteer their time and they give the students some mock interview. And invariably they hear in that mock interview somebody saying you need to have evidence of your sketching ability in your portfolio so they're focused on digital drawing skills and that's what they put in their portfolio and then you hear it from a practitioner, and then they suddenly believe as we haven't been [unclear 5:20] it's the fact that they are still extremely important skill.
Interviewer: Okay looking at student when they come on to the course as first year undergrads, how do they present themselves to their course terms of their skill-set their attitudes their sort of you know what they want to achieve or not with regards to using manuals sketching techniques or even digital sketching techniques but that sketching process?

Neil: Well I suppose when they arrive we've got a broad Church arriving so some students are coming with poor sketching skills some people are coming in with digital drawing skills we have a real variety. And quite quickly they jump into a task wherever that task is that will involve some sketching output, whether it's this year either the beginning of the year or the first year dived into a making exercise they were making some chairs out of cardboard. But part of that making these it's about them sketching their ideas, so that's how they present themselves to us so they typically broken down into Subgroups Studio groups of roughly 15 students so there is one tutor looking after those 15 students. So by the end of a very short project whether it's 3 weeks or 6 weeks or whatever it is those tutors have a fair idea of the capabilities of each student within that group.

Interviewer: And how willing are the inhibited or those with no sketching skill set, how willing are they to take on manual sketching is it something they want to do I mean can you sort of place them at a sort of demographic or something within the course?

Neil: There are a relatively high number of students they are almost scared to pick up a pencil or a pen. And we invariably ask our students to pinup their work quite early in the first year so that they get used to putting their work in front of other people particularly in front of one another. And it's something I think we need to look at because for some student that is genuine terrifying and if they feel their skill-set is way below those around them it's evident they really, really don't want to do that. But it's funny because we have been talking about it in the staff meeting that we really need to start thinking of different ways of getting students to present their work particularly in first year so that we sort of get around the issue because there are certain students that one comes across who are terrified to put their work on the wall, terrified to put their sketch on the wall. And if they put it on the wall and they talk about it even though we try and make that situation very relaxed they don't find it relaxing. You get the same as in you know several instances when I've got the same student around the desk and it's the same drawing and the fact that it's on a desk and they don't feel physically exposed they are more comfortable talking about their sketching. The other time we really notice it is when we go on trips so we do a lot of trips. and over the last few years of our trips our first year trip our second year trips our third year trip have been in the second term, so if we talk about first years they've already been here for a term nearly a term and a half. And they go on a trip to Italy whatever somewhere in Europe, and the cool content of those trips is that they are sketching things that they are looking at. And at the beginning of the week there is a sizable proportion of those groups who will not open their sketchbook to show you and I think that's a term and a half into the year and that's when we really notice it. And colleagues I mean the first field trip for a while but colleagues you know purposely get students to sit down and they give them say in the next 3- minutes you are going to draw that building, and so most of the drawings are fairly crude in 3-minute but at least they are getting into the habit of drawing and having someone looking at it.

Interviewer: Do you find that reduces in ambition when they are giving such a short deadline [unclear] you don't have time to get the panic does that kind of override that level of panic to some degree do you feel?

Neil: I think we need to do you know I do a couple of presentation to students before they go on trips, and I show them sketches and I was purposely trying to show them really scruffy sketches which are about me understanding rather than me creating a pretty picture, and they are fairly crude all over the place. And I think we do need to do more to make students comfortable with putting up work that isn't a masterpiece. We used to do a life drawing classes here which we don't do anymore because there was just weren't enough student turning up. But I did life
drawing and this tutor made me draw with my tomb, and so drawing with your tomb and putting them in an ink pad incredibly crude but it helped.

Interviewer: With the course you are talking about producing life drawing so observation and interpretation onto paper. Do you separated that from the teaching of the design process utilizing sketching as a cognitive tool, so there is a distinct separation between the two processes they just happened to use sketching as a means of expression?

Neil: That's a really good question, answering that question I am thinking where is the teaching group probably think of sketching in that manner there is many things I'm not sure whether we articulate, no we do articulate not really to student. But we certainly expect them to use it analytically observationally and then we expect them to use it creatively so it's feeling their imagination sort of propping up their analysis and understanding, I'm not sure we talked about that enough to students.

Interviewer: So the teaching of design and the teaching of visualization of design is there a definite separation are students aware of that separation?

Neil: So in terms of structure the course in the first year they have design modules, they have 2 design modules one for each as a major term. And then you have a communication module so the communication module is 15 credits and the 2 design modules are 60 credit. And what happened at the moment is you know originally the idea of communications modules was that it would be communication in a broader sense, so how does one communicate how does sketching do that how does verbal do that. And it's become I root in which we introduce digital to students really so the sketching aspect of our teaching sits almost wholly within the design modules, it's a little bit more blur than that the sort of sketching work that goes on in the communications but not a lot. So a few years ago we made a clear modules communication about drawing it's supposed to be about all manner of drawing, and really to articulate to students that there is a skill set that you need to acquire, in order to be a good designer you need a good set of skills and those skills are quite broad. Does that answer your question actually?

Interviewer: Yes, it kind of some interesting stuff coming out here actually. Do you ever hear student talking about sketching in terms of having to do sketching manual techniques why can't we do it on Cad, or observe that sort of rush to the max that's something your kind of see a lot?

Neil: Yes, and to give you a couple of example I hear student saying and it goes back to my earlier comment about them being intimidated you know a couple of colleagues I mean if I take my time I can't sketch, you know sketching [unclear 15:01] pretty well you know with the colleagues you can do that exceptionally well and we show them that as to make them aspirational but it intimidate it definitely does, so I have heard a few students you know taking students on trips and they will say oh God I can't draw as well as ex-member of staff you know it's almost as if that's the expectation.

Interviewer: That seems to be a natural thing which sketching it is very much a constant comparison regardless of discipline or ability even uninhibited people are still very aware of this comparison and hierarchy of a big judge that sitting somewhere so it's intriguing.

Neil: In our heads it works in the sense that we are showing them you know look how wonderful this person drawing is try and copy their technique you know look at the way they use the pen and use these lines if you like. And we put them in this direction of various sketching blogs around but I think they are intimidated by it but we certainly hear that a lot. I've been doing some teaching in the second over the last few weeks with a part-time colleague who is [unclear 16:14] artist in the city and he and I had similar size group we were both doing the same project and it was a technical focus project, and we agreed even though we had separate groups we agree that we would do things the same he and I so that we can support
one another group. And we turn to our groups and say you will be drawing on detail paper so all of your development work will be on detail paper, and we will bring detail paper to the tutorials and we will draw by hand. And it's been quite interesting what is happening because my group I really struggle to get my students to do that, so the point where my attendance was really low now I don't know whether these two things are related, and as a tutor I don't bark at people at all but I think quite a lot of time students weren't turning up because of what we were asking them to do maybe. And Sylvester had much more success in getting students to draw on detail paper and we had a couple of moments in the work where we got students from both group to pin up, and all the other students could see that certain student had done really simple hand drawn diagram and we can stand in front of them and say look at these, these are sketches they are just crude they're like they are almost like childlike with all the crayon on them. But looking on them we all understand what the student is saying and as well as that student who is done them of a big smiling beaming face and you can see that she that she was [unclear 17:54] okay get this and we had a conversation about how that was significantly quicker than doing it digitally, and it's an actually very successful way of presenting you know these students thinking about 20 or so issues. But our attendance has been really low we don't know where the two are connected.

**Interviewer:** Right that brings me onto my next question kind of quantify and qualify the sketching ambition amongst your students amongst your cohort can your kind of you define a percentage or a proportion who seems to suffer numbers just something to give me an idea?

**Neil:** I think there is a general comment this isn't quantifying I'm surprised generally by poor skills with the pen and goes to actually writing so sometimes our students you know they might have produced a drawing digitally and say okay printed out and write everything on it you want to communicate and I can't read their writing, and that's %70 of the students I think that have really poor writing skills.

**Interviewer:** Okay that's interesting because my dad was an Architect and he is a good writer it was just beautiful and they don't do that anymore and I thought they did but they don't.

**Neil:** No we don't I studied 3 weeks of letter writing as a first year, so in that sort of sense I think that it's a high %70 of the student who would rather type and some of them ignore the directions, and I say I want you to write your notes by hand and at least %10 if not %15 will just ignore me and they will scan it in and they will type it in. So it's %70 plus who aren't very comfortable doing that, in terms of actually sketching drawings it's %50 it is massive I don't think it's where I demonstrate to the students like okay this isn't about me being old and grey head you know I draw digitally I understand digitally and the parallel of digital drawing is immense it's incredible. But with a piece of detail paper I can, and I taught them through doing a diagram and say that's taking me 10 minutes and we can all see that is a reasonable valuable diagram of sketch. And so across a week I would expect you to be coming back with 30 of these sheets to see me next week. And I have to say I've giving up doing that little bit of teaching because I have never got a student to come in with 10 sheets never let alone 30 sheets I mean it might be a cost issue.

**Interviewer:** That's interesting do you think that by virtue of the fact student don't turn up with the required number of sheets, does that demonstrate that they haven't touch through a problem enough, or do you think they have thought through the problem enough they are just inhibited in the way that they represent their thinking?

**Neil:** My instinct is to assume the form they haven't thought about it but then quite often when I sit down and talk to a student here [unclear 21:30] you have already done your work and then we talked to them and they say actually you are thinking about this, you just not making it evident and they don't seem to grasp and I have returned to do a lot more sketching in lectures because now I can go to a lecture [unclear 21:47] and I guarantee that it is going to be an
overhead projector thing they call it a visualizer, so I am trying to use the detail paper a lot more in lectures I don't know how effective that is getting them see the value of sketching but we don't get I mean one of the students that you will be interviewing Grace is an exception I mean grace made a submission last term and she, so I was giving lectures to that year group about the work they were doing and I gave some content about how they might organize their work and what they might aspire to achieve in the portfolio submission they made. And I said if you are using the detail paper and you are using tracing paper and you are making sketches in front of the TV where you've written part of your shopping list on it that's part of your portfolio, binding it together beautifully and submit those 50 sheet you have done, and Grace is the only student who have done it that's 1 out of 88 and her submission is extensive because of it her work is in terms of quantity it look twice as much as any other students because she recognizes that the sketches is valuable and I put it all in a pile together and bind it briefly and put a nice title page on it a cover page on it is a body of work not many students get that.

Interviewer: That's weird isn't it. So they vanish they rush to use Cad what do you use AutoCAD?

Neil: Two dimensional software is mainly AutoCAD but students to use other stuff three-dimensional and some students use Accu-Cadd for both 2D and 3D some student Revy a sort of 3D Cad Sketch Up is the go to tool for most students which we try and get them away from because it limits the way you think about things.

Interviewer: So they prefer their Cad they vanished is there anything else they get up to I've had instances of illness [unclear] I am just wondering what else goes on as a kind of avail over this fear.

Neil: Well not a sort of manifestation of it and again I've given up doing this, so say I've got a tutorial group of 15 and I've said to them so your kind of understand what you are going to do for next week I am recommending you do that on chasing paper or detail paper and you do it quickly don't sit on Cad because [unclear 25:05] on Cad it's really slow doing this kind of stuff they don't quite believe me I don't think. And I am saying next week when we come in it's just a tutorial it's nothing more than a tutorial but I would just like you to pin it up you know you might pin up 3 sheets you might pin up 20 sheets so I generally don't mind I just want it on the wall so that we can all walk around and look at it. And typically if I say that I've kind of to stop saying it you know 15 students 3 of them will do with that. And so the other 12 I will get them and say why haven't you pinned up and they all go, so the other 12 at least 3 of them will say I have to printed it out on the computer I said well I ask you to do hand sketches, yes but it is on my computer so we are going to print it so they're gone for an hour printing it which is an avoidance thing, and occasionally I will say okay just open up your laptop we will look at your laptop and they say oh you know and they don't want to do that. So the vast majority of them are sitting there with stuff they have printed out but they won't pin it up and the stuff they printed out is %80 of it is digital maybe % 90 actually, so they see a sketch as [unclear 26:21] Cad drawing of boxes it's terrible.

Interviewer: So just going back to the concept of you talking about students not being able to write very clearly, do you think there is an initiative of ability skill set dexterity this sort of manual dexterity that I had I trained with everything was done on drawing board and I struggled to go across to the digital thing because I just find it really boring. Do you think that students coming into these courses are lacking the pen holding kills?

Neil: Yes, I do absolutely I think it's crude as that.

Interviewer: Because I know in school they are sort of encouraged to used computer print-out things everything is done digitally I mean my niece it 8 and she's producing things marks of
word that's what they use, and they do handwriting but that seems to be something which it's not a natural thing it is something they do and they will put it one side.

Neil: We started doing things so it's not quite what you are looking at but so far next on Tuesday the third years are having a review so formative review pinning up their work is quite an important day for them and right at the beginning of the year, so I used to do this for my group but I have insisted the whole year does it so every tutor group has to do it. On Tuesday they are pinning up black and white drawings, so the most thing we be will be drawing digitally which is fine because they are getting towards the end of their projects and it's becoming more digitalized. And it's because there is being a slide in recent years where the reliance on digital means that digital involves Photoshop, and they make drawings look prettier and better by rendering them than they actually are, and there are some examples we even picked up on it and then it's a national trend so we have now introduce sort of making a black and white submission no colour anywhere. But the majority of that will be drawn digitally although one studio group is insisting their students do it by hand which is quite interesting, and using tracing paper so real old school and I am reading I'm watching this quite carefully and they are the youngest tutors in the team. And so students naturally gravitate to those [unclear 29:00] I did that as a student they are young they look like they might be a bit more exciting than everyone ever, and they that those tutors have got excellent digital drawing skills but they are insisting in their students draw tracing paper because they know that that's the [unclear 29:21] of drawings.

Interviewer: And the fact that they are closer in age and they have those sort of developed manual skills that be might be a kind of positive influence on them because there is always this you know I am a student there are tutors, tutors like maybe old you know like 40 or something we are old yes when you are in your 20s 40s is ancient, that's interesting that they are the younger ones what's the rationale for wanting hand drawn is it something they've chosen to go with?

Neil: There has been no formal conversation about that to sort of aware of what they are doing I think it's just establish best practice. I've tried to show students a couple of famous UK architects, well actually one of the architect I have shown you on the photo in the office those are actually Irish architects, so they are really famous architects producing exceptional work as winning National and International Awards there's been an article on them in a journal and there's photographs of the office, and their office the walls are plaster in relatively crude Cad models sketches everywhere. And what they seen in the magazine is a really refine elegant digital drawing it is established practice for those like developmental creative, the pen in the hand it's much stronger and we can keep away from the screen a bit longer, or comfortable flip in between the 2 and recognizing where one is better than the other. And I think Diana and Michelle these are 2 younger tutors they just accepted that's what you do you don't do anything else really. So it's not as they're approaching it an old school [unclear 31:20] this is it it's what you do.

Interviewer: That's why I am looking at sketching as a designed tool I didn't want people to think that this PHD was about bringing back sketching and drawing as it was without understanding the processes but the actual processes within design sketching that sort of ideation stage are so crucial to the quality of the design, and the way the designers mind works it's sort of [unclear 31:50] iterative process that's the bit that's important as soon as you say sketching and drawing people thank God you know like ancient drawing boards and dusty drawing offices and that kind of thing which is not what I am all about at all. Right so sketching is taught I am just kind of recapping here sketching is taught in the first year you have your communication and design modules.

Neil: We don't teach sketching techniques we demand sketching activities.
**Interviewer:** Right so you assume then that there is a level of the intuitive about sketching and that it is something that doesn't necessarily have to be taught?

**Neil:** Well I am speaking about the colleagues [unclear 32:38] the first year at the moment but I am confident that there will be some kind of modelling saying well look this is a sketch and look at how the views [unclear] so it's a little bit of teaching but it's not structured teaching in way.

**Interviewer:** Okay and how are students encouraged to maintain their sketching skills if they ever feel that they should?

**Neil:** They're encouraged, we assess them partly on a portfolio of work as well as a pin up of their final design and they are instructed and shown samples of good portfolio which I've got lots of sketches in them so they see it as part of the process. And I suppose that is the main way we sort of encourage them to recognize it as an important part of the assessment.

**Interviewer:** So it's this constant exposure to the need for and the fact that it is going to be part of the assess.

**Neil:** But interestingly, colleague we've had a much greater focus on hand drawing in first year this year then we had in the past, a Head is just left and during that Heads 10 year he flipped out teaching around he demands that we flip our teaching around and we focus on digital drawing in first year, which is against the grain of what we were all doing and generally there was an opposition amongst staff against that and he said no you've got to get with it you know. And we have gone back so we used to focus on first-year in hand drawing and then we had a brief flirtation with really pushing digital skills in first year and we flip back.

**Interviewer:** Does that pushing of digital skills in the first year create an over alliance then did you feel later on?

**Neil:** Funny if I think the way that I'd had thought about it as a strategy it might had work because it was basically saying that the digital skills needs to be developed in the background, and then in design studies you can focus on hand drawing as much as you like but resources wise and time wise the digital dominated.

**Interviewer:** And do you feel that the fact the digital has being pushed so early on encourage students to think that you design using digital tools that, that was the design process rather than it being up here in the mind that it was an external process. Okay so managing sketching an ambition amongst your student apart from dragging them in and stapling their feet to the floor which you can't do. You are looking at perhaps a sort of a less formal situation for things like presentation of sketch work, are there other things that you've try or would like to try?

**Neil:** We just start looking at black and white submission which is not quite what you are looking at but I am wondering whether that's the first of a measure.

**Interviewer:** That almost exposes the issues more because as you say if things aren't beautifully rendered and [unclear] and you strip things back to the elements of design you can then see is there any design in there, is there any design or is it just some shiny surfaces so it's almost stripping and exposing the issues.

**Neil:** And we speak to or student about this just behind you of your shoulder some drawings they won a fairly prestigious award, and honesty it was part of the. And we can stand in front of a drawing and say to these students the reason Alistair can draw so beautiful digitally is that Alistair can draw beautifully by hand and he recognize that, but interestingly it's a bit of an aside so he is a post-grads student, that cohort the graduated they were relatively
small cohort about 40, 8 of them which Alistair was one 8 or 9 one of the final output was just Stella you know it's graphically. And interestingly all of that cohort in their second year of post graduate in their first year of post graduate we insisted that they draw black and white for a whole term and we got that and I think those two are related and we've gone away from that I am trying to do it with my postgraduate student that they are drawing black and white, but sorry I have I'm digressing a bit. I have been [unclear 37:27] this for a long time but I genuinely can't get any of my colleagues to agree with me I think we present students with too long to do design projects. So we tend to gravitate to you know I have a long week here for a project the consensus among staff is it could be 2 weeks it could be 3 weeks long you know we want more time for them, whereas I think we should talk about words like nimbleness productivity, and as soon as you start talking about those you say in order to get students to understand what it means to be nimble to be able to think around a design problem quickly we need to be sending them a 2 week project 24 hours projects and do that and save them and you will do this on detail paper and pencil and it alleviates the stress because they think it's only 2 project it's not going to [unclear 38:21] my degree and I am a bit of a lone wolf in this.

**Interviewer:** That's interesting because interior I used to design [unclear] exhibitions and you would have a day or a few hours to turn something around quickly so you don't get time to sit and panic and over think things you've got to turn something that you do feel like you are turning things out ultimately. But architecture is very different because of the nature of what you are creating it's assume that projects do go on for many years’ month’s years it's one of those things where you have more time.

**Neil:** But often the design the generation design is really quick.

**Interviewer:** It's momentarily very often and as soon as you have a brief the idea is there you've got to justify it by going through the processes so yes I see what you mean.

**Neil:** When I told students about this I mean I don't talk to them about this. When I was in practice I was a key person on a building that won a national award and it's within about me somewhere on the website so a couple of them students have talk to me about that, and I go yes but you have to understand that my director and another associate went and won that job and I delivered it and it was an incredible quick timeline and that's one of the reason it won a national award. But by the time they got back in the taxi Journey from the interview where they were told they are awarded they had designed it and they went no they haven't, I said how could you not they walked in and they put 4 sketches because it was a 20 minutes.

**Interviewer:** Because it's floating around you just got to make it.

**Neil:** And they knew the director knew. So certainly within 2 weeks of that taxi ride I was drawing steel work drawing because we had to knew that quickly. So I said I am really proud to be a part of that project they said but it's not my design because it was literally done in 20 minutes and they came in and I was going no, no we need to sit down and talk about this, he said we haven't got time this what we are delivering and that was quite exceptional but it's a quick. But I would like us to adopt some sort of anchor words [unclear 40:38] nimble is what I really like productivity we expect our students to be high in productivity we expect them to turn out portfolio of work but we don't talk to them about the skill-set that enables you to be that productive and sketching is part of that massively.

**Interviewer:** Do you get feedback from industry you've got obviously contacts so you've kind of pass on graduates to industry do you get feedback about sketching design ideation sketching, is there an issue in the industry are there problems in the industry caused by this sort of lack or disinterest at all or is it really not an issue?
Neil: I am in contact with industry predominantly in the city you know fairly regularly almost weekly I think; it doesn't come up like that but we are definitely aware of the fact that they are looking for that in the students it comes across really clearly. So one of my colleagues in the architecture and Design Resource Centre just along the [unclear 41:50 and so deals with practitioners quite a lot and he deals with practitioners contacting him and saying we are looking for a couple of students so he is in conversation with them about what do you want, he ask them what you are looking for and [unclear 42:00] and Rob keeps reporting that back to me and to student saying they really want to see your ability to sketch, but I've not really heard practitioners saying it's a problem because I supposed as they've got a handful employees it can do that well and they kind of have that covered perhaps.

Interviewer: And with architecture certainly within commercial areas there is this growing sort of separation between the designer and the visualizer, it's becoming more prevalent in architecture as well this has nothing to do with my research I am just curious to know. Do you pass your drawings as a sketches onto a visualizer who will do a lovely animated walkthrough?

Neil: Yes, and recently I've spoken to a graduate he will come to me in a minute he was working for a big practice I mean I really good practice really quite a famous and respective practice. Traditionally architecture companies are organized around teams you know there is a team under an associate and 4 teams under the directors or however it works. And this company are organized around skills so there is an animation team and there is a sketching team and there is a technical team and he is trying to jump between teams because he's getting pigeonhole as technical which the technical team I am sure is the biggest team. And you go and working animation team and you would do films of walkthroughs and nothing else. And they sell those skills separately you know they feed against those skills. And he reported that there are people in those teams that's all they do and they have lost touch with their broader skillset.

Interviewer: I've worked with a guy use to design he hates design he like sitting in front of a screen all day, the stuff he does is incredible but he sits in a little shed just thinking away and it's amazing.

Neil: Because when I finished studying in early 91 or 93 something like that in the early 90s and digital was happening in offices and I left college without any digital skills at all and fairly quickly people were buying those visualizations kills from particular practice we have set up for that, so even then I think practice was starting to allowing the way they worked where that skill was provided by a particular group of people, and so maybe more of them up those skills in-house but it still it's a team it's a group of people who are suitably skilled up for those things.

Interviewer: Right I think you answered all my questions I am going to turn this off now bye.
Interview with Chris Wright

CW: I do feel that way, I do feel working on game art that a lot of the students became very uneasy when it became test time, they spoke about stress and pressure of having to get work finished just a certain time at a certain pace that the assessment criteria, and it did feel as though... Chris Rust said that we should do less assessment, less marking, more feedback, and what is it that were trying to do with students? What is it that we are trying to get them to do? Do we give grades? Are there things going on with students that are stopping them from learning? My perception is that the education system that we are making students go through now in schools and colleges is still very much based on the Victorian method of teaching. As a business model it’s great.

CW: I think it varies across the board... I’ve been here for sixteen years... There was a big push for sketchbook work, for people to draw and make marks, and make mistakes, but that was driven by even people like design management.... I ended up teaching the design management team very simplistic basic drawings. We had applied drawing of the graphic design, applied drawing for design management, so it was a different kind of syllabus for each class... A different ending for each class, where is the syllabus could be quite similar. If I was teaching on the multimedia design course... We could begin to look at hand drawn imagery that would affect layout and design for interactive movement, it could be life drawing for game artist to work out size, scale and proportion for figures. Animation would be the same, but it would also be environmental stuff. Design management was an odd one that came in and said we are doing this stuff and were working through graphics and were working through this, but Richard was quite up on the ideation process students to work in sketchbooks. Graphic design has always been prolific in using sketchbooks and pushing sketchbook work. We pushed it as a department, as we were in art, design and humanities, because you weren’t in technology at the time, so I think certainly from my background, I know that they’ve tried to push sketching and tried to push ideation, trying to put iterative design as a method of thinking outside the box, a method of exploring. Design of product, Michael Marston pushed it a lot in design, some of the guys who were teaching on the course on product and furniture were constantly pushing the guys to work in sketchbooks. We used to teach those guys in our old drawing studio which is what this setup is based upon because that’s what we do here. I think game art has been very, very prolific at making people have sketchbooks, at making people go through iterative design. Animation is very similar as well. The art in technology, game art, animation, illustration, communication art, are all now very much on board and have gone through that process. I think all the lecturers and senior lecturers and course leaders are backing that and supporting that in technology, which has been great. I think working with people like Contour, there has also been less drawing going on and I know that in ADH people are trying to get students and push students to do sketches students tend to be very scared. Students do seem very reluctant to put pen to paper and feel as though the digital way is the way forwards, so recently we’ve done a little project as a test piece,
where we actually bought... It’s kind of evident that it’s not just Contour fashion, there are other courses that have spoken to me recently that feel in ADH there needs to be more sketching, more ideation, more development, more thought processes. Unfortunately one of the things that I think is happening is it is being lost in schools… Here is a lecture about layout, and we went through terminology which they hadn’t done before, things like gazing direction, briefing room, arabesques, flow lines within images themselves, and the girls are really interested. I said if you want to learn some more I will do three workshops that are optional drop-in centres just to see how it goes, to test the water for ADH to work with you guys, Rachel Toner, Gillian Proctor and the rest of the guys from Contour. It’s a bit of a test piece because we’ve not verified it through the VC’s or anybody else, we are just doing some cross collaborative research together. I had seventy of them turn up and they all sat here and I got them all going through a mini lecture and then I started saying right now we going to do an exercise in drawing in perspective. A lot of them had sat there and gone I don’t understand perspective, but because I had done a lecture and I got them to copy something and then change it and got them to work with left hand and then right hand and then blind contour, and completely confuse them through language, or the lack of language, and they began to draw without thinking about it and I can show you the results of that, and I’ve also got all the feedback from the girls that took part in it. It was taking the language side away and saying it’s okay to make mistakes, it’s fine were going to put pen to paper, we going to make a mistake were going to draw some stuff, we’re going to change it round, no one takes the piss out of each other in here, no one is better than anyone else, because you’re all blind, were using the opposite hand, and the started to evaluate what was going on. This is the main thing about the drawing centre which I think is most important is that people begin to evaluate what they’re doing, but without the pressure of it being assessed.

He likened the teaching of drawing to the teaching of martial arts, where the teacher gets and the student takes following an ebb and flow pattern and using the entire body: When you want to get darker, feel your way round the floor, when it’s dark and you want to pitch dark render dark, use your arm and push, and when it’s light, pull, and all of a sudden it becomes a whole-body experienced. That you can’t do on a computer.

I see nervousness in confidence, I see them compare them to one another, I see them to look at other people on social media and begin to compare and contrast in a negative format not in a positive format. I see them saying I’ve never draw, I can’t draw, my brain is wired that way. I’ve never been good at art. Why do we need to do this? What’s the point? I can do this using different media. But actually it’s not that difficult to get them out of that mind-set…. This was a social anxiety of I don’t know people here, people are going to judge me, I can’t draw, I can’t do this, what am I doing here? Even people that want to learn to draw are still scared about doing it, because they’re scared they going to get told off all scared that they are going to make a mistake.

I think that the need for all of it, I don’t think you can abolish traditional drawing because it’s needed, I don’t think you can abolish digital stuff because that’s got its
place in the market as well. For me to produce some digital concepts using photo shop, a graphics tablet, photo manipulation, I can get done far quicker them by drawing it by hand.

It’s quite clear, students between the ages of sixteen and twenty-seven, I believe it is, at the worst possible time in their life to learn, and previous to that, it’s great for students to learn in different ways. If you look at the Swedish system, you play in a sandpit, you play with water from the age of three until ten, you’re understanding physics, you’re understanding gravity, you’re understanding how things work. Then you can put kids straight through SATs at eleven, why do we put these kids through the system? It’s very much based upon this education system which is antiquated…. In education we try and force students through a certain system, and I think that certain system works for some people, the language side of it doesn’t work for everybody. They teach you that way until you get to university then they tell you to, right now draw, now be creative. What is creativity? Why are we doing this, what’s it about? So when we look at drawing in education or creativity in education, or problem-solving, iterative design, a lot of that is being lost through mainstream education. It’s not the schools fault I believe, I believe it’s the fact that the national curriculum is trying to force arts and arts education out of mainstream Stem subjects. Art is being marginalised to the point that… If you look at the pecking order we’ve got English, maths, sciences, humanities, geography, and you get all the way down to the bottom and you end up with art, and even below that, dance…. As creativity is being quashed out of that system, of looking at grades, looking at how well things are doing, because schools need to be accountable, I understand, teachers need to be accountable, schools need to be accountable, but the creative thinking side, the non-tick box assessment is being neglected and forgotten and I think that the time students get here, they’ve got that teacher, is telling me that I’ve got to do this but not giving me a reason why. So I think one of the things about teaching, one of the things that the contour fashion guys said to me is that Chris explained something to us and then tells us why, and explained how it fits into the overall side of things which people haven’t done before.

Look at how quick films, games, animations now can be made using those techniques, but I think you need a grounding, you need a grounding in good visual communication skills, you can’t just jump and go from right I want to be a concept artist, let’s start digital painting because that doesn’t work.

LT: do you find that they take on board criticism more easily and apply it when they’re in a not being assessed situation?

LT: what is the institution’s attitude?

My teaching has always been about demonstrations, encouragement, about actually being on site, about actually teaching. We’d have lecture, recorded footage, tutorials, helping, feedback and stuff. This
On assessing student work: it will be part of their body of work, part of their sketchbooks, of their iteration, of their process. That’s the last thing I want to happen, I love marking stuff, I love looking at the students progression and going wow look what we’ve achieved, and I’ve been using MP3 stuff for the last three years, so I can actually give students 5000 words whatever it is, which they thought is great. Now what we sometimes do is video it, we set the camera up, look at this, look at this, and give feedback that way which is a new method. You can’t just have a drop-in session, but you’re only going to do a certain thing, you can have a lecture but you only going to do a certain thing and you can have a handout but you’re only going to do a certain thing, but if you combine those then that becomes that ebb and flow…

On the use of digital sketching tools versus manual techniques: I think both are needed in different subject areas. For ease of development, a tablet is great because you’ve got control, you can go backwards step, you can go backwards a few steps, you can redo. Using something like a Cintiq you draw on the screen has been of great benefit to thousands of students in product and furniture, graphics and game art, animation. They tend to work through ideation processes on screen more than they tend to work in a sketchbook for the simple fact is easier to change a design, it’s easier for, you can take an image on one screen, you can have an image half on the screen and you can draw over the top, you can trace, you can copy, you can push things around… You can suddenly change that image or you can tweak that or pull that all free transform and you can change the proportions of the body. You can make it bigger, you can make the head bigger so actually through an iterative design process, the screen is probably better, but you need the background and the understanding of the fundamentals before you can get to that so, people just go, you don’t need drawing, you just need a computer and we’ll just digipaint, and we’ll work from photographs, that’s okay you can work from photographs but all you’re doing is copying from a photograph, and you’re not understanding the lighting conditions, you’re not understanding the value range, you’re not understanding perspective. Can you tell whether that’s wrong in perspective? You can’t because you can’t draw in perspective. I was teaching the contour girls the other week, I showed them what perspective was and how perspective is drawn, told them how it works and placed them in an environment, I told them where the horizon line was and then said now draw it with the wrong hand in thirty seconds without looking at the paper. 99% of the people in that room drew perspective, because they didn’t think about it, they hadn’t got the no that’s wrong in their head. All they’d got was oh my god what am I supposed to be doing? I’ve seen something on the board, I’ll do something like it, and actually they were looking at the paper so they didn’t know what they were doing it right or not. So that shows that the 300 trillion neurons that we’ve just tried to develop as an education system, works, but it’s a different teaching method, it’s not lecture, delivery, it’s lecture, stop, talk, draw, move, paint, observe, it’s a constant ebb and flow.

take something from here and reproduce that visually as well as understanding it to achieve something and then we’re going to give you a grade which we are not even going to explain to you why we are giving you that grade, and when it is alien as that is
the subject, how are they supposed to know what grades they’ve got and be happy with it? Because they’ve never been taught it and because you’ve given them that grade and it’s not as good as they want it, mummy and daddy are going to be pleased because they’ve got 76.9% everything they’ve got three GCSEs or the national curriculum and other any getting thirty-five project anywhere to the parents saying there’s no critical analysis, there is no criticality in the work, then not develop this, they don’t understand perspective… So my biggest thing is making students be accountable for that body of work and allowing them to take ownership of their education and I think that’s slightly different. The students who come down here the ones that either really eager want that extra, once that no they really not great at this but want to have a go, once that have been preferred by lecturers who said go get a bit more help and support, but also ones that just want to have a go for no reason at all.

The fact we go through a series of processes and then say, right this week we’re going to Bradgate Park, we looked at rendering, we looked at value, we looked at measured drawing, we looked at perspective, when we get to Bradgate Park, what can you see? Lighting conditions, atmospheric perspective, so it’s about making those connections in those students minds…. It could be that the animators want to make an animation of what the park looks like, it may be that the game artists want to change it into a post-apocalyptic landscape… It may be that the girls in fashion really like the colours and the textures to work on something for a catwalk show, it doesn’t really matter, but is that understanding of making connections and making connections in the brain and that’s think that this place is about, that’s what my teaching is about, it’s about empowering and encouraging getting students to feel as though they are not making mistakes, or they are making mistakes that they’re happy to make mistakes, it’s about progression, make a mistake, play with it, see what happens, move forwards, have another go. This so drawing against digital drawing, using both to get an end result through graphics and through digital media is essential in today’s era. I think at the moment we are up to about 650 signatures on the register.

The group that I have got, that I teach and have regular people that turn up is 140, but they are nearly all Leicester media school students. I have open sessions for people to come and have some teaching from game art, animation, illustration, graphic design, graphic design in media, communication arts, MA in international film, BSc visual effects. Having a set curriculum wasn’t necessarily the right thing to have, because they were picking and choosing or they couldn’t make sessions or someone was ill or something else happened…. It then became that people came in and said I’m working on this project, can I have some help, where do I find this from, so it came very much more about bespoke… The MA international film that I had no idea would come across have been using the studio a lot, they are using photography they are using storyboarding to learn to draw, their learning focal points, spatial understanding, measurements, arabesques, they’ve looked at photography by Henry Cartier Bresson, we’ve looked at how the grid system is being used, and we’ve looked at the films of Ridley Scott and they are inspired by that, I have talked to them about classically trained painters and classically trained directors that use this, Stanley Kubrick, Ridley Scott, all
of these people that use these classical grid systems to create the best composition. Now they didn’t know about that,… And some of the lecturers that teach them didn’t know about that either which is not a problem because it’s not being taught in art schools, and I wasn’t taught it, I’ve stumbled across it later in life and I actually realise I’ve been using this system for my photographs and my paintings for twenty years, but now I can actually lay this grid over the top… For these guys I have used a curriculum which is exactly the same as the stuff for graphic design and the same curriculum as game art, but I’ve had to adapt it in a completely different way. It wouldn’t be week by week, this is what we’re going to do, it’s right, you’ve got this problem, we need to solve it on with solving it three drawing, drawing with light, through communication, through photography, through whatever method we confined to get the best possible composure and the scenes that are being set up.

There’s no assessments, there’s no feedback, there’s no marking, what’s not to love? Because it’s all about holistic, pastoral support.

We like this teaching method because it was laid-back and it wasn’t being marked, we felt very comfortable, Chris made things easy, there wasn’t a barrier between us, there was no hierarchy. So I think part of it is how drawing is taught but it also how drawing is perceived as well, and assessed, and it’s a minefield, when you go into assessments, how do you mark a drawing? Why does a drawing get 67.3%? And we’ve already said drawing, it’s a pass or fail, can you do it, yes or no, simple. But criteria need to be met, criteria that need to be marked and we need to have assessment boards and we need to give things grades, and I don’t think necessarily that is good for the student, for the simple fact that they see us as being the enemy, or us that judging them and they take it quite personally, and if you take that away and just constructive criticism and feedback they then turn around and go, oh yeah, that was quite a nice idea, and that’s very different.

When we did University, we had to a foundation course before we did a degree - that’s gone now. Scotland has a four-year art degree, you’ve got to do a four-year arts degree, in the UK it’s like, okay, we’ve just missed a year. Why should an English education be different to a Scottish education that you just take an extra year Of your degree? I’m not saying a foundation course is the be all and end all, because it needs to be a good foundation course to develop those skills, but it’s going back to the government who are putting quashes on creativity within schools, aren’t allowing the students to grow, aren’t allowing the students to develop essential skills in visual communication, and it doesn’t have to be drawing, it can be anything. I’ve had students in here today that have worked through drawing as a process, yesterday it was building film sets and props, it can be through photography.

With the national curriculum it’s can you do this? Yes, tick a box, can you do this? Yes, tick a box. The drawing is slightly different to that because you’re asking them to do a multitude of different things at the same time, it’s like learning to drive, your trying to work it feet, your trying to do your hands, your trying to check your mirrors and your
trying to do a series of different things, cognitive functions in the brain, and it’s not as simple as just drawing a straight line or reading a book…. The drawing side of stuff is something that feels alien to the students because it’s not being taught in school, arts are being marginalised in mainstream education.

I’ve got a young guy from communication arts, doesn’t really need to learn to draw superheroes and comic book heroes, but is a massive enthusiast about the stuff that’s going on and he comes down once a week, does some drawings, nothing to do with his course, nothing to do with Leicester media school drawing centre, it’s just him having fun, and over the time is learn to draw a sphere, so he can draw a globe, he’s learned to measure and draw, you know, count how many heads high particular character is. He’s begun to look at Andrew Loomis’s books and say I can see that the Herculean character in this comic is based on 8 ½, 9 ½ heads, I can see this is based on ten and half heads. All of a sudden he is now theoretically assessing comics by visually deconstructing them, and going that’s a cylinder, that’s a sphere, that’s a cube.

This is one of the reasons why I set this place up, because we were asking students to have fourteen years of art experience first, and they come to a degree and not having fourteen years art experience. They have fourteen years of experience around something to do with art, but not necessarily around drawing or creativity, or that kind of, the fundamental system of teaching. I guess what I’m saying is I’m trying to get people to see, not how to draw but to see, how to analyse. If I can teach you these fundamentals of what to observe and then once we understand what to observe, we can then recreate. It’s almost like using Bloom’s revised taxonomy, getting to that top key point, when you’ve done all these building blocks.

Now you’re going to draw him or her over going to draw a building block and the going to do it with this hand and were not going to look at the paper and you’ve got thirty seconds. Then you go right change hands, so you don’t give them time to think, and then I go round the room and praise everybody, look at this, look at the fluidity, look at the arabesques and the things I’ve just discussed with you on the board you’re applying and you haven’t even realised. Now you going to draw the person sat next to you, just draw the face without looking at the paper, with the opposite hand. Even if you can draw, I’ve changed your hand and you can’t do it, but what we’re analysing there is fluidity in the mark set of been produced and that you’ve got some kind of technical accuracy. I do that as an icebreaker for the first fifteen minutes…. But for a class I was just teaching from day one, blind contour, a quick lecture, get them to draw each other, get them out looking at perspective… A combination of different things, no lecture-based delivery, just combinations of different practices, encouragement, workshops that are fun, taking them out of their comfort zones slightly but allowing them to revert back to it, so the students who came in from the MA international film had never drawn before, so we don’t need to use pencils, we’ll use a camera. So in that time with me, they’ll be a series of different teaching methods, a series of different teaching practices and a series of different practical things that students do, so they never really sit still….
With the game art students, a lot of the stuff I’ve had back is like, I’ve learned more in twelve weeks than I have in fourteen years.

If you had a group of students who came down here that were averse to doing it, I don’t listen to the reasons of why not, it’s let’s look at why, let’s look at how, let’s have a go and when they can’t do that, we’ll take a photograph or we’ll trace it, will get it on the Cintiq so are constantly buying the teaching back to the level it needs to be taught at. I never run at the fastest pace but I never run at the slowest pace in either.

When a student is particularly scared if you sit them in front of a donkey or an easel or something else they are even more petrified because they’ve got a machine or device and they think they’re going to fall over, they think going to knock it over or something is going to happen to it and they’ve got a barrier between you and them. What I tend to doing here is give students a still life in front of each one of them to work with. Using a graphite stick or a pencil and a small sketchbook just to get people started is a good way because it’s a sketchbook that they keep, it’s a sketchbook that they use for progression, if we teach them on paper it gets left behind, it gets put under the bed…. They’ve got to be committed, I just turn round and go crack on with it, if you make a mistake it’s good, there’s going to be a positive within that. If the materials are cheap and throw away then students go, yeah, let’s have a go, let’s make a mistake, let’s not worry about it. So large sugar paper, teaching people to draw with movement and drawing with the arm and being confident about that is great, I think with the students that I’ve had in who are new to drawing completely going that big on that scale with that material is a bit daunting to start with, that’s only from my previous experience. For a second class, third class, fourth class, brilliant, for an intro, I like students have that in in a sketchbook or a journal, it doesn’t have to be expensive…Just working documents, it encourages them to be creative, it tells them that’s not precious, if you make a mistake that doesn’t matter.

We’ve got the teaching practice, the teaching and learning that goes on which is like that ebb and flow, you’ve then got the documentation of that teaching and learning, so the idea of the studio is that I don’t want to mark that as a body of work and go right, here’s your sketchbook, let me go through your sketchbook from start to finish, I’m quite happy for them to work on big paper, on small paper, on paint on canvas, whatever they want to do, but if they feel as though they’re not doing very well on that scale I’d quite like them to change, I’d quite like them to go to a bigger format, a smaller format, but I’d like them to document it, so the idea of a sketchbook to me is the fact that you can see progression. The progression of what’s going on in their own work, so I get my sketchbooks out and I show students that my sketchbooks aren’t precious in any way whatsoever…. It’s about getting people to evidence and reflect on what they’ve been doing so if they can evidence and reflect and feed forward through a sketchbook, through criticality, through creative thinking or whatever you want call it, that’s the way forward. It’s about documenting the learning processes, it doesn’t matter if it’s a learning journal or not, it’s kind of a learning journal and a learning contract for yourself, but it’s about being self-reflective on the stuff you’ve been doing.
I think that a maturity level that students are coming in that aren’t as articulate in visual acuity and immaturity because they haven’t had that room to grow yet, and I don’t think it’s their fault, but I think there’s also a culture of I’m paying nine grand a year, give me my degree, and I’m paying your wages, and that I don’t like. I’ve gone through the education system, the education system not working for me, me then going back to find my pathway in the education system to try and then make a difference to young people who are similar to me when I was younger. To then end up being a university lecturer to help students that need extra help and support and care, to then be given more students than I can cope with because it’s about stats and it’s about numbers, to then set this up and this is about that pastoral care and support that we’ve looked at and wanted for so long for art students.

If you don’t want to come to a studio that’s free, that doesn’t do marking, doesn’t do assessments, gives you constant feedback, constant positivity, an area to grow, fun projects, time to think, time to grow. If you as a student turn round go, no I don’t want that, I’ve kind of given up. It’s that kind of ethos, the ethic that everyone is welcome.… This doesn’t exist on its own, as an entity, it doesn’t exist as this is better than that or this is replacing this, it doesn’t do any of that at all, it’s about enhancing what already exists.… As you were talking about maturity levels both artistically and maturity as in a grown-up mature person, yes that’s changed over the years and we found that, I’ve found that it is possibly less than with had before. Maturity sounds a little bit patronising… I think it’s more about skill level and coping mechanisms to cope with situations, so it’s about giving them the right tools to make the right decisions and that’s been lost along the way, and those decisions come back, in my opinion, to creativity, come back to what happens if I do this, what happens if I do that? Criticality, thinking further, iterative design process, if I stick my hand in the fire, is it going to get hot? It’s to do with skill levels, it skill levels to do with things away from home skill levels to do with things outside of education.

Students are being asked to draw throughout the degree, what we should be saying is that students should be encouraged to be creative around the processes of design and I think could be done by a multitude of different things, I think drawing is one vessel, photography is another, I think using different ways to teach people how to see and teach people how to be creative with design processes, so I know people have been teaching drawing for kind of the first term and then saying the students can crack on that with that for the next three years and use it as a process, but students don’t see that as being part of the process, they see it as being, I’ve got to do that for that module and pass that module to get to this next bit, what does my lecturer want? Students will say that they’ve been taught this in the first year, but they can’t remember how to do it.
Appendix 7 - interviews with industry

Interview with Anonymous 2

LT: you start by giving me, for my records, that I could use, obviously with anonymous threats you know, your position and, little by if that’s okay.

AF: I work as a designer, a senior designer in a studio, and it’s mainly based in web design that I have a background of designing things from a very early age, and drawing as well. That could involve any kind of area really, so, corporate, marketing, sports and entertainment, sort of areas of design. It’s pretty much all 2-D communication design.

LT: and where did you train?

AF: I did a BTECH training course at an art and design college in Buckinghamshire and then I did a degree at the UEA in art and design at Ipswich and I specialised in corporate communications, illustration and graphic design.

LT: as a designer, how do you use ideation sketching? I’m not talking about presentation sketching, presentation level drawing, but when you have a brief, you have a concept that you have to work through, can you just explain how it works for you?

AF: it depends on the project but a good example is a website, you’re going to have to structure this website with information, so you start with the information and building blocks of what you’ve got and you would start sketching those elements into what we call a wireframe. That tends to be a hand drawn process at the very start, one because primarily it’s very quick and to because you can move things around and change things and start another one and if you try and do that in a programme which comes later, it can be a bit more labour-intensive, so we find that that, personally, I find that ideation is best started with sketching to get the ball rolling really, and that’s kind of the same with most projects I would say in the information design world. It starts with pen and paper.

LT: so it’s quick, it easy to move things around and you can start again, so what kind of, this is a really strange question, what kind of paper and materials to use at that stage?

AF: personally I tend to use a pen, like the liner pen and often if I’m wire framing I’ll use a gridded notepaper. It’s not lined, it has like little dots on it so you’ve got basically a grid of dots which helps you to sort of plot out the dimensions of a website or objects, which is quite good for what we do, because it’s a technical thing anyway and that helps to give it some form I suppose, because you can just go straight into a sketch but for a lot of people further down the line, it’s a little incomprehensible for some people, so we tend to use those to make the sketch a bit more sharp I suppose.

LT: to give it more structure?

AF: yeah, yeah. It’s essentially like an A5 or an A4 pad and it’s got, all of these lines and the vertical ones as well, but where they dissect they just have dots, there’s no lines, they are really faint and are quite useful for doing technical things.

LT: that would be quite useful for my students who don’t like drawing because they can’t make it look the way they want.
AF: it’s great because you can roughly measure and that’s important when you’re doing things like a website because it is a very technical thing, not like an architectural thing.

LT: do you ever have a lot to do with new graduates, take a new graduate designers at all? People have been graduated a couple of years?

AF: not at my current place, not so much, I don’t think we are really that big enough yet but companywide they do have that, they have run schemes like that and had students come through and started with the company and then move into various areas like web design, they learn how it works, yeah.

LT: is there any particular reason why?

AF: it’s more of a need, because are quite open to bringing designers who have graduated but it depends on the dynamic and whether we get the time to, for training, but it’s not in the against I know that much. Personally I quite like that because it’s nice to see the learning curve, but lately we’ve not done it, no.

LT: so when you’ve had graduates in the past, not just where you are now but, in the business generally, do they have shortfalls in certain skills, have you observed?

AF: I think the only one previously I’ve seen that may not apply today is we are going back a bit, is commercial awareness, and I totally understand that because when I graduated I probably wasn’t as aware of the industry in terms of how quickly things moved and the process of presenting work commercially and the process of feedback and things like that. It was, I think that area, I think in the past, but it’s one of the things you learn. I’ve noticed of late that younger designers are much more aware of that commercial element and I think that’s coming through because of the nature of the technology because they use a lot of it anyway and have grown up with it, and I think to some extent they are more commercially aware now than when I started, and it depends how switched on they are to those things as to how that designer falls into that, that’s massively important.

LT: okay, so when these new younger designers come into the industry, you’re talking about them being more commercially aware than they used to be, you didn’t think they had a great deal of awareness and that something they learn as they hit the ground. What about their manual ideation skills or their ideas their ability to communicate that early stage?

AF: again I can only really speak from the ones I know and it’s probably different for every person, because you get designers that come from different backgrounds and you get ones from an illustrative background like myself who are much more into the process of drawing, whereas as a whole kind of new designer I would say, comes from a much more technical background and is much more aware of the technologies and the programs and probably doesn’t draw as much and I think it’s like a different approach, yeah, they tend to think of the programs rather than draw something out.

LT: so when they are given a brief, they think, “okay how will the software do this?” How would that be interpreted by the software, without them going “oh, I’ve got this brilliant idea and I need to scribble it out.”

AF: I think that comes from your background, how you got into it originally, because some people just got into it purely via computers, yeah, there are varying approaches
LT: okay, which is the most effective? Is there a most effective way to work or not?

AF: it’s a difficult one really, because some people with programs can be really fast and do this idea quickly, but in terms of ideation the most effective way is to draw, to sketch it out, even if you’re not really good at sketching or you’re not traditionally trained as an artist or illustrator. I just think it’s much quicker and efficient to get those ideas down in a sketch format, just to get your mind thinking of what you are next going to put into a program.

LT: when you have someone working with a computer that way and someone working with a pad and pen, who kind of tends to get to the end of the process quicker? I know that’s probably a massive generalisation to be made is, but it is it an obvious thing or do they all get there at the same time just in slightly different ways?

AF: I think you’d have to see more designers and I’ve only had experience with a handful really. I think they generally all get to the same, because they have to, they all get to that point of same time but the process is different, whether the results are different as well, I’d say, and again it’s difficult one, because it’s what works for one designer. I’m not sure I can answer that.

LT: in terms of the quality of ideas, the levels of creativity in the solution that’s been ideated does drawing provide something different from computers, obviously it’s a different process, different mental process, a different physical process? Do computers offer a more creative solution or does the pen, pencil ideation on a pad, do they tend to be more creative, or again is it just depending on the individual design?

AF: I’m slightly biased, I would say you get a better idea out of starting with sketches because you’re not locked into the framework of the program. Perhaps you can rapidly move through iterations of an idea quicker than a computer, I think personally I could, and other designers may feel otherwise, the ones that work with programs, certainly. But again, personally, I try to spend as little time with the actual programs as I can, and more time drawing and thinking about ideas, because that can always be done, the program bits, most designers can do that, it’s getting the idea, the quality of the idea and, yeah, the creative side of it down and the solution really, yeah, it’s easier and quicker to do in sketching.

LT: you’ve got the computer, and the hand drawn stuff, do you ever employ, I mean in interiors and architecture you have professional computer visualisers, to render things, you pass on your design and they produce amazing walk-through. Do you ever have people in your industry will concentrate purely on the visualisation of the process not be involved in the design work?

AF: yeah, you definitely get that, I do know in the industry that’s quite a common thing, because I know at the moment there are quite big differences in a product designer and a branding agency, someone who is actually just a visual designer, I don’t say just but, is the visual designer who doesn’t do the strategic thinking behind an idea that executes the visuals for its, and that’s definitely, yeah, there’s a huge area in our industry for that. There are lots of very good agencies that do that as well.

LT: male designers, female designers. Are there any differences in the way that they go about working? Does one group were in a certain way more than others, or some more
confident?

AF: I don’t think so, we’ve had mixed design teams and I don’t think there’s really that much difference between them and how they get things done, it’s not really a gender thing.

LT: when you have younger people coming to the industry, what is there attitude to this hand drawn stuff, ideation?

AF: I think most of them appreciate it, for the strength that it brings and have an interest in it and a passion for it. I have known some to be a little bit afraid of it because they can’t conceive of themselves as somebody who can draw, but my answer to that is always it’s you don’t need to be someone that can paint amazing pictures, all you need to be able to do is doodle really, your ideas on paper.” It doesn’t have to be a masterpiece. And I think that’s the critical thing, that’s the only thing I’ve noticed about younger designers that don’t do drawing, they do actually appreciate it, but they feel it’s not something they do. I get drawings from technical programmers that are excellent for just showing you an idea, it’s rare, but it just goes to prove that.

LT: the ones that reckon they can’t draw and don’t want to feel they can’t do it, when actually put pen to paper, can they do it all can they really not do it?

AF: I’ve never come across a situation where they can’t do it.

LT: so would you say that their fears are unfounded? Because I’ve noticed a lot of this with undergraduates who say “I hate sketching, I’m so bad at it and everyone is going to take the mickey out of me in studio critiques” and stuff. And I’ve said “okay give me examples of what people have said and done when you’ve put your workup to show everyone,” and they’ve said “oh, nothing, no one’s ever said anything” but everyone is frightened of it.

AF: I think it’s a confidence thing, because I worked with the studio manager in New Zealand who was much older than the rest of us and he would sketch his ideas out and I mean, they weren’t anything particularly special, but it was the way he presented them, he was obviously quite confident at that, and that worked and I think that’s the thing, not being afraid of projecting. I should have brought some of my wireframes because with wire framing, essentially, what you’re drawing is boxes and information flows, but you drawing it and it doesn’t need to be, it is needs to be an informational flow, and are not masterpieces and most people can actually, like I was saying the programmers sometimes do them for me, they are not masterpieces but they are excellent pieces of, they’ve drawn it for one, but they’re not artists or illustrators, and it communicates everything that you need to see for information architecture. If it’s a really basic form of drawing and it’s essential, that’s really good place to start if you’ve got, if you’re struggling, you know with a grasp of drawing, don’t do anything complex you know just a wireframe with information, it’s a brilliant exercise, just putting the pen down, and eventually you’re going to design the thing in a program, but you want a rough, that’s common now in our industry.

LT: do you ever get clients who say “I’d like to see some sketches” as opposed to wireframe or a rendered page?

AF: it’s different in architecture because clients like to sit down someone whose, however badly and regardless of however good or bad you are.
AF: I think part of that is because we design a commercial agreement with them that we’re going to supply wireframes, we can give them their information architecture, but I think, generally it’s like an architectural blueprint.

LT: if you were to speak to higher education, what would you say to them with regards to what they teach and what would you like to see graduates, with? Obviously were talking about like the commercial stuff, is there stuff that higher education isn’t really doing for graduates?

AF: I think sometimes the creative process is missing a little bit. That Idea of being able to take an idea and work with it and spin other ideas off of it and put it to one side and move on to another idea, because is not always the first idea, it’s about having lots and lots and lots of ideas that are different and then looking at them and thinking which ones work best. I think maybe that dimension of thinking. I think there’s a danger that’s you get in, we see a lot in web design is that you get template syndrome, everything looks the same, everything is adhering to a commercial sort of framework and what we try to do is get away from that because you can’t stand out amongst the crowd by copying everyone else. You’ve got to be offering something a bit more unique. I can understand why designers, I mean, I’ve done it myself, why you pick safety, because you are on a deadline, you’ve only got so much time to do something, and you haven’t got the time to innovate and create, and it’s the same in the fashion industries and all of that. But we are seeing in a lot of our high-end industries, they don’t want that, they want something, because you’ve got all these start-ups, you know, trailblazing, they want something that’s going to put them out there above and beyond what their competitors are doing and I think you can’t do that by just going linear, you have to have that whole phase of kicking the ideas around and actually thinking visually how you’re going to do that. We are bringing more of that in now, but it’s a definite turning in terms of how things have been working.

LT: so when you work, do you have one-person, one brief, or do you sit and brainstorm in a group situation and everybody comes back or…

AF: we try a few things, what tends to happen though is, unfortunately, you get the brief, one person’s there, one person will come up with all the ideas, but where we’ve done projects in groups and we sit around and actually sketch stuff, they’ve been really successful and they have definitely produced the best creative and innovative results, yet sometimes you haven’t been able to pursue that because of commercial constraints, you know, they won’t put the time in or the money in to invest in that. In all honesty, in the last few years, there has been a shift in this way of thinking and you might’ve seen in the news like people like Air B n B who are a design decision led company who have got their own design department that is there for no other reason than to innovate and sit down and say “Right, how do we stand above the rest of the crowd?” They come up with all these ideas and it’s a group thing with their techs and all their creative people and they come up with this stuff and it’s brilliant because it’s working for them. Loads of them are doing it now, because I deal with the big ones and they are developing a whole new framework of design systems because they’re starting to push into a whole new area which is really interesting. It’s definitely a shift towards that design led thinking to make them stand out and it all starts with that, getting the ideas down on paper, a whole bunch of you, you know.
Interview with Tim Court

**Interviewer:** Okay and could you just to start with for the benefit of my tape recorder, could you just give me a brief bio.

**Tim:** You are just stopping and starting every second.

**Interviewer:** Okay I will carry on and just tell me if it disappears again. Could you just give me a brief background to yourself your specialism and your education and what you are doing now just so that I have a bit of info about yourself to start with if that's okay?

**Tim:** That's fine, basically I [unclear 0:51] and I specialize in woodwork [unclear] and A-Level shall we say and when it comes to finding a job, I only have one A-level which is woodwork so the only [unclear 1:12] and the only college that would except me Loughborough because I didn't have many A-Levels. And I did the certificate of Education and then the Bachelor of Education, specializing in Creative Design but obviously the sort of theoretical teaching side of it, and both in sociology and history of head. Thereafter at Loughborough it was mainly staff by ex-Woodwork teachers of the old school, so projects they would have prefer them to be chairs with certain tapers on the legs, French polish and mahogany you name it. So I having done so much woodwork at school I was more interested in perhaps concrete or Lycra or metal or what have you. So having done the design course I went sideways and did a post-grad MA at Leicester Polly. And then most of that was practical hands-on this is before the days of computers. And then I got a job in London with this company and I have been here ever since, so I have been here 36 odd years.

**Interviewer:** 36 years’ wow that's impressive.

**Tim:** They wouldn't give me a good reference to [unclear 2:53].

**Interviewer:** So you are just hanging around to annoy them yes I like that okay. Can I ask you about the organization it's PDD isn't it that you are with?

**Tim:** That's right.

**Interviewer:** And can I just ask about the attitude and the position of things like ideation sketching in the kind of work that you do within your company?

**Tim:** Okay ideation is critical to us and we actually actively run training courses for clients and staff members and what have you on a sort of public basis. And quite often that necessitate sort of quick sketching skills and things like that. So both from an internal review situation as a senior looking after projects and client, the ability to be able to sketch well is actually quite critical from our perspective. And we do have some
Workshop creative workshops where we have to supply sketchers who can actually sketch up the ideas instantly free and easy and presentable. And I agree with you it is becoming harder to find people who can do that, and equally we see the initial stages of a project where it's coming out with initial concepts that is traditionally done with a pencil and paper Free and Easy in the early stages, and applicable both to highly visual and perhaps consumer products to a very mechanical engineered type Gizmo. So we do have one or 2 Engineers here who can really sort of sketch exploded mechanisms and sort of you know we actually use Sketch out gears and pivot and axles and things like that, and that's equally as important as some of the sketching the glossy exterior of a product.

**Interviewer:** Sure okay, do you feel that your industry needs for sketching have changed over the years that you have been with PDD, or do you think they are as they were back then?

**Tim:** I don't think they have changed a great deal, I think probably because of the used now of computers then the quality of some sketching has probably gone up because obviously you can hand sketch and put it into illustrator or something like that and then you can then hand sit or add a few bits of shade and what have you, and that's probably improve some of the presentations but the need the basic need hasn't changed at all.

**Interviewer:** Sorry I am making a few notes as I go here, it's easier to look at those than go through a transcript when I need them in a hurry. Okay when you have graduates and I am assuming as an organisation you do take on fairly newly graduated designers from time to time, people in their sort of early age.

**Tim:** We do it all of the time but we also take on [unclear 6:50].

**Interviewer:** Okay like internships that kind of thing?

**Tim:** Yes.

**Interviewer:** Okay what kind of skills in terms of sketching ideation do they bring to you, compared with for example 30 years ago when you were fairly new with the organization, how has that changed?

**Tim:** Generally, [unclear 7:16] on a day-to-day basis and I think some of that is because they are now extremely conversant and comfortable with Cad and computers. And therefore I think a lot of them turn up here assuming that that's the mode of communication, whereas what we actually need above modes those sort of quickie and presentable hand sketching. And I think [unclear 7:52] that was mentioned that youngsters need to be able to sketch I can refer that to you but to my understanding the only college or university that we have come across that is actively promoting this and its Loughborough at the moment, which is great I mean that's great to hear. And I mean
obviously some people are naturally talented and some people struggle a little bit but a little bit of practice can you get you further.

**Interviewer:** Absolutely; so comparing the quality of students sketching the ideation sketching now to where it was 30 years ago has it declined?

**Tim:** Generally, I would say it's declined although now and again you get some really good ones but overall I think it's declined, it's declined in importance and it's declined in competence, and a lot of young [unclear 9:05] don't see the need?

**Interviewer:** Absolutely, okay so with graduates if you do take a graduate on who perhaps is struggling slightly and isn't particularly strong with their sketching skills. Have they got methods or things that they do to compensate for that shortfall, are there other tools that they use and obviously you were talking about computers but do they use other types of communications like model making or to cover up that inability to communicate?

**Tim:** Certainly one or 2 will but quite often the youngsters are actually reluctant to get their hands dirty. And some of them will come here and we have got a relatively well equipped workshop, and some of the machines are somewhat intimidating. So we do have to be careful [unclear 10:06] normal duty of care that they don't use machines and they are not trained or skilled to use but we would push them, and get them as confident as possible on the basic machines anyway, so that we are the type of company where if there are questions about a design that can be proven by making a quick mark up, carving a bit of foam or painting something or mechanism make it 10 times full size and use drawing pins as pivot and things like that, we would tend to do that as quickly as possible but I guess one of the difficulties is the likes of myself who is not Cad literate but understand what Cad can do for us. I quite was at ease nipping into the workshop and drilling a few holes and sawing a piece of wood, so I would refer to that sort of side to prove something, whereas quite a lot of the youngsters who are Cad literate will try and prove it on a screen.

**Interviewer:** Right and is that successful or as successful as doing it manually in the workshop?

**Tim:** I think it's [unclear 11:33] there is a balance and there are times when making a mock-up will tell you the answers quickly and might even be easier to work out the geometry compared to doing it on the screen. The [unclear 11:53] we have here is that when we say Cad there is 2D Cad and 3D Cad, and the younger generation is totally verse to using 2D Cad. 2D Cad is like a non-smoking swear word, because there are 2 directions of or 2 direction of thought to the youngsters, 2D is an output from the 3D. To the older generation you start with 2D thinking and you put it into 3D and then you output the final drawings or what have you in 2D but we would be tempted to sort of
prove a critical section or work out how big this [unclear 12:55] and will be tempted to
go straight onto 3D which is time-consuming and time-wasting.

Interviewer: Right okay. What kind of info do you as an organisation get involved with
these sort of younger graduates? For example, they do lack confidence with the drawing
skills and they can't think on paper. What kind of things do you do or do you do
anything and obviously you've showed them the workshops and you get them to do that
kind of thing, but are there any things that you do or you could suggest that would help
students young graduates to get over this fear or you know dislike of the manual
processes?

Tim: I guess more exposure is one in Creative workshops we tend to get
done relatively quickly and I think that's quite beneficial in some circles because the fast
and furious with 2 or 3 people participating often leads to better answers than somebody
stewing in a corner by themselves which is A somewhat lonely and [unclear 14:54] and
B you get bug down and neither the wrong solution or not the bad solution or something
that just blatantly doesn't work and you can’t see wood for trees.

Interviewer: Yes, absolutely gosh we have all been there it’s horrible. Okay so people
kind of taking an idea and passing it on to somebody else to kind of develop further is
something that you feel that can kind of get beyond that sort of anxiety?

Tim: Yes, and I think as well but you just keep looking at it you know keep introducing
and being realistic we wouldn't be sarcastic or take the piss if somebody isn't a natural
drawing person, but you know there may be ways around things [unclear 15:50] if you
can't draw a straight line or what have you, use [unclear 15:56] paper use tracing paper
overlays tracing papers is something that I think they think Mary Berry is the only
person who uses, but you know sort of lay things as a sandwich so that you can see
different pivot and different areas is good. And I think to be able to take a basic sketch
that you have done, and most of them will then have the ability to put it into Photoshops
or something like that and Elevate outline of the sketches so that helps them achieve
more at the end anyway.

Interviewer: This is a bit of a strange questions but bear with me, I've discovered that
there are potentially some gender and cultural issues around sketching inhibition
through doing my interviews. Have you noticed anything of that nature I mean I
presume?

Tim: No I have never seen anything cultural, I've seen I mean my wife is an artist my
elder daughter is naturally quite talented and my younger daughter who is a
physiotherapist still draw and she's in her thirties, still draw trees like lollipops and
people like lollipop and nothing up here tells her how to draw, and that's been exactly
the same from primary school to now so don't think that [unclear 17:47] but apart from
that I haven't seen anything culturally and we have come across a lot of different cultures gender ages and [unclear 18:0]. And what tends to happen if we get client creative Workshop people who aren't creative and don't talk to their colleagues and what have you sometimes becomes really animated because they are in a different environment and they just get on with it. And some people will see it as an opportunity to have their say and start scribbling in subtlety which is good.

**Interviewer:** Okay right if you have somebody who is sketch inhibited and there is a problem with that, in terms of what they are able to reproduce or develop. In what kind of ways can it affect your organization?

**Tim:** Well it will make if we've given some project to do and need [unclear 18:58] initial concept if time is pressing it's actually quite difficult to suddenly bring somebody else in towards the end to toss up the sketches or what-have-you because they lose the understanding of project. So in some respect the ideal person for us is somebody who is highly talented from the creative side and can really draw and sketch. And the same person is totally Cad literate [unclear 19:44] can go and make a model and one or 2 of those but we come across them from time to time and they are brilliant because they are all Rounder’s because I think one of the difference is now compared to 30 years ago is because of the different ranges of skills or task that we have to do if we are not careful you do your little bit and have to hand it to somebody else to do their bit and hand it to somebody else to present it or put it into 3D Cad, and all the way down the line it's got sort of scheduling issues and you lose some of the flavour of what you were doing in the first place.

**Interviewer:** Yes, almost like Chinese Whispers the kind of sort of losing the meaning as you are going through because you're passing it through so many people interesting okay. With your client and you're talking about doing clients Workshop, with regards to things like ideations sketching do you get feedback from clients or requests from clients, to see hand drawn sketches to see hand drawn ideation in the early stages of design?

**Tim:** Yes, I think we have one or 2 clients who if for the very first sketches if we put them all into sort of a computer-based presentation Style, that some of them would see that as we have been wasting time you know presenting it all or putting it into Cad when really they want flexibility and they want different ideas they want the modes of them. And why have we spent time presenting just show me sketches and things like that. If we are having an internal brainstorm we often invite the clients anyway so they can [unclear 21:55] and sort of go through the Journey with us.

**Interviewer:** Okay and will they actually sit with a designer and talk through ideas which the designer is then visualizing at the time or sketching out at the time, is that something that happens very often or not?
**Tim:** Sometimes it will happen and sometimes it does happen in Workshop situation but the other thing that we do a lot is of course when we are with a [unclear 22:31] especially something slightly more technical [22:38] I will scribble something on the wall and will act as a catalyst with another designer in the room or the client and we [unclear 22:50] all afternoon on the Whiteboard and taking pictures of it on iPhone so that we can [23:03] because we have never really intended to use Interactive whiteboards here but with cameras than you can scribble something photograph it rub it out and modify it and re-photograph it. So for some of our customers then we might spend all afternoon prepare or scribbling on the wall for clients as well as for staff.

**Interviewer:** Alright interesting okay. Do you feel as somebody in the industry if you look at what Higher Education is given graduates? Do you feel that there are skills or things that they are failing to Address and failing to provide students with when you get to see them as they come out as Junior designers?

**Tim:** I think a little bit more of the basics would be interesting, so An obviously in the context of this interview then you know drawing in presentation skills would be good, basic understanding of processes and materials would be good and then also presentation skills in terms of technical drawing is also quite Limited I think because there is obviously BS8888 at which we technically have to draw to, but it's a little bit like in the old days we struggled getting youngsters to actually do neat drawings on the drawing board, so they couldn't print neatly and they couldn't spell but that was General in those days, they certainly couldn't get arrowheads to line up they couldn't get corners of lines to join, and then along came AutoCAD which meant we could all then start releasing good quality professional drawing so that sort of even the lumps out a little bit, but because the younger generation aren't used to doing the old style drawings and what have you, then they are a little bit lightweight in terms of understanding and what the drawing does or what is has to convey or how it should be laid out and what have you because they were never used to doing it by hand, and the computer would be an extension of your hand basically if you are doing a technical drawing.

**Interviewer:** Yes, it's interesting when you set a drawing board every line you put down have a lot of thought behind it and has a purpose so you don't put it down, but I see what you mean with Cad it's easy to click and drag and create something without putting the thought in behind it.

**Tim:** Yes, and I think a lot of youngsters do, the same youngsters even people in their thirties if they are very competent with 3D Cad they are more keen to generate something, and the senior guys will come along and go well that won't work because of such and such, and they go okay then and they can press the delete button and you think well that's another hour wasted. Whereas you know a little bit of background work or technical research first would have said that won't work so don't do it and let's get on to something else. So I think the computers allow people to waste quite a lot of time, certain individual another individual it allows them to raise their heads because they are
highly competent and can [unclear 27:18] it out but some individuals will go round and round the houses and do quantity rather than quality.

**Interviewer:** Yes, and you can kind of hide behind it to some degree very easily. Okay do you feel the general alignment between higher education for designers and what industry requires is kind of meeting in the middle, or do you think there is any kind of misalignment you know are there things that industry needs that just aren't being met. And obviously you're talking about the basic skills which is an [unclear 27:58] problem but is there anything else that you can cross your mind over at all?

**Tim:** I suppose most of the people who come out of Education don't understand the good design in the industry is the best idea that you can come up with in any available time [28:35] and ideally it has got to be good enough to [28:44] the customer so we do have a little bit of we have a bit of Disconnect at times when somebody will, some of the youngsters are quite Keen to monitor the budget and will say well I was allocated 10 hours to do this, and I have done 10 hours’ worth of work therefore this is the output therefore you must be happy with it. Of course if we say well we are not happy with that then it keeps going because we have got a business to run and we must have a happy customer. And if you are used to staying well I thought it was a 10-hour job and I have done 10 hours what's wrong with the output, that's a difficult one to get over and it's a little bit almost to the accountants and what have you, he said well you have reported 20 hours why have you done 30 and so we didn't come up with the answer in the 20 hours, it's not a fixed science this business.

**Interviewer:** Okay right let me just check my questions here I think that I am getting to the end of them now. I think I've covered most of the things that I need to ask you about I've got lots of notes Here which is good. I think that's it I think that I have covered everything now that I am going through this. That's brilliant thank you for answering my question I am sorry some of them seemed a bit bizarre.

**Tim:** I am used to this research Market don't worry about that.

**Interviewer:** Yes, I live in a strange Bubble at the moment my own bizarre world that I have created, okay I shall switch off the recording now.
Interview with Jan Faulkner

Interviewer: If you could just start by telling me [unclear] who you are and what your position is within your organization and what your organization does, just so that I have a little bit of background as to what you are about and what you do here if that's okay?

Jan: My name is Jan Faulkner, I am currently the director and major shareholder at Haley Sharpe Design. I have been here for 27 years I started out in the company as a detail designer on the drawing boards back in the good old days before computers and before Cad. And learned stock and trade in terms of how things were put together and how things were built, and over the years became a little bit of a visualizer and representing those design freehand. I did a lot of my drafting in freehand on graph paper, I didn't even use the parallel motion it was all full size one to one drawings straight onto paper, and so quite a unique process but that backgrounding of understanding how things go together, and then sort of having the confidence in the line and the way that we draw allow me to visualize a little bit. And then from the visualizing came a little bit of salesman I kind of have to explain the design to the client, and eventually moves on to become head of the concepts the head of the concept design, around a team of visualizers whose Prime skills were drawing both freehand and on the computers using a kind of combination of both skills set. And then probably about 6 years ago I became a director but still hold on dearly to the drawing skills, which even now I go to clients and draw in front of them and much to their amazement it's a little bit of a show and tell but it gives them huge confidence and it shows them what we are thinking it communicates very immediately what I am thinking and what's inside of my head, because when they talk I am sure that they see pictures of what they are trying to describe but if I can describe what I am seeing it gets on the table the same page very, very quickly. And as director of a design company I think that's a hugely importantly that designers can communicate to their clients as quickly and as clearly as possible. What it is that they are seeing how they think that they can Envision the solution or the design ideas, I have no hang-ups as to how good or bad drawing skills are I just think it's that ability to communicate. So we have in-house visualizers who can artistically draw way better than me and most of the other designers, they are artists and they own right. So we use all of the tools that are available to us to communicate that design, from me sitting across the table and scribbling and drawing to eventually creating 3D computer renders of interiors or freehand artistic renderings of Interiors, it's whatever is in the toolbox that gets you there, and that bit I understand from a college or junior or young designer perspective but sometime they feel a computer is a quick way of getting there to show what they are thinking. My only problem being is I actually I am a strong believer that when we are drawing we are thinking and we are making cognitive decisions and I think the computer short cuts that a lot. So what I've see is a lot of kids who can actually really model well a bad design because it's not thought through, and we have people like that here they are amazing visualizers but give them a blank piece of paper not a clue. So this ability to think as we draw and explore ideas it's huge, and that's very stereotypically kind of what happened but it's not the total Norm you know
we do have people who are very skilled in both areas and who do think and who do model and stuff but the majority of the people when they come to college straight to Sketch Up. I can do 3D studio so I am like great what do you like as a designer, well yes I can visualize but well no that's not designing that's a different process, and they don't get it. So last year we offered the whole campaign as part of their reviews of the staff, where do you feel that you are weak what skill-sets do you really think you need sort of building on or defending. I am getting usual responses however I want to learn 3D studio [unclear 4:47] I want to learn Sketch Up but there was at least half dozen people who'd said that my drawing skills I need to be able to draw better, quicker and communicate design with a Flair. And I think you know we see a lot of it in design magazines. [Two person speaking at once 5:04]. It's just sort of that ability to think and Design and you know I just wonder sometime whether or not you know, that thought process is something that they are lack and so when they came back to us and say we want to learn some more design skills we basically are like why, and it was a lot of other things that would have come out of that conversation and some of it is like oh when we do a project, I run a Sketchbook a big Sketchbook massive one. And so what happens is they are visual notes so I am not drawing design I am creating a language of thinking of what's going through my head you know because I do think visually. And then when these eventually come back down to a brief some of them are more cartoon like and they got a mix of wood they are half diagram just starting to plan. 9 out of 10 client say can we have the Sketchbook, and I also think that the genius sees it as power in the meetings, because the clients are always looking [unclear 06:26] what's the solution what's it like, and they have seen that from a business point of view huge that you know it was like yes great thanks I've took a whole bunch of notes and I will come back to you in 3 or 4 days and hopefully we got it right it doesn't always whoosh.

**Interviewer:** Yes, it kind of runs out steam doesn't it okay.

**Jan:** So this idea of being able to sort of and this is quite an old Sketchbook but it's one of my favourite it's just sort of [unclear 6:51]. And I cheat because a lot of these will be done in pencils in the meetings and then I will work up in them after the meeting and then I will stick things in the Sketchbook so that they can become scrapbooks of ideas, but they communicate and I've just got a lot on my desk, they communicate ideas and some of these are briefs to the design team internally.

**Interviewer:** So the amount of information contained on that one page is vast really?

**Jan:** It is huge and then it's just you get it you know, and some of these things I mean they built this and we've got photograph of [unclear 7:30] collection in Smithsonian in Washington DC, and it looks like that which is really kind of scary and comforting you know.
**Interviewer:** But isn't it great that you started off in that position in that Sketchbook with a sketch and developed it in that book, and really it's virtually buildable at that point you obviously have got your dimensions and things.

**Jan:** What I need to do now for people I need to talk to them about you know if they bring their folder in and they got all of the Cad drawing and I am like great okay I didn't get there what was the journey, what was your thought process who did you take with you, what's the process in relations to the client you see because all we sell is time you know, 8 hours a day to make some money and hopefully enjoy myself. And if I waste the time I am not going to make any money so commercially we are dead in the water. So as quickly as you can make a decision or communicate an idea and you can [unclear 8:43] it's usually important because the more time you waste exploring things the less viable you'll become as a business as an individual. So when I see a lot of people struggling with blank piece of paper I feel quite sorry for them that either they can't [unclear 9:06] their thoughts they are looking very Catalyst something to help them to sort of springboard their design. And from a created position we all have our good days and bad days so not every day is a beautiful creative flow sometimes you know there is pressure of work or budget or other things happening so you've got that commerciality side of it, but I also [unclear 9:27] struggle and I've seen people who have gone to a college or learn design and I am thinking you should have been thought about thinking through what makes a good design you know [unclear 9:41] with designs drawing for manufacture, it doesn't say any of that style or beautiful or aesthetic it just says design make something work, which I think is the essence of design it has to work you know whatever his brief is and his functions. So I had a whole bunch of sort of things about the ability to draw and the power it gives us [unclear 10:11] but I mean I would say that, I mean one of the guys who just say hello today, he used to be head of design his father's museum in London he is now the current head of concepts he draws just like me. [unclear 10:25] who got a 3D Studio in Mountain he draws like me. And we just have that level of communication and there are a few other designers that are really good designer but there are some that just cannot. [Unclear 10:40] but they are like 12-year-old drawings there is no confidence, and somebody draws it and it's a weak drawing I feel sorry for them because as designers we lived for the Aesthetics and we live for the communication we live for problem solving, and if you can't communicate that in a clear and precise way other than spending a few weeks modelling something up, which explains the space but it isn't a design to me. I will take you around the studio and have a look.

**Interviewer:** That would be really good Thank you so much.

**Jan:** Sure you can meet a few people and see where computers do come into play, some of the render that we do for final projects they are stunning.

**Interviewer:** And you have guys who specialize and visualizers as opposed to the designer doing the whole thing?
Jan: Many of them can draw.

Interviewer: I have noticed that certainly in interiors the guy I work for he is a visualizer he's designing because he hates thinking like a designer he likes the software, and the stuff he does is awesome I could never have the patience to sit down and learn that kind of thing.

Jan: But also moving on slightly I mean when I went to Art School to learn about the history you know golden section Etc. And after I even talked to the visualizers you know they are so literal at times Well we are just doing our job now. This is for a Hindu Heritage Centre and these are the visual briefs and on their own. The reason that I am showing you these is because in a minute I am going to show you where we're at with the visuals when we are upstairs. This is a huge screen [unclear 12:30] the screen in the space they want to represent the vast years of their Hindu scriptures, and they've write thousands and thousands of them and they are written in [unclear 12:452 Scripts and you would need a guru to translate them and guide you through with bits of the pages or the scriptures are useful to you. So it's not like the Bible where you can read it and it's like no you know all of these documents and I am a guru and I will tell you this page and that page and what you should agree so you need a guru. The analogy was being that we were going to use a tree and the leaves on the tree, because the tree is a part of God it's very symbolic but all of the leaves look the same but they are not actually the same, so when that tree grows it has a central core which Hinduism [unclear 13:19] brilliant and lovely symbolism it's a local tree and it's very, very popular so you move towards the space. [unclear] so I brief the guys upstairs and the young lady that involved and she came down and she showed them the visual and I am like, she said it's not right and I said that's because the composition of it is wrong I said the under sheet has got this massive wall lift up your view from here and it's there [unclear 13:49] if I am standing there but all of the views that have convey the scale are big we are standing back and that was the intent of the visual that we needed to convey the scale not the technicality where the screens are [unclear 14:06] so you lost intent so it's like a painting you have to create the painting and the portion of where your [unclear] work so it all happens in this third but without this it is meaningless. And then she crops some photos of the tree and I'm like okay so what's wrong with it and she says it doesn't work, because you have not understood visually how to create the right image [unclear 14:30] but also as a fill conveys to transition so I said you know well it goes in as if you are right in the middle of the tree with all of the leaves that you generally put in. and then we will see an arising of every single tree, and she said oh right yes so she said what do you see in your head.

Interviewer: But she doesn't see that is so strange.

Jan: And I am like how can you not see something like that. So even as a designer a detailed twenty-odd years ago, the reason that I could do the detail is that I could
understand where the method and the wood touch I could see things in 3D but we storyboard films now we are currently dealing with 6 million dollars of film for one project and we are storyboarding it internally, on the same bases that we actually won't be able to walk through the space or through the film you know for the same reasons I need to convey what the visitors going to see, so when we go and pitch for jobs I often say that as well because I am having the worst visitors. And you guys say what do I care and I want to see this space through the visitor eyes, and I can see it and I can draw it and I can convey it to the visualizers and to the client, and to technical designers to an architect to an engineer, and I just don't understand how you cannot do that and again to be able to see it and draw it. [Unclear 16:00] Maybe that's a good thing maybe not everybody can do that and that's what makes us directors or visualizers or there are layers of where you fit into the process so I think you know, if everybody did what I did then there would be nobody left to do the visuals or nobody left to do the other bits of the design process but I still look for people who can communicate. And we did some clever drawing when you see this, there is a rational and that explain to me the visualizing team and what happened in this space, this represents the fact that you make decision in everyday life so these are actually video screen and it's one film not repeated it's as if you've projected.

**Interviewer:** Oh its parts of one film?

**Jan:** Yes, so as things move across they would move from this one to that one to this one. And then occasionally one of these would come up with a message, and I show them some Exhibits and Alex is a graphic designer upstairs, as he is finishing the visual and I just looked at it and I went oh my God that is beautiful, but the imagination and that's what maybe we cannot do just the imagination. And yet one of his Hobbies is taking large-scale action figures and photographing them and then photo shopping them into real movie scenes it's technically stunning.

**Interviewer:** Right but it has got to be there first for him to do something with?

**Jan:** Somebody has got to give him [unclear 17:40] absolutely basaltic at the moment [unclear] and you can spell it phonetically because [unclear] send me i.e. and he writes about cognitive thought process and what it is to be creative.

**Interviewer:** Right can you spell his name again; give it another go?

**Jan:** Okay well Micaiah chick sent me i.e.

**Interviewer:** I will find it somehow.

**Jan:** And it writes back creativity and it is the one thing that separate us from the animals, from everything from the chimp that recognizes a stick and maybe [unclear 18:18] in an ant ness it will come out. To brain surgeons engineer poets, it's the ability
to think laterally or connect associated ideas so that when we listen to a client giving us a brief, we see oh there is brick wall where someone else might think well what kind of bricks [unclear 18:41] and it's just that I don't know imagination.

**Interviewer:** I've got Master students that I am teaching their fashion textiles, and I am asking them to work through a concert from a words give them a words to start with and I want to see 5 visuals in January based on something that you have designed for that concept. They have all turned up this week with photographs that they have downloaded from the internet stock in their Sketchbooks, nobody has actually lifted up a pencil they have all done that and that's the scary bit they do that and they see something that they like and then they try and make it and that's the [unclear 19:19]

**Jan:** Basically I mean I don't know what other people's backgrounds are like in terms of skill set. I remember being 11 plus at school and getting an A-Plus failing miserably for going to the secondary comprehensive School I never went to Grammar School, but my 11-plus art exam and I have always been able to draw and it has just been one of those things that even as a kid.

**Interviewer:** And does that drawing that ability to draw does it all start with those pictures in your head?

**Jan:** Yes.

**Interviewer:** It's always stuff going on in your head [unclear]?

**Jan:** Oh yes but I don't know whether or not how far the seed falls from the tree. [unclear 20:07] my dad turned down a scholarship to go to Art School, my son is a filmmaker and my daughter is beautician makeup artist.

**Interviewer:** Right so they are creative something from nothing it's still there.

**Jan:** But it's all part of the way you were brought up, because you know I was always painting with my dad and we drew and we made things and you know we made go karts [unclear 20:34] got rescue bikes and that has skips and made bikes up and you know it was just all hands-on and all imagination.

**Interviewer:** That's kind of lacking more now because everything is presented to younger people and kids in a finer way they don't have to make something from nothing, their lives are kind of very fabricated.

**Jan:** It is and even now we do some crazy stuff. I don't know whether it's the way [unclear] and the way they grow and what they do but we have a fantastic time with the
kids growing up because they always used to come to my house. And we used to have design sessions and day sessions when the new film came out we had it. So we always had a house full of kids which was very rewarding but even now they come back but a couple of years back, but even now we have family and friend’s events that are unique [2 person speaking 21:52]. So this creative process is once a year we do a [unclear] party, so the kids I asked them what they wanted to do in design stuff so that was my daughter she wanted the [unclear] so it took me 2 hours’ ping-pong ball PPA [unclear 22:25] her boyfriend's name is Marco big piece of [unclear] to his head, but what I am saying is just daily things that we do as a family [unclear 22:48].

**Interviewer:** But isn't it lovely to be like that?

**Jan:** [Unclear] even though you know designing museums interiors and tractions and rides and theme park stuff and you know and it's over but distance and I think [unclear 23:03] going back to basic which is what the drawing is about and it's that getting back to basic [unclear] just try to illustrate what that is, but sometime it is rewarded I started using an iPod like this year.

**Interviewer:** Right and for sketching what are you using, A4 format I like it.

**Jan:** So at the moment I've got a couple of programs that I am running at the moment but my notes plus for me is huge because what I do is I am on a conference call so I am sort of drawing straight into the iPod.

**Interviewer:** Do you use some sort of stylist?

**Jan:** I use Apple the pen which I have to say is probably the best stylist the pressure and it's soft, it doesn't have the same resistance as on paper but it just allows me to do a whole bunch of stuff.

**Interviewer:** And this what's it called, it's an Apple notebook or it's just a notebook function?

**Jan:** Yes, you know I was talking with some architect about a project in Oklahoma and we were in Seattle at the coffee shop and I was just drawing, [unclear 24:33] you know just for the matrix but we are communicating, they are not as sophisticated as drawings as you know complete interior but the ability to just think [unclear]. So I have moved into the digital age but I still use a Sketchbook.

**Interviewer:** Okay so it's a combination of 2?

**Jan:** Yes, [unclear 24:59] is I convert this to a PDF and send it to the client and they are like.
Interviewer: Immediately so happy.

Jan: Even me when I photograph with my iPhone and send them because it's just easily done.

Interviewer: It's so lovely doing that isn't it. Right has the need for sketching with an industry over the time period you have been working in the industry has it changed over time, are there different needs for use for different purposes?

Jan: I think that you know we mentioned earlier the fact that you know Cad and Sketch Up are becoming more and more industry tools, and 20 years ago Cad was purely into the mind of Engineers and architects. And I think now that we have got digital design tools they all seem to be the only solution perhaps, and as I say there is a place for them absolutely so I think that the pressure is off drawing because there are other ways of expressing yourself. And sometimes a nice computer or a nice touch pad or whatever is quite easy. [Unclear] graphic designer, graphic designer was one of the first few things that we said, you design something and it [unclear 26:30] and we applicate and we still do and sort of printing stuff out full size and sticking it on the wall, because a graphic designer on the screen they will look at it and [unclear] it's that big and I am like really [unclear] so again scale taking stuff off the screen making Cad models getting back to basics is still a huge it has huge values. When we designed the Royal Ontario Museums which Nicky was involved in actually in Toronto. [Unclear 27:10] extension to the existing 1978 building so huge Crystal that sits over the 1958 building but still it was so complicated [unclear] had to build a Cad model of it because all of the engineering renders [unclear] 2D, nobody could get their heads around it and it had to be built and it was an 8 foot high model, because sometimes I could say use the right tools for the job but now we have an extended tool box of 3D visioning of iPod and there is less pressure but I still think there is more thinking time. And some of that might be to do with the fact that you make a mistake with the drawing pad, it's harder you can't make the mistakes not hand writing your letter.

Interviewer: You will never get rid of that you can't just rip the page out because then you feel bad don't you it's kind of there is funny isn't it.

Jan: So that whole thing that sort of taking your time care I think is really important as well it matters, Bill Haley who is the founder who optimizes every line that counts, because he said to as I was drawing 20 odd years ago [unclear 28:36] you don't know well what did you draw, and so again it's all part of this.

Interviewer: Consider every line does tell a story doesn't it every line in there has a purpose.
Jan: Anyway so we have got designers now who are able to draw because I think they appreciate that it's a thought process, that it gives them power in front of the clients to be able to get back to Old School kind of thinking.

Interviewer: Do you get clients who specifically come to you and ask to sit with you during the ideation that initial stage?

Jan: Not initially but when they see stuff happening in meetings.

Interviewer: Right it then peaks their interests and then they are kind of drawn in like.

Jan: Yes, it is a case of that I think I mean I do sometime go to interviews and just say look we are not [unclear 29:34] and in a drawing I have no idea how we can bend it so it's not just ideas but it is something that [unclear] the Sketchbooks and say if you employ me this is what you get, what you are getting is 20 odd years of Construction industry knowledge and the ability to see Concepts and ideas and spaces.

Interviewer: And what is their response to you turning up with sketch pads and pens and doing that?

Jan: That's quite interested actually some people they look at me sort of like from the Medieval Times.

Interviewer: Yes, it is a funny thing isn't it.

Jan: It is and as I say that's why sometimes you don't want to push it too much because the value is hard for a lot of people to I think realize or understand until you've actually been in that Workshop process, we've just been employed [unclear 30:39] and it's coming to a close potentially where it is structural drawings now, but they asked us to stay 2 months in the [unclear 30:47] for the common spaces and they actually specifically asked for the 5 of us that could because in the meeting they wanted us to put [unclear] on the walls so they could visually map what was happening then which is kind of different. So I think some people that just does they once have to be involved in the process to see the value because to be honest they are just a bunch of pretty pictures you know you just don't get it some of them are.

Interviewer: Most people who don't design can't really draw in anyway.

Jan: Usually illiterate. And I am still surprised that's a [unclear] that's a window.

Interviewer: Yes, but which way am I looking at it.
Jan: Me inside of the building it's a plan I don't know I just think that again I've just employed somebody [unclear 31:52] and she joins us on the 22nd. And the first thing that hit me was her ability to draw [unclear] Cad skills and the visualizing skills. But I normally get drugged into meetings because nobody else can draw so I am sitting there drawing stuff, and then oh can you develop this can you develop that [unclear] I don't know maybe in 10 years’ time when I am not doing this or whatever somebody else might have a different opinion of it all, because I will [unclear 32:35] the designers have said can we have drawing classes in fact we have just written to Nicky to say is there anybody on your stuff that would be willing to get involved, and we do a barrage of things either they could come in lecture or they can come [unclear] and I can probably sit and talk to people but the boss [unclear 33:07].

Interviewer: And that is quite frightening?

Jan: Yes, it's true so I mean to be able to have somebody come in who can sort of communicate, drawings for the design that's what we were saying is to use [unclear] how do you represent a human form. [Unclear 33:30] and I am like this is the stuff given 1500 it's across it's a 2-point perspective, [unclear] we worked into in Photoshop but there are some lines above the high level that are coming up in the distance and I am like.

Interviewer: How does that happen on computer because I thought that did all of the thinking for?

Jan: That's why we put Photoshop in afterwards but they have to explain to us to see that, now if I put it away from me [unclear 34:08]. If it does that, that means it's actually pointing down and she's like does it matter, does it matter.

Interviewer: Oh no, she must die that's interesting.

Jan: But well if it doesn't matter why are you bother even doing it but you ask me to so what I am asking you it doesn't matter, I mean that's how you think you didn't think about what you just said you just said it, is that how you draw you don't think about what you draw you just did it but there is no.

Interviewer: There is no understanding of the process and what's in the head to start with and how you than get it out using those rules. So with your sort of new graduate Junior people who turn up looking with their portfolios, what do their portfolios generally contain you are talking about the plethora of digital images. Do they bring Sketchbooks or Do they hide those from you?

Jan: Rarely do they bring Sketchbooks; they bring the Sketchbooks because normally they could as simple as that you know. So a couple of years back we employed about 6 graduates and 4 are still with us, and the 2 that left they just couldn't be bothered.
**Interviewer:** Really.

**Jan:** Drawing a brief construction of a Switchboard with condos dropping into the Switchboard. Every conduit was drawn a different width and I was like why are they different widths, and he said well I just put a note that they are [unclear 35:47] conduit, why didn't you make them the same well it doesn't matter and I am like wow okay.

**Interviewer:** That's scary.

**Jan:** It is because visually it matters a lot because it just looks really nice. So what do their folders look like genius [unclear 36:04] they are very proud of their technical drawings and their plans and stuff, and what they don't show me is the process, it's like what led you there what do you mean. I said because that's the technical drawing that you are showing me make up %15 of the end product, and I said being honest we have a technical department [unclear 36:28] that draw most of us on Cad whether 3D 2D whatever but I am just assuming that the first %80 is intelligence and sort of the ability to communicate those ideas to the client and to the design team. That's what gets us through any percent of the job Clarity of vision and Clarity of thinking and communicating that. Now I don't care how you do that if you are going to do that using Sketch Up that's cool we use it huge amount I mean massively. We do walk-through and flight-through especially with the American clients they love Sketch Up because allows us to space plan, and then they migrate that into 3D Cad [unclear 37:15] building process sorted but as I say it's a bad idea if it's not thought out. I think Sketch Up is about as close as people are getting to this, when I see what the kids do on Sketch Up nowadays the only problem being is that a lot of for Middle Eastern clients hate Sketch Up.

**Interviewer:** Why is that, does it got credit card European aesthetic or American aesthetic?

**Jan:** They are only interested in the things that look really cool. I've just gone through a whole painful process with a job in Abu Dhabi, and they wanted me involved in the design process so I showed them some sketches [unclear 38:02] these renders are terrible this is terrible why are you showing us this rubbish. I was like this is how we work on volume metrics so we put the object in a space to see how the [00:38:14] should be and the spaces around it, we are not interested in this where is the design I am like that is the design process, it's not the design process we need the visual.

**Interviewer:** They want to see the shiny that kind of realistic.

**Jan:** And so what we've ended up doing is pulling back the team and say here, we're doing basic model rendered and with a lot of Photoshop work and as we came up the design approve. And now they are saying fantastic now we can build it and I am like no
you have got to sense of visuals. They give you a sense of what the space should be but you still haven't told us what the objects are and you still haven't signed off on budget [unclear 38:51] and then where the media is coming from you know there is a lot of work to do [unclear 38:55] in Sketch Up we are not interested just delivered that, I am like okay different processed, but that on the day [unclear] your sketch and where are the sketches, they love the artistry and I am not interested in the process.

**Interviewer:** Right so it's the final image that sells it and they like that bit because they like to see how clever you are to get to that bit that's interesting isn't it.

**Jan:** It is very scary.

**Interviewer:** Yes, interesting points in history on a single page, history of the world in one Sketchbook so much in one book. So they don't have the sketching skills and they don't have the thinking skills potentially some of them, they don't go through the process and they don't want to show you how they go through the process.

**Jan:** [Unclear 40:06] designs fall in 2 categories of just thinking right if it Abu Dhabi clients they were interesting and they say what is the design language what is the design rationale, I said I don't know I haven't got a clue as to what colours you are using and what the textures are exactly all sorts of photos over it. Ceramics because we like these colours and I am like okay are they relevant to the [unclear 40:26] what do you mean, I said well this is about sort of moving across the desert to the coast so we are looking at sort [unclear 40:40] is it the colour of the Terracotta or is it the colour of the blanket and I am like why is that important, I say because if you want a design language I would like to say that if this point is deep red this is the red that represent the crush berries that actually made the dye for the blanket and they are like. [unclear 40:56] is a design range as much it is that everything will be at 30 degrees or everything will be 69 proportions. I would like to have a rationale for why the designs are the way they are, and sometimes it's just a gut feelings of visuals response in the space [unclear 41:12] because you are more about the visual is it colour or is it you know [unclear] I have got to visually and emotionally engaged with the imagery, or is it that there is a lovely rationale that they want to colour pallet that every colour relates to the fresh fig or the colour of a certain stone or terracotta or [unclear 41:35] and they are getting it and I walk around the side 2 weeks ago and saw a [unclear] I suppose it's pieces of bedrock with lumps of coral put on top of it. And I photograph it and she is like why are you photographing rubbish, and I said the rubbish is quite interesting and I said because the coral stone is what this [unclear 41:56] is made out of the bedrock is exposed is the reason it's built here because that is the only place that you could build it, and I say that's the foundation of this whole project, I say that's the foundation for your project for the designing, in fact we are going to call it Foundation and she is like that's beautiful, and I am like so that's one photograph in the rubbish and she said have you drawn it and I said of course. So we've got these starters now which we are trying to develop and they took it so literal and it's like where is the [unclear 42:30] and it's like no the starter
is the design language and if you start bringing Corals Stone and Bedrock it's going to look cartoon like, and they are like but that's what you drew I am like yes it was an idea it was a foundation and now we are going to build on that Foundation. And now we are taking them on a journey and they kind of getting it slowly but surely. [unclear 42:48] but it comes back to imagination as well just some of these things that I sometimes wonder I don't know I mean I love TV and film [unclear] gaming and stuff but not masses the kids do you know the Xbox and PS4 and stuff [unclear 43:11] everywhere you know the new Blade Runner movie came out and I was there.

**Interviewer:** I haven't seen it yet, is it good everyone says it's too long it's fine is it I will give it a go.

**Jan:** I am a little bit sad because you know I have celebrated the first film so I am telling my son about it, he is 26 now so he's like [unclear 43:33] you've got to see it really the second movie is a good standard one but if you see the first movie you will understand a lot more. So him and his girlfriend watch the first movie and he is like that was crap [unclear 43:47] is terrible pieces is missing out of the store line I said that was the whole thing about Blade Runner of his age, and I've got the design books out [unclear 43:58] so he went to Kingston College and told an old story. I said the fact that it had pieces missing from it is because he wanted to engage the audience with questions like well I wonder if .[Unclear 44:15] in so many different ways a lot of the scenes and the model [unclear] that was a 6-foot high model it was a huge model it filled the room it was lit and there was real smoke [unclear] and I said as a filmmaker you must appreciate it you have got to appreciate it, he said I do but it's still rubbish compared to the one new film was beautiful so we really like the new film. And I was like interesting so all of the other techniques didn't I mean I didn't appreciate maybe at the time but it was obvious times in the early eighties, he was brilliant [unclear 44:52] changed a lot of the things and now he has moved on and they have done it again but for a new audience. I don't know I doubt it I really do doubt it I have got kids here who are sort of 25 and 26 who can draw like this, and they are then on Fast Trucking because they have the [unclear] the client loves them.

**Interviewer:** Are they hard to find.

**Jan:** Yes.

**Interviewer:** What sort of proportion of applicants make you go oh they can draw?

**Jan:** Less than %5, if you wanted to tell students how to get a job and I would almost put good money on this that any designer the kid sees because 9 times out of 10 if somebody is going to be 30 plus interviewing them, they will have a lot of respect for somebody who can draw and think at the same time, and you will guarantee to get them through the door [unclear 45:52] it's more Cads stuff and it's more visualizing so really 2 penny I can get that from agencies so that uniqueness.
**Interviewer:** And when you have sort of youngsters coming in that are kind of lacking in the drawing skills, obviously they have got Cad and they've got Sketch Up and they got all of these other things that they can kind of lean. Do they have other ways of kind of compensating for shortfalls, do they talk too much and not have enough to say?

**Jan:** The personality side is huge when you are interviewing somebody in terms of not [unclear 46:34] confident but do you know how I talked about being able to understand a non-packer design, we've got visualizer here at the moment who wants to be a designer in fact his portfolio was really strong graphic in 3D, but he can't actually present his design and again I just wonder [unclear]. So he said what's inside of your head and he said a complete jungle because I think it is I don't think that you can think in a straight line, I don't think you can unpack a rational and understand where you need to keep checking about until they will drop into place or close, because you have done some stunning work for us but it's been a very different path to what I would have gone through, and that potentially cost us a lot of money again, but the result is great.

**Interviewer:** So he perhaps a bit of sporadic or something if he's really good at the techy stuff.

**Jan:** I think it's quite a lot like it's an old borderline kind of one thing or another, and you may have designers that make can't spell including me you know there's a couple though but [unclear 47:46] really good at drawing Interactives and working with storyboards and films and then straight to the nuts and bolts, but it's almost that you can't put him out in the public domain because he scary he just doesn't communicate particularly well but somewhere some part of his brain really function beautifully and that beautiful drawings.

**Interviewer:** It's kind of freakish isn't it when you go out to an agency and everyone's got their only little domain and what they are good at and everything else about them it's a little bit scary.

**Jan:** When we employ a couple of the designer's it's simple things like okay there is one guy Paul he was working on a lighting design company, but things that was in his folder was he would actually come up with a lot of photographs and things that he built. I am talking about a complete bar in Nottingham he build the bar and cast the concrete, hallowed it sections out [unclear 48:44] wielded and he done the Cad drawing and I am like do you sketch and he went no I just get an idea use the [unclear 48:51] portion and then just get on with it and I am like awesome, your lines does things differently and now he's learnt Sketch Up and he is communicating but he does actually he was horrible and he is quite better [unclear 49:07] and I am like do you think they still go together like this, how does would [unclear 49:12] so he does think and he does sketch. [unclear].
**Interviewer**: Well that's good.

**Jan**: Are you finding useful because I am just rambling?

**Interviewer**: This is really useful this is probably the most useful so far. Right so you are kind of getting them to do some life drawing, I am just kind of going through my list of things that I need to know about. Do you hear your young designer graduates people coming, do you hear about what they feel about sketching and manual techniques, do they sort of say oh that's kind of crop and rubbish and that's outdated I don't need to do that are there something's that you kind of heard?

**Jan**: No I suppose sometimes they will put stuff forward thinking and I might be kind of not dismissive but it's funny but you perhaps you shouldn't [unclear 50:04] because it's not but if they got sketching it's good but when you talk about sketching, do you sketch and stuff they say no I always do it on a computer. And there is not really a dialogue because by that time I would be either disengage, [unclear] you are just another [unclear] in the mill. I mean we do employ people who don't sketch because as I say there is all sorts of niches to be filled into the design process and if everybody thought they were you know we have enough problems with prima donnas and people who got egos and stuff like that in a building like this.

**Interviewer**: This is a bit of a strange question I am looking at whether there is a connection between issues of gender and culture on people's desire and ability to sketch. I know you have obviously seen students from different part of the world at Leicester at DNA you do there are patterns.

**Jan**: We speak 14 languages in this building, Italian [unclear] German and Brazilian Spanish a little bit of Arabic a French designer from Paris she is really good sketching [unclear] hand skills but she desperately wants to learn her hand skills. So yes about 14 languages and I would say currently the makeup of that company is probably %6 woman.

**Interviewer**: Interesting.

**Jan**: But I would also say that the majority of the Sketchers are man.

**Interviewer**: Right is there an issue of confidence around man I only ask that because that's come up in other things that I have picked up on?
Jan: The French girl she's so [unclear 52:00] I think actually that is a very interesting point to take because our industry still has one foot in the Victoria neighbour in terms of construction industry very much so and we see that quite a lot.

Interviewer: I was the lady designer when I first started working in exhibitions, I wasn't a designer I was the lady they are sending the lady designer.

Jan: I don't know or maybe I am not being sensitive to that I am just trying to think.

Interviewer: Yes, I know [unclear 52:34] people can't go I have not thought about it.

Jan: We've got decision maker through this company we have some very, very strong decision makers. One of them we just promoted to senior design manager she started out as a receptionist and she went to De Montfort actually and she's now pretty much [unclear 52:54] but she says he's not a designer but I trust her implicitly to brief the design team because she is so good. And I think it might depend on who you talk to [unclear 53:13]. So maybe I do dominate conversation with people in the room male or female I don't know I feel a little bit comfortable in there. I try to do my best and let everybody have a voice because I think no idea is a bad idea until it is proven, and I might be would have challenged my preconceptions because teaching me new tricks is going to be bloody hard, but I am not always right I've been married too long to realize that I will never right all of the time. I've got kids that tell me that I am an idiot you have just got to realize that I just have a bigger portfolio of experience to dip into, I have been lucky enough to travel the world with clients and whenever I go I see Museum and I see Art Gallery so I see things and they stick with me, and so the younger kids don't have the experience sometimes to dip into that level of it you know. Their inspiration for ideas and creativity might be a shallow pond and it doesn't mean that they are less creative it just means they don't have that.

Interviewer: [Unclear]

Jan: [Unclear] Go to stuff which is probably where the internet comes in because they think that they can see an image and it's like it's cool. We have the Spanish girl Monica she is actually doing a part-time degree at De Montfort at the moment and I didn't agree, I said that she should do it if she wants to do it but I think it's the detriment of her career here because she is never ready to do anything, but she has an amazing sense of static we had put mood board together, it's almost like Monica like Monica has got to do it because she has such an amazing sense of style and it's a huge strength she sees it as a pain [unclear 55:01] it's just too beautiful and strong you know I don't know how you do the way you get them from but.

Interviewer: Is she good with colour.
Jan: Yes.

Interviewer: A Female seems to be better with colour a sense of style that you can't quite put your finger on and men seems to be more confident at putting lines on paper, it's kind of the risk taking thing off I am going to put a line on a piece of paper, it could be horribly wrong but I don't care I am going to do it anyway. Women are a little bit more [unclear 55:31]. From what I've picked up so far I am just wondering if you could?

Jan: I think it's a strong definition [2 person speaking 55:56]. So no I must admit I think again it's probably got more to do with the General confidence and abilities whether or not they feel that they have a voice. Now when you see Alex and what he has done with his visual he is not afraid of colour as a graphic designer he is [unclear]. Yes, I suppose I do I don't know [unclear 56:45] in theatre and set design costume design and Lighting.

Interviewer: Right because I am thinking that you are good with colour.

Jan: Well I do have a lot of black tops I don't like to make a lot of decisions personally. I think it is interesting [unclear 57:09] graphic designer went to St Martin's and very, very intelligent a senior graphic designer who have been with us for many. I often say that his graphic designer looks like somebody that just falling over the paint job because they are like wow that's a hell of a colour, and it's normally a rationality but he is not afraid of colour whether it is a good use of colour. Style I think that's the biggest thing that we've got. As you say designers fall into 2 categories, we've got the technical designers who can make it stand up and make sure it functions and then you have got the people or the visionary the French word the Europeans [unclear] stenographer it create that Visual reaction that when you walk into a space it's like wow that's what we miss you know and I think a lot of people who can draw do that that's what Monica wants to do, she has put herself down for Life drawing classes Sketch Up classes, she's definitely a designer she [unclear] a degree in Fine Art and work at the Victoria Albert Museum as a [unclear 58:16] she is not a designer but she does have an amazing sense of aesthetic with colour.

Interviewer: Okay, now with the kind of decline in and willingness to sketch amongst younger designer particularly. How does that affect your business and your organization either operationally from an HR point of view, things like [unclear 58:51] because they can't hack it and obviously not wanting to know any details of your business but financially do you have to kind of think I can't afford to keep this sort of non-sketcher on or it's having an impact?

Jan: No it doesn't only work that way you know let's say we are just looking for juniors so we have got a whole bunch of people coming out of colleges and stuff and we need something at a junior level, it's a bit like many things in life it's not a clean cut in terms of what exactly we're looking for that makes the grade you know if I see a portfolio and
it is strong on hand skills I am saying that I want to see this person and see what makes them tick but I also look through the folder and go do you know what I mean they've got a whole allergies in their only little sections they've got a good grade they've got a 2 or 1 so they obviously are sort of reasonable good at what they do their portfolio is interesting in terms of the presentation skill you know they catch my eyes they are kind of clumpy or sophisticated. And also it might sound dumb but the way that they lay out their [unclear 1:00:02] some are over laboured some are so sophisticated the minimalist that there is nothing to them, but the use of fonts and just clever little things and topography and having folders look as if it is important, so it is difficult to sum up what gets you an interview [unclear 1:00:20] the presentation skill and you get a good [unclear] with a good General skill of Education in terms of being able to think you know I think is really important. And if he comes over as neat and not sort of too Scrappy that's good, and precise I don't like to see, brought my portfolio in and I am like oh my God, now to show you the 6 pieces that Define you, so you know something that sort of been [unclear 1:00:52] executive summary that says this is who I am I would love to meet and show you more stuff cool great that would be really good. A level of sophistication and the visualizing whether it's Cad or, I see a lot of stuff we run or we giving involved in giving some sort of prizes to design students to The Graduate and we pick what we think is the best graduates and some of that we look at the file degree shows and go don't get it [unclear 1:01:24] nothing about the job would I get it does it communicate instantly [unclear 1:01:30] don't get it and it does engage me to want to ask more questions and that's what portfolio should do for them. I want to know more about this person I don't need to know everything just wanted to be inspired and think wow that looks beautiful or it is Well presented it is not cluttered it is not messy and it's not clunky a lot of the visuals are quite poor so I am looking for good skills rounded skills. It's difficult really I change my cards [unclear 1:02:09] my God you change your card what makes you choose that it is so different.

**Interviewer:** The kind of relationship that you have with De Montfort or your knowledge of what students are doing within that environment. If you had a chance to say to a university or a higher education generally how they could improve what they are doing to reduce the sketch ambition and reluctance and reluctant. Are there things that you would like to see students being taught or engaged in that they are possibly not?

**Jan:** I need to go back to probably some of the stuff I was saying earlier about, the process what got you to this solution or this desire. And now whether or not that's a scrapbook or a Sketchbook with [unclear 1:02:57] but that thinking process as I say it is usually important to me and I don't think our industry and the clients that you can take a brief really brief and taking apart and convey what that brief means to you in some way shape or form to The Wider team and to the sales team and to the client or whatever and understand. And it doesn't have to be strong rationale sometimes it's just [unclear 1:03:24] and it's a good start or sometimes it's the colour of things and it's a good start
so what were the building blocks that took you on that Journey. So with the intellectual side of what we do in terms of design is huge I suppose that might be more to do with interpreting the design you know a lot of our subjects have got very important with messages. This Hindu Centre is to convey the history and the reasoning of Hinduism to one hundred thousand people a day.

**Interviewer**: That's a little bit scary.

**Jan**: [Unclear 1:04:00] because 80% of the population can't they can't read so we [unclear] and finally he says I get where you're coming from but never say that again, fair enough. So I would like to and I am assuming that when college I mean I have done a little bit of lecture but it was more like review [unclear 1:04:31] back at materials because once this looks great I would like to just tell it to you as a person to figure out what got you there, so I am assuming that they give them briefs now intimate and credits or guidance to figure out how they are doing because managing time in hugely important to us as a business so as I say sometime it's nothing, rush deadlines late night [unclear 1:05:02] but that will never change everywhere is like that so I would like to sort of [unclear] that thought process a little bit more to say don't be afraid to explore quickly but the rational in terms of the space or the Sketch Up but also the emotional Journey but don't just download [unclear 1:05:22]. Some of the things that we do it's quite interesting I will take Sketch Up drawing that people have done and work into them with markers and white-out [unclear 1:05:39] and chalk. And say well the drawing has got a texture to it and says you can't do that in a Sketch Up can you and I am like no. So again going back to this Hands-On kind of getting your hands dirty in terms of just saying alright I understand that the space is great we create [unclear 1:05:59] for visual because that's what this has done this has convey [unclear 1:06:02] and what we are trying to do I've got holographic figures Avatars walking with you as you go through this tunnel with the creation of the universe being projected [unclear 1:06:12] on a concrete tunnel that reflects [unclear] but the visual and I wonder if I've got any.

**Interviewer**: Yes, I would love to see it, it sounds really good I just like the [unlearn] of light concept it's just so cool.

**Jan**: It's so simple because it gives you that level of audience.

**Interviewer**: And sorry where is this being designed for?

**Jan**: In Northern India.

**Interviewer**: Right so literacy is not really a thing anyway so it's all experiential.

**Jan**: I am going to show you something this is what I did for a client in Abu Dhabi this is different but we took the Sketch Up and I just drew over it and went that's it done that's the design language, and I am like okay interesting. I can't find the visual to be
honest I don't know what the guys have done with it, oh hold on, Alex just sent me I will just download it, it will take 2 minutes he just sent me a version of this so this is the marketplace where I should. Now I've said to the guys is what they can do is they can strip out those big vertical columns in Photoshop and insert a movie so we can actually. But what I was explaining to them is [unclear 1:07:48] I said you need to have the continuity between a couple of these that person is quite obviously talking to that person but this might be a different image it doesn't matter but these read together as one so if you don't have that.

**Interviewer:** Yes, it's not going to tell a story and it's not making sense. Yes, it is the process the process is what [unclear] they try and instil it but students are very good at skirting hiding up and not bringing things in.

**Jan:** You want to tell them that you know if you want a job in interior design in the museum design normally in terms of client they are in the top %5 of them, because they are creators and they are academics they are bright people. And you walk in and go oh it looks great and it looks wonderful they just look at you. And you don't have the intellect or the [unclear] you don't understand what it is that I am trying to do. So good education it doesn't matter what subject because I think by the time you done you degree [unclear 1:09:22].

**Interviewer:** Oh God yes you've kind of crossed over various times haven't you. Can you think of any methods that you would like to see underground engage in to reduce sketching abolition, you know enforced drawing classes?

**Jan:** Well not even enforce drawing classes the design [unclear 1:09:41] really push it and it's not speed dating you've got to come up with an idea and you've all got these white snow cards postcards, and it's like you are talking and then you have to explain what you took away from the conversation so it's not design you have just got to think right, what was that space what was this like but they really work and they want [unclear] which that's good [1:10:06] these represent a concept a high-level concept.

**Interviewer:** Right and that was done at speed was it the speed.

**Jan:** That was one day one day and we got 5 subject, and it was everything from [unclear] to the middle of the museum what are the anchor designs. And then we discuss and there was slideshows and people bought movies, they had time to prepare and think what it was but they couldn't [unclear 1:10:34] to put anything on the walls and they had to draw it, so some with diagrams and we had even the architect's drawings are [unclear 1:10:45]

**Interviewer:** Architects are really bad at drawing.
**Jan:** But I think they fall into the same category in terms of design so you've got some that will draw conceptually and others that are absolutely terrible.

**Interviewer:** But it all means something so it's that language isn't it?

**Jan:** Yes, but the design [01:11:09] I don't know what you would call them because [unclear] is we have lots of people coming in like engineers and clients coming in to try and figure out what to feed into the process. I think if you have a design of no it seems to competitive put people off but if you are generally brainstorming a session and I don't know how [unclear 1:11:30] and it almost might be that you won't take somebody else's brief. Say if you've got a brief in the room and I don't know how to brief work so if you say you've got a class of 30 kids and there isn't one brief coming into them [unclear 1:11:48] you split them up into something like bring them into 3 groups [unclear] or somebody come and say alright guys what is this job but I might draw for the first 15 minutes but I might not because [unclear 1:12:00] but I might come around and say what are we going to talk about is this and in a 10 minute or 15 minute sessions you need to put down on these either keywords or diagrams anything that communicates what you are thinking, not a visual this is the abolition, the very fact that they are drawing or represent their thoughts I think that's important if they are representing their thoughts it's not a huge lead then for them to actually try and draw it because they get put off by it's not in perspective and it can't be scale and I am getting judged on my drawing ability, and not my thinking and we could separate those that might be an interesting exercise it wouldn't be a huge [unclear].

**Interviewer:** What I do with some of my guys is we do as our mental imagery exercise, so we all sit around the table and we all got a sheet of paper, and shut their eyes it's like a party game and they like party games because students like that kind of thing. So you get them sort of Imagine an environment or something that they design something in their minds and you talk them through it so in their mind it's very detailed, then they have to put it down very quickly on a sheet of paper and they will pass it to the left so there is no sort of judgment attached to what I have done here because it is going to be passed on. So taking someone else's work and then adding to it it's taking away that oh I've done this oh my God everyone is going to look at it because you just do it and pass it on quickly that's quite an interesting thing, [unclear] they are kind of oh God that stress is kind of lifting but that disappears.

**Jan:** You find anybody [unclear]

**Interviewer:** I wish I had more like that, that would be great to teach. Right I think I've covered everything that I need to cover actually that's brilliant thank you very much.

Audio Finish
Interview with Jeff Kindleysides

Interviewer: Lovely right, your organization here can you just to start with give me a quick background and bio of yourself and your organization, just so I have a bit of point of reference to start with if that's okay?

Jeff: Okay so my background is I wanted to be a fine artist, and in particular I like John Piper I don't know whether you know the artist John Piper.

Interviewer: I've heard of John Piper I am trying to picture what he has done.

Jeff: He did a lot of things on churches with John Benjamin and all those folks, but anyway that's irrelevant maybe anyway but part of that was the screen print element of it that I really loved. So I left school and didn't go to university but I went into an apprenticeship in prentice to learn screen print because that's kind of what I wanted to do. And in the process of learning the screen print I got into their artwork Studio, because I wanted to learn how to do colour separation and things, and at the same time once I started that they were like alright this person is useful. So I ended up in the studio at the prentice but not for very long because I convinced them to send me to [unclear 1:29] to the graphic schools and I met somebody there, it must have been about 17. I met somebody there that was working in a big design studio and they said that they were looking for junior so I applied for this job and then I got the job.

Interviewer: Right and what kind of design was that at the time?

Jeff: That was graphic design and kind of, well it was working for [unclear 1:55] the big retailer the [unclear] actually in those days they had a massive Design Studio, and the head of the design studio with David [unclear] and he was a lot older than me and so we decided very early around when I was about 22.

Interviewer: For that age that's quite Brave isn't it.

Jeff: I know it is yes, and that's what we did but we were really successful very quickly and we started working with retails and then we started working with brands, and Levi's in particular at that stage. And we did all of the kind of Graphics work and amazing photographic work and we went around the world doing all of this stuff. And then they asked us to look at a store design [unclear 2:52] shop and we designed the store and honestly is just revolutionary because we were quite young and naive, and we designed it in a way that we thought was the way that you would do it for brands and it was on Regent Street, and it was like globally the centre of focus and we just completely exploded at that point and we just took off. And we were working with loads of people [unclear 3:20] Rose Royce Bentley you name it we started to get all of this work.

Interviewer: So did they come to you it sounds like you didn't have to go out pitching and struggling?

Jeff: This store just became a global phenomenon.

Interviewer: How brilliant.
Jeff: And then we built the business over the years, so what we do now is we are a brand specialist so we've got strategy and insights we do a lot of strategic work for brands and we do a lot of insight work. And then we design brand things for brand everything from digital Graphics but we are particularly known for our retailing and all of those things that we do. Globally really you know we are one of the best companies in the world at that stuff by every measure of the walls.

Interviewer: That's quite nice that you are in Little Old Leicestershire as well that is rather nice.

Jeff: That's where I was born, but in the London still though it's lovely and we have got some really amazing people in there.

Interviewer: So how is the work distribution are separated between the 2 offices, do you have clients in London and you just service them from a London office?

Jeff: I mean most of our clients are international anyway so it doesn't really matter it's more a thing of you know we've had graduates come here, and then they want to go and work in London so we set up a London office [unclear 4:37] that's how it started about 10 years ago and that's grown and then people have left and gone to work in Japan as well, come back and then they go and work in London, and that's how it started really but it's really useful for us because you know the people that are flying into Britain doesn't necessarily want to come up here, other than look at a workshop and if we are building sometimes we build full scale shops.

Interviewer: Because as you say your manufacturing is here it, so you've got a Factory out there that's what it's about?

Jeff: Yes.

Interviewer: It's a big whole set up isn't it.

Jeff: It's huge and then all the kind of things that we do for Brands where we might be designing their products, so that's kind of where it starts. And then David [unclear] retired 12 years ago so it is my business it's just the one and that is me, and we have got about 120 people here.

Interviewer: That's a lot to be running on your own.

Jeff: It is yes I've got directors. So that's the backgrounds but the way that we approach our work is very art driven, the spirit that I create within this company is about art that's why we've got, if you were to go into that Workshop it's like an artist studio, it's massive and there is 20 [unclear 6:17] but some of them are ex furniture designers who are making these things, and it's run on a you know if we were [unclear 6:22] we wouldn't be allowed to do that I just invest in it you know because I think anybody that's learning to design needs to understand one, how to draw and which will come unto very important. And 2 how things are made and how do you learn how things are made if
you can't see it everyday. And that's why we've got it because it makes everybody a better designers commercially and in every other sense.

**Interviewer:** So do you send your designers your [unclear 6:51] do they gets them out to go and observe?

**Jeff:** [Unclear] there everyday doing stuff and when we are making stuff because we are drawing it up and then we you know, and sometimes we go straight from a really loose catch that's kind of the way I work or I might put up a Cad model really quickly, and then we will get somebody to knock something up particularly if it's something that you say and it's a principle of how we might want to get somebody to shop and change Behavior or merchandise product, or look at how materials work together or you know a principal of [unclear 7:33] or whatever it might be we will knock something out. And sometimes we will build a full shop, so recently we did the [unclear 7:42] original store and [unclear] which opened last week but we built literally a full-scale version of it in the workshop where [unclear 7:48] came over from Germany over a period of 6 months, working on this thing with us from the product point of view and we design the store and the environment and then we will on it it's a very [unclear] thing and that kind of mind-set comes from my Origins and my wanting to be an artist, so I still write and I still draw and all of that stuff which I think helps the process of it all.

**Interviewer:** What was their perception of having a real life size Creation in there, compared with being shown you know an animated walkthrough rendering because that's usually what we sell things on isn't it it's a slick rendering.

**Jeff:** Sometimes it's not enough and it's the same thing that we will come on to you know some of these things are governed by your knowledge of the software and not your desire and how you do things. And so you know the fact that was the big idea of what we got there was, we saw this installation art installation of I can't remember his name now a sculpture anyway, who balanced these massive sheets of Steel in an environment just one piece like that, and so we were thinking well that's such a beautiful thing wouldn't it be really lovely to just do you know the [unclear 9:25] just to have something as singular as that but to do it you would have to see it and feel it, and at the same time it was like well how would you display the product then. So I said to them, well I went to the workshop and he just got me a wedge and I thought well wedge is probably one of the earliest forms of kind of connecting 2 things together you know whatever it is you're kind of doing that thing. And I was saying well the friction alone by doing that and the slot is probably all we need, and so we got that piece cut and we got this wedge and then we are going to turn it to Germany and I say well this is the idea, it's like you've got that and you bang that in and then you kind of, and they were like amazing that's great. So in order to show how beautiful this thing was going to work in an environment where it was lit and everything else, we did visualize it and I could show you that they are amazing you know renders but to see the scale of it balancing in a space it is completely.

**Interviewer:** Because you seem to have a very kind of fine line between what is really an installation, and the merchandising the retail bit it's an interesting kind of Junction really isn't it between the 2 sort of art I guess merchandising is an art.
Jeff: And I think that you start with you can't ignore all of the components when you are designing something, or else you just over [unclear 11:09] and you are going to have one too many and it is not working, so yes that's a good starting point [unclear 11:19] when I used to do the Levi's we have got to find a different way of doing this.

Interviewer: Yes, and so much more rewarding to be Hands-On than the dry you know where do I start on my computer with an idea or something.

Jeff: Sometimes it's the same thing that you talked about with sketching really and drawing, and I would say it's the same with how you might sketch with 3-dimensional items real 3 dimensional things, because certain Deputy is kind of everything in design, and I think they subconscious and the hand and the mind are capable of spontaneous things that are restricted by people who can't draw, because they go well I would like to have that shape but it will take me an hour to work out how am I going to do that so I will compromise with this shape. And I so you know everybody has to draw I won't have it because I think that thing of saying that it wants to be like this is far more media than saying I imagine it being a kind of a shape like that but I stretched the access on that and I pulled this one, and you lose the plot really on that. And it's the same with designing environment you know I have often, I work with designer Joe here we have worked together for a long time and we tend to work on kind of older projects [unclear 13:09] and all the other kinds of things that we do we do them together that's how we work, so he is a genius and he can draw but he does all the other stuff like nobody else well. And we were looking at this project for one of the foot wear brand that we are working with, very high-end and somebody else in the business was working on it and we were looking at the stuff stilted it's not really working at all, anyway we went off and I kind of went downstairs and the materials thing down there and kind of library. [unclear 13:52] that was describing but it was a different shape and it was made out of [unclear 14:01] it was just kind of in a rubbish box really. And I was saying what we really need is you know you need a shiny surface, so this is a way of sketching in 3D so it's a bit of prospect there to put that down. And it would be nice if you had a kind of an illuminated wall behind it and that was [unclear 14:20] like that and just put that on the window, and then the main feature would be this do you know that photographic that book it was done in the Victorian time photographic thing of horses jumping on people walking, what's it called

Interviewer: With the little images?

Jeff: Yes, with the little images. Well it was a book with lots of photograph I don't remember it but anyway it doesn't really matter, but it was kind of a thing I was saying well it would be great if we could do something that showed because it is for footwear and it is was really high-end, it would be nice if you could replicate the kind of moved if you got a kind [unclear 15:05] or a shadow in the form on the floor of those things and we are just putting these things together like these 3 wedges. And I took a photograph on the iPhone and it looks absolutely amazing and then Joe put it into the computer and put a logo on the back and put some shoes on this thing, and it would be less than an hour to sketch that in 3D but it was a certain Deputy really because we knew what we were kind of looking for but to get that you would have to sit down and constructed it. Whereas what you get there as an idea and the thing is that it's liberating because it's a freedom of thought there is no risk or investment in this, we are just going to do that to look at the thing and stay that would be a really nice principal to start with.
Interviewer: I was looking at your literature down stairs was it the shoes store on Jordan Street?

Jeff: No I could show you it I know that you are not going to tell anybody about it. I could show you it is something that has not been built yet but it's for an Italian company, but it's beautiful and anyway it's been developed now with all this sort of stuff in hand, and the client actually build up the prototype in there [unclear 16:23]. And I look at it and I just think well that would never have come about never if Joe and I haven't just sat down there freed or minds up and go, let's just have a play which is the same as let's just have a sketch. And what comes out of that is certain deputy unexpected kind of seeing something at another scale when you are playing with something that is something else, and then it therefore becomes you know so most things happen like that there was another the [unclear 17:04] store that you are talking about we did another one in Covent Garden it's beautiful.

Interviewer: I like the whole pic board and there was a [unclear] glass that you did I love [unclear] glass I'm glad that you've made these of something that I love.

Jeff: Anyway so that one the same sort of thing one night we were just sitting there and there was a piece of material on Joe's desk and I was saying, it would better if we just routed out a shape of the tools and this material because it's beautiful, and we put leather [unclear 17:47] so we took it out to the sections and put drawings on it.

Interviewer: You've done that on your drawing board downstairs, I couldn't work out what was behind it is it, leather or was it just the board?

Jeff: I think that's just wood on that one and that was a thing of saying right that would be because we wanted a contemporary twist on the traditional thing so that's what was required, it's the same thing but it's a fast way of working but you have to be in the kind of in the mind-set to look for it.

Interviewer: Yes, to look for that or to have your mind open to something springing up.

Jeff: Yes, coming out so that's how I view really and I think it is really important to be able to draw.

Interviewer: So your organization here, what is the general or what is your General because you obviously have a huge inflence of what goes out of the business. What is your kind of attitude towards the position of drawing and you have obviously got other means of visualization and design development but the sketching initial ideation process, how do you kind of all relate to that there, is that something that everyone engages in or has to engage in?

Jeff: I think right at the very outset It's a combination of things now because obviously you know there is the thing around you do a lot of mood boards things because that's kind of really important to get the [unclear 19:31] of it. And I think from a client perspective they are far open to being relaxed and having a discussion around Cad models and drawings. And in fact you know when we've been over to [unclear 20:00] and we talked to them about stuff particularly this original thing, and the first
thing that we got out was a, it would be great to show you the presentation actually if you would be interested to see it. So one weekend I was sitting at home doing a load of drawings on what I thought this thing should be. And Joe was sitting in Birmingham in and [unclear 20:29] doing a set of drawings on what he thought and we were just taking photos of his drawings and then sending them to each other. And he was putting them together on into a presentation on the map next to all of the new boards and kind of pulling things out. And then over a period of about 3-hours we've got a kind of really nice Narrative of kind of, because it's about how will you get people to interact with the space and how do you change the space. So that all really works well and so then you go to the presentation and say alright we've got some thoughts but what you are actually explaining in drawing is the strength of an idea and not the beauty of a rendering and I think that's the power of it, because it forces people within the business to think about what they are saying. And the least amount of drawings you do the stronger and the more compelling the idea has to be you know, because some people would be taken with and don't get me wrong we do it sometime we do just go into an amazing kind of visualization thing, sometimes that's what you do but in the most internally or when you are talking to certain types of clients there is some kind of sigh of relief when you get a drawing out and a model because a model enables people to instantly understand a plan which you know people get intimidated by and can't read it. So universally I would say every minute spent on a sketch model in white is worth like 10 hours. And then the drawings are they are a language of artistry but they are a language of understanding as well, it's a shorthand thing that I think people that can't do it, you may as well be paying a piano in front of them because I think there is something, and I don't know there is something that suggests that they are unique in a position where you are crafting something entirely for them, I tend to draw a lot in front of clients.

Interviewer: It's a very personal thing isn't it scribbling in that very formal environment.

Jeff: Yes, I mean that's what I tend to do and I've always done it with [unclear 23:37] because I think probably I find it easier to do that then I do to try and talk my way into it, and I have always found it very compelling and very powerful.

Interviewer: Do you find something that's just comes to mind that was, I've interviewed Jan Faulkner at [unclear 24:00] and he was really helpful as well. When you have young people come into your business, you obviously go through a process of interviews portfolio blah, blah, blah. Do you or have you noticed there being any relationship between an inability or a disinclination to sketch to put pen-to-paper to do the 3D Cad modelling the initial stuff. And the fact or the possibility that people like that don't have that visual 3-dimensional kind of stuff going on in their minds do they lack imagination or is that?

Jeff: I think that might be a bit of a generalization but I think we get different types of creative people and I think it's kind of conceptual thinkers, who allow their minds to kind of go around a prospect and they are normally the ones that draw and make things. And then you get the rush to a conclusion type who are itching to just show how good the rendering is going to be and show their vision of what it is. And I think design is a collaborative process it has to be because you can get designers that says I want to use these lights and the next time that I get a job they are going in whatever the scheme they
are going in, we don't have people like that here but I have known people that have worked here.

**Interviewer:** That's just like shopping.

**Jeff:** Yes, Pinterest designers really. And I think design is a collaborative process because you have to understand who you are designing for and you have to understand and listen to the people the patron if you like, the people that are commissioning you to do it to be able to advise them in the best possible way. And part of the collaboration sometime is investing time not in the design but in time with the people, that's where we have made our kind of [unclear 26:37] really that's what we always do.

**Interviewer:** Okay your conceptual designers your 3D thinkers and Sketchers. Do you kind of separate or do you have visualizers and designer’s conceptual designers; they all have to be able to do the whole process.

**Jeff:** They have to do it all yes, that's how we've always worked we don't have, you obviously have juniors that are learning and you have seniors that are kind of season, and then you have kind of creative directors who perhaps don't have to do so much of the visualizing anymore but they will do a lot more of the conceptual [unclear 27:21].

**Interviewer:** Okay have you seen with your sort of new intakes and I don't know how often you know obviously you've recruit constantly I would imagine because of stuff shown to some degree but when you recruiting juniors and graduate, what are their ideation and development and sketch skills like when they turn up [unclear 27:50] the portfolios what do they show you?

**Jeff:** Quite often they are not very insightful.

**Interviewer:** Right in respects of how to present work or in respect of having the ideas in the first place?

**Jeff:** Well you don't know because you don't see that part of it, there seems to be a kind of a focus on the Finnish concept of what they're trying to achieve and only relying on then getting everything right, because if you can't see the idea and you think the rendering isn't as good as it could be what are you judging it on, is this a person's learning the rendering skills or getting a grip of the software or this is somebody trying to tell me an idea. So I would much sooner see the process of you know the ideas and the thoughts you know the brief. You know I had some point about your [unclear 29:14] as well and be articulate in the way that you write because that's really important really important now. And it can be as colourful [unclear] drawings but I think that there is an emphasis on being too perfect and too polish and too performance.

**Interviewer:** Right so do you ever get to see sketchbooks or development work?

**Jeff:** I think if we get people that we think might have something we get them back to bring stuff that's what we would always do.

**Interviewer:** Right but do they generally turn out with that kind of stuff?
Jeff: Sometime not.

Interviewer: They just want you to see their best most shiny work.

Jeff: Yes, and it doesn't really tell you very much and I think depending on what you know institution it is, sometimes I have a bit of an [unclear 30:12] style of the way the lecturer or the person that running the course wants the people to present, and I think that's a bad thing as well because you've kind of never get to see the real person. And with the best [Unclear 30:24] in the world they are never going to because why would they be able to do it they are never going to be able to present the way that we would present to clients because we have not got that far in the creation.

Interviewer: Okay so what kind of skills or shortfalls do you feel there are with new graduates or are there any skills shortfalls, I mean there are always issues with people not having quite the right skills?

Jeff: No I have to say that we have some fantastic graduates.

Interviewer: Where do you recruit from Are there specific schools that you go to?

Jeff: [Unclear 30:58] quite a lot you would have to ask the people, no honestly we have and I actually got them together the other day and there's 3 of them down there more in London, and that was in the 3D I was talking to them because I just thought that they are so grown up and they are so mature, I don't know how old they are about 25. They work really hard and the confidence that comes out this generation for whatever reason how they got it is always high you know they are just made differently to how we were when; you know My Generation when we were younger. I don't know what repairs them in life to do that but they are you know how I took one to a meeting the other day you know with a really high-profile client and they are just really good. So I wouldn't sit here saying you know the whole [unclear 32:10] education because there are some amazing people that we've got and we are very, very lucky and I do get them together. But our financial director had an accident and died after 37 years of age.

Interviewer: Died?

Jeff: Terrible he fell off a ladder.

Interviewer: Recently?

Jeff: Yes, 2 weeks ago and I was left thinking well there is so much I should have said to him. And I was thinking about these kids and I was thinking you know they've turned out some amazing work recently, and I just got them together and I said look just why I'm in this Frame of Mind and I think that we have got to do a lot more of this, but you know if you feel something you have got to say it, so I just want you to know that I am really so proud of guys for what you do, you are a real credit to yourself and to the company and the work that you do it's just Fantastic just carry on I really just wanted you to know that. And I did think afterwards how lucky we are that we have people like that, and they get the culture of the company and you know they are getting up at 4 in the morning going to site when the [unclear 33:35] and they are filming it and they are doing all of this stuff, because they want to and I am encouraging them to learn by you
know the momentum [unclear 33:47] is going again next week because we are doing a big project. And you see the confident growing in the people you know from when, and when they first come and you expose them to these things and then you start to [unclear 34:08] and obviously that has an effect on the work because you see that Bloom as well and blossoming. So I think that we are very lucky you know there are some people that's not so good but that's just a natural thing, and there are some people that are exceptionally good and we are very fortunate to have them with us. So there is not one kind of set of things that make the thing perfect, I would imagine those 3 probably can't they won't be able to draw like [unclear 34:46].

**Interviewer:** Is that because of their young age is that because they are, I don't know what they are doing you know what they've gone through with their undergrad courses or?

**Jeff:** I don't know, when I was younger I always thought still and I still don't see a distinction between design and art because you don't you know why would you, or I don't see a distinction between 3 dimensional or 2 dimensional disciplines of why would, you know I have said to each one of them that you need to have a view on digital and graphics and those disciplines and all of the other things, and interior and whatever because actually what you are orchestrating is a complete thing, so you know if you went back to the architect and [unclear 35:47] all of those sort of people they all knew how to make a designer chalice or do a piece of fabric or design a building because what they are [unclear 36:05] a vision of something. And when you look at a brand and you design for a brand and you are seeing the singular vision of what that total thing should be. So you shouldn't be designing a space for somebody else to populate you should be able to think work collaboratively with somebody that specializes in that and jointly have crossover ideas of 3D in 3D. And you know I think that's, I started off as an illustrative designer it isn't artist, and then when I start my career I was illustrator graphic designer. And then I don't know what age it could be probably, well quite early on I start the business when I was 23 so you know it was quite earlier on. I would have buy necessity of running a business of start to design spaces and now that's my main skill over all of these years, and now I was being designing those little spaces and how that all work but I still do it from an artistic graphic communication you know you could see it in the work it's all [unclear 37:30]

**Interviewer:** So the concepts of design disciplines and I've got this, well all of us doing PhD are being encouraged to concentrate on a discipline and I don't think that, design is not discipline specific design is a state of mind and ability to solve problem using creativity. And it applies too like you say turning your hand to different Outlet.

**Jeff:** Yes, I would completely agree with that and I talked to all of these guys about it as well I don't see why anybody should be, I don't see design as a discipline driven thing it is what it is. And I think people I would expect and I suppose I get frustrated by it as well when I think you know, a younger generation don't have what we would call a dad skill you know which is the kind of those skills that you would have learnt from your dad in my era, which is how do you take a door off and plane the edge off it, dad skills we talked about it a lot.

**Interviewer:** Dad skill is so handy I know what you mean.
Jeff: You know those kinds of things where something happened and you take it apart like we do every day really we take washing machine apart every night. And its simple stuff in design when you start to and you think if you haven't got that kind of thing of like you know how you do this, how can you actually possible design something that's going to attach to a wall, [unclear] alone instruct somebody on the [unclear 39:26] to do something somewhere, and I think that is a problem that's an emerging problem you know.

Interviewer: A lack of understanding about I don't know how you put it.

Jeff: Just the practical skills of you know the basics the very basic practical skills and recognition and understanding of tools and how things are put together.

Interviewer: So with your new your sort of younger designers that you were talking about. Did they come in with a fairly good knowledge of construction, or is that something that they've had to kind of developed?

Jeff: Something they have developed; they will come in with a version of it.

Interviewer: It is difficult because most courses will teach you, you know these are some joints and these are certain materials and how they join together and how they work, but when you are actually practicing it's very different.

Jeff: It is really different and you know that's what I think without, you know you see people designing things and it's like a 25 mil sheet of MDF and I go how is that going to stand out. And he said go to the workshop get them to get one out of the rack and try and pick it up, and then come back and let's have a discussion about it and it's that sort of thing really, that's only I spend a lot of time talking about things art related things as well with people you know when you are sitting and talking about stuff and you know how things are made or how things have done or how it would have been done. I find it fascinating to be honest because it's quite kind of like well how did you know that [unclear 41:16] you learned it over the years isn't it but it is also having a kind of instinct to go and look for it.

Interviewer: I like the students who will design something using the heaviest of materials and then you say well how is it actually going to be held up or put together, and the invisible joints are the popular one so what's an invisible joint yes, I love that interesting.

Jeff: But the other thing that I say is let's just be really clear about why you are employed okay, you are employed together with me and everybody else took make money for the people that are employing us. So if you design something that can't be made or you design something that can be made but it's so expensive or it falls over or it does something else. We are not going to get paid and it's not going to make them any money, people retain this because we do things that make them money they don't retain this because they like.

Interviewer: It's freaky isn't it?
**Jeff:** It is and they will like it if we are doing them a favour but they won't like it if they think we are just wasting their time, so don't waste out my time it's a simple message really.

**Interviewer:** So putting your graduates out there and getting them to look at how things are made and get them on site, that's how you've kind of well they come in with certain shortfall and certain skills because of their lack of Experience.

**Jeff:** Well they are young aren't they so you know what more to expert and the university life can only tell them so much.

**Interviewer:** Have you noticed this is a bit of an odd one but bear with me. Have you noticed any issues around things like gender or culture, obviously being young means that there are certain disadvantages to them and what their portfolio skills is like, but are there any gender or culture issues?

**Jeff:** I would definitely say no and I say that because Becky and Jack you know they joined at the same time, you've got Lucy and she joined at the same time or round about the same time. And I have been surprised at how adoptable they are to every situation and I think if you get, I think the other thing is they are bloody bright which means they are bright so and I think that is an obvious necessity and [unclear] and for people to be inquiring and to be bribed. So I wouldn't say there was any gender or culture or anything because we have got people of every kind of description sexuality culture [unclear] everything here it matters not.

**Interviewer:** I only asked because at Leicester we have lots of international students and over the years there are patterns which have formed, and kind of emerging with regards of whether people are inhibited in terms of sketch work model making presentation you know some cultures are less inclined to take risks.

**Jeff:** I probably not have enough experience with that we don't get a massive turnover from stuff but we do get turnover from stuff and we've employed all sort of people.

**Interviewer:** But then the stuff that you employ you go through that process of weeding out the grass that you have interview those and you have picked the best ones so yes.

**Jeff:** You know we've got all sorts of people but I think [unclear] it's defined by our own standard of how we would go about something that you don't start by looking for a certain type of person, but you end up having to collect the people that are like-minded and I suppose that's because the way that we go around and what we did, and we wouldn't take people on just for the sake of that, because we had a period of time where we always grew people ourselves. and we had a period of time when the company was in a bit of a change and the person that was. Anyway it was a decision made that we wouldn't take during the graduates, we take intern and then [unclear]

**Interviewer:** What was your reason for that?

**Jeff:** It wasn't my reason but it was somebody else's reason I don't really know because that's how it was done at another company.
**Interviewer:** So interns are basically an extended job interview process, so there will be interns for?

**Jeff:** Interns or people that just come from a kind of a period of and that's probably the same thing isn't it. And that was a really big lesson really for me because when I kind of got a hold of that after the person have gone over a quite number of years. It took us up until this point to kind of get back to where we should have been, because I am that kind of development to people because we don't really get Freelancers into work for us because you know it might do in areas where it really affect [unclear 47:17] or the kind of quality the creative thinking the more mechanical and we like to grow our people. I've lost the plot in the question there.

**Interviewer:** No I do that when I am doing this and think oh back to my list. What kind of feedback do you get from clients when you are kind of focusing on the sketching and the hand rendered and the hand drawn and the 3D kind of Cad models. When you are with clients what kind of feedback do you get from clients about that kind of process of doing things?

**Jeff:** They love it.

**Interviewer:** Why do they love it?

**Jeff:** Because I think we quite often get that kind of comment when we are pitching for work, and we probably have heard one in an afternoon or something.

**Interviewer:** Horrible isn't it and you have to spy on everyone else to see who the competition is and it's hideous.

**Jeff:** But and we purposely go about it a different way, and sometimes we do and I have to show you these thing [unclear 48:27] get the idea but sometimes we do a row that is as long as this table that actually tell us the story of what it is to be interrupting with that brand as a consumer, and what are the narratives that come out of that and what's the connectivity of how that all goes back and it's all hand drawn completely hand drawn. And there are 2 reasons for doing that, one is because it looks really creative but 2 people immediately stand up and get over it and they start looking at things.

**Interviewer:** Yes, and they are participating at that point aren't they, I haven't thought of that Dynamic actually that's clever.

**Jeff:** Yes, it is and that's why we do it and you know you’ve kind of just you turned it with nothing and you roll it out and you start talking about the issues that face them and without [unclear 49:27] answer really other than you are giving them an insight into a creative process that they might enjoy being involved in.

**Interviewer:** So rather than them seeing a plan or an elevation maybe a walkthrough or [unclear 49:42] visuals and this is our presentation and what we would like to do for
you. So how successful well obviously that is successful for you or you wouldn't do it but the feedback that you get from that process.

Jeff: I just kind of keep it or I love it or we've got one company that we work with a company called Dan Murphy's Australia's biggest booze retailer.

Interviewer: What are they called?

Jeff: Dan Murphy's we did quite a bit of work in Australia for some reason, and anyway we did that one and they love it and it's actually in a big long frame in their office. So you get that kind of reaction and you get that kind of feeling of well this is creative process and this is an insight to how we might work.

Interviewer: And it's also that feeling that clients get of suddenly somebody understands us that feeling of being understood and someone has got into there and gets us.

Jeff: Yes, and you are leaving enough kind of space for their kind of and you are not locking anything down you know and it works for some people it probably will work for everybody.

Interviewer: I think it depends on how you go about it, have you got an example of one of your role I would love to see if that is possible. [52:09] I am just going over my list of things that I need to know about. And back to the kind of HE thing and under garage. If you were able to speak to sort of HE environment about what your guys need when they come out into the real world, what would you say to them what would you like them to consider that perhaps they are not doing at the moment?

Jeff: Well I think there is a set of things that you would have to have, so you know we always say about the rendering skills computer skills cad skills you have got to have that there is no way around that, and you would want that to be current and Industry.

Interviewer: And what do you tend to use do you use things like SketchUp 3D Max?

Jeff: We use all of that SketchUp v-ray AutoCAD.

Interviewer: Do you know something call Maxwell Render a good friend who does some amazing he's a visualizer he was an interior designer he just does visuals now. He said something called Maxwell Render and I've never heard of it but his visuals are so hyper realistic they are frightening; I've never heard of it before.

Jeff: I mean they are all capable of doing it and so that's that.

Interviewer: Okay so the IT visualizing rendering skills.
Jeff: I think I suppose if it was because it is not just interior they do graphics as well and digital, so you have got a baseline of things that are meaningful knowledge base that you can work with. I think and it's a lot to ask in 3 years isn't it.

Interviewer: I was talking to the guy who run games design and animation design Marco Powell and he said if you think about it they have 26 weeks a year. [54:41].

Jeff: Just trying to find out what we are doing tomorrow. So we were talking about skills?

Interviewer: Yes, the Cad skills.

Jeff: Oh yes all those kinds of things.

Interviewer: What about their drawing skills, what skills within that do they need obviously the ideation and the ability to generate those ideas is important?

Jeff: Yes, there is different types of drawing skills.

Interviewer: Are there some that are more important than others do you feel?

Jeff: Well I think that if you are a 3-dimensional designer than you need to be able to draw in perspective and draw 3-dimensional objects from pretty much any angle, and do it you know in relative scale to each other so you know what you are trying to show. I don't think you need to go much further than having a level of ability that you can communicate your ideas in, but I think the level of drawing needs to be one that says it don't need to be a timid style of doing this kind of thing and getting it all over the shop, you need to be able to be.

Interviewer: Yes, make a commitment to the page of that.

Jeff: Yes, and you need to be able to confidently draw.

Interviewer: Do you feel, I know fine art design have this sort of designers don't like doing fine art drawing or tend to complain when they have to do life drawing because it's not for design, but there is a school of thought that think's that there is a need for designers to observe?

Jeff: Yes, we've had some people on life drawing courses before and yes I think it is really important I think all that sort of thing of having an interest in art and kind of seeing things from a different perspective it's all really important stuff you either want to do it or you don't or you either have the ability or you don't do you know what I mean, and it will lead you to one place or another but I think they all come under the same heading of being observant being open minded being and conceptual and being aware of your surroundings, and that will leads to Memory Bank of things and situation and circumstances that allow you to either consciously or subconsciously recall it.

Interviewer: Because I've kind of noticed with some of my, I've got post grad textile
fashion students and they haven't really done observation drawing. So when they come to generate ideas they don't have stuff in their heads like you say to kind of refer to and reflect of, oh I am thinking of this particular shape that you would see here or there [unclear 1:00:07].

**Jeff:** I draw every single day you know something I draw every day, and I do my own thing as well and I will do things for my clients as well you know I have done all sorts of stuff and illustration or. And I can remember the age when I first started you know going from that thing of drawing things to designing things and thinking that I am finding this really hard to do, you know at that stage I would probably be designing a POS Unit or something, and thinking I've not only got to get the scale of this and you don't have to do any of this now you can work it all out, but I did really work hard at that and out of that I became very, very confident at drawing and painting and all of the rest and communicating ideas, but yes I think that you need to be able to draw to a level where you can communicate either to a client a supplier or to people that you are working with on the team, because you need to contribute in a way that is peer to peer that's the kind of way that you get your credibility. And actually the least you have to worry about how you communicate your idea the freer you are to actually expressed something.

**Interviewer:** That's it making the lines is not what you are thinking about because it's all going on an in here it's all that automatic writing or whatever they call it. So yes absolutely okay, I think I've covered all of my points here yes I think I've covered, can I turn this off I will turn it off now.

Audio Finish 01:02:07
Interview with June Lawlor

Interviewer: Right could you just start by giving me a little bit of background as to who you are and to where you've come through the industry, just if that's possible so I kind of know about you for when I start to write up if that's okay?

June: Yes that is fine.

Interviewer: Thank you.

June: Well first of all my PA Paula has sent you a bio so we can run through that now as a brief background.

Interviewer: Within your industry, obviously you've worked at a more strategic level but I don't know how closely you work or have worked with designers, particularly new graduate designers coming from college from degree courses etc. How much exposure have you had to new people coming into the industry?

June: I have had exposure all of my career because in buying generally you have a team of designers working to produce Private Label product (or own label as it it often referred to).

I started my career in Topshop where we had a team of designers working to design Topshop own label product and we had the merchandise produced by many sources internationally. In House of Fraser when I was Buying Director of Womenswear we were heavily weighted towards buying branded product but we also produced our own label brands for which we had a team of designers working on. We had a Head of Design and a design team (obviously some of them were junior designers) for each of the Womenswear profiles we created – being at the time modern classic, contemporary and trend. For each profile we created a brand name for the ranges – this brand name was registered and exclusive to House of Fraser.

Interviewer: Okay and what is the, I mean over the years that you have been in the industry, have there been any changes you can see this in the quality; I mean from what you have seen or what people talk about or how organizations are run. Has the quality of graduates changed at all over the years?

June: Well that depends on where you select from and who you select – I think the selection pot has got bigger which gives you the opportunity to select the very best talent available.

Interviewer: So is it more labour-intensive?

June: No, I think technology has changed how people are thinking which has impacted on how they are learning and training. Therefore you have to take this into account in the selection process. Some designers are just naturally hand drawers and some combine
it with technology, some are limited to hand drawing and they are not up to and do not grasp technology.
I imagine you want to ask the question, is hand drawing important? Yes it is in my opinion.

**Interviewer:** What does that give the designer that the technological tools don't give them, do you feel?

**June:** I feel to go from personal vision to a pencil in hand, is how the true creative juices flow and an individual’s ‘signature’ style/handwriting of design is constantly and consistently developed over time.

**Interviewer:** Do you think that the sort of more technology savvy students who are less inclined to draw lack that ability or does it still come through?

**June:** I think the more technology savvy students with a lesser hand drawing ability, tend to hide behind technology, in my opinion restricts a creative flow and consequently a development of their own ‘signature’ of design.
The way that you build up a collection in my opinion should be very pictorial. In my experience of managing teams of designers creating own label collections select the quality of the designers style appropriate to the market they are designing for is key – i.e. modern classic, contemporary or trend.
The individual designers get a strategic brief which they interpret. Based on the profile of the customer - age, lifestyle, price architecture, together with a view of what other brands they shop. Then their role is to do silhouette design, obviously colours, fabrications and working it up. I think that when they are working up the whole collection, from sketching with selection of fabric and colour, ensures the creative build-up of the vision of the customer in mind and the brand position.
So in my opinion designers have to be able to draw and they should have the ability use technology or 3D printing to support it.

**Interviewer:** You mentioned the different types of the sort of different areas of fashion design. Does hand drawn, the hand drawn process, is it best fitted into a particular type of fashion or is it suitable for everything? I mean you were talking about a classic range, a contemporary and children's wear. Is there a kind of, I mean does children's wear involve more technology, are they more sort of technologically minded designers within that, or is it kind of a cross? I am just wondering whether there is a sort of different in terms of the spread of skills that are required for those different types of design?

**June:** As I said earlier in my opinion a designer should be able to hand draw full-stop and I think that they can support themselves with technology. Womenswear lends itself to hand drawing much more than many other categories.
Also the higher up you go to the luxury end of the market and obviously haute couture you have to have to have the ability to hand draw with technology as a support.
At the mass market end of the market and production of core lines for womenswear, menswear childrenswear and accessories technology in design is a great asset and can be used to its full potential.
In my work with … I am seeing some students coming through work that that are doing more technical drawings than they are freehand. I think this is fine for the categories of shoes and accessories when you are creating contemporary structural clean lines. I have been advised by students “my shoes are very structured, they are architectural” but I question is that their real style or is technology driving their style? Then you have students who advise “my shoes are feminine” and I ask to them “where is the femininity if they are structural?” If I had to sit on one side of the fence - this is only my opinion - to depict is technology defining their style of design if they are not doing hand drawing? I think, yes.

Interviewer: Do you think that the kind of clothing available currently would be, it would look different if technology wasn't such a strong part, obviously it has a purpose in kind of creating the patterns, and the technology and creating the product, but at those early stages where people are working with ideas, do you think design would look much more different if people relied more so on the hand drawn process during that sort of conceptualising stage?

June: Yes, I think that is quite obvious it would because you cannot create an haute couture range from technology.

However, I must add that the average size increase of women I think is impacting design generating a requirement for cleaner, simpler lines which lends themselves to greater use of technology in the design process.

Interviewer: To what extent is technology used in haute couture for the early ideas development or is it just kind of, what's the attitude of the part of the industry?

June: Whilst I have dealt with luxury brands throughout my career, but sadly I have never worked in haute couture. The true definition of haute couture is "high dressmaking" It is the creation of exclusive custom-fitted clothing. Haute couture is high-end fashion that is constructed by hand from start to finish, made from high-quality, expensive, often unusual fabric and sewn with extreme attention to detail and finished by the most experienced and capable sewers, often using time-consuming, hand-executed techniques. To my knowledge due to the level of detail required in the design process haute couture does not lend itself to technology as a total concept but may be used to support in parts.

Interviewer: That's interesting. With young graduates coming out of college, what are their attitudes and what do you hear from them when you are teaching or mentoring them about having to work in a manual way?

June: Can you repeat the question please?

Interviewer: That's okay. What are the attitudes of young designers coming out of college or when you are mentoring, you know, you were talking about you were working at UAL doing some mentoring. Do you kind of pick up on their general attitudes to work in freehand drawing at all?
June: I think they either naturally freehand draw or they don't - if they do not they work to a greater capacity with technology. However when you look at their drawings you know they are working from CAD, and I ask them, “what's your hand drawing like?” and they often say “I don't really think it's good enough” and I reply “well, you are a designer you should work on that.” I also add “some prospective employers may give you a pencil in your interview and ask you to draw a design, and are you prepared for that?”

I know of several Creative Directors who will give a pencil and paper and a quick brief in the interview and say “if I asked you to draw that, what would it look like?” and they should be able to sit there and sketch. And if they can't hand draw I think it is a piece lost from their armoury to demonstrate they have the ability to become a great designer.

Interviewer: Are there great designers, fashion designers who don't draw at all?

June: I have not met one who cannot draw and I have worked with several key names and have colleagues and friends who are designers and they all draw. In fact some of their sketches are so beautiful you just want to keep them!

Interviewer: As artefacts in their own right and not just conveying an idea? Fashion illustration does fascinate me, it’s beautiful.

June: Fashion illustration, one wonderful designer that comes to mind is Jon Moore who had spent much of his design career at Hardy Amies and I had the great pleasure of him creating my wedding dress. The whole process of discussing what I wanted and him sketching and producing a magnificent end product was breath-taking. Jon gave me his signed sketches which endorse the specialness of the dress and the story behind it, all very personal.

Interviewer: And you still got those sketches now?

June: Yes of course, I also have lots of other sketches from several designers that are both colleagues and friends all very special.

I was with Roland Klein a couple of weeks back and we were talking about a design archive that he was looking at. During the conversation I said “One rainy day, I would like to visit and go through your archive of sketches,” and he said “it would be my pleasure”.

Roland Klein was a high profile designer iconic in his time around the time of Studio 54 days when Bianca Jagger and other celebrities of that time famously wore his silk jersey recognisable draping dresses.

This visualisation makes me ask the question “how do you bring that signature style of ‘draping the body’ alive on paper if it's a technical drawing?”

Interviewer: No, fashion is interesting, the contrast between architectural 3D design and fashion is the human body and the fluidity of what you are dealing with, the materials. Whereas, what you are talking about with you know, students who kind of manage to get through a degree course by just relying on computers. They seem to manage that more easily with structural things because as you say the software lends itself to that kind of aesthetic, but yes, I hadn't realised that it's just not suited at all. This is a bit of a strange question; do you think there are any kind of gender issues, it sounds a bit weird? I am assuming that most fashion graduates are female and a larger
proportion of them are female, I mean most of the textile students that I am teaching on the MA, I think that we had one guy last year and the rest were female. Do you think there are kind of any issues around the gender of the designer that makes them more or less inclined? For example, with architectural, I know some of the female students that I have interviewed are quite, they are surrounded by males and there is a slightly different kind of dynamic in a studio when you are surrounded by a lot of young guys and they feel slightly more intimidated. And I just wondered whether fashion being almost kind of the antithesis of that, I wonder whether there are any kind of gender issues where the women are, may be more able to kind of take risks in that kind of industry?

**June:** Gender issues to sketch more creatively?

**Interviewer:** I know that sounds kind of a strange thing but it's kind of coming up that in certain situation woman will sketch more easily than men or men will sketch more easily and woman won't want to. I mean when you have been teaching them I am assuming most people are, most of the students are female?

**June:** Well, in my experience there are a lot of extremely talented men in the industry that I have had the pleasure to work with. We just need to consider some of the key talents that came out of St Martins - John Galliano, Alexander McQueen to mention a few. It has never struck me that woman naturally take to the pencil and draw and passionately do it and men are more inhibited by it.

**Interviewer:** I just wondered because I mean Leicester is a different demographic, I presume to a lot of the colleges in London, most of the students are female, most of the fashion and textiles.

**June:** No, not in London

**Interviewer:** No that's something that I need to kind of look at maybe.

**Interviewer:** I just wondered. Cultural issues, again in Leicester we have a huge number of Asian and Chinese students, and where they have come from and the kind of courses that they have done at undergrad level in their own countries. Some of their skills are not as good as perhaps as they should be. Are there cultural issues that you've kind of noticed amongst the kind of students that you have dealt with?

**June:** I think there are some cultural issues that reflect on a designers style of design, here are differences by nationality which I believe goes back to our heritage – for example if you look how Chinese and Japanese people dress it could be said they have a more sculptural, clean lines, minimalistic style. While these countries have become westernised their natural style hasn't changed. When I first went to Japan, Yamamoto was just becoming internationally famous and his collections in my opinion, whilst very fresh in approach, were hugely influenced by his heritage.

**Interviewer:** It's interesting when they come having done an undergraduate degree and they are doing a post-grad, they don't draw, they will do anything but draw, they won't have kept a sketchbook, they are terrified of drawing. And yet as designers they are quite fluent with technology and lends itself to the way they work.
June:
I do think it is a cultural issue and many of the students from China and Japan are extremely tech savvy … many from a young age. Also some I don’t know whether that is coming out because some have not had exposure internationally until they have came to study in London. However there is no excuse now because the world in now small and designers should be curious and looking, looking, looking! Likewise, in Europe, there are cultural issues. I worked for several years in Germany and it is very interesting observing how people dress and it is a lot more structured and formal than say in Paris or London. Each country generates a style of design. If we think of German born Jil Sander, who consistently produces collections of very clean lines in beautiful fabrications, minimalistic with huge attention to detail and quality for her discerning customer. We could go on discussing cultural influences of design… all very interesting.

Interviewer: You are answering questions very differently to a lot of other people which is good because I need to know about things that I don't know about.

June: I just think we need to be careful if I mention some names like, you know, - or -.

Interviewer: I won’t mention any organisations.

June: No you can’t. Well, I’m sure people like Roland, there’s a whole load of people I could tip off and say, and then you’ve got to go and, and then they’ll say “what’s it for?” And then it goes round. I think it’s suffice to say, you know, doing tutorials in university in London, that’s fine, it could be any, yeah. From my personal point of view I would like to know where this interview is being circulated as I need be careful mentioning names of people and organisations without informing them / getting their approval.

Interviewer: I won't mention any names or organizations that you are bringing up.

Interviewer: Okay, design education, generally, what's your take on it? Interested to know. What's your take on the way that institutions are teaching design and teaching designers how to design? Are there things that make you cringe, are there things that they are completely forgetting to do and missing out. Are people coming into industry well-prepared or ill-prepared? I mean obviously it depends on the course and the institution and who is running it, but what kind of things have you noticed?

June: There is obviously set modules of learning that the students have to work through - from research, hand drawing, technology input, through to pattern cutting and making. What I have noticed is, if I take shoes as an example, the real makers are capable of completely conceptualising, drawing and following it through all the stages. In my opinion If they can come away with that then you have a designer who can commercially conceptualise and create a product. Because a key issue is whoever the designer is has also got to work, not just look good. The designers who understands this and can follow it through I think have the biggest chance.

Interviewer: Right, do you observe people in university or college not making it work? Are their ideas kind of distanced from reality, do they kind of come up with ideas which
actually can't be made because they haven't gone through that whole process, do they lack a level of awareness or anything?

**June**: The students are given a brief to work to they are encouraged to be creative – obviously this will naturally result on there being a number of students who distanced themselves from reality, not following the process and are in danger of their designs not being made. However the staff are there to steer such students and in general would assist to get a student back on track without stifling their style and creativity.

It is important for them to be able to understand and describe who they are as a designer and what is their ‘handwriting’ as it develops.

**Interviewer**: Right, so they have not started out with it in mind that they are developing a style as they go through their modules?

**June**: Not everybody, some students have a very definite style/handwriting from the beginning, with others it evolves not everyone is the same.

**Interviewer**: Is that a maturity thing on that part of the student? Some students know exactly what they want to achieve when they go into a course and others will kind of go through the motions and present you with what they have done but they don't kind of get the big picture.

**June**: Again I think everyone is different - from different backgrounds, different levels of parental support, different educational background also it is a confidence thing some people have lots of it and some sadly lack it and need a level of support and personal attainment to gain it.

**Interviewer**: So that need to kind of fit in with an organization and being chameleon-like is useful, but the designer still needs to be able to define themselves through that whole process.

**June**: If you are a good designer with key disciplines even if you have got a particular style/handwriting then most surely you can flex your style if you have to. However then they must consider their long term career goals:

If in their twenties when they come out of university if they start flexing their style to fit in working for brands or key department stores into their thirties, at what point have they fully developed their own style/handwriting - question? ….if indeed that is their goal. Not everyone wants to be a Creative Director or a lead designer or indeed have their own collection. Some of the students say “Actually, I just want to be given a brief and design.”

I am quite surprised that some of the students go through the process of achieving their BA in design and say, “I don't want to be a designer now, I've decided that I want to be a buyer.” And I respond “If that is your decision it is not been wasted time as you now have a fantastic set of tools to make considered buying decisions.”

**Interviewer**: In your mind, if a student came to you or a graduate came to you what would be, when you are talking about doing sort of portfolio work, what is the kind of best portfolio for a graduate designer to present to industry?
June: I think that you have got to think of it as a business presentation really. So you have got to tell them what you are going to tell them and tell them again !....and summarise at the end. As there is a danger when you are talking about one’s own work, you can get a little lost in yourself, show what you have achieved. I advise the students to do their background for the role they are applying for and think what is it the interviewer (prospective employer) is looking for. Then how best to edit your portfolio that brings out what they are looking for and what you can bring. Less is much more if it is considered and a planned approach, resulting in a succinct but compelling presentation. There is a danger when students are going for first interviews to rabble on and loose their message and show their work.

Interviewer: Everybody does that, I mean everybody that I have interviewed they want to show you everything and tell you about everything.

June: Exactly I say, “Now, what is the purpose of taking this person through and how long have they got”. Preparation is everything, the more you put into it the more confident you will be on the day. “FIrst two minutes you are making an impression, go on longer than seven and you will be like an old fish, so get in demonstrate. And get out leaving a good impression and them wanting more”. This is why I encourage them to produce a succinct profile, a personal profile of who they are and what they have achieved and what their career aspirations are.

Interviewer: That quite easy to put together, I think that when they come out of that early stage.

June: Yes, for you it would be more difficult but if you have refined it you have to hang on to make a confident and powerful opening.

Interviewer: I am assuming there is a combination of the hand drawn and the conceptual stuff and the presentation stuff within a portfolio. Do you know of any instances where people have recruited purely on the basis of the quality of the hand drawn stuff in a folio?

June: No, but I know that there are lots of high-profile designers who will give people a pencil as I said before.

Interviewer: Yes, they do that, the pencil test. Okay, just back to higher education briefly, is there anything that you would like to see higher education doing for student that they are not doing at the moment, in any sense at all, just generally?

June: I think I would like to see higher education more strongly preparing students for industry. As a student they focussed on attaining and as they are about to leave to start a career in industry they have not had enough opportunity to think about ‘self’ - who you are, what have you achieved so far and why? What is your style of design and where it is best placed …and why?

Interviewer: That’s interesting, because I mean in all of the design courses that I’ve taught on or seen, they don't get student ready for that bit. They will do the folio kind of
critic and you know looking at folio but whole package, it's kind of forgotten, it's interesting.

**June:** The senior people I am working with at UAL the Dean and the Head of School are really interested in focusing on this. Hence I have been working to produce 3 module exercise of ‘getting students industry ready’ and the response from the students has been extremely positive.

**Interviewer:** No, and I think that the transition from university or college to industry, students don't realise what a big jump that is to the system, they think that they are going to kind of leave and pick up a job and it's going to carry on in that vein. They lack awareness as to what that transition is going to be like, it is a maturity thing and age thing as well I am sure, but yes, that's interesting. Okay, I think that I have covered all of the areas that I need to ask you about, okay, thank you, I will switch off.

Audio Finish 39:35
Interview with Jono Mawford

(Pilot interview - Industry expert)

LT: What is your organisation’s attitude towards sketching and drawing during design development?

JM: Well it’s crucial, really. It just shows that any potential person coming to see me for, you know, if they wanted to have a job with ourselves, I think to be honest with you, I’d say that’s a crucial element because it shows that one, their thought processes, how they work and how they develop a project. There’s too much of a reliance on technology now to produce something which doesn’t have the same substance and I think from a client point of view as well, clients really respond well to initial ideas and sketches.

LT: What skills do you feel are most important for concept generation and development?

JM: Well definitely drawing skills without a shadow of a doubt, spatial awareness and listening to a client as well. That’s crucial, listening to a client or listening to someone who’s briefing them from the same organisation, that’s a crucial thing.

LT: Was considered early career recruits offer in terms of concept generation and development?

JM: When I don’t see enough of the ability to sketch, that’s one thing, they come with a very strong awareness of 3-D software, more so than myself to be honest with you, certain ways in which that software works, they understand to a deeper level than I understand it, but it serves a function for what I do. But again it’s probably not enough conceptual and sketching ability.

LT: How do these skills meet with your commercial requirements? Is there a gap, and what does entail?

JM: It’s the ability to sketch out initial thoughts, very often I think to, it’s very difficult for, it’s a Catch-22, because obviously they need experience, as well as their design experience, the design experience that they’ve learned from college, but I do tend to find there is, they do tend to lack structural considerations really. Standard things which you would expect them to have learned, and standards sort of requirements which you would have expected them to have learned at college, some haven’t got a grasp of those principles.

LT: Is that with regard to construction of something that they’re designing or...?

JM: Yes, to some extent, yeah.

LT: Have there been changes to the need for sketching in your organisation over the years?

JM: I think clients don’t necessarily expect to see sketches so it isn’t that expectation any more you provide some initial thoughts and sketches and also because of the deadlines, the speed by which stuff is required, often that sketching process is knocked out, simply because people design something, they plan it out they elevate it and they go straight into the visuals, so the
sketching is an element which is not so much of the requirement that you do show the client is sketch, they go, “wow, who drew that?”

LT: Has the increase in the use of technology for design changed the skill set of designers, if so how and over what period?

JM: Over the last 15 years, I would say, and again too much reliance on software to provide the answers rather than deep thinking process.

LT: What are the attitudes of early career designers towards sketching and drawing during design concept development?

JM: They love the idea of it but, and a lot of people sort of say, “oh, I’d love to be able to sketch,” and I say, “well, you can do, if you try hard enough,” but there seems to be an unwillingness to spend the time sketching basically. It is, sadly a dying art but one that we try to encourage.

LT: How do you assess the ability of new recruits to generate and develop design concepts?

JM: I think again, if they could provide good clear explanations to how they come up with a design both verbally and with development researchers, elevations, plans, that would impress me.

LT: Is there an issue of sketch inhibition among early career designers in your organisation, or do you have experience of that generally?

JM: Yes.

LT: How does sketch inhibition among graduate designers affect the operation of your organisation?

JM: I suppose, given that scenario, it will probably come back to me to provide any sketching required, I guess. Sketch inhibition, somebody who didn’t really, who felt uncomfortable, putting pen to paper, and they came and said, because don’t get me wrong, even if you don’t sketch, it doesn’t mean to say you don’t come up with a good idea because a lot of people do, you know, do use fingers and thumbs rather than your hand a lot more now, and over a period of time I sketch far less than I used to and instead converted over to utilising the computer as a tool for drawing, rather than hand sketch. So I think to some extent, if there was a sketch that was required to wow our clients, if they’re inhibited, it would be down to me to provide that, which has a time impact.

LT: What methods do you believe would reduce sketch inhibition amongst early career designers?

JM: I think if, and just, maybe, going to an art gallery and really getting to appreciate beauty, if you like, of drawing and painting, and think about ways they could possibly integrate that into their armoury really, of what they do, to make them realise not everything has to be done by computer.

LT: To inspire them?
JM: Yeah, so inspiration, things like that really. And also I think if a new recruit came with me to a meeting and they saw the benefits which hand drawings have the client, that would inspire them as well I think.

LT: What influence over the education of designers do you have?

JM: Yes, I have dialogue when I’ve been to final year shows either at Bury or at Ipswich. I’ve often said about the importance of developmental work, sketching research and rest of it. So yeah, I have had that dialogue with colleges.

LT: What issues around sketching skills of new designers you feel education needs to be aware of?

JM: I think they are encouraged to sketch, but I think one thing that does come to me is the perspective drawings and sense of scale in those perspectives. So I think generally speaking, it’s hand drawn perspective drawings is something that lacks.

LT: Perspective is one of those things that once you understand it, it’s so obvious...

JM: It becomes easier and easier.

LT: But, if you don’t understand how perspective works, like my mum is learning to do perspective drawing in her classes, it’s just, you know, but couldn’t construct a two-point, and the eyelevel and the vanishing points, and to them it’s a big mathematical scary thing. Where is the soon as you see the result of what you’re doing, it makes sense and your mind suddenly switches into the ability to kind of see in your mind’s eye things in that perspective, yeah. So it’s perspective?

JM: Yeah, I’d say so.

LT: Any other questions you think I need to ask, I note a bit of a random thing to ask you, but things I need to be asking of industry about the issues of sketching sketch inhibition with recruits?

JM: I think there’s a root problem with drawing at school, really. Again I think schools, I honestly don’t know, yeah maybe it could go back a step ask about schools, the sort of things that pupils do first and second school and whether that helps or otherwise from their skills in drawing but as I say earlier on that now people don’t hold anything any more, you see children eating with their hands they don’t use a knife and fork they use a keyboard rather than holding a pen and I can honestly see generation, obviously touched with iPads, in a generation, that people aren’t going to hold anything any more. And to be honest a lot of students they don’t, even at sixth form, the a level students you do, you can tell an A-level student if they’ve done art, a big difference, but some of the students that come up through the ranks of college...

LT: FE rather than doing the A level routes, yeah?

JM: Yeah, they do general art and design, level 2, level 3, they manage to skirt around the ability to draw.
Interview with Max Milburn

LT: Can you just start by telling me a bit about yourself, professionally, and what your experience is and your involvement with the practice and things like that, just so I have a bit of background information.

MM: When I was about 12 used to fill exercise books with plans of houses. That seems rather silly thing to do for a 12-year-old boy, there will always houses they weren’t anything else but houses and as I progressed through the school in Norwich the headmaster said to me, “you know I think you should be an estate agent,” and only wish I’d taken his advice. The art master decided that it might be more appropriate if I followed architecture, so he arranged for me to go to work for a local firm of architects in Norwich, because in those days they opened on Saturday mornings, so with the school only being Monday to Friday I could go in on a Saturday morning and also during the school holidays, so by the age of 13 or 14 I was actually at a drawing board using those extraordinary pens that you filled up with ink and translucent linens. You probably don’t remember any of this.

LT: The pens I remember, I used to have a set of refillable Rotrings, the old Isographs.

MM: There were those that had little ink well in the top and they fed ink through a pipe to draw a line and then there was the Graphos pen which had a little flick top to the nib and the ink fed down through the top section of the nib and the bottom section and according to the calibre of the nib, it drew a line thick or thin, and invariably blotted of course if you put too much ink in it and that was the problem you know, to blotted dry it. It was quite a laborious sort of thing. Anyway, I started at the age of about 13 to 14 and I went holidays and Saturday mornings and when I got to the point of actually leaving school, they offered me a job, the princely sum of 3 pounds a week I think. And that would have been 1956, 1954 probably. And things have changed a bit, so that’s really how I got into it, and I started by following course at the Norwich School of Art and we did history of architecture and we did all sorts and I think in tandem with that there was a construction course at the Norwich city College and all these things contributed towards examinations which the Royal Institute of British Architects acknowledged to be part of a course, but it seems terribly laborious, so two of my chums managed to get to university. One went to Liverpool the other went to Leeds and I got accepted at Kingston which in those days was considered to be one of the best and also the AA, but unfortunately, and I don’t really remember quite why, but there was just no funding available. And so whilst these other two mates of mine disappeared and I was still left working in the office and I thought, I really felt a bit cheesed off about that so I decided that I would look in the back of the Architects Journal and see if there wasn’t an opportunity for me to sort of also leave Norwich and try and find somewhere else to go. I went to a number of interviews, one of which was in Shrewsbury and the old boy there offered me a job which enabled me to actually work and pay lodgings and that’s how I got away from home, but I was only 17 then.
LT: So you’ve done your building qualifications, fine art, history of architecture…

MM: So I continued my course in Shrewsbury and then one of the guys who was a tutor in Shrewsbury, he said, “You know you’re not doing this the right way, I think you’re capable of more than this;” he said, “I’m going to have another word with the AA to see if we can get you back the way you should have been,” and again I went to the AA and they accepted me but it just wasn’t practical, there wasn’t enough money about, so I never did it. And after a couple of years of a fairly good social life in Shrewsbury, I was always a member of the Young Conservatives and that was another option I had, I could have gone to college to be a professional politician, but I didn’t, maybe I should regret that? I had a good friend who was a quantity surveyor and he had gone up North and in those days, you know the North was just emerging and he was up in Middlesbrough and he used to write to me, because we didn’t have mobile phones, and we corresponded and eventually he said, “I can get you a good job here,” he said, “you can continue your studies in Middlesbrough,” so eventually that’s what I did. I then moved to Middlesbrough and I went to the Middlesbrough school of art and I continued on so to be an active member of the Young Conservatives and that’s where Betty and I actually met. She comes from Stockton.

She has no accent.

Well, it was a long time ago.

Not even an inkling of an accent.

Well, she was a teacher, and anyway after a few years, I think we both realised, and she used to come down and visit my parents in Norwich, and she realised that Norwich was a rather nicer environment than Middlesbrough, so we decided that we’d rather get married and live in East Anglia rather than in the North, and that’s what we did. By this time, my career was taking over and I seemed to have the ability, you know, my earnings were going up and I had the ability to persuade my employers that I was probably more capable than I really was, and I was progressing and earning and so my learning was going on in tandem with work, rather than going back to college. I came back to Norfolk, got married and then we had the, I was working in Lowestoft, we lived in Norwich, then my employers in Lowestoft were members of the East Anglian mafia, the Masons, and through masonry, they opened their, Norman Weston who had a practice here in Bury St Edmunds and he was bemoaning the fact that, to them, presumably at some sort of Masons meeting, regional meeting, bemoaning the fact that he didn’t have anybody supporting him in Bury St Edmunds because he’d lost two people, the two people turned out to be Heaton and Swales.

I was going to say you must have known Mike Heaton it was Mike Heaton and Alan Swales who deserted him and that left Norman a bit exposed, and so my employers based in Norwich and Lowestoft decided that they would buy into Norman’s business and I came as an emissary, and we both came really, as
emissaries from Lowestoft to Bury St Edmunds, and so I came to work with the Norman and how old-fashioned that was.

And where was your office at that time?

it was in Churchgate Street, 38 Churchgate Street which is now house, and I remember the only two people he had working for him, they wore smocks, draughtman’s smocks. The boards were rickety and when it rained the water came in through the ceiling and oh, it was dreadful. And he drank like a fish and I had great regrets about the whole thing and I thought, “Why on earth we come from Lowestoft?” and we were beginning to develop quite a nice social life, and I thought, “Oh dear, we’ve made a really big mistake,” and I thought well, just got to make the most of this, and I did, I joined Round Table and got involved with all kinds of organisations and one thing led to another until, this would have been around 1963, 1964 and by 1968 I’d really had enough of Norman being drunk most of the time, and so I said, “Either he goes or I go,” and they decided to retire him out and that’s when I took the business on but by this time of course it was too late to complete any further education because I had already got myself into a position where I was in command. And I think looking back on it that was probably a good thing because I wasn’t actually formally qualified as an architect, I was always employing and supervising architects, and I think I was possibly a bit more objective because there are a funny lot, or they could be. And I can remember the old boy, the one you drank too much, Norman, used to say to me, because was very grand, he used to say, “RIBA, you know, what it really means is remember I’m the bloody architect.” And that pretty well encapsulated the way architects were, they felt they was so important that they were omnipotent, anything they did or said or drew, you know, was so superior to anything else anybody had. In reality it was the builders who were doing it because they provided minimal information, they didn’t have computers to produce fancy drawings, they’re all done by hand and if there was anything that had been altered, you know scratching out the paper, it was such a laborious process. I tended not to do that sort of thing and that’s probably why coming to me was quite relevant because I always drew on the wall. I was quite well known locally amongst the builders as the guy who drew on the wall, because he used to keep that bit of wall as evidence until it was eventually of course, it would get painted or plastered over.

So a particular job you would draw on the wall

so if I went on site to talk about how things were going to be done, I didn’t use a piece of paper, because if you use a piece of paper you then have to go back to the office and photocopy it and I suppose nowadays everything would be properly recorded but we were very slipshod, and I would just get out a very soft pencil and I would draw on the wall, particularly finishes because when you get to the stage when building has at least been plastered, before you actually do the finite stuff, you could draw on the wall. So yes, I did use the pencil a lot, so that is relevant.

So what was the name of your practice at that point?
Well, when I joined Norman Weston as an employee it became known as Western Piper and Whalley because Piper and Whalley with the, my employers that Lowestoft, and then when he was edged out in ‘68, it then became Piper Whalley Milburn and it’s been through a number of sort of changes since then, there’s a lot more to this story than that but anyway, that’s how it started in 68 and frankly then it went on until, we were obviously part of a group of practices under the banner of Piper Whalley because they had practices even down as far as Bath and Bristol, and I built up the biggest of the whole group. Had nearly 40 employees by 1970, yes this was ‘68, and by ‘76 we had around 40 employees, so big

MLT was that part of the group or was that a completely independent practice

Ah, when eventually, the Piper Whalley business became independent, we were never part of what was Piper Whalley and partners, it was always that Piper Whalley happened to be partners with Western and then gradually they died off, so I never became part of Piper Whalley. Piper Whalley evaporated I don’t know what ever happened to them, they were mostly in Norwich. Most of our activities were in the ‘70s, the growth, and looking back on it, the number of rises and falls in the economic cycle of boom and bust, redundancies and…

Because the middle and late ‘70s was quite a difficult time for builders, because I remember my Dad went into practice around that time and everything crashed things just crashed, it was either feast or famine, always. And I think just the last few years have been much more stabilised but it was either, the cycle was probably only about five years and you could never be sure about anything it’s quite a fast moving cycle isn’t it?

But we did a lot of work,

And you remained as a kind of manager of the architects working for you, all within the partnership?

it was my business really, I always had the major stake in it, and I was a strange sort of hybrid really, when you think back it wasn’t a very orthodox setup. It wasn’t really a very orthodox setup. Much later when, I had a number of other partners, do you remember Rhod Rees, well Rhod was a partner for a while, and Michael Clare. Michael Clare still exists, he lives out at Norton, and when we got to about 1988, I don’t what we were called in those days, probably Milburn Rees & Clare, because we were quite big in East Anglia, we got caught in the searchlight of the first publicly quoted firm of architects, a firm called DY Davies. They were the first practice of architects in the UK to go public and we got onto their radar and they approached me and said how about joining forces and becoming the East Anglian arm of what they were building up, a sort of national network and I thought that sounded rather an attractive proposition. But unfortunately Rhod and Mike didn’t, they didn’t want to go down that route, so I paid them out, they did rather well out of that and that’s when I had to reconstruct the
business to incorporate in order that it could be absorbed into a public company. So that’s when we became Milburn & Company and that would have been in 1990, and we were well down the path of this sort of amalgamation and then there was a really nasty recession. I don’t think DY Davies exists any more. In fact it was the fickle finger of fate because I think I probably got away with that really, but if I’d already done the deal I might have lost everything. Anyway we kept going and the big, deep recession of the early ‘90s that followed that, it was really painful and we reduced the staff to probably under 10, may be nearer six and gradually we came out of that recession I think in about 1994 a very nice guy called Malcolm Leverington, he approached me with a one-man business, he was a fully qualified guy and he had his own little business in Barton Mills and he and I teamed up just the end of that recession and then things really motored for us for a few years and then he got a brain tumour and he died.

I was going to ask about him because he’d fallen sick at the time you were are handling things for Dad, or shortly afterwards, I remember talking to him and then I heard that he wasn’t well and, so he died, he didn’t… He was a really nice man.

yes he was, and that was a really, that was a really bad time. And that left me vulnerable again, from a business point of view, because I really did need some support, and it was that time that a local firm of accountants Binder Hamlin, Lyndon Mills, I don’t if you know him, he was also an accountant for the Heaton & Swales partnership, and Heaton had died, Swales had retired, John Abbott was kind of retired, and young Lionel Thurlow, who is not your relation, and he had a lot of work and he was struggling so the accountants brought us together and that’s when the business of involving Thurlow, that was MLT, that’s where that came from. So that would have been around the same time as Dad died really, yes I think it was because Malcolm was alive that time I remember speaking to him and you had a really nice secretary or receptionist, I don’t know what her name was, who came down to the office and literally went through all of Dad’s files and organised everything

Kate, she’s now back in Bury St Edmunds. She went off, she found herself a man and she went off to Somerset and that seems to have gone wrong and she’s come back to Bury and I saw her only today and she is now a secretary for Pick Everard’s in Looms Lane. She doesn’t look a day older. So yeah, that’s a potted history.

Your organisation, I know you’ve kind of had various organisations but you, in terms of being the head of various organisations, what with the attitudes particularly in the last 20 years or so towards sketching and drawing during the development process of various designs?

Well, I think there’s always an instinctive resistance to change, and I can well remember that, a very nice secretary I used to have years ago, and she’d been in the business of architecture all her life, but she was a bit older, and we had the opportunity to buy a fax machine, a copier, some form of computer, it would have been an early computer, and she got really vexed about this she said, “If those gadgets come in then I’m leaving, I
don’t have anything to do with it.” She used to take things down in shorthand and type away on a Remington. Anyway, in the end she conceded that we could have a fax machine, she could see the relevance of that, and I think looking back on it, that is the kind of resistance that happened when ever there was something new, and I don’t think we’d have got into computers at all, not at that particular time, if it hadn’t been for the fact that my middle boy, when he first left school, he went to work for a firm of computer sales and they sold Apple computers, when he talked about Apples in those days, I thought they were things you ate. And he was able then to explain to me what these Apples, these Apple computers could do, and he was able to sell me, a lot of architects in London and design studios are using these Apple computers because they are so broad ranging and so flexible and all the rest of it, but eventually he persuaded me that we were to have some equipment and the younger members in the team were quite enthusiastic about that, they thought the old man, he’s decided that we’re going to have some computers so they got really quite excited, but the ones that were my age were not so excited, so we bought computers in, I didn’t entirely understand them but the younger people did and I suppose I might well have lost control a bit by then at that stage, because the computer, if I didn’t understand it, how could I know what it was going to be doing? The youngsters were working on computers but the older members of the business were still very much using pens. It was a transition it would have been a transition over about 20 years. Now, when I retired in the business split and Lionel Wendt’s own way and Mark Sabin went his own way, marks office down on the corner of Angel Hill, they don’t have any paper at all. They would know how to use a pencil, it’s a totally paperless office. It looks very smart.

On a sort of personal level what schools do you fear the most important for concept generation and development within your experience what, related to design?, Yet what skills are the most important, yeah, it’s generating design ideas and working them through at that sort of early-stage I suppose the ability to see things, the ability to have a three-dimensional concept of things. I’m surprised how many young students we got to didn’t, actually. Whether it’s something that an innate thing I don’t know. Can you teach that?

I was talking to a colleague of mine, I was interviewing a colleague of mine a few weeks ago and I put it to her that, is it like playing a piano, some people just cant do it and other people can learn, but never be as good. I’m not sure whether this ability to image, you know have a mental image and perceive in the mind is something that, I’m not sure that some people can do very easily and other people could just can’t do the ability to actually put yourself in a space in your mind, yes, in a mental space and to be able to kind of, get that out somehow.
I think that must be a fundamental, but maybe it’s not important any more. If the computer is going to do the thinking for you, I don’t know. But you only get out of the computer what you put in don’t you?

Yeah, yeah. It’s an interesting one, am not sure about that, when you have, I mean in recent years, when you have, I presume you have employed fairly newly graduated staff, designers

yes a lot over the years

when they come to you and you’re in the process of recruiting them what kind of skills to they come with in terms of how they generate ideas and develop ideas as designers. What kind of skills of the using the process?

Did they bring anything to the party? When I always felt people bought things the party because just having new blood in the office was a good thing. I think, I probably used to feel a bit disappointed, I don’t know that I can remember anybody sort of immediately arriving straight from college and being able to make a difference really?

I can’t recall that. No, I think those who made a difference were the ones who had already had some experience. I don’t want to came straight from college, it was always good to have students who were part of the way through the course. That was good, that was good, just to sort of keep in tune with the way things were going, so that we had an understanding of what was going on in colleges, but whether those who had been immediately qualified, no, I don’t think they actually came and made an immediate impact. And maybe they shouldn’t

yeah yeah.

You know, they shouldn’t think they know it all

okay, okay. When students, I’ve got a question here which may or may not be applicable really. My question here is how to students, or had your new graduates meet with your commercial requirements. Is there a gap between what they could offer you and what you needed of them for a commercial endeavour?

I think what I’ve said is the answer to that. The answer to that is yes, but does that, in a way does that matter? They can’t, just because a graduated doesn’t mean to say they know it all, and surely that must apply to any profession.

Did you find that they came with a huge foot shortfall in the things you needed them to be able to do, you know from the get go really?

Sometimes, not always. It’s probably because there are different ways of actually reaching qualification. Some people will go to courses where there was a heavy emphasis on construction and technical drawing, even if they were doing it on
computers, at least it was, you know they had a very thorough understanding of nuts and bolts, but then there would be others who had been involved with things more serial. But you needed both

okay. Have there been, and you’ve kind of answered some of this, but have they been changes in the need or sketching and drawing ability within your organisation. If so what are they and over what period?

The demise of the pencil. Well, at the end of my career I was the novelty in the office, I was the only one used a pencil. And I think the youngsters were pretty impressed with what they saw, it had its limitations compared with a computer, but what differentiated, the things I felt I was producing towards the end of my career with things that people like to see, and the computer never flattered. The computer made never made it look desirable where as I think I could actually make things look desirable, particularly in domestic architecture where you’re talking about people’s homes the way they live, I think I was able to make it look more appealing than the computer drawing state, and often when I was designing houses I would get to the stage when I say to the client, well that’s as much as you’re going to get from me, you know we’ve done all my pencil drawings now, and I’m handing all this lot over to the guys who are going to convert that into real working drawings, when they saw the drawings that came out of the computer they were then disappointed and they would say well that is what we agreed and I would say, well actually it is exactly what, you know what you agreed, it’s exactly what I’ve drawn, but it didn’t look the same. So I think the pencil was more user-friendly, I think you know what I’m talking about don’t you but clients are going to get any more because there aren’t boys around like me to produce that sort of thing. The youngsters are not going to produce and I had to say I looked at a planning application the other day for our house and flat that had been designed by the practice, one of the practices that developed out of my business, and it’s a new house being built out it rough and they looked at it and I thought, oh, no, I mean it’s just, it looks like a barracks, it doesn’t look like a house at all, it’s all, it’s a country computer drawn building

Sid do you think the aesthetic starts is based on the ability of the architects,? Do you think they would be able to produce something…

Well the something about it was it was a drawing of a building that was meant to look like something that could have been belts in the past, so if it had been an overtly totally modern concept building then I wouldn’t worry too much about, the presentation, but I think this is really quite a good example actually, it’s called Lake house at rough, you can look it up online, look it up on the’s and Edmundsbury website, it’s a replacement for a house called Lake house rough and I was looking at it together with Chris comps and who used to live there, he was born there, and he said to me I understand there taking on mild family house down a building a new one. We went online to see what it looked like and it doesn’t have, the drawings do not have herb appeal. Now I don’t know, the end result might have, but the drawings certainly don’t have, and I think if I’d
been the client employing architects to produce a new house for me I wouldn’t have been very impressed with this concept

has the need, sorry has the increase in the use of technology designing changed the skill set of designers. You’re kind of answering that as you’re going along, it’s completely evident

but it should make it more efficient shouldn’t it? But I think the combination of what I was doing towards the end of my career worked well because actually I was ironing out all the problems with the pencil and it was always resolved before went into the computer. We weren’t sorting it out on the computer, we will sorting it out in my head what to were have been the attitudes of your sort of younger employees, towards the use of sketching. I know you said they kind of feud you as a novelty

oh I think they, they thought it rather amusing. Although I think they quite liked what I did

is it something that they felt they’d want to do for themselves

no they didn’t want it for themselves I don’t think no.

Wide you think that was though?

Maybe they felt they couldn’t do it, I don’t know

nobody kind of gave reasons as to why they preferred other methods

with a really tried to do it. They could have done I suppose. Well I don’t know, maybe they couldn’t because I was the only one, the end, I was the only one with a drawing board.

I really, so there was actually no,

they were to been able to have done it because of the drawing board had gone

some of these questions you’re kind of answering some not going to even asked because I know when I go over the transcripts it’s, you’re answering these questions as I co-along before even asked them. The fact that people don’t sketch when possibly would be more helpful for them to do so, to put their ideas down on paper, does affect the way that your business operated? Is quite a broad question isn’t it?

Yes I think it possibly did, but that again would probably be an age thing, or it may not necessarily be an age thing. I know that on the whole clients warmed to the sketches that I was able to produce because they, there was a kind of a warmth about them that felt more like home. And I don’t know that there was, there probably wasn’t always an age thing, the other clients like that as much as the older ones. It was just that they were often disappointed to see the subsequent products that the computer had produced. So it wasn’t a particularly, I don’t know that the computer is a very good sales technique, and
yet in many ways it is because there are now so many programs like sketch up and, that I think are remarkable and they look like hand drawn drawings don’t they, and they’re accurate. They haven’t got this sort of subtle distortion that you probably introduce if you’re drawing it yourself.

and what software did you use within the practice

Victor works

did you sketch up routinely as well?

Well and Ross of course some really sophisticated

I’ve got a friend who does a lot of product design modelling and he does the most amazing animated renderings, it’s called Maxwell render. So sophisticated, he sends things often render farms in Germany because he doesn’t have the memory to do all of this and the things he produces are incredible

but expensive

amazing, amazing to watch Grand Designs? Some of those models are unbelievable the way they sort of built up

the fantastic

but the amount of work that must have gone into it

these things take forever

within people come to provincial practice and expect to get what they see on Grand Designs

not realising almost out what the visualiser is doing is almost completely separate profession to the process of designing, it’s almost its own profession out, purely visualisation is

and then you walk around it don’t you, and you look up and down around to you feel that there might be methods to reduce, or encourage the use of sketching amongst the sort of early career designers, you’re more junior staff? Do you think there might be means of sketch inhibition and encouraging them to sketch, due think, or due think it’s something that they are completely adamant and that’s the way they work?

As an interesting question because I think students of architecture used to be more often than not people who’d been quite good at heart and I don’t think that’s necessarily the case nowadays

like the maths, the academic staff that you need to get into courses where you are studying architecture, but the sort of portfolio of the creative staff, particularly the fine art drawing skills, I don’t think they are as hot on that, so not sure, I wonder if there
might be ways you think they could be ways to encourage the younger guys in the studio to pick up pencils

there was also the discipline of presentation that if you had to draw something, I mean some of the old draughtsman produce the most incredible pieces of work, and they are works of art, things that are hopefully now a lot of stuff has been preserved, but that was drawn one-off on cartridge paper, they didn’t have an opportunity to change it or anything. They had to make absolutely sure it was right all the time and then very, very carefully lettered up untitled. They were works of art computer drawings are unlikely to be works of art.

What influences the education of designers or architects to you have?

I suppose before I retired I probably had a bit because I’d be very critical

are you involved, you are responsible for the Milburn centre of the college?

It’s named after Betty

I wasn’t sure because it’s a centre for the guys to in gauge in their practical skills, like builders and craftsmen

because of her involvement of the college, she was chairman of the college

, I assumed it was an architectural thing

in a way that’s coincidental, but no, when she was acting, when she was chairman of the governors they decided they wanted to a building to encourage apprenticeships they managed to pick up an old factory number to her they decided to name it after her when she retired, and so yes it happens to house construction, not only construction is going to be nuclear as well

how exciting

how many people Cisco got now Betty, the Melbourne centre

backspace? Is it about 1000?

Was about 600

it’s more than that now, because as a great info emphasis on apprenticeships

but they’ve just got a special prize for the project where they had design students working with carpentry and building students with Heytesbury housing with the college is a joint project

it was an interesting, that’s, that is an interesting project because I don’t know that the end result was particularly attractive, but Heytesbury and the college were working in tandem to develop a site on the back of the Howard estate, is it? You know that all the roadworks at the moment in the Fulham Road, or the road in the village of phone, just
before the very last buildings, there’s a gap at the back there and this new house is being tucked in that are actually overlooking this area at about to be developed and Heytesbury and the college combined to challenge the students to design and execute it, but in order to make sure that it was architecturally acceptable, my old colleague Mark say Ben was one of the two practices that came out of my old business, he was involved in keeping them on the straight and narrow and I have actually been up to look at it closely but I think it was the best bit of design work but it was good for the students because they saw right through. And is produced affordable homes, and that was a good project for the Melbourne centre

are there any specific issues around drawing sketching et cetera that you feel education is unaware of, that they need to be made aware of. I come from a kind of education background, I’ve written courses masters courses for designers, so I’m kind of aware of the process of how you put courses together and how you go about researching the need for courses to be developed but when we do that there’s always this sensor have we missed something, you know, it would be nice for us to include focus groups and that kind of situation to glean up all this knowledge

if you were to conclude that the demise of the pencil is a prejudicial results then would you then think that it might be appropriate opposed the only part of the curriculum on the course to include use pencils? See it, there are so few pencils in the office down there now but if they wanted to write a note they’d have difficulty, if I said somebody give me a pencil, they haven’t got one, because they do everything on the computer

is this kind of alliance, this assumption that it’s always going to be there. A slightly dangerous assumption to think

I don’t know, we were talking earlier about the future world the way I see it and it’s going to be, there may be a world that doesn’t require the pencil. This is an innovative housing project that saw students working along a housing association to build homes embarrassed Edmonds. Authored 200 suffer college students worked on it, it doesn’t show you a picture of the results

what’s the website detail of that? I’m going to look for. It’s Heytesbury is it? If the news, it’s if the news

the partnership has won top prize, one of the judges commented that the collaboration between Avebury and the college was a refreshing and innovative approach and one that should be promoted. But it doesn’t actually show us what it looks like does it?

I’ll track them down when I get home

all the students benefited greatly from the experience and the credit of the joint venture team for bringing this amazing opportunity to the college
Interview with Peter Phillips

Interviewer: It's recording now. Okay brilliant can I just ask you just to start by giving me a little bit of background, who you are and where you studied and who you work for, just a very brief bio just so I've got a little bit of background for my sort of primary research collection and I know who you are?

Peter: Sure I did my Art Foundation down at Bournemouth University and I went to Central Saint Martins for 3 years, do a BA degree in [unclear] design, brackets engineering [unclear 0:37]. Joined a small consultancy up in Cambridge for a year-and-a-half and then join BIB in London where I met B Ford and then [unclear] until 1999 and then I was the fourth partner of the consultancy from tangerine which included Clyde Granier [unclear 1:04] and I stayed there for about 15 years and then join the [unclear 1:11] and then I moved down home as I call it back down to the New Forest with my wife Sue and now I work for myself. Well 82 I graduated so it's about 35 years or 36 years and I have resigned.

Interviewer: And do you work for yourself now?

Peter: Work for myself and then like on a Friday or on a Thursday I will [unclear] down at [1:39] University and that sort of continue as a sort of part-time relationship that I have had with design education with the fact that I have been external with De Montfort and South Bank and Southampton Solent University. And then I've said for the last 6 years I have been an [unclear 2:00] down there and that's something that I have increasingly enjoyed as I got a little bit older [unclear] just giving something back and provide some support to graduate designs coming through so that's good.

Interviewer: Yes, brilliant okay which brings me very neatly on to my first question. Within your sort of position as you are at the moment with your design, what are the sort of attitude well how do you feel about the necessity or the importance of sketching. During the early ideation design development stage, I am not talking about the visualization the client sort of stage, I mean do you use sketching a lot or is this something that you've kind of moved away from?

Peter: I still use sketching not a lot but I do use it and I suppose because, I don't know if we were talking about this yesterday because another one of tutors at Bournemouth there's a guy call Michael Kennard. And he was the guy that really made Kingston Police graphic designer course so famous in the eighties and nineties. And he said really the process of sketching because it takes a certain amount of time to do it you are designing and you are changing things as you sketch so you are drawing something and you are going oh no I don't want that line there I want it over there so you rub it out, because it takes a certain amount of time and [unclear 3:38] you are designing as you go so I think that was a bit of a [unclear] but anyway you are right because you realize that you don't just sketch something and then do another sketch you are going to have to work on a sketch until it's to the best that you want to be and then move on. I think we are also saying that being able to draw is a great skill and it's very difficult, but if you are given enough time to do it like you know in a foundation course or something like that. You can get to a point where you go okay I am quite good at this and that builds confidence to be able to pick up the pencil and draw something, and that confidence I think never leaves you but unless you have that confidence in the first place you don't
do it so therefore it's very easy as the default situation where modern students they just
go I can't draw I am going to go straight to my computer. And I suppose it's a bit of a
stigma about being can you draw or not and if you can't you tend to just never go there.
So it's a bit of a shame Lisa it's begun this can you draw or not because people say that
they can't and then they don't do it [unclear 4:51] have a go I don't even use it as a part
of the process to sort of work up an idea and see if it works or not they just missed it out
completely. And because they are missing it out completely they are missing out that
time of thinking about the form or the shape of the idea and try to mature it to a point
where they go okay that's quite good, I quite like the look of that and now I am going to
go to Cad I am going to take it to the next stage and I am going to make a model of it, it
very rarely happens.

**Interviewer:** I am seeing that increasing actually it's quite depressing. I mean this is
brilliant because I didn't realize that you did quite a bit of teaching so this is actually
good because you are kind of crossing over between industry and education. When you
see undergraduates working what kind of skill sets short falls are they demonstrating, I
mean to the point that you or someone from the industry would be concerned about
possibly you know people coming up into industry?

**Peter:** I think one of the things that we've really try and forced down the necks of the
students at Bournemouth, and I think I've mention that I teach them a graphic design
course [unclear 6:13] because we try and get them to really understand the design
process of, and we taught a lot of observation inside the design. So it's like you know
let's try and look at the problem and observe it talk to the people talk to the users and
understand have an empathy have some insight and then the design. And I say to
students quite often if I was employed a person I would be looking to see which student
is understanding those first 2 stages of the design thinking, if they got that really
nothing but if they're not very good design doer I will be like okay because I have got
lots of other people who can go and do that so it's the thinking that is the most important
bit now I believe. If a student doesn't do the thinking and comes up with a whizzy
design that doesn't need to be brief they are not going to be impressed by that, so we are
trying to sort of move it back a little bit, and from that that's sort of takes a little bit of
pressure of them because they think they are to produce beautiful design, and some of
them perhaps are going through stage where they can do but others realized rather the
third year that they are perhaps not going to be the greatest graphic designer but do still
enjoy designs [unclear 7:27] or maybe if you can sort of get that front bit right, and you
could go into you know innovations consultancies or other areas of design where you
are not necessarily having to produce outcome, you know you enjoy the process so
[unclear 7:45] will keep them in the world of design by doing that because as you know
as you always know in anytime or any year you get the comment were the head of the
comment has got the 6 or 7 brightest and [unclear 7:57] And then just going to shoot
through, and then in the tail being dragged along is the rest of them is the middle group,
and I knew others ones at the end who just giving up. So it's like it's the ones in the
middle that you want to sort of look after and keep them going as best as you can. And
then sometimes just try and take the edge off what they have to produce sometimes
makes them go okay like I understand this design thing and it's not about producing
beautiful work it's also about the process they've gone through. So going back to
sketching I think that if the student is showing us some sketches but you know exactly
what it's like, they come along and then they say, you go and sit down with the tutorial
at the beginning of the project. And they also said I have got this idea and they show
you an A4 piece of paper with this little drawing on the left hand corner you know, I have got an idea what [unclear 8:54] and you know the classic one well just draw that again but bigger and then draw it again and draw it again. And some of them do and understanding that that's the way of then getting it out on just building the confidence and the concept, and name going into the next stage or you just get the ones that open their laptop and show you a finish piece of graphic design. And you say well how have you got there, well you know I just had this idea and I did this and it's okay but it's not what we wanted to see we are wanting to see how they got there, because this could have been that they've copied something or they got there by default or you don't know.

**Interviewer:** No you have no idea. And overtime I don't know how long you have been teaching obviously you have been in the industry a good few years, but overtime has there been an increase in that has the dynamic of that change?

**Peter:** I am thinking it's been 6 years doing it now almost and in the past obviously you know with the external side of it, then there was always, there was a period of time where [unclear 10:10] making things was disappearing but that seems to be coming back ever so gently which is a good thing. There was a period of time when students would just you know going in Engineers to design something and not make models. And I think that guy came from [unclear 10:29] he spends some time with John Hyde. Did you read the article with [unclear] that I've sent to you.

**Interviewer:** I haven't read it yet but I will do I have got loads of stuff to be reading next week from Peter,

**Peter:** He just basically points out about that you know I think it was [unclear 10:48] college of art and design shut their product design course because they said model making facilities was expensive to run and therefore they were shutting that and pulling it from the classroom [unclear 11:07] computers and John said that's absolutely outrageous you can't have somebody who finishes a degree and end up with [unclear] but it doesn't make anything. And last week John was one of these extraordinary designers who didn't make one model of something that he design he'd make 10 and 20. He just keep making models [unclear] is so slightly difference so you can't say that it's better but it's just full of card and wood and paper and models of [unclear 11:34] or whatever is your design so he was a real Krause in the sense that he believed and he still does that there is an element of craft in design because that's where it came from, well the Central School of Art design was called the Central School of Art and Craft. And it's that old school style of let's make it again and try something else but by making and very rarely ever refer to Cad [unclear 1202] so I am sort of feeling a bit like that really because we have lost something definitely in the drive to get the kids understanding all of the latest bits of software, and that's just such a total waste just when I remember getting CDs from students and saying you know what they have done and achieve and then [unclear 12:23] and well this is like all the programs that they know and it was Solid works of Rhino and all of these words and you go, well that's no good because I've already got one of these packages in my consultancy I only need them to know that one why does learn 20 you know. One other thing Lisa that make smile, one of my clients I have been [unclear 12:47] they take on the graduate student Department [unclear]. And they've got a young girl they called Emma who's a very nice lady, who is doing a product design course down at down in Bristol and she is every year. And I've said to her you know what do you want to do this year what do you want to achieve because
you have got, and I said look here in this particular these type of things everything from a birth to the death of a product, do everything in Marketing sales texting all of their advertising everything is done in-house, so again everything they do and their manufacturer is done in China you know what do you want to experience, and she said I really want to learn how to work out and learn how to use SolidWorks, that was all she wanted to do and that is get really good at [unclear 13:36] the software I thought you are missing the point you have missed the point but that's what the kids believe and when I say kids I mean students, that's what the student they need to know.

Interviewer: Okay so from an industry point of view you are talking about kind of the opposite of that being the case. If you are looking to recruit or you know take on somebody early careers or new graduates. What would be the sort of ultimate skills that you would look for in a student in a newly-graduated designer?

Peter: Going back a little bit as I say to be able to show empathy for you know for other people so that they don't think about designing things for themselves and what they like, it's understanding and bring up the empathy to understand a different customs of different requirements to design for them, because you know you can take on a globe and say well the first job we're going to do is repackaging for footprint for skull. And then he says do you know anything about footprint and he go no and I go well neither do I, let's go and ask let's go and talk to people who use it and I understand and it's empathize, but for now I think if somebody goes okay I need to get out on board on something that I don't know anything about, and just breathe it in and live it for a little while rather than just automatically think that oh I know what to do, and go to the computer and bang out 5 designs. And it's funny because the way that design when Peter and I sort of graduate you know you went into a Consulting and your boss would say alright, we got this job for a television manufacturer let's go and bang out 8 different designs to go and show, so you go spend all of that time doing 8 different designs and then you go and show, and then it just becomes a completely subjective Beauty competition where a client would go, who have got no design experience at all would go [unclear 15:48] and you think well where is the skill there because I am the designer I should be the one that should be saying you know this is the one we should be doing. And I think over the years probably as you've got older you get a little bit more experience, and it get to a point now where sometimes I only do one design now and just say this is it this is what we're going to do. And this is slightly arrogant but it gets to a point where you've just got to look I have been doing this long enough to know what you need and what the market needs its interest and show them. So that's probably you know benefit of time but going back to your original question, just somebody who just applies the sympathy for the process and understands rather than having a very bullish oh lets you know [unclear 16:30] and do a rendering or something. And I think that's what John said was is you know I think [unclear 16:42] if I am interested if I tell a student that I am interested in making a design a phone with out of glass, why does that student then go away and do a fancy rendering of a glass for telephone why doesn't he understand what you can do with glass so it's the craft element it's like well what can you do with glass. And you go and find out what you can do with the material, and that's a little bit of Renaissance in that sort of going back to the craft element. Terrence Cameron son I can't tell you his name, Jasper thank you that's what my wife said. Jasper Cameron he is doing a talk at Central about form follow craft I think it was form follows material, so it's like going back to having a look at wood and the metal and he made things and sort of applying that to product, so that's quite good but I think that
there is just this constant preoccupation with Cad. And I think that I’ve said to you when I did a talk down at Bournemouth University last year I just said guys it's just a tool you know it's no better than a pencil, and you know sometimes the pencil is more powerful than Cad, and I think even the tutors are looking at it and go and seeing looking like the devil had sworn at them you know it's like that, but honestly though just uses one of your armoury to get to the end selection but I think it falls on ideas a lot.

**Interviewer:** Yes, and going to sort of Industry side of things. When you are met with people who don't have any empathy for the process and aren't able to work through their ideas. What kind of effects does that have on an organization or on the actual design output, obviously it causes problems but can your kind of identify any of those at all?

**Peter:** There are consultancies out there and you can see very engineering led consultancies and they call themselves [unclear 19:06] and they are full of Engineers and their designs are very projective and they don't push the envelope at all they are just ordinary stuff, so they don't really there is a time and place for them but they are not challenging [unclear 19:24] perceptions of a particular products so they will always get this sort of engineering products that need working on, so there is a time and place for them of course but then that doesn't really push the envelope on what we are trying to do you know as an industry, and I think that's where companies like that [unclear 19:45] because of John's relationship with them but companies like that and what they do just push boundary over every sector, whether it be software and Hardware or retailing you know purchasing online with the internet they just raise the bar so far up and it just to make life as designs very much easier just to going in and go you know you can do this now, I mean you are an interior designer you know their retailing must blow your mind you know you go into those shop on Oxford Street or wherever it is and it's just wow.

**Interviewer:** Oh it's great.

**Peter:** It's mad isn't it?

**Interviewer:** Yes, fantastic.

**Peter:** They are cathedrals aren't they, and it just pushes your mind it pushes your you know what retailing [unclear 20:34] what they can do and we have got to do it so it's all good.

**Interviewer:** So it's about raising the bar really, sorry I am making notes here as I go I'm recording but I always make notes as I go for the Juicy Bit.

**Peter:** It is about [unclear 20:52] it then creates a void and it allows designers to then move into that void and say now we can now operate at a much higher level, you know Ford and I sat and said could you imagine 20 years ago that a computer companies would machine laptop companies out of solid blocks of aluminium, him and I would be laughing it out loud and now here I am looking at one, and it's just like they've got to be on the point of like wow, it makes so much sense the machines are not in one piece, well why didn't everybody do it but it just didn't involve [unclear 21:38] let's go and do it and I off we did it and changes the faces of the world.
Interviewer: I'm just going through my list here hang on a second I am ticking off as I go in a particular order. Right can I ask you about the alignment between education and Industry, so you see both sides of the coin which is brilliant and you are talking about the way that education kind of pushes the software and forget about the process. What I mean is there a mismatch between what education is providing student and what industry is wanting from students, can you identify any issues there. You might be digging your own grave here I don't know I am sorry maybe I shouldn't have asked you that. Did you want to go anonym you can go anonymous now if you want to it doesn't matter?

Peter: The Bournemouth Art University about 3 years ago asked me to write an MA paper on to sort of setup masters and interaction design at Bournemouth. And you know from a complete novice I had to and with very little help, I had to get it validated into writing papers you know what it is like at a [unclear 23:10] stage 1 stage 2 or step one and then validate, but anyway we got a crew and it run and we recruited, and then it got killed it just got taking off after the second year which was very upsetting for me at the time because I sort of put [unclear 23:32]. And I did sort of say then the interaction design was so important because it was a course that wasn't being done, but it was actually what the industry was asking for, in the sense that we got this situation now in the industry and I am sure that you can see where you just get this dividing lines between the individual disciplines of interior design and graphic design special design, it's just blur so there isn't any real sort of understanding of yes it's taught inside of us at the University level and there is very little cross discipline across the [unclear 24:12] between the individual disciplines because you are all very busy doing your interior design and Ford is running as industrial design [unclear 24:20] and they are trying to, they ask me again if I was up with a BA design course at Bournemouth but they want to run it now they weren't going to run it 2018 but now they have to put it back to 2019 because they were trying to get somebody to run it, but that is either based on those sort of Goldsmith model where it's all very multi-discipline disciplinary. And once I am very excited about it [unclear 24:52] concerned that the student isn't going to get a particular they aren't going to have a discipline a strong single discipline at the end of it. They are going to have a sort of understanding of 3 or 4 which worries me but I can imagine for students, the Foundation course looking at that and going great I am going to do that because it sounds like they are just [unclear 25:15] doing my Foundation for another year, in the first year trying a little bit of graphics a little bit of trash and a little bit of model making and a little bit of interior design, and I can see why it be very attractive, and I can see why AUB [unclear 25:33] going to do it because it will attract lots of students and that's their primary objective is to get kids on the seats [unclear] 900 a year. But that for me would be a good thing because you would get, if you could get your sharpest and the best designers applying on [unclear 25:53] like that and they would then come out as sort of just General designers that could be quite attractive to companies, companies that want to employ designer but want a designer that can manage their webpage and do some packaging, do some retail design because the [unclear] stuff isn't very good and maybe design is a bit of product as well, and if a designer could sort of straddle out over those things and that becomes a very valuable person rather than trying to employ a web guy or Graphics guide or an Interiors lady or whatever like that, which that would be a good thing because it would then encouraged companies to employ somebody you know employee a designer.[unclear 26:47] possibly we are you know and MA in Design would be better and if AUB are going to run that as well because by the time you [unclear 26:57] and you got yourself a
discipline in one particular area and you can then go and do a year or 2 in design and just develop your skills further, but I think that is a case of education and listening to Industry and saying you know we are listening and we are trying to design a course but generally my experience is they don't listen to the industry at all, there is no like let's go and find out what actually the industry wants from designers and you know let's go and talk to the industry that we actually serve.

Interviewer: I have never known that to happened, I have been teaching for 18 years and I have never known that to happen. It's always a case of oh let's invent a new course and we can get 40 bums on seat every year [unclear 27:52] but it's strange how it's just not done it is very odd.

Peter: Because the design industry has changed dramatically since [unclear 28:06] it's just gone completely different you know and I said when we used to make things in this country we would go and visit somebody you know we made something. And now it's all done in China and you have 24/7 turnover of communication and everything has changed, but the design industry I am sorry the education still produces designers in the same way, it's a real shame I went to do a talk over at Bournemouth University because I have worked [unclear 28:45] at Bournemouth University, it's sort of nestle into each other it got nothing to do with each other but they are still on the same side, but then the Bournemouth University they've got an industrial design course and a product design course. Now that's another question that I had to ask them, I said what is the difference between the 2 because to me they are the same thing [unclear 29:08] it's the same thing but they sort of defend it [unclear] anyway you know I met some really nice tutors who had been there 30 or 35 years, and they have no external help on the course so those guys that are teaching there, must be teaching the same curriculum that they did 10 years ago and the industry has changed dramatically from that time. So I think there is a little bit of responsibility for [unclear 29:36] to go and find out a little bit more about actually what's happening but as far as I can see it doesn't.

Interviewer: So can I just clarify you as an industrial designer are there things that you would say to education, if you were to give them a kind of bulleted list and I am not trying to get you to kind of put words in your mouth or anything, but are there specific things that you would say to education. The industry needs more of this and more of this or none of that Are there specific things you can kind of own in on?

Peter: You know going back to design thinking I would really like to, there is course that start to float up and say look we are just about, we are about design thinking and about strategy and about coming together and working together and use a sense of design. And we are not about producing working prototypes of within you know motor bikes or something like that. And it's almost where Central I went over at Central and we were very much about sort of designing and making but understanding the process and the materials. And then it went into a sort of quite a weird area for about 10 years where that was all very, very experimental and very sort of weird designed and at the time I mocked it but now I am still almost missing it a little bit, and I think Central they almost do that still except that central has lost its way because it's full of very rich Chinese and Korean woman now [unclear 31:39] because they want to study design in England, so it was early when I did those work up there a few years ago that's what struck me it was just like, his heart and soul has been lost really just sold out they get
the money. And it would be nice to see if courses could just separate ever so early, I went to a new design [unclear 32:00] for this year did you go?

**Interviewer:** I didn't I hadn't been for a couple of years actually no I have not this year.

**Peter:** I was chatting to was it Napier it could have been I think they have got a product design course up there. And their stuff was really fresh and new and different and I have gotten chatting to the guy and he said we are just trying to talk about craft and we talk about making things and deconstructing stuff and I thought good on you, you know but it was the only one that I could see that was almost trying to be different you know when you have got like the main De Montfort and that lot it's all the same. And I just thought for the kids going through and you know to spending their 30 grand, and you are thinking if you went there you think well I am just no better than that guy over there, but these people over there are doing something quite kind of different. And it would be nice if some these courses sort of drifted up a little bit into that, because I think there is some other engineering courses and I've heard through one of the [unclear 33:07] at AUB saying where some of the engineer courses and some of the [unclear] were expanding to recruit they've changed their name from engineering to Industrial design, and I have seen that because of this company that I work for last year they employed a graduate girl from [unclear]. And she was doing product design within [unclear 33:36] and I said to her well what's the Innovative part [unclear] but when she spoke about actually what she was doing it's an engineering course. So she is going to come out thinking that she is a product designer but she is an engineer and that's really naughty of these [unclear] because you are not producing industrial design rates you think that you are producing pseudo Engineers who can't compete with the really good guys from De Montfort and from [unclear 34:08] and Brunel who actually are producing [unclear] engineers or mechanical designers so I am inside of Education and I can imagine that it is very tough you have got to recruit [unclear 34:27] on the seats the easiest way to do that is to you know generate more other courses, and try and get [unclear] on seats but I don't know whether that course generating idea is actually based on what industry want or whether it's just a case of going well hang on we can do that because it's a bit [unclear].

**Interviewer:** It seems to come from within you know oh this course is good that course is good we could Market a course for people who would like to do a bit of each, but there is no research done outside and Industry is there a call for that from our experience, and I shouldn't say that I will have to be anonymous now. Yes, it's a strange way but it's gone about. Can I ask you with your teaching in the aspects of your teaching, this is a bit of a strange one but it's stuff that I have been picking up on as I've been researching. Are there any issues around things like gender culture or age which affect student attitudes and ability to work through design using sketching and using these sort of early ideation skills, I know that you were talking about, I'm sorry go on.

**Peter:** I would agree with you not so much gender now and I think that’s a really good thing you know when [unclear 36:00] there was no woman in the industrial design and now they are and that's got to be a good thing and now woman engineer are coming through. And that was when I was a kid and funny enough I have employed 2 female designers and it was the best thing I ever did and I almost hit myself for didn't do it early because quite often clients or a female and you suddenly get this empathy where you suddenly realize you haven't in the past so that's a good thing. And sometimes age
in education funny enough the order the student is the less ability they have to think creatively and empathize they just automatically let their preconceptions rule to go [unclear 36:53] and you go oh yes I remember that I've done that and I know why I'm on that. And yet you say that to a 19 or 20-year-old and they will go okay that's interesting. And they are much more opened [unclear 37:07] obviously because they haven't got the preconceptions, and we talk a bit about don't allow preconceived ideas to dominate that, and that's a classic case that we talked about actually Peat would remember this as you ask [unclear 37:30] about this, when we were at BIB together BIB had to design a little Duracell torch I didn't remember it was black and it had a little yellow on the end.

**Interviewer:** He just talked about this Duracell torch.

**Peter:** Okay it was design before by a guy called John Dray who was our senior guy who was in his late 40s early 50s when we were there as young kids. And John Dray he invent almost without realizing that he did use the [unclear 38:00] research because he said to people because the other thing was the Duracell brief ask for a light source not a torch as soon as you say torch to somebody [unclear 38:19] based on the light source and John just ask a few of his friends and he said, when you use the digital touch what do you use it for and he said well [unclear 38:27] either got one hands or 2 hands free you know [unclear] changes it a lot but a few years you want to have [unclear] so he didn't stood up. I mean it seemed so bloody obvious now but at the time it was like wow you confuse the design and thinking oh that's an amazing design and I never thought of doing that, but John just completely drove it from a user need, and that's great story to tell students there because they look at it and think oh that's whizzy torch, and then they go no it's actually driven completely by a [unclear 39:06] so that's good but that wouldn't be taught in these sort of pseudo industrial design courses I don't believe anymore, I don't think they will just say design a Light Source or design a torch and the kids would then go off and then [unclear] so they are switching it.

**Interviewer:** Styling rather than designing. Cultural issues you were mentioning Saint Martins the Korean and Chinese students they come and we have got a few of those at De Montfort as well I know where you are coming from it's quite interesting. How do they relate to the process of design ideation development sketching, I've got a certain sort of take on it because I have been teaching them for so long, but I just wondered you know are there any other cultures where you see a difference or an issue with this development, design development stage.

**Peter:** I would say that probably 90% of them just don't get it just don't understand it, every now and again you will get like one, I saw one yesterday and she is great and she just gets it and she understands it, but she has applied a little bit of Chinese culture into an English culture so that's quite clever, but whether she's understood and how she has got there or whether it's just a mistake you know I am not sure yet but I would say 90% just don't get it and when you talk to them it is just 2 creepy guys over their heads. And whether that's a cultural thing or and understanding or anything I don't know it surprises me because I think, it must be a Monumental waste of money to their parents to send them over because it's costing them an absolutely Fortune, and I really don't know whether they get it, and they hardly say anything to you they don't really take in much notes at the tutorial they just sort of do their own thing and keep themselves to
themselves. So I think it's such a waste of money but anyway then again [unclear] need them because they pay out.

**Interviewer:** Are they quite willing though or do they I mean regardless of how much sort of tutoring and mentoring you give them does it make a difference?

**Interviewer:** They do produce a lot of work but whether it's gone the right direction or going in the right direction I don't know whether it does, generally they just don't get it but they do [unclear 41:36]. And where they are most successful is where they you know they apply a little bit of their own thinking back to it. And we had a Chinese student last year one of the brief I think from DNAD or one of the graphic briefs they were sort of team Packaging, and of course they did some [unclear 41:58] based off sort of some Japanese Packaging that they have seen out there. So hopefully when they hit on something that they can bring back from home back into an English country and do a sort of Chinese Japanese version of it then that really works. And that's quite good for [unclear] students to go wow that's amazing I haven't seen that so that bit I think of that can work but it's their money but it just seems to be a bit of a waste of money.

**Interviewer:** Yes, absolutely sort of specifically talking about your undergraduates. What are they I mean do they ever verbalize their attitudes towards sketching and Design ideations, I mean sometimes people just kind of disappear and don't come into lessons if they don't want to partake but I mean have you picked up on what the attitudes amongst the undergraduates is Bournemouth and [unclear]?

**Peter:** I think luckily because the recruitment is quite difficult they take about 100 but they might get 600 applicant so they can be quite choosy, and I have done some interviewing for them this year for the very first time [unclear 43:25] if they have not done a foundation course don't accept them because it's unfair then, because if you let 4 or 5 through and they are in a cohort of 60 or 70 students they have all done foundation course those 5 to 6 who haven't done it will just struggle from day one, so you said you know that it just shows them go and do a Foundation and then come back next year, so generally speaking I am really very lucky that [unclear 43:49] approve all of our students this year I've done a foundation course so they are that year older and I think that makes a massive difference because they would have been taught to draw in the foundation course, how much of it [unclear 44:03] I don't know and I think that come back to the other thing [unclear 44:10] a course that when we taught and when we were doing them Cad didn't existed so we wouldn't have got Cad so we would have spent a lot of time being shown how to draw and getting those hours under the belt so that we build up this confidence to go I can draw now so I am happy to pick a pencil up and sketch something but the kids [unclear 44:33] because they are then oh we need to do Cad and we need to do sustainability design and we need to do you know ethical design, and it get distracted and there isn't enough time for them to do it. And so in such a short space of time they get taught how to draw and if they don't get it at the end of it they go well I can't draw and then we are back to the beginning of the conversation which is like I don't draw and I don't sketch I just go straight into illustrator, but you say they don't understand if you could just take the myth away from being able to draw and just say you could sort of draw, and that's all you need to do to get using sketch to use as art in the development processes. And don't worry if it's a drawing on the bottom because we can make a bigger drawing and then draw it again and draw it again, and then you know you suddenly get a nice big sketch of something that somebody wants to design. It is
very rare when you do see a student who can sketch it's lovely isn't it, and you go wow that is really good I mean but it's very rare.

**Interviewer:** Yes, I spotted I did a quick [unclear] of the architecture degree show this year, and there was one student who'd got a lovely little leather bound notebook. A they'd worked in just sepia ink, sepia ink and pen. And done some really lovely tiny observations scamps sketches and as an artefact it was beautiful and just to flick through and see what they'd produce it was just the best bit, with all of these great big sort of Cad drawing and plans and big boards and they all look the same. And this little book this little book of Joy was just sitting there, and it was lovely it was lovely to see, and yes it's just a shame.

**Peter:** When I did the [unclear 46:33] at De Montfort the first time [unclear] was it Michael who used to run course as well.

**Interviewer:** Michael Marston, yes he has now gone off to, I think he is head of the design school or something up at Nottingham Trent now.

**Peter:** Can I told you about something else [unclear] we got a case of plagiarism can you have a look, and he was showing me so we've got this. I can't remember really because I am really, really off record it was an Arab lady with the full headdress and did the whole thing in the class who was designing this insulin pen and she done it with the drawings [unclear 47:26] and she said come and have a look at these drawing, and you clearly she had gone out through a professional consultancy and [unclear] the work because it was drawn I never seen drawing with you know, she's doing it with a crayon draw perfect lines she just drew this pan into 3-dimensional using a single line, and it wasn't just one drawing it's like all over this page it's almost like [unclear 47:24] little sketches and it was all beautifully done and then the engineering drawing was beautifully being drawn and all Dimension exactly right from you know the right date and line. And it took them about 9 months I think to prove to this woman or get this woman to admit that you have been buying his work, I read about 20 or 30 thousand [unclear 48:22] so professionally she actually got it but you sit in a room and do those drive and they actually got her to do that and of course she couldn't. And said oh I am not feeling very well because [unclear 48:40] and it was such a contrast I mean if you are going to [unclear] at least just don't choose somebody who can't draw very well not draw but you know [unclear 48:44] the whole country can draw and that was my memory.

**Interviewer:** Yes, it is priceless when they do that. Okay I think that I cover everything that I need to cover. Do you ever get clients giving you feedback about the use of hand drawn, with Interiors very often clients like to sit and work through a brief with pen and paper and the designer, so you are kind of describe slash designer in that process. Does that happen do you get that with products and Industrial were sort of the manual process is bit of a selling tool in itself really.

**Peter:** You do I mean before the days of Cad your first stage presentation would be sketches of the designed and maybe some mark-up, and they would be on paper and some drawings or maybe some magic marker or something like that they will be drawing. So the client would understand okay so these are first concept okay I understand I'm quite like that [unclear 50:00] you know we trying to design it a bit like
that and they would understand that this is just the initial thinking. Now students go in with 5 design as fully finish 3D ren...ders, and the client goes so that's it then it's not going to change for that is it, and you go oh no it's just [unclear 50:18] finish so I kind of had an input in it, so well okay I'm really enjoying this process because I haven't got a stake in the thing and as you know professionally if you get your clients on board to go and the clan goes [unclear 50:39] can we try that and he go good idea that's really nice let's try that you know [unclear] I am a designer here and with a finish render that's it they can't implement it because it's done so definitely the ability to sketch automatically, downgrade the Finish idea to just something that has been worked on and can be contributed to so yes I wholeheartedly believe in that, I think it's just a constant drive to be professional quick you know you completely missed that element out.

**Interviewer:** Yes, okay right I think I have got to the end of my questions I've got loads of nose here and I've recorded everything and I obviously will be careful about the bits that you have mentioned about being a [unclear] don't worry. Yes, okay thank you so much I don't think there is anything else I need from but can I possibly come back to you in due course if I have things to sort of run by you when I am putting up the framework together for teaching, that won't be for a few months.

**Peter:** I think the future game there is a real certainly in Bournemouth in the graphic school there is a real concern amongst the tutors about the ability to sketch and draw and the fact that it's lamented and it's a shame that the kids can't do it better and then there is always a come and get a drawing phase in the first year and they have one at the moment but they want to build on that or maybe go for a few more weeks just to try and get sketching back into the skill set, so there does seems to be a concern in design education that is missing and if we are not careful it disappear, but that's good to know that but I can't [unclear 52:44] for engineering courses or you know some of these pseudo design courses I can't imagine for one minute that drawing is taught there.

**Interviewer:** Thank you very much. Okay lovely thanks to you so much I will send you a little email to thank you properly.

Finish
Interview with Dick Powell

LT: can you just give me a kind of overview about how your organisation relates, and I’m talking here about the early design ideation, development process, up to the point where it’s then necessary to articulate designs in a final visualised presentation sort of way. I’m talking about all the kind of mark making that people do from that sort of inception development stage, however that kind of comes about and what it looks like. What is the position and attitude of your organisation towards sketching and the need for mark making during design development process?

DP: well it depends on the kind of project, but, I mean as a business, because both Richard (Seymour) and I are very keen on drawing and always have been, so always felt it was very important that our designers could draw, the need to draw hasn’t diminished with the improvements and that other available tools that designers have, but we still think drawing is very important but the way that the business has developed over the years, we tend to, rather than have one designer do a hold project from start to finish, so from concept through to all the engineering bits and bobs, we have specialist skills, so people who are good at conceptualising things, and there is a relationship between inability to draw and inability to conceptualise, in my opinion. We have people who are very good at that who work upfront then they move on to something else while someone else picks it up, so it’s not always one person going all the way through, more usually it’s not, but often it is one person who will take it through several stages, and what’s changed is the speed with which you have to get something finished looking, so we call it fast and shiny things, is very very rapid now, which means you generally (…) the CAD system very very early compared to 20 years ago.

LT: what has caused that need for, you know the shift in deadlines?

DP: no, it’s the quality of CAD rendering which is only accessible twenty years ago to a very few people who required endless knowledge and skills to do what is now available to everyone, so therefore clients see highly finished CAD renderings all the time, therefore they expect them all the time, and even though you may only be at the inspiration stages of something, they nevertheless want to see it looking real, even though it’s not.

LT: is there a difference in the way clients perceive hand drawn conceptual images and a rendered image?

DP: will hand drawn image is an intermediate step to get to that final image but they’d rather have that final image, they really don’t want to see the sketches, but very often they want to be involved in the process, so where they might only see three CAD renderings, they quite like, and we quite like, sharing with them all of those sketches that worked for that, so we often take them through all of those other alternatives, so they enjoy that, (…) where do we go from here, which ones are we going to work up quickly?
LT: so those sketches will actually go into a meeting with a client?

DP: very often, yes

LT: do you find clients sketching at all?

DP: never, never never never.

LT: it’s just, there’s one incidence of that I’ve picked up on

DP: I mean, if you’re dealing with a design manager, you might, but generally speaking the quality of sketching amongst designers has fallen through the floor

LT: the need for sketching within the industry, we talking about certainly the last twenty years improvements in software, the usability of it, do you think the need for mark making and that kind of conceptual concept generation using sketching has changed at all, or is it still there, kind of inherent within the whole process?

DB: I think that the need for it is more important than ever, mainly because it’s dying out and because, much like the questions you’ve been asking, it’s focus is on the presentation, not the creation, but where sketching and drawing is so important is in the creation not in the presentation, so as a tool that designers have to articulate ideas to themselves and to others, the sketch is as important as it’s ever been but it is not viewed by most people in that way. We used to say that to do, this was a long time ago, we used to say, to do a CAD rendering something, you had to build every single part of it, so you had to learn what it looked like round the back, because you had to build something which you could then render, but with a sketch you could communicate 90% of your intent then you know 10%, so CAD you had to know 90% to communicate, well you had to know 100% to communicate 90%, but with a sketch you can suggest what is happening.

LT: so those sketches during the initial phase, what disciplines within your organisation and outside the organisation would engage with those kind of sketches, those pieces of information? Who does them and what do they do in your organisation, obviously you’ve got the designers, I wonder whether the project managers or engineers engage with them?

DP: the designers of the people who sketch, and we talking about product designers here, and they will all draw to some extent and most don’t do drawings that you could then put in front of a client. What was the question again?

LT: do they share those with other people within the organisation, obviously you’ve lots of different disciplines within here?

DP: I mean we have workshops with our clients, creative workshops, creative events where we draw in front of the client, innovation style events where we work with the client and with their R&D team and marketing teams and so on together to produce things rapidly. We used to call it the Rolf Harris factor but we can’t any longer, the
ability to, I always say creativity, it comes from (...) metaphysical theory, but creativity is about idea, belief, embodiment. So I’ve got to have an idea, and build the belief behind it is the people doing it and responsible for it, and you’ve got to actually embody it, so you’ve got to make a model, prototype all you do a drawing, the embodiment of an idea, and in those workshops we have with our clients, you have these three elements, idea, belief, and embodiment, so people are drawing ideas, and creative workshops that other people hold, you end up with all’s of post-it notes and people sitting on beanbags and lists of things, you know, words, but actually none of these are as effective as a sketch at doing that, so by a embodying ideas rapidly and quickly in that sort of way, and Richard Seymour is absolutely brilliant at that, you know, you involve the clients in that part of the creation process, because they can’t, you know, so they might have a great idea and they don’t know how to embody it, to visualise it, and what do you do…

LT: industry’s needs for sketching over the last twenty or thirty years…

DP: kids can’t sketch any more, kids are no longer talk to draw, and that puts them, I mean if you have an ability to draw, you’re at a huge advantage basically, you know lots of people can draw on CAD systems, not many people can draw, but John Lennon famously said, didn’t he, “everybody can draw until someone tells you you can’t”.

LT: Right, so, where does this being able to draw come from in your mind, where has that blockage kind of…

DP: I’m not an expert, kids being bought up and, you know, my kids all draw, but they draw because I draw, and because my wife is an artist, you know, so they’ve always been interested in it and they’ve always been encouraged to do it and when they went to school they showed an interest in it and got encouraged in it, but most kids do not get encouraged, I’m sure. Some people have a particular peculiar gene, I think Richard definitely has a peculiar gene, he says he got knocked on the head when he was six.

LT: there’s something unusual with some people’s ability to draw, it comes from like way beyond wherever they are

DP: there’s a sort of, he says he’s sort of at one end of the autistic spectrum you know, like something happened in his brain ever since when he got this big bang on the head, it may well be, but you know, he has a photographic memory and can just draw anything. Most people sketch, but Richard would start in this corner and finish in this corner

LT: extraordinary to have that degree of accuracy, so, as an organisation I assume that you do take on graduates or early career designers, at some point so what is your experience of their ability to ideate and develop ideas, I mean I’m talking about this lovely sort of timeframe of people working in the last thirty or so years, it’s kind of perfect what I’m looking at

DP: people who can draw and articulate ideas quickly and fluidly are very rare nowadays. You to see more of them from colleges and universities abroad than in the
UK. It’s the old problem that even we had when I was a student which is if you have a
tutor who can draw they will talk to you about how important drawing is, and if you
don’t feel say it’s not important, and that’s the way the world works, it’s the same with
all teaching isn’t it you tend to get that? And that’s why certain colleges often produce
students who are good at this because they’ve had a tutor there who thinks it’s
important, helps kids to do it, encourages them to do it.

LT: apparently Sheffield is good with architecture at the moment, they’ve got a very
good…

DP: I don’t think drawing is important in architecture any more, I don’t know, I doubt it
somehow

LT: I saw one student at the DMU undergrad architecture degree show, he’s got a
beautiful sketchbook and he’d worked in just sepia ink and watercolour and he’s done
some beautiful studies, so they were observational but he kind of worked them into his
own ideas, and it was the most beautiful thing, but no one else demonstrated that, it was
all CAD-based grey, straight lines, a curve, you know

DP: Richard does watercolour drawings for client ideas, on big sheets of, you know
watercolour paper, and they are exquisite you know. We always used say, in the days
before CAD, you know, when clients can tell a good designer from a bad designer and
they were looking for a design company or a designer to help them do something, they
could tell a good designer by the quality of his drawings and presentations, renderings
and things like that, so they could see that they clearly know what they’re doing because
they can do this, as opposed to this person who can’t you know, but CAD flattened that
playing field so they can’t tell a good designer from a bad designer. They can’t see the
built-in skill of the person doing it has because the way that it’s presented to them looks
the same

LT: this is it, they are looking at this shiny well lit, lifelike artefact, yes, I’ve got interior
design students from Suffolk I was teaching a few months ago and they wouldn’t
sketch, they sat down and I give them half an hour to come up with concepts and they
wouldn’t sketch. As soon as I said your half hour is up they all rushed to the Macs and
started making straight lines and then repeating and then rotating, it was all based on
what they could do and then they rendered it with some beautiful lighting and it looked
lovely but there was no design value in it. Okay, so you’ve seen a decline in the skill,
the standard of drawing skills in graduates, okay. How do they compensate for the skill
set shortfalls, is it purely by CAD or do they tend to write more to get over…

DP: no, it’s illustrator, photo shop and CAD

LT: so this Dr that, okay. Do you do anything as an organisation to reduce that shortfall,
do you encourage them to sketch, you just take them as is and use them or bring them in
and, do you develop them?
DP: we do put people into these creative workshops and they’re told to sketch, and they come up with ideas and their sketching is not very good.

LT: and what’s their reaction to that?

DP: they find incredibly daunting to sit next people who are really good at it, and it just makes them feel inadequate, it’s not terribly helpful.

LT: but afterwards, after they’ve been through that process, does it give them a sense, have they learned any skills, is there an increase in what they can do or are they so traumatised?

DP: I think that the good ones, the good designers in any work role is that people quickly need to come to terms with their skills and their limitations, and the best ones are the people who say, “look, do you know what, Neil is better at this than I am,” and that’s just the way it is, so they quite happy then to have Neil work with them because his bloodied good at it and rather than saying my idea is better, so they don’t tend to get any better, no.

LT: no, they just get traumatised

DP: well, we all get traumatised, their grown-up and they realise then not good at it and they accepted and they do other things that they really good at and you know, fine

LT: so, when you’re recruiting new graduates for early career designers with fewer sketching skills and less ability in that area, have you recruited fewer people because of that, do you go out to recruit people who can do that and not other people?

DP: when we see somebody who can draw and they have the other design talents that we need, they always get the job, always. But we need so many other different skills that we are often taking on people who don’t have drawing skills, no, but we need their other skills.

LT: And what other skills are those?

DP: well it depends on the job, but they might be working in in the digital domain, on interface and all of that so they have a whole series of skills that perhaps other people in the organisation don’t have, or they may be working for foresight in trends and research, they don’t need to be able to draw, they could be hired for their (...) they are really good at mechanisms and how things work, you know and they may have (...) in transport design, so we need a set of skills but we also need the ability to draw, but that’s different for everyone.

LT: and when you find someone with the folio that’s kind of, wow, is that a real kind of deal clincher for you in terms of employment, I mean if they have got, you know the other skills to a high standard, is that drawing ability, is that something that you snap up?
DP: yes, said got the other abilities, I mean obviously they’ve got to be great at appropriate designs, they’re not just sketching dreams, you know, and so they need the other basic skills that all designers need which is how things are built, how things work, how they stand up and all those sorts of things, but if we find somebody then we take them on. And I always used to, when we were taking on designers, what I used to do, I’d give them a drawing test, we don’t do it any more

LT: why don’t you do it anymore?

DP: well basically the place is run by people who can’t draw and they think it’s not important, you know so they don’t…

LT: and what did the drawing test entail?

DP: will you look at someone’s portfolio then give them a pad and paper, a piece of paper, and ask them to draw one of their designs, so if they have a design for a computer or a hairdryer or something, and pick something from their portfolio and say sketch it, you’ve got half an hour or whatever it was, fifteen minutes, and I take the failure out of they could refer to it and that tells you to things, it tells you, first of all, can they draw, can they articulate an idea and capture it quickly. Secondly, it also tells you did they do it, because if you have created something then you never forget it, I could draw you the first product I ever designed down to the last detail, I actually did it, so I’ve had lots of occasions with glorious looking things, we had a guy from America who came in with a brilliant portfolio of staff but it was clear he couldn’t draw it, he couldn’t even remember the detail and he clearly sat over the shoulder of someone else who was putting into CAD, so it wasn’t him doing it, and we are after some doers and not talkers, so we don’t have managers, everyone does something, so there was room for somebody like that in the company. But it’s a shame that most people can’t do that.

LT: it’s quite telling, we have lots of students who seem to get, we have a huge issue with plagiarism, academic plagiarism, but it’s only recently that I’ve realised that it kind of informs the whole design, producing design drawings, students who farm them out to their friends and people they’ve paid to do them, we have students from India who, they work in Imperial, and they trip themselves up, they can get these drawings done in Imperial measurements by other people and then there asked to convert them to metric and they don’t, they can’t measure anything, it’s frightening how they, anyway, that’s a complete other issue, it winds me up. What are the attitudes, I’m not talking about the abilities of people to design new coming to the industry, what are the attitudes towards sketching?

DP: they don’t think it’s important

LT: why don’t they think it’s important?

DP: because to acknowledge it is important they can’t do it, is to acknowledge that somewhere they aren’t as good as they should be. The mature person says, “I don’t have these skills but these people do, that’s brilliant, we really need to optimise that,” the
person who is less mature about these things says, “Christ, we don’t need anybody here doing that because they going to be a threat to me here,” and all of the rest of it.

LT: how is that attitude changed over your thirty odd years?

DP: when we started drawing was all we had, we had drawing boards that we could do 2-D, we did do 2-D general arrangement drawings, measured drawings, you know, probably for the first 10 or 15 years, something like that, you know, so and when we first got into CAD in a big way, it was through Freehand as it was called which was a competitor to Illustrator which was vector based, Bezier curve based thing and then into 2-D CAD and then very expensively into various 3-D CAD programs, what was your question?

LT: the question was, over the thirty odd years you’ve been in industry doing this, how have the attitudes of graduates changed of as they’ve come into the industry?

DP: well you couldn’t have got a job if you couldn’t draw, because what else would you do?

LT: what point did it become suddenly, actually, “I can get away with it now?” There’s this timeline, is it ten years ago, twenty years ago, I’m wondering, obviously, you know with computers becoming more ubiquitous, there was a crossover phase very much in the 90s and I’m wondering was quite early on?

DP: it was the arrival of decent CAD systems, you know, probably fifteen years ago.

LT: do you use sketching software at all?

DP: I personally do.

LT: what you use?

DP: because I’ve got an iPad pro and a pencil, and so that has really replaced the sketchbook, almost, I do still sketch a lot on paper I suppose, but…

LT: it’s still that same process you’re going though

DP: it’s exactly the same

LT: you’re not thinking, “how do I put that line there,” yeah, it’s that instant sort of interaction, the interface between mark making and substrate.

DP: a lot of what the guys do now is, the good sketchers will sketch and then take it into Photo shop to colour it up.

LT: architects and interior designers are quite afraid, I’m quite afraid of using colour. What are product designers like when it comes to form and shape and then they have to think about what’s it going to look like?
DP: we have a basic format, we used to call it a pale blue drawing, where we just use a
tone of pale blue to shade things, you take the colour out of it, because you spend half
your time battling to get the colours right rather than worrying about whether the thing
is right, and then only later when you get into a bit more defined solutions, or into more
defined solutions where colour becomes more important, then you would probably be in
Photo Shop. We’ve got one guy in there, he’s doing coloured drawings a lot.

LT: and that’s from quite early on is it? Does he do that quite early on? I find it very
hard to think in colour when I’m…

DP: what happens is your brain says, actually at this stage, colour is not important, he
uses colour, and I do too just a break up things, because you say this part will be a
different colour from this part, but which colour, I don’t need to decide that now
therefore I can use any colour and that therefore, and sometimes people who do that,
they have that point of view and they wrecked their perception of the concept because
they’ve chosen some crass colour to do it.

LT: that means the terrifying bit, not the actual sketching. Slightly unusual thing to ask
about, but it’s kind of coming up in my research, gender issues, I don’t know what sort
of makeup of male-female you’ve got within your…

DP: I used to say about 50-50, but I don’t know what we are right now, probably still,
probably more blokes, but were accused of being a blokey organisation

LT: product design always makes me think of men inventing things; it’s like an
inventive thing, so it’s…

DP: where about 50-50, but actual designers, not so many women, we have had women,
good women, but at the moment in product design we haven’t got any women.

LT: why is that?

DP: we’ve got lots in research, in Foresight

LT: but not designers?

DP: no

LT: why do you think that is?

DP: well basically, I’m sure if you looked at the numbers of students studying design,
industrial design, it’s probably 70 or 80% blokes, so inevitably that’s what’s going to
happen when you get out into industry, but you know, if you’re a woman and you’re
good you will always get a job, because everybody’s screaming for more women in
product design.

LT: it’s ironic isn’t it? How does that translate into sketching issues, I’ve been reading
papers whereby, and it’s all academic staff, but whereby women respond differently to
being asked to do things like sketching, they are more kind of open minded about it and
are willing to make mistakes, they have less of a kind of an ego driven need to be good in front of their peers.

DP: that’s a dangerous conversation to get into

LT: I know, it’s a bit tricky

DP: (...) only yesterday who wrote a paper circulated in Google, it’s big news, about how, one of the things he covered in his paper was that men make better programmers, better than women, and got fired for it. I personally think it’s really silly

LT: I just don’t see that, that’s not defaming women or kind of demeaning is it? It’s a factual thing

DP: it’s an equality thing, women do everything just as well as men and men do everything that women do just as well, well that’s the basic theory. I haven’t the faintest idea whether it’s true or not, I really don’t.

LT: so, your sketching proficient people obviously you’ve got a larger male base of designers, but are they the ones who kind of shine through, or are there women who, or is there really nothing to go on there?

DP: I don’t is anything to go on, but I mean sketching is an important part of what they do really, and I, when I was at the RCA I spent a lot of time there in the automotive design department because they were all drawing which I loved, and in the car world they take on a lot of women but they are not often the people who are actually conceiving the vehicles, I believe, but I couldn’t substantiate that with any facts, I mean all the car designers I know are men, but there are a lot of women in the business, but the sort of perception you know which I think is now wrong, but certainly was the case, that the women designers were the ones who were doing all the CMF for example, there are a lot of women in CMF, but not doing the more hard engineering part I think, you don’t see many women in engineering which is appalling and whenever I run into a woman who studied engineering I’m just such a fan because they desperately need more women in engineering. But I couldn’t begin to substantiate any of this.

LT: things have cropped up as I’ve gone along and I don’t want to sort of aggravate or upset anybody. Cultural issues as well, bit of a hot potato, we have students from all over the world at De Montfort and cultural issues affect hugely their ability and inclination to put pen to paper. Have you seen anything like that in the industry or while you’ve been doing this? And where do you recruit from if you don’t mind me asking?

DP: all over the place, we’ve had a lot of graduates from Northumberland here, a good relationship with Northumberland, and RCA graduate and graduates from abroad.

LT: Are there any institutions abroad that are particularly good?

DP: we’ve taken on Koreans, we’ve had some good people from Korea, because they have a more traditional view of sketching out there, so it’s important there, but no, I
couldn’t draw any particular trend out of it. But we’ve had different ethnic-based people here, you know, Indians for example, but there are only two that I can immediately think of, and neither of them was particularly good at drawing, but you couldn’t say, oh, therefore…

LT: I just wondered whether there was a correlation, certainly with the academic people have been talking to there are definite sort of correlations between ability and culture, but that’s another layer of stuff to go into which I don’t have time to do.

DP: if you come from a background that values drawing people are encouraged to do it then people are going to be better at it, surely, it goes without saying doesn’t it?

LT: is also the East Asian culture of compliance, compliance are not stepping beyond where you should be which creates a level of fear which I’ve seen certainly in a lot of Chinese and Taiwanese students. They’ve got the ideas but they’re just petrified to get them out.

DP: yes they don’t like doing, they don’t like drawing in public that’s for sure.

LT: and yet the UK students, I’ve got fashion and textile students and working with and they get their pens out in charcoal and they’re all over the place and they just don’t care, so there is this certain cultural effect on inhibition, and I didn’t know if it had actually come through in…

DP: certainly in our workshops with a Japanese client or Korean client, you know and there are designers round the table contributing, and they don’t do anything. They just sit there and nod.

LT: now, within your organisation, let me just think, let me just think if there’s anything I need to ask, within the organisation, obviously sketching is becoming a kind of decreasing thing and technology and digital and 3-D things like that are kind of the way forward, how was that affected the way the organisation actually runs projects. Obviously you had drawing boards many years ago.

DP: what they got turfed out

LT: I’ve still got mine, I won’t get rid of it

DP: but we threw them all out, when we moved offices the time before last, I don’t think any drawing board survived that move. You don’t need a drawing board to draw

LT: no, I know, it’s just that sort of feeling of I’m in this place now, it puts you in that place, yeah, okay. So are your premises smaller, can you get away with that, I suppose if you’ve got more people there it doesn’t work like that?

DP: the premises are actually bigger, and actually we laid off some people last year, this year and last year, so about the same size that we were when we were in Fulham, we’ve got more space.
LT: When you’re presenting sketches and development stuff to clients during this sort of session with clients, what is the kind of feedback about what they see what is going on in front of them?

DP: Generally, they find it awe-inspiring. I always used to say that it was one of the great skills of the designer is why would they employ you, because you could do something that they can’t, your basic skill is quite beyond them and they watch because they’re so gobsmacked to see something come to life so quickly and that’s one of the reason why there are workshops and they are participating in the drawing. When we actually present the drawings as part of the presentation then, they’re not seeing the drawing, they’re just seeing the design, that’s the whole point you know, they don’t say, “Well that’s a lovely drawing.”

LT: Yes, it’s a difference between fine art design, you’re looking at the process and you’re looking at an artefact in fine art, yeah, do you actually need to sketch within this industry?

DP: No, a lot of these designers, there are whole design companies built where nobody can sketch, so you don’t need to. I mean sketching, one of the things that sketching does, sketching suggests that you are a creative organisation, if you see a beautiful sketch on a website design company, you think, “These guys, they know what they’re doing,” whereas if you just see CAD renderings, you just think, “Well everyone does CAD renderings.” It’s a very distinctive thing to be able to draw, so if you can do that, it’s really nice, people love it.

LT: And that seems to form part of your brand image? That’s why I sought you out really, because you were very big on drawing, Richard is big on drawing and that’s kind of what sells you to clients.

DP: It wasn’t really about that, I mean it’s just a skill that we had, I mean when we started our competitors went very good at it either, where as we were really good at it and it was quite easy to convince people that they should use us, easier I would say. But no you can, most of the time in companies now, people don’t draw. But as I said at the beginning, what is interesting about drawing is that it’s very closely tied to your ability to create and design. Creative people who have ideas about how things should be tend to be people, if you control, you are fluent with ideas, you can visualise things quickly enough to have a conversation with yourself and others about what something should be like. If you can’t draw, you can’t have that conversation with yourself and others. So while it might take five minutes for me to sketch something that I want to, somebody to work on, if I had to reach into the CAD toolbox to do that, which I tend not to do, right, it would take me a day right, that’s the point. So that is creativity, how I have an idea to do something, I can have an idea to do something, because as I draw it, I can visualise exactly the problem that we going to have is happening around here, in this thing that we are doing, and we know that we’ve got to, we’ve got an issue here, I can say to the designer, (starts drawing) “We’re going to have a problem just here with how this works,” you know we need to sort this out because we can’t mould this, therefore we’ve
got to do it, and I can say, “go away and work on that”. How else would I do that if I couldn’t draw?

LT: I’m trying to think how you would put that into words, how you would explain that in a linear sense, it’s impossible.

DP: and a lot of people would, I mean at that late stage in the product process, you know, they might draw, you know a part of the problem and they might say that, “the problem is here, we haven’t got enough space there to make that work, or this really won’t work, or we can do it like that”. But if you’re trying to capture like the whole look of something and say, “well, what we trying to do is produce something which is, you know, it’s going to be very thin at this front end, and it’s got a shape that’s sort of slightly curved up like this so, what’s that going to be like?” What am I drawing here? An old-fashioned laptop of some kind, you can say a lot about what that, what are you trying to do with this shape here by defining, you know what its cross-section is and all of that. So if you’ve got an office that doesn’t draw at all, then people will rely on working in details like that in a kind of engineered way, we make mock-ups of things so, mechanisms and things like that.

LT: it’s the speed of being able to communicate that information is vital, isn’t it, to the process? Because to sit down and try and explain or to go into this kind of sectional, technical thing is just too much or it’s not clear enough if it’s verbal stuff.

DP: that’s particularly good when you’re sorting out a problem with something, this sort of thing, these two things, but actually when you’re coming up with the idea for the thing in the first place, what is this thing going to be like and why we doing it like this? Then, you know to then say that I think there’s some mileage in this idea, you know we can do, you know you can see that’s enough information based on what the guy is doing to take that away work that up in Illustrator or something else, so… (stops drawing)

LT: when you draw, you’re drawing in a natural two-point perspective kind of way, is that something that people who can’t draw can’t get their heads around? I know it’s something that you have to be taught, how to think in this sort of…

DP: well that’s the way the world is, you learn to draw by looking at the world.

LT: but people don’t observe, I’ve talked to students about putting things into two-point perspective set looks like it’s in the real world and they can’t do that, they don’t understand what that means, and that such a fundamental way of understanding, as you say, that the way the world works.

DP: we used to have things called perspective grids that you used to stick under your piece of paper, and Procreate on iPad pro has a perspective grid, and if you struggle with that, Procreate does everything you need to do and it’s got a perspective grid so if you struggle with it, and product designers always draw in that kind of view because they’re always looking down at products.
LT: this is it, you’re kind of there, at the table looking down at my product, yeah, okay

DP: but if you’re doing an aircraft interior, you don’t take that view, generally.

LT: can I ask you about higher education? I know it’s not your specialism but obviously you benefit from what comes through.

DP: I was a governor of a school for thirteen years.

LT: the alignment between industry and education, is there a misalignment between what secondary education or even primary education is doing with students, and I know we’ve got the national curriculum and things like that but is there a misalignment between what universities need to take on what schools actually developing? I was reading about an A-level product design course, I’ve never heard of an A-level product design course, and I couldn’t understand why, at A-level, are you being educated, or are you being trained to become a product designer? I couldn’t understand why at A-level you would study product design, why you wouldn’t study the sort of engineering, the design technology the creative side to then go and become a product designer later on. But seventeen and eighteen-year-olds studying product design, curious. It’s so prescriptive it seems.

DP: well, we’ve had DT (design technology) in schools on the national curriculum since Kenneth Baker, I think, probably 1998, and that was a mega move in terms of, because putting DT in schools at all really was the kind of mother lode of potential for people going into universities and art schools to study art and design in one form or another. Because before that kids didn’t even know about it, you know, so it made a massive difference and I believe that this country I think is one of the foremost, certainly used to be number two or number three, in its creative industries, the U.K.’s creative industries contribute more to the economy than the financial sector, I can’t remember the exact figures but, globally it went on 2 or 3 or something like that. We have a fantastic creative industry.

LT: you don’t hear any fuss about it do we? The banking sector is like…

DP: they do, some people make a fuss about it but, the creative industries include things like music and dance and drama and art, and all these other things, but we have that fantastic creative industry sector as a consequence of having a fantastic art school and design college and university system which is taking on kids and turning them out as people suitable for the creative industries, so it’s down to our education system I believe, the quality of other factors, but it’s really really important, and then that was fed by the change in attitudes in schools towards design and technology and arts, so that’s been really successful thing to do but over the last three years that, of course has been cut down at the knees by Michael Gove and move to program seven and the baccalaureate, the International baccalaureate which says, “of course you can do design and art other than your five core subjects,” you can have three, they can be days, but schools and parents are both saying, “don’t bother with these three,” because you’ve got
to have these, so you’re better to do two more of the eligible subjects from this group rather than take these, so art and design and DT is being, its funding is cut and they conquered the teachers and it’s dying on its feet et cetera, and that’s going to have a mega effect on the intake into design colleges over the coming years and will diminish this country’s capability to be a creative powerhouse. So in answer to your question, is the out stream, you know, period of school important, yes it’s absolutely important. If you get a kid fired up about drawing while he’s at school, or she is at school, they will go to art college and they will pursue their career, if they’ve had a teacher, and I’ve seen some fabulous art teachers in schools persuade children they can draw, and children find out, yes they can draw, and they get set on a career then, because it’s so rewarding to go on to do. So it’s all down to the school, you know, they go through school and they never pick up a pencil, they are never going to be a designer.

LT: the difference between fine art education and design education in HE institutions, when I did my degree we had to do an afternoon a week of fine arts life drawing, and I’ve been reading various people have been looking into the benefits of that kind of education on designers and are saying that final education, observational of the human form to produce an artefact rather than to understand the process you’re going through, is not suitable for designers, or is less suitable for designers, you’re still making marks and there is a benefit to that, do you think that a particular type of drawing or a particular activity or set of skills potential designers need to be learning through drawing, rather than sitting life drawing at an easel which, we all hated, and none of us have come out thinking, I’ve got to go back to that because it’s just the way to draw. You don’t draw that way.

DP: I think anybody of a certain age will say that drawing from life is incredibly helpful because it teaches you to look at things in a different way and it gives, it arms you with the skills to apply to drawing a mobile phone, you know there is an intimate connection between that, is it essential to do that? No, I don’t think it is. It’s an enormous benefit, you know, that if you can do that, you are, you will be better equipped, but I wouldn’t say it essential. I’d love to have, you know, if I were at college I would have a life drawing class too.

LT: well I would now, it’s just at the time when you’re being made to do it, it’s strange

DP: it’s a very appropriate thing to have on a foundation course

LT: oh absolutely, because kind of, the breadth of skills is necessary at that level, okay, management methods for sketch inhibited undergraduates, can you think of anything and do you see any way of encouraging students who haven’t sketched and haven’t had that, you know, initial encouragement either through doing design technology or a foundation type thing? Are there ways of encouraging students to draw?

DP: well yeah, the more you do the better you get at it.
LT: I’m just thinking, because you’ve got children who draw, so I’m wondering whether there are things you’ve learned from them?

DP: well, no, because they’re not in the design industry so, but, the more you do it, the better you get, and there are lots of learning tools out there, so books, for example, very helpful, but nowadays and YouTube videos and lots of means that will teach you stuff and make you better and quicker, and the more you do it the better you get.

LT: I think I’ve got to the end of my questions.

FIN
Interview with John Roycroft

Interviewer: Could you just start by giving me a little background of who you are and your position and your sort of you know root through industry and education, just so that I have got a little bio type thing so that I know a little bit about you if that okay?

John: Okay yes so John Roycroft principal of a company [unclear 0:22] instructional engineer. I went to the University of Bath and thinking that I wanted to be an architect and realized over the course of the years that actually I was more interested in how things were put together and how you might build something, and the course at the time was based a lot around more so like conceptual ideas rather than buildings and that sort of frustrated me a times. Ted Accord (?) was the guy who gave out the lecturers so I moved into engineering. So I suppose that I came from a background at that time which was sort of early nineties it was more around still sketching I think, you know people used to produce air brush images and things. So yes I work at the engineering course at Bath and, we did [unclear 1:24] project with a lot of sketching and people like Mark Weber came in, and they really sort of understood engineering sketching and the ideas behind it. So I then join with [unclear 1:40] around 96, I worked with these various companies but every company that I have work at sketching has been important. So I suppose in 96 when I graduated engineer's sketch the concept ideas and Cad was just sort of coming into its Zone and 3D Cad but there were still instances where 2 or 3 years into that role I had produce tender drawings on A1 sheets because we were understaffed and you know we've to work on those things and I have generated tender packages by sketching details onto A1 sheet, so you know we will never see that now or anywhere I would imagine any practice. So a different background due to you know just sort of where the entry was.

Interviewer: So you have been at BDP for?

John: 9 years.

Interviewer: 9-years okay right. Okay within your organization within your bit of the organization the engineering side. What is the position and attitude of what you do and your little bit towards sketching and towards drawing and then if necessity or they sort of was it optional or?

John: Everyone on my team recognize the value of sketching the importance, I've instil that and there has been a drive in the 9 years I have been here to promote Bim I mean practice wide, it's all about Bim it's all about analysis that links to Bim and it's all about you know the whizzy things that you know IT allows you to do. I suppose as Engineers we recognize that not just sketching but hand and Analysis of calculations is important. So that there is a generation but probably I am the last of that generation who still trying to instil whether it be sketching or working out how building works and calculating it by hand on a one sheet of paper and not 50 sheets from a computer it's still important. And I suppose what we would hope is that the Next Generation learn enough and see enough value in it that it carries on because I think if we lose it it's completely automated. [unclear 4:23] I think it doesn't give the same degree of early thinking I think in particular.
Interviewer: So when you have sort of newly qualified fairly early career people come in, what kind of skills do they have drawing wise sketch wise and thinking wise?

John: Some of them have no taught skills and some have intuitive skills, a lot of the University do not teach people how to sketch that's for sure, I mean I think places like Bath where there is still sort of design like course you might see a little bit more but I think a lot of it is moved away towards Cad and Bim.

Interviewer: Do you think that relates to the ability of tutors as well obviously as the generations move on?

John: I don't think any one of my tutors could necessarily draw.

Interviewer: That's kind of come up for me in this research because it's like you can't be taught something by people who don't how to do it, that's very interesting.

John: If I think of all of the people, so the guys who looked after me Mike Barnes was the professor at the time when I was at Uni, I mean basically genius he would find out elements very [unclear 5:46] I did all of the modelling of [unclear] with Ted Accord, his sketching there was no evidence of sketching but he was a very, very bright man [unclear 6:00] a technical guy extremely bright but no he don't sketch and Chris Williams again very, very bright guy I took him first from Cambridge you know he might draw some. The biggest building blocks to sketching so I remember being sat 2 years out of the University at the National Physics Laboratory in a meeting where I was probably a little bit inexperience to be there. I remember a big table and wanting to get an idea across but not knowing how to do it, and it was too difficult to articulate verbally but sketching you could do but even now I didn't have the confidence, so I think it's much about confidence and ability.

Interviewer: So the skill-set shortfalls tricky among graduate. Is that just in their ability to ideate through sketching or are there other areas that They are short on that kind of affect the way you go about things?

John: Some of it is just to do with logic or thinking perhaps, I mean calculations you know I would always draw things to help illustrate how [unclear 7:47] into a design, virtually nobody now wants to draw in calculation of sketch so it's reluctance.

Interviewer: That's strange because that would help me because I have trouble with numbers they don't mean that much to me but images do.

John: I think that it goes right back to when kids are very, very young so my son I have sat with him from a very early age and we sketched sort of silly little sketches I guess, but he now uses sort of that sketching to help him work. He was doing some spelling the other week, and he wrote down whatever it was and then he went on the next spelling and then he went, he started doing this and it's weird and it's his thought process and I thought well [unclear 8:40] on a computer which frustrated me but actually there is something that I have embedded in that, and I think that's where the gap perhaps is just getting people to articulate their thinking process, which I think you are brilliant at I mean you know I think you can map analytical and diagrammatically better than anybody. [Speaker 3]. I think I didn't quite answer your question but I was trying to
say that as a graduate when you start to draw something it's quite hard to draw if you don't know all of the technical information, and what's brilliant once you've got the experience that I have now you know how to present information that you don't know, it's almost more value in what you don't than what you do so you then try to draw but you just. And it's almost like the great oil painters only draw what he needed to see, and again it's a great skill but I think that there is a lot in that but when you are young and inexperienced it can be very hard to draw something.

**Interviewer:** It's that lack of authority that you feel you have.

**John:** Yes, and then we like the confidence again.

**Interviewer:** I interviewed Dick Powell from Seymour pound a couple of months ago, and he said it was really good actually it kind of totally collect, and he said sketching is brilliant because you can draw 100% of what you want something to look like with only 10% of the knowledge because you don't have don't have to know how it works around the back. [Two person speaking [00:12:49]. Absolutely so that's interesting. Okay so when your young guys come in and they are all keen and green but still a little bit scared to put pen to paper. What do you do with them or make them do to kind of reduce any shortfall that they might have?

**John:** Well I do run a little course so each time we chat we came in with simple drawing that work, Trevor Flint he is a really talented guy.

**Interviewer:** I am sorry then.

**John:** Trevor Flint.

**Interviewer:** Trevor Flint I have heard of him.

**John:** It didn't quite work for me because he came from a sort of illustration artist background, so I decided [unclear 13:32] I just wanted to, my guys didn't really need to understand perspective particularly well, 2 point or 3 point. They were tricks and trades that I used day in and day out, and to rather than scare people just show them which pen to use and a couple of tricks on each section, you are not trying to show the whole building because if you are not a good artist then you will fall down there. So I just gave them a sort of like a dummies guide really.

**Interviewer:** Okay so what kinds of things do you teach them in this dummies guide is it a publication?

**John:** It's a PowerPoint so one of thing we do which I think possibly one of the first sketches in there and we do a Timed exercise, put some Sheep head in the middle and we get 5 minutes 4 minutes 3 or 1, and of course the 2 or 3 minutes is the better one because people lose their inhibition and just crack on them a bit. We look at pen's and we look at markers and we look at section isometric I don't mess around with perspective.

**Interviewer:** You don't need it do you?
John: Sometimes I like using it.

Interviewer: But when you are doing calculation things everything is kind of.

John: Yes, it's a sort of losing inhibition so we do a number of exercises and we sort of. [unclear 15:07] can you draw can you illustrate your journey to work or your day and just give them like one sheet and then you know everyone put them up different ways it really looks really interesting, you know sort of approaches but I think as long as you promote it and people sort of respond to that I mean there is some quote in there from people who came and it was really nice from the feedback I was quite shocked actually.

Interviewer: So how long do these classes take is it a one-off thing or is it a weekly thing?

John: It's only a couple of hours.

Interviewer: Okay and then just 2 hours’ workshop and then they go and then they?

John: And they go and they use it I mean we should do it more we really we should do it every year.

Interviewer: Graduates what are their attitudes General demeanour towards manual skills?

John: Positive you do get in engineering you always get like very technically oriented people, it's inevitable you know because mathematical people who are very mathematical and analytical will be attracted to it. Sometimes when people are extremely mathematical or analytic you know they might draw good sketching, but we are not really looking for finished pieces of work we are looking for a communication tool. So most people do start to use it and we just try and encourage it and you know occasionally you might get a client or an architect who says you know we really want a cad drawing, and will tend to sort of you know push back at that a bit, because the value is in the thinking. And you know often when I come up with an idea or one or 2 of them come up with an idea and we pass it over to, as a sketch we pass it to the draftsman or technician but we would lose cad at the times that he has come about with less information, and then he goes well why is that on there.

Interviewer: Chinese West bird you can't rely on people. So when your graduates and younger staff come in for interviews during the recruitment process. What kind of stuff do they bring in and what do you get to see if there are related to sketch and drawing or absolutely nothing?

John: It depends dramatically on which university, if they have done projects they will bring the project work in but it's increasingly becoming [unclear 18:10] quite a basic [unclear 18:15] information less and less sketches and someone came in last week who had some nice sketches but he was a more experienced person but yes The Grads less so.
Interviewer: Is that because they don't have the inclination because they have done that kind of course do you think or has it been kind of drained out of them?

John: I think because probably increasingly Cad in form has been taught to University and probably an expensive technical drawing drawing possibly.

Interviewer: Okay and has this sort of lack of skill increase over time, and from my point of view I have seen a definite increase in problems but have you any ideas?

John: I have seen more evidence of the architect suffering from that skill change if I am really honest because I do probably pick people who demonstrate probably more attitude for it because it's important to me and the group, but looking across the architectural part of business yes I think there is lots of evidence in there. [speaker 3]

Interviewer: Okay so you are not having to use sort of use technical speak in front of a client who would just relate to an image. This is the strangest section, gender issues I am assuming that you have a mostly, I'm probably generalizing here mostly male?

John: We got probably about 40% female and 60% male, my followed principal was really my boss Michelle, you know she is like the Fig head so she is quite rightly sort of always driven for better quality across the group.

Interviewer: Okay so it's something that you actively do?

John: We want a diverse workgroup we really do so I think we yes we are always self- assessing how we are doing but you know we just want the best engineers.

Interviewer: Culturally as well do you have mixed culturally or mostly British, do you have people from overseas coming to study here?

John: Mostly people from Europe.

Interviewer: Okay with those mix of people can you relate any of those kind of gender or cultural issues to people's ability or sort of leaning towards using hand drawn ideation and hand drawn thinking processes.

John: I would say none at all.

Interviewer: No not at all because I have been talking to people from different sort of backgrounds and discipline, and some are very you know the boys are very confident and the girls lack of confidence, and then completely the opposite in another discipline but that's not something you've ever observed?

John: No I would say the girls in the group are actually usually pretty good at communicating virus sketching but I don't think there is much difference I don't see a lot of difference.
Interviewer: Are there any issues of not necessarily what they produce but their attitudes in terms of confidence?

John: I would say the woman in our group are more confident.

Interviewer: Right any ideas about that how and why?

John: I mean it's a good environment to be in and we are just very open and fair and people just, you know we run at sketching well not really sketching but a project philosophy work competition. So on every project we try and set out an A1 sheet of what the project philosophy is you know and how the building work and stability wise and you know the little bits and pieces on one sheet. And you know Rebecca Ellis who is one of our Engineers you know she won that Competition and you know she got more information on there and communicate it in a nice clear way. I don't think it's effective, we don't see I mean we had a lady who isn't with us anymore who was a very, very good engineer but she was very quiet but she could sketch beautifully, I mean she did have a confidence issue but her sketching was it was almost like that was how she communicated.

Interviewer: Okay that's interesting I thought with you coming from an engineer background you would say oh no the guys are really good at sketching and the woman kind of stay back.

John: I think if anything women are more open to it as a way of communicating than a lot of the guys in the group, you know it could be a bit more sort of dig in a bit.

Interviewer: Just going on to client issues Sean was talking about the image of the tube train around this particular project and using an image to kind of convey. Do you ever get situations where clients specifically asked for that sort of sketching development during a meeting, or give you feedback on the fact that you have presented drawn stuff as opposed to technical things. And what sort of things do you get from your clients about that?

John: A lot of my roles these days is [unclear 25:35] and yes sketching [unclear]. So if there is an opportunity then I will go back to a client with a sketch and we could develop that. And on big projects where we've had for example maybe a cost issue, you know you get call to a big meeting to talk about how to reduce the cost, I've responded to things like that with the sketch done on the train, and yes the feedback is amazing.

Interviewer: What are some of the things that the people say, and that sounds really crappy to ask that but I am just intrigued by what people sort of ask for and what their responses are?

John: Usually it's one that I've complete, almost surprised is an expectation these days that things take time because of the digital elements there. So when you respond within the same day sometimes with a quick sketch that's got all of that [unclear 26:38] thinking and it's like you know thank you this is amazing. I very rarely receive any criticism at all for so many hand drawn sketch.
**Interviewer:** Okay yes so that's the fast turnaround time.

**John:** It's fast turn around and I think what they like is I suppose I am sort of seeing as someone in there at the top of the organization now, so the fact that you've done that for them it carries a lot of weight.

**Interviewer:** Yes, it's kind of personal isn't it?

**John:** They don't expect there is no expectation I don't think even in an environment like this.

**Interviewer:** And if you do have situations where people and I am assuming that wouldn't recruit someone who was just completely anti or really phobic about the sketching or drawing or anything like that?

**John:** Well Ant is different.

**Interviewer:** Ant is like you know I can't do it and I won't do it I rather use a computer; they wouldn't get in the door from that perspective [unclear 27:43] presume?

**John:** It might be like any team you need different skills and I don't believe there is anybody who can't learn the skill of communicating virus sketch and it might only be a couple of lines on a sheet.

**Interviewer:** I tell my student that I can't I wasn't born with the ability.

**John:** The ICA I was the chair of the institution of civil engineer [unclear 28:20] or something like that so you've got about 20 industry experts and me sort of charring it, but the one thing that I always do was raise awareness for sketching on that but we didn't go too far with it because they were Mighty fully concerned that their members who [unclear 28:42] Railway engineers and Road Engineers you know the perception will be that you know it's a skill that's Well it's a talent and not a skill, and I wanted to sort of battle that a bit harder than I did, you know it was, it doesn't have to be something you even got the present to a client or issue is just having the confidence to draw a couple of lines, or probably just some quick exercises probably for 90% of the people would [unclear 29:17]

**Interviewer:** It's amazing when I get my guys in group situations and I get them to do sort of mental visualization, and they are mark making and they are reading and doing it different ways suddenly it makes sense to them and there is a bit of structure to what they are doing and why and then they are kind of up and way, but they just don't know what to do what am I supposed to do I have no idea, so they leeding inner bit. Right higher education are there skills within your sector within the organization here, that higher education or degree courses for engineers is not giving them. When you are talking about a lot of guys not actually getting any drawing tuition within their courses, I am assuming any drawing tuition would be technical drawing race as opposed to thought comunication or?
**John:** I think what unlocked it is the little projects, I wasn't looking to go to Bath because it was quite project-based, so one of the guys he was going to bring down here to me is Matt Turner and I think he went to Leeds, and again they had those projects.

**Interviewer:** So these life projects they were just project-based learning?

**John:** Made up usually you would design a bridge over rivers or building and those give you an opportunity to explore how to communicate, and finally some people may find that you know digital does it and gives them the freedom of on how to do that. I mean I have to say that with iPods and things like that now you are becoming more able to sketch, so I've got like that. And me and my son have started sketch on iPad and I don't see it as a backward step, because the harder you press with i-Pen it response like that. So that is a massive maybe that will be the link as being a gap [unclear 31:15] links it back in with where we are. So that's the question The skills almost can be self-taught or with just the right tutors in place through projects. And you know if you do one of those courses like I do at every University and then run a short project people would you know I think they respond [unclear 31:44].

**Interviewer:** So do you think the line between education and reality the real world is kind of pretty good or do you think that education needs to be doing things differently in order for people to come out with the skills that you need?

**John:** I think maybe education but before higher education is where it needs to be.

**Interviewer:** I have been looking at that and I see that you have rules and I am like oh my God where do I start with this.

**John:** Yes, because they are on whiteboards and all of that whereas I think by the time they get to the university you know you sort of, you try to change things that are completely ingrained, I am sure the higher education is just developing what's really there. So I think it's tough on the university to say well you don't [unclear 32:37] sketch or.

**Interviewer:** Yes, it has to go back a long further than that, yes that is a massive [unclear]

**John:** And I don't feel that I was held back because would I've rather have had people who could sketch well as University lecturers or the genius people that I had, and it was good for me what I had but the way that the curriculum was based and the way that you did projects and the way they brought visiting tutors in like me or you know that sort of knot it for me it wasn't the professors themselves.

**Interviewer:** It is amazing if you have a tutor like you can just relate to you will get it.

**John:** And Encourage you and you know and just say that's great I love you for that.
Interviewer: Yes, just a few little words of encouragement are kind of in there for the rest of your life, and I don't think that kids that are in sort of secondary school get that I think that they are constantly being pushed for more and more.

John: I did a sketch of an idea for a bridge [unclear 33:36] the University and lots of ideas [unclear 33:40] and I never forget him coming in and the words that he said were something like, this is amazing because I could see all of your thinking on this sheet. And that is what all at any level or profession that's what we want you won't understand what someone is thinking.

Interviewer: It's amazing of the poor standards of it because I teach a lot of post-grads and a lot of them come from overseas sort of the Far East a lot of them, and they pay a lot of money to come and study it doesn't necessarily mean that they are possibly the best candidates for doing the courses on their own but they don't do Sketchbook because they don't think they don't have a process, and to teach them a process in a Masters course it's like well I haven't got time to do no matter where you start it's gone and it's too late. Anyway yes right that's really helpful thank you very much it's nice to have you on, I will switch off now if that is okay is there anything else that you want to say.
**Interview with Nick Vessey**

**Interviewer:** Newly graduated and so the end of their degree courses I am looking at students, at the end of their degree courses who are sketch inhibited. So they have been through the process of HE and they are now back to embark on their industrial careers, and they are sketch inhibited they will not sketch and I have been teaching for 18 years so it's something that I have seen constantly and it has becoming an increasing problem. And I am trying to establish what causes this what the effects are and how it affects the design industry, so people such as yourself I mean Peter was fantastic and tracked a few good people down for me, but it's basically to sort of get your take on what you have seen over the years if that's possible. Okay so could you just start if that's okay for my recording with a brief sort of bio in terms of Who You Are what your background is and what you are doing at the moment just so that I've got a little picture of you to start with if that's okay?

**Nick:** Okay I am Nick Vessey I am currently managing director product design at a consultancy called WNP where multidisciplinary agency near Oxford. So you know we design exhibition stands and we managed events, we have got a digital team an act team a graphic design team, film-making that's where we all started but yes I run the product design side, and I am just sort of classically trained very much like Peter. I went to you know did a BA in industrial design and then Masters in product design. And then I got my first job at a consultancy in London where I met Peter, and then gradually I went to a second consultancy in London and got the opportunity to start my own business with another colleague which we did in the end of the 90s, and then I sold that and 10 years later and so I actually sort of being Consulting and then I teamed up with an ex-colleague at WMP and I have been there for 3 or 4 years. I don't do so much in the way of Designing these days it's more about strategy and helping companies use innovation to sort of Drive their new product development forward and you know winning new business writing project proposals that sort of thing so less creative Direction and a bit of creative Direction yes.

**Interviewer:** Okay lovely right thank you. Can I just start by asking you to tell me about WMP and you within the product design sector. What are your organization's position and attitudes towards the use of sketching, and I am talking about sketching in terms of at a conceptualization and development of ideas as supposed to presentation the sort of rendered type images, it's the thinking process that I am thinking about here using sketching as a means to convey and that dialogue. What's your organisation attitudes toward that particular tool?

**Nick:** Well it's obviously fundamental I mean you know it's actually quite relevant, we presented to a new client on Monday following up an entering presentation. So we often like to do with the first, some of the new clients because they don't know how we work and you know they were a little bit sceptical about you know they are suddenly paying all of this money and well what are we going to get from these guys. So I mean the first
thing that we do on a project and we did on this one was you know obviously you've got
have a lot of discussion with the client to try and understand what it is that they are
trying to do and often you know they think they know what they are doing but you can
add something to their thinking and questioning that. So the first thing that we did
obviously is quite a bit of research very quickly but into you know basic familiarization
get an understanding of the market that they are in and analysing competitive products
taking them apart, taking apart the clients products seeing you know understanding the
technology, because obviously there is no point going sketching and developing ideas if
he can't afford to buy certain technology or he doesn't have access in Asia or China or
whatever. And again what we did on this project and again we like to do you know we
did various positioning chart where we can push brands around and try and position his
brand where you know whether it's in the portable Market or whether it's more design-
led or you know whatever the criteria are but I think all of that kind of builds to you
know there is a danger that when you start a project and you think oh I had a great idea,
onece we have been talking to this client I thought you know this is it, and you want to
start doodling and sketching but so you know in a way it's a good thing that you held
back it's almost like sort of by the time you've had 2 or 3 days familiarization and you
know brainstorming that you've actually desperate to go pick up a pencil and you know
get these ideas down on paper. So you know we've just done a 2 week phase of work
and I would say that probably just over half was spent on sketching, but I still find it a
very quiet a nerve-wracking part of the whole process because you know you can, there
is a danger that you can look a bit chaotic and a bit disorganized and you know will be
something on a sketch or in the corner of a sketch that the client might pick up on and
you just you know that isn't perhaps important to you I mean there is a whole host of
potential minefields in there. And actually we had 6 huge boards plastered in sketches
and we structure them as the best we could you know we had some different themes and
you know graphically integrity or Basecamp. They won't mean anything to you but you
know they were linked to what we saw as being potentially interesting phase of
Direction that his products could go in. And I guess getting to another what you are
talking about, there is that kind of there is that moment that you can't quite put your
finger on where we all sit around the table with our Sketchbook and starting this whole
process you know and it is quite a strange feeling you know who is going to be the first
to start dealing something and sharing it with the others and saying you know what
about this. And I don't why it is I don't know where something has changed in the last
20 years where you know all you did was pick up pens and pencils and felt you know
magic markers, and that's all we use to take you right through to the presentation stage.
Whether this feeling it will be alright because by the time we take it into Cad and then
we Photoshop it, it will look polish and realistic and the client will think you know it's
believable and whether it's as though it's a necessary evil you know I am not saying
that's every case but I do sometimes. I have over the years increasingly you know since
the digital age The Dawn of the digital age perhaps sense that, students and you know
I've checking [unclear 8:16] graduates and they don't seems to draw as children I guess
that the way we did perhaps we me my generation perhaps. And because they are other
more exciting things to be doing perhaps and you know. So I have interviewed a lot of
people and when you start to question their beautiful polish designs and you know you slightly lifting the carpet you realize that quite often there isn't the depth of thinking that's gone into that design and consideration. And yes it's sort of kind of blindingly obvious as well really when you start to talk to these people because you know at the end of the day you know graduates you know they still got a lot to learn and there is no doubt you know I just finished being external Examiner on a 5-year cycle Duty [unclear 9:13] University and the ones that went out and did a year in the industry they came back for their final year and were flying you know compared to the ones who have just done 3 straight years, you know they all just sort of, they learned so much in that year in Industry and it gives them confidence and just an understanding of the real world that is perhaps impossible to teach in a studio our classroom.

**Interviewer:** And did you feel that when they've done a year in the industry and had come back to the I presume their final year of HE. Did that give them more confidence in terms of being able to put their ideas on paper and work through them, where they more confident in that respects obviously you do grow when you go into an industry very quickly don't you, but was that an obvious thing did you notice?

**Nick:** Logically you would expect me to say yes but I won't name the university but unless I perhaps already told you, but anyway I was brought in as a bit of an experiment. The University's traditionally have taken on external examiners and they are usually from within education, so there will be lecturers from other universities. There was a move at my University I was at to have one from the industry and one from Academia, feeling being that you know they weren't getting enough of the feel for what the industry was looking for as their designers. I think the feeling was at the end of it my involvement as an experiment wasn't successful, probably because well you know I was told anyway you know my line of questioning wasn't just being appreciated because I was struggling to see how they were producing design graduates that were fit for the industry. And you know whenever we employed it was the last University I would go to you know I never interviewed anybody from there, you know we have just taken the guy on from as I said before Sheffield you know, and they seem to be producing graduates that are really geared up for consultancy as far as I can see you know they get it. And going back to your question you know when I wandered around and you know I don't know a 100 students and I look through their Sketchbook, and it feels like they're just going through the motion you know if they have got a nice tick [unclear 12:02] of sketches they've ticked the box and they can move on and do the dissertation or whatever and you know and sort of, I would rather be seeing fewer sketches but more result and perhaps more Focus than you know just page after page of. And every now and again you do get someone who can actually sketch as well you know a lot of, I find a lot of undergrads just don't you know it's probably a bit fun to them actually I mean to sketch stuff and think 3-dimensionally and so consequently you know you do see some sketching that you think well what's that you know how is that helping them how is that moving things forward. So I am sorry I sound a little bit down, it comes to the end of
my career towards it anyway. So yes I was a little bit sounding disillusion by education. And I have talk to others in education and even the lectures that I have talked to you know they struggle because of the sizes of the classes obviously I mean that's another whole separate issue but there isn't, you know they don't seems to be classes where they bring someone in to teach them tips and techniques on sketching they are all sort of, I don't know perhaps they will have to find their own way of doing it but I just couldn't believe that wouldn't be an important part of the module you know.

**Interviewer:** Yes, absolutely. What are the General skills the ideation and development skills amongst the graduates that you have seen, what do they like how are they like with their ideas and their Concepts, if they are not doing the sketching or they are not doing the sketching with the thought embedded in it. What are their sort of conceptualising skills like, have they declined over time or I just wonder if you could talk me through that?

**Nick:** Again it's very hard to judge you know, so I've just done a 5-year stint so I have not you know there were good years and years that were perhaps you know not so good, there was no it didn't sort of get better each year incrementally I think they are always when you have got a hundred students they are always going to be a handful that stand out, but you know a lot that perhaps you'd think well they are going to struggle to get a job in the creative industries with the competition for places and you know overproducing students. So I mean again I think it depends on the you know the intellect of the individual student doesn't it weather, I think some of them just get it because you know it's a very complex it is quite a complex subject you know and I know from my own experience when I was a student and that first year when I started working with Pete, it was a hell of a shot you know and it was real single swim and I could have gone either way you know and I just didn't feel prepared for it at all. And you know somehow I [unclear 15:39] and then something clicked and it did start to make sense because I think there is a danger that design is seen a bit like art and that you you come up with a number of concept that you are pin to a wall that you like and hope that the client will like one of them. And it has become a lot more scientific in the thirty-odd-years since I have graduated thankfully. I mean it really was you know I don't know if people would agree with me but you know it was you know a little bit we were a little bit precious perhaps a little bit, it was a bit personal and you know let's say there was less design thinking than there is now. I am sorry I have gone off truck a bit.

**Interviewer:** No that's absolutely fine. Can I ask you about overtime I am not talking about the ability of student but their sort of General attitude. I've been teaching at De Montfort for about 18 years now on a part-time sort of bases. And I am absolutely sure that over the years the quality of sketching has declined, there are still those sort of Little Gems that you see every now and again but to the attitude of students towards having to sketch and work through ideas appears to be changing Have You observe that at all?
Nick: Absolutely you know when I was a student definitely I mean it's usually why you ended up being a product designer I mean that was the thing I was best at school it was Art you know but you were seen as like well what are you going to do with that for a living kind of thing. Luckily product design saves my life in that sense you know otherwise I would have been a [unclear 17:46] only you know as my careers teacher suggested. And I think I can remember going yes starting and I am thinking wow you know when I joined this consultancy the first one and just looking around thinking wow these guys really know how to draw 3-dimensional and think 3-dimensionally, and they have got the techniques as well you know they know how to bring a sketch to life so that you could convey whatever the meaning of it was to you know client. So it just doesn't seem to be as critical now in terms of how you know, how universities recruit students I don't know I don't know if [unclear 18:35] have interview event I mean I certainly did and had to take a portfolio along. I don't know now when there is so many students and also a lot of foreign students where it's impossible, so yes definitely a decline.

Interviewer: And are they less willing to have a go or I am just wondering more attitude wise then the actual skills. Do you hear sort of moan and groans of oh God we have got to do this, or is it something that is just inerrant within them?

Nick: I don't know for certain but I suspect there is a bit of you know a draw that be you know using computer they [unclear 19:28] no tools to create something you know it's more interesting and more exciting, so yes I don't think there is the rigor anymore that you know before you go into Cad or whatever that you really sort of flushed out the ideas and sort of save you a lot of time hopefully because you've figured out where the problem lies but yes I would have to say at least I think.

Interviewer: Okay when you have graduate who are kind of appearing in industry, and their skills sets their sort of sketching and ideation skill set aren't as strong as they should be or have been historically. How do they compensate for that what sort of things do they do or prefer, what processes do they prefer to compensate for that lock that they are demonstrating?

Nick: Well I am just trying think because again we had a student a friend of one of the designers where I work his son just graduated, and he said look you know well you can come and work with us we will give you a desk in the corner and you can sort of help. We are not going to pay you but if you want to you know he just wasn't up to standard at all but if you wanted some experience and what is life like and we said that's fine. And I gave him a mock interview as well to you know just sort of see and he got a 2-1 and I was quite shocked actually how poor his portfolio was. And I think some of the way that they compensate is you know they create some very primitive shapes that are easy to draw or model. And the certainly in his case you know he just you know the
guys major project you know he just had some very fundamental issues with it that wouldn't of taken long to figure out, and I was just quite well it wasn't just me my colleagues we were all quite surprised at how poor for a 2-1 it was but then I know again you can do a fantastic dissertation and this and that and boost your scores the other way, but so yes again I guess it's the good old Photoshop and creating something shiny and glossy and contextualizing it and you are outputting it like it's a kitchen device putting it in a kitchen and making it all look, and you know detract from what the real issue is here that you know the design isn't fully resolved.

Interviewer: Okay obviously being in industry and having your own businesses for many years. If you do have new graduate staff who comes in and they lack these fundamental skills. How does that affect the way you as a business you know obviously it must have an effect? How does that kind of impact what you do and how you perform as a business and also the things like the quality of the design output?

Nick: Well I mean It ultimately means that you know you are carrying someone I mean there is no doubt that you take on graduates and you really do hope that it will work out, but you know in some cases it's evident you know a matter of weeks that your interview isn't what you are getting on a daily basis. And it could be for a number of reason you know they are unsettled whether living or but you know if we focused just on work, it just means that you know typically teams will be on a project might be 2 or 3 people so there is no way to hide really. And you know being fair we wouldn't expect a graduate on a project to be you know I think we are reasonable people we wouldn't expect them necessary to be the finished article. And the whole point is that you think that there is enough there and that it's worth investing that time in training them up, and hopefully you know because of the interview process you feel confident that you can actually at least invite them into a presentation with a client without it jeopardizing the relationship so you know at least all things that you consider when you are seeing the interview people but I think I mean you just have to you know we obviously have a probation period of 3 months and then 6 months, and then obviously on your reviews and I think you have just got to be you know you have got to be honest with them and if it's not working out you part ways but you can't carry someone for very long if you don't see the potential there.

Interviewer: No, okay from your client do you ever get feedback from your clients about the need for sketching during sort of client you know meetings interfaces with clients. Do you ever get situations where they specifically asked to see sketches or whether you are sitting with clients sketching, and what is the client's take on that kind of thing?

Nick: I mean they generally do like to be involved which is good and there is a danger that you could go you know you go away for 4 or 5 weeks and you come back with some highly polished concept options, and you know you've gone for whatever reason you have gone down the wrong track and miss something or you know we've had some
and you have an instance where we designed a little security camera a couple of years ago. And the client it was clear from after we presented the concept that the client had got a very, very strong view in his head of what the product should be, and that was he said I want it to just be like an iPhone 4 you know. So in terms of its construction it's build in a mini iPhone 4 and you know you just can't win there is no logic or there is nothing that we could do you know we presented our thought you know assumingly 2 of the concept were very strong but he was [unclear 26:25] bent on having a mini iPhone 4 and then you know the relationship went nowhere after that because he realized that he was paying us but he wasn't really you know we felt anyway it didn't feel collaborative in any way. So it is better to have certainly we do we are always happy to share sketch and as I said we did on Monday 2 weeks into a project we had a lot of sketches but I still I think clients don't often understand. I was talking to a big very well-known brand this morning and they are looking to cut corners, and they thought of One Design but they don't really want to spend the money if there is a shortcut still. And they have come from somewhere where their portfolio is a mess and yet you know we are starting to get them sorted out and yet there is still this tendency for the [unclear 27:28] and the accountants whatever to say well do we need to do that could we not you know could we look back at some of your old concept and reuse one of those or you know all sorts of silly stuff so not very strategic. And so I do find probably I don't know about %50 of the clients say they want to see sketch but they really don't they don't understand it and they are disappointed, because they think sometimes think the sketches are you know close to being finished and it's just a sort of matter of flicking a switch and it would suddenly pop out of an injection moulding machine in China. And obviously a lot of that is down to us and what we show them and how we structure the presentation, and as I said it was a little bit chaotic on Monday because you know we had so many ideas and because it's a big product range that it wasn't sort of one product, we are designing a product to identity and we are trying to create it with the language and apply it across you know several very different-looking or Touch Products so it's quite a lot to capture. So I think it's down to us partly and it relies heavily on the client having a sort of an open oh you have got a friend behind you.

**Interviewer:** Can you see him sorry he jumped up behind me I thought so okay you won't see him that's alright I am really sorry, that's terrible.

**Nick:** I am looking for him now my dog is down here somewhere. And yes so it just depends I have been in situations where the client or someone of the client will say something negative and people cannot get it out of their heads and then it becomes a bad idea before it even got a chance to get off the ground.

**Interviewer:** Can I ask you this is a bit of a strange one but bear with me when I have been doing some of my early interviews with educators, people in HE who are running courses Etc. I have picked up on certain issues which I haven't anticipated, and they are to do with gender and culture and you know the country of origin of some of the
students that we have from the international scene. Could you just cast your mind around that concept are there any issues of gender culture or age where it affects people's ability to ideate using the sketching process, have you ever noticed anything like that can you identify anything?

**Nick:** I mean I have come across some very good Asian students that can really sketch you know wow fantastic, but I can't say that I've noticed I mean some of it and the university I have just been involved with you know there are huge issues with Asian students not integrating, not turning up the lectures you know again it's come to England and get a certificate kind of thing you know tick boxing. And it's very disruptive as well you know the staff find it very disruptive because, and you know when they do turn up the usually present very poorly and they usually don't get very good results at all at the end of it but we all know the reasons for that I guess [unclear 31:15] but I can't say I have noticed I mean we have just done a piece of work for the Taiwanese company and we went over and presented it in the summer, and we created a design tool kit to allow this in-house design team to start to be more consistent and to produce products that look like they come from the same company, and you know there is a good dealer [unclear 31:50] they are held bent on finding ways to break the roads as it were you know so I have seen all sort of weird and wonderful interpretation of the identity apply to products you know where they have inverted things or squash them or flip them upside down or you know you name it. And I mean I don't know if that's the cultural thing or whether that would be the same for you know a European base team whether there is some resistant to you know feeling that we are Outsiders that we shouldn't be meddling, but I mean a lot of we do get a lot of business from Asian companies because they want to enter you know European Market, and then obviously designer is sitting in Shanghai that never been to the West and don't understand you know the cultural subtleties and differences you know it's bound to be struggle, but that we do a lot of work in that way but I couldn't honestly say, I mean they tend to be poor students so I would then therefore surmise that their sketching isn't brilliant either but that could be a sweeping statement.

**Interviewer:** Okay now that's okay right you have talked about this a little bit already but are there any other skills that you require in Industry that HE is failing to address or provide, obviously the sort of thought process is kind of the crucial thing I guess that's the big area that is been failed by HE in some instances, are there any other things around that you can think of at all?

**Nick:** Well I think I mean the cohort size is clearly a big issue I think most university is and that obviously has not gone to access to Cad and access to the workshops. And also like a one to one time with teaching staff so you know I get that every year you know my last thing that I do is we have the opportunity to sit with a student in a room and say so how has it been guys you know, and we get an hour of letting rip on what the you know [unclear 34:29] of the course but mostly anyway. I think for me you know somehow simulating I mean I appreciate not every design graduate wants to go into
consultancy and which is the only world I have ever known but it just needs to be a way perhaps for them to simulate that more realistically on projects you know I think they either given a brief or they write a brief and then you know they go off and go through the gears and they go through the motions, we will do the research we will do the sketching and we will do the model block so it's a workshop [unclear 35:15] they very quickly fix on a design that they like and then as they are looking at their schedules and think okay I have got to stop taking that into Cad and I've got to make a model of it. And you know it doesn't seem to be enough time in the process for exploration in sketch form you know it's really rushed, and I would say that's one of the things that I have noticed most is they settle on a design very quickly and that's not what happens in the industry but you know there should be more. And I don't know whether they are not getting the opportunities to present those ideas in early stage and to get feedback and say that's looking strong but don't dismiss this one, and you know keep going for a bit longer you know keep juggling 2 or 3 more concept, but it just gets shot down very quickly so they can move on because they are worried you know. So I think it's everything it's like you know I think when they are going into in the industry they have got to quickly going into and assess what they are good at and what their strengths are, you know when I go into a business with a view to try to win the business I am thinking what am I going to put in the project proposal because you know in a way you are doing a health check on that business you are trying [unclear 36:43] you want to develop this but these are the barriers and these are the opportunities and you know you are sort of affecting your business consultant as well as the designer but you can't design something if you don't understand what that business is about or where it wants to be in the next few years Etc. so it's teaching them to be more Consultants I think.

**Interviewer:** It's the research into that sort of fuzzy ill-defined problem that the client has rather than assuming that very, usually quite underdeveloped brief is what the client wants is what they think they want but it's actually often not. Okay and finally I'm nearly finished now thank you so much. In your mind can you think of any methods that would enable Educators people like myself in HE to sort of manage or reduce the sketching ambition issues amongst students that are coming up is like where do we start?

**Nick:** Well gosh I mean I think they need to practice obviously because if they are not practicing they will be up tight and I remember from you know probably at school and we all did art. And you know my lovely art teacher when I was at school said you know we are going to do some stretching exercises and breathing exercise you know she thought about look you can't just come in old tight from you know a lot massless and then expect to, so and the silly things like that probably but you know if these people don't practice enough and carry sketchbooks around and doodling things then it will always be a bit of a shock to the system. And so I definitely think sketch tuition on sketching not everybody is going to be brilliant at drawing but they can get better, and you know it's a win-win isn't it the more you sketch the better the outcome will be probably at the end because you can't you know increasing the 3D Cad tools are getting
better there is no doubt and you know you can move very quickly with them but I am sure your starting point is for higher if you have done a sketching beforehand, so I think it's just maybe it needs to go up a level in the syllabus or whatever you call it it's seen as a more you know it's a really important part of the module, and well-structured and more meaningful as well and not just doing or sake of doing it.

**Interviewer:** Yes, and that's what a lot of students are doing at the moment is like you say filling a Sketchbook because you have to submit one rather than actually working through real ideas.

**Nick:** Yes, creating wallpaper.

**Interviewer:** Yes, they are a blessing. Okay is there anything else that you can think of that you wanted to tell me. I have got to the end of my questions really, I really appreciate your time.

Audio Finish 40:21
Interview with Martin Witts

Martin: I am very familiar with the kind of process but it's an interesting subject definitely, as soon as I read it and as soon as Peter told [unclear] because I have seen this unfold over the last 2 to 3 decade probably, this migration from an analogue world to a digital and what the fallout of that is all about. So I would be very interested to kind of stay with you or just get an idea of where you go with it and how your thesis develops and how your argument build. So if down dreams you want, it's up to you it could be anything or nothing it's your call I am really not you know but if you wanted it to say what you think, or if you wanted to come back and just say my ideas are firmed up and this is kind of where I am at, do you think I've made a good enough argument very happy to go through it again so it's up to you.

Interviewer: I may come back to you I mean I am not looking at [unclear 1:07] until the end of next year I am still in the middle of collecting data and doing my thinking bit which is kind of tricky. So I may well come back to you if that's okay in the next few months for some feedback on the kinds of things that I've found and the kind of proposal that I might sort of put forward in terms of being able to manage this sort of sketching ambition problem, so yes you might be a handy person to come back to.

Martin: Yes, no problem.

Interviewee: Magic thank you.

Martin: Do you have; this is a PhD thesis is that right is that the idea?

Interviewee: Yes, I am now just beginning my third year.

Martin: Okay and have you kind of made in that hypothesis that you are setting out to either prove or disprove, or is this just a scenario that you have come across that you thought, I can see it let's try and get some understanding around it or both I guess.

Interviewee: I have been teaching in HE for 18 years now, and I have been doing freelance there is a lots of sort of design work in industry. And as you are saying over the last X number of years, this problem seems to have kind of grown and grown and grown its kind of increasing, everyone that I know and talk to about it we are all in agreement that the problem is there. So my PhD was based on the fact that I know it's there but does it actually exist beyond my realm of understanding, which it clearly does I mean the literature is showing that kind of thing. And what are its causes what are its effect on industry what are its effects on creativity. So I did start out with a specific hypothesis other than my assumption or my belief that there exists a problem and from that point I kind of, so I am not really proving or disproving I am kind of investing, and the idea is to come up with some kind of pedagogical framework, it sounds a bit punchy I have no idea what it's going to look like or be like yet but I am putting together ideas
you know from this kind of situation where, I have been talking to Industry and education experts and also students as well and it has been quite enlightening the students really have so very little understanding of what sketching does and how it works and what it does to support the thinking process. And I am interviewing mostly third-year undergrads, who are you know consolidating and doing their final year projects now.

**Martin**: In what discipline?

**Interviewee**: Now I am an interior designer but I am looking at products, industrial engineering architecture fashion. So I am kind of looking at quite a broad spectrum of design because the literature seems to relate and convey that the process is pretty much identical regardless of discipline.

**Martin**: Okay got it.

**Interviewee**: Brilliant okay right. Can I start by asking you I won't ask specific questions but if you could just kind of talk around things that would be great for me. What is your organization's position and attitude towards sketching within the design process, are you very Pro sketching or I mean just talk to me about how your company approaches design and its relationship?

**Martin**: Well I am in partnership with my wife and it's a partnership of 2 there are just 2 of us, but what we do is we pull together other designers under the umbrella of our partnership. And we undertake quite a range of design projects but principally workplace design projects. So what we will do is we will Design the best environment to facilitate the particular ambitions of individual companies. Whether that's 2 guys in a bond and a start-up that are surrounded by screens or whether it's a thousand people that are doing kind of financial trading on dealing decks in the city and anything in between. My wife is an interior designer and I am a product designer so we kind of stepped out of working for others about 20 years ago and work for ourselves. And we pull in specialist and we have got a linked with probably about a dozen people that we know that have skills that we don't, or compliment or enable us to do projects that are you know we try and punch above our weight a bit. So if we wouldn't stand a chance if there was just 2 of us and we can bring 5 or 10 people with like complementary skills then we will do that and we will stand a chance of winning those projects that we otherwise wouldn't, but we oversee everything in a kind of almost to a kind of OCD level with the 2 of us but that's how we managed to do some quite interesting work and get clients keep coming back.

So how we get there to go to your area of interest in terms of working with others, and seeing exactly that phrase that you use the progression of an idea the absolutely must stand up to scrutiny. The people that we work with I would say are in a similar, and I am bringing in age into this because I think it is quite important. They are of a similar you know we are both in our fifties and we went to Art School in the mid to late eighties where the first time I ever sat in front of a computer was at Art School. And we use
them all the time now don't get me wrong we are not [unclear 7:31] heads here, we are surrounded by screens I mean we've just got Banks of screens everywhere. We use all of the software that we can we can live in a police station in the middle of the field in [unclear 7:45] surrounded by woods because we like living here and we don't have to go somewhere else. So all of the technology that helps us we use but we have got this little group of about a dozen individuals, typically that have cut their teeth in consultancies for a decade or 2 and are then stepped away. They are similar to us and we share ideas through a number of ways and it can be from we've got a few real, let's call them traditionalist and that's probably a loaded word but start every single projects and paw through a couple of sketch books, and then they are scanned and then across they become, or we do a Skype call and we are holding up pages to the camera that kind of thing or we even meet you know we will even do that if it's needed, but I know personally because I've always found it pretty easy to draw and it's probably the ability with the kind of spatial awareness, and the kind of almost a mad desired to if it's been put together I will take it apart and then work it out and then put it back together. And from an early age I was always doing that and it's probably those characteristics of how my brain works that sent me down a design route but I've always drawn and I mean just, I fill these up I mean these are kind of half sketch half presentation kind of booklets. And there is sheets and sheets of this stuff I probably got several hundreds of these over 30 years and it's 50 feet sheets in each one, so thousands of kind of sketch development ideas. So that's how I do it and I know that I was very lucky I went to a good art school that, well I say good art school. It was a good art school but we had some fantastic lecturer there that could really draw, and I thought that I could draw and then I went to Art School and realize that I was good but I wasn't great. And we had a really punishing first year where I remember a fantastic guy he must have passed on now called Allan Padgett who was at Central St Martins in London, and he said if you are awake you should have a pen in your hand, you should just be drawing all of the time. In that era, it was kind of expected that if you call yourself a designer the one thing which would separate you from everybody else is that you could draw. There was an expectation that you could do this magic thing that others couldn't, and designers did student did put a lot of effort into trying to develop and improve and own those skills. And you said a couple of phrases about designers being intimidated or kind of the fear of putting pen to paper and how would they then immediately be judge then [unclear 11:42] and it's either well it's almost certainly a product of the accumulative experiences that they've had, but it's almost certainly rooted in the fact that they haven't been taught correctly because the one thing that you should never be faithful of is drawing, it should be almost an unconscious process of just getting it down. And what you are principally doing is kind of having a conversation with yourself, you are putting something down which trigger a thought or a way of seeing something that you otherwise wouldn't have had and then you can move on. And it's not a beauty contest it's not a how good is my page in front of me, which is where designers almost from the first year want to get to immediately they feel compelled that they must be able to pin up on a wall something that looks great immediately, and the effort is on style option and it's just so wrong. It should just be a brain dump where is the good in what you have just done, interrogate
that yourself move on and if at any point someone that can is visually literate, a good lecturer should be able to come and just step in and encourage and nudge the process or open it up where it might have got blacked, and that needs the right people with a respective audience. And I think when I was being assist of whether I could go to the central or not and along with all of the others, they were trying to pick out those people that had like an inquisitive mind, a few skills enough skills but we will just put you in the right environment where then and I know that it's different now. The number one [unclear 13:49] was draw. Draw, draw, draw and then when you finish do some more drawings sketch work your ideas out and it was relentless I mean it just never stopped but boy did we turn out to be different after that very green kind of rookie first period in the opening few weeks’ months, but a change has gone on unquestionably. I'm sorry I am just rambling here but maybe I am covering some of the topics.

**Interviewer:** No it's absolutely brilliant thank you this is great.

**Martin:** Now a change has definitely gone on and I change my attitude because I have to, we have to keep Reinventing ourselves all of the time that's the nature of what we do and how we see things, you know we are advocating change we should be pioneering that change in ourselves as designers. And I have changed because I used to judge people by their skills as a principal skill communication, but because we need to make a good design or good designers probably have this ability to communicate visually where others don't. So with the language they use they can paint the picture that enable someone to see something that they otherwise would just be, it just would have no access to, or they can draw something or they can produce a 3-dimensional model or they can make something, and that should take somebody from not seeing to seeing but the fastest most economical tool still for me, because obviously still the tradition is in that sense is by putting pen to paper, and I am never without my you know I've got my line-up of [unclear 15:54] I've got all my kind of scrappy chunks of kind of A4 paper that I just kind of [unclear] as well and then I've got anything that I feel that kind of captures a point in a development or something it makes it into one of those wallets, and I just got used to working like that but the change for me is coming. If designers don't draw or the purposes of design now where you get drawn into it, and then you've got some fantastic tools that enable you to get almost to a photorealistic representation of what you've been thinking about just a few moments ago with some of the clever tools, why should you draw you know is it a real problem not to be able to draw, but if the designers are thinking well I can that but [unclear 16:54] and maybe even the computer's kind of fill in the blanks and there are some programs that will literally fill in the blanks if you have got halfway there, and you can just decide as the kind of creative editor that's good enough job done and you know there is idea number one. And then you turned out 2 or 3 or 4 more and show the client and it's good or bad, but if the designers are recognizing that there is a limitation in that particular approach to producing something, and that possibly this thing that they skipped, this ability to problematically or in a kind of creative way you know joined up quite literally where you wouldn't have otherwise joined the dot in the way that you sketch and develop, then
there is a problem but what I am getting to is the longer that I am in this business the more that I realized, actually the only thing that truly matter is, is the end result good or not has it improve something or not, does the client like it or do they hate it. So if the end result is good I actually don’t care whatever the path was to get to it, it’s either good and acknowledge as being good, and I know that’s a very kind of qualitative assessment is very subjective rather than objective in many cases, but if for those that are interested in it, the client or the designer you know who is funding it whatever it is collectively the end result is good and somehow that was arrived at with no sketching involved at all I don’t care, if the result is good that's great but it needs to be good it really does needs to be good it need to you know do something smarter with less more efficiently with a kind of a desirable aspect to it that was otherwise missing, that has got that kind of I like it I want it the kind of immediate response and engagement whatever it is, a piece of fashion or graphic design product design whatever it is it must be good, it just mustn't be average and however you get to that approach then fair enough that's good enough. And if designers can operate by that approach then it's fine but if they can't and if it's kind of just fall short and you think well it's a big disappointing and there is just no rigor here. And you know in new product development you know it really isn't for the faint-hearted it absolutely has got to cut it on some quite ruthless levels of assessment. The kind of minimal expectation is that as a designer you should be able to make it look good but that's a rare that's a kind of very superficial level of assessment now it's got to deliver on a whole number of other levels. And you have to go through that intellectual process really quite carefully and thoroughly. And the easiest way to do it for me still is to keep a record and it's probably two-thirds or even three-quarters sketching and a third or a quarter annotation [unclear 21:03]. And you kind of gravitate towards something that is almost invariably an improvement on where you started if you cover the ground, and the way that you cover it and record it and keep a paper trail quite literally is to go down this sketching route. And that's why for me it still works and it's still the one thing if you took everything away in the studio the one thing that you would feel penalized by not having would be you know something to write on, a couple of good nice pens and boy I've got loads you know we have so many, but yes good selections of pens loads of paper and you will do almost %90 of the projects in that format, and then you could kind of bring it to a conclusion but I think there is another Advantage as well because when we go to client meetings invariably the designer is asked to if not facilitate but be described, or if someone is going to stand at the whiteboard send the designer, because A we might be able to read their writing and we never know they might draw something that is a bit interesting. So I invariably end up as being like the kind of person at the front, and I've got quite used to doing kind of little cartoon sketches or trying to encapsulate the things that we are talking about. And there is a still something it doesn't matter how some of the presentation material is there is an engagement on that very kind of base level of somebody from nothing just putting a few marks down on a piece of paper or on a whiteboard, or if I draw my tablet and it's linked to the smart screen. And the client is not sitting back in their chair at that point they've kind of move forward and they have begun to engage, and for them it's just that little bit of magic it's run-of-the-mill for most designers that we cross paths with, and they do vary you know
we have worked with some on projects that do have some really fantastic skills and I
guess by default and it's make me think about this a bit more that if I [unclear 24:09]
that we do work with those draw so I don't know whether subconsciously we've kind of
done this selection process that's kind of interesting. We have made this critical
judgement of whether they are part of our group or not because of that ability, but we
have worked on projects where we have been given material to take on board, where we
have done it but the level of sketch work and I am thinking of one project which I will
not name. I don't know how much I can say here but it was a huge project for us a year
and a half, and we had to turn the kind of mind ideas, sorry you can sense my. We had
to turn the idea it was a designer had loads of ideas very well respected very, very good
with words but couldn't draw, but the client was %100 behind wanting to employ this
individual for their projects because of the name, but behind the scenes the people
actually going from, and you know [unclear 25:35] was kind of it really but the loosest
of ideas it's almost like I mean minimalist don't even get to it its way further you know
less than that, we were giving so little and some images out of magazine and some bits
and pieces and the odd material sample and told to make it work and we are quite good
at doing that but there is a huge Leap of interpretation, and if I was the designer the lead
designer and I wasn't you would want to try with the people that were charged with
bringing this life as much of your guidance and thinking and be as close to the Target as
possible rather than how we enter the project, but we found a way of working together
year-and-a-half work over 70 items all fine but if you were just judging it on here is the
pile of sketches at the beginning of that project go make it work, this would be
preschool level of sketching preschool okay. So if you are working with postgraduate
designers or people coming towards the end

**Interviewer:** Major projects and consolidating everything that they have learned.

**Martin:** Yes, again and you know I don't know how much you know about me but I've
done some lecturing at De Montfort with the 3-dimensional design course there, first
second and third years. De Montfort is very good I think they still encourage that kind
of degree of exploration through all forms but all of this [unclear 27:47] probably and I
don't know how many years now since I've been, probably 8 or 9 years since I have
been there but still the route that does work which is principally embedded in the main
lecturers that design and run and delivered the courses, they know that sketching works
so it's probably very interesting to step back in now and see the current cohort of
designers coming through and more immersed in a digital culture, and a way of seeing
understanding and manipulating the world. The sketching I can see that it is getting
side-line or could easily get side-line but it's not the sketching that is the key, it is the
process that you go through by that very activity that you, a kind of single point when
you finish the sketch and it should be you know ideally a real exercising economy no
more lines than is necessary, to get the real essence of the shape or the mechanism or
the mode or the feeling or whatever it is, try and capture that take stock think adjust
[unclear 29:19] it from the other side flip it over break it in half is it better with 2 pieces
than one if it is might it be easier to make, how do you bring it together and how do you fix it how do you mould it where is the colour brakes. And then the dialogue with yourself starts to flow and at its best it can be a riot and you are almost struggling to keep up with if your mind is racing and your sketching is you know Fast and Furious, but you are maintaining an understanding of I have done it and I am now assassinating it, I've now had another thought that I wouldn't have otherwise had here is my next thought. And then every now and again what I do is I just put a big box around a section on the page that might be worth coming back to, there is something there and it could just be [unclear 30:24]. And I have worked in a consultancy that absolutely before we started our business I worked in 4 different London consultancies. The first one of which is where I met Peter Ford so we had a fantastic time all brilliant stuff but boy did we work hard, we probably [unclear 30:41] life expectancy with the amount of hours that we put in but there you go but we learnt and we owned our skills. And then I moved on and then a number of, BIB was quite ahead of its time in some respects in that it enables you to come out of a problem almost from any single angle, it didn't matter providing you oriented yourself with the problem that the client has said, what does the client wants solve it do something and that could, we were giving free [unclear 31:22] and then other consultancies had almost developed a kind of formula format or process response to a brief. The brief comes in they allow this amount of time this many designers and they go through 3 very Define stages. Sketching is in terms of time was probably half or more of the overall process, and then there was a ruthless kind of cull so you would put 50 ideas on the wall, less then %10 would get a second chance of evolving through a more controlled sketch and semi presentational style at that time. And then there will be another cull and then you would get the kind of final few or more that kind of went to the finish line and got the full treatment. And that was a well-trodden past you know with multiple projects running in parallel or the whole studio would be stopped and everyone would be thrown at it, if we haven't started with enough time we would Blix it towards the end. But there was this Feeding Frenzy of sketching still and I do remember the principle of that consultancy, and it's probably best that it's [unclear 32:54] quite anonymous is that they have a lot of admiration because the principals they could all draw they come through Art School you know prior to the 80s, when you absolutely had to be able to put things down on paper and bring to life something, you could never go down the digital route. And then their consultancies grew up in an area where this technology started [unclear 33:27] Fast and Furious and prices plummeted, and all of the students coming through and the entry level designers were all kind of 3D letra on computers. So they are almost like default the kind of where we started a project got questioned or even overlooked. You would have some designer’s younger designers wanting to just start absolutely from day one in a digital environment. And there was a I can remember a bit of it wasn't conflict but there was a you know okay well let's see you know result is everything, so let's just see but it was still I think from the principles of actually probably all of the consultancies that I have worked at, this not quite preoccupation but this expectation that, I'm sorry I am jumping around here, that you could draw you could draw. And I remember one saying to me I've never yet met a designer a good designer that couldn't draw, so for him it was an
anathema that you could ever become a really high level practitioner in your field if you didn't have that skill. Now I wouldn't go that far I think the end result is all that matters, the past to it I hit a project very hard at the front-end but almost in an uncontrollable way there is nothing that I don't want to read there is nothing that I don't want to think about, what I want to research and the amount that I want to draw it's probably of a frenzy but I feel I need to get as fully informed as possible in the first 10 or 20 or a quarter of the time that I have. And then at that point I might be able to do something that genuinely moves it on a bit and I can feel and I construct an argument of why it's better why it cost less, easy to make and more easily stacked you know all of the criteria which if you try to quantify is it better or is it worse you would bring that kind of level of assessment to. So it's a way an accountant would assess a project even though even now there is still the yes or no is still very much in the qualitative aspects of how project are assess and I thank God that it is that needs to be that it's better faster smaller lighter and more economical better environmentally, all of those things must line up behind the fact that wow that looks great. And I've worked with designers that don't work like me which is great, and I have worked with designers that almost working like a lab environment. You would go in there and you would have no clue what's going on it is very and then I've worked with other designers where it's like the ultimate kind of Workshop where everything is everywhere, everything is plastered around the space, so the person in it trying to kind of conduct all of these element is immerse in this world that they have created which is picking a project, my wife tends to work like that as an interior design. And some designers work on the top of you know several projects that are all piled on top of each other and then they just put the current projects on top and then they do what they do. And it doesn't matter you know I used to think it did and thought no, no, we can't get to where we need to be it all needs to be a bit more, there is a chaos front-end undoubtedly but then there is this kind of Ruthless scrutiny because you want to have imagined every question that you might get asked before you are asked it when you are in front of the client. So it all comes just naturally and the quickest way to do that is to tread that ground and I tread that ground with a Sketchbook it's just the way I've been taught, and that's my survival mechanism really that's what it is cover the ground cover every angle, but it's something a bit more tangible than that I think even still, it's the fact it just facilitates you can kind of flick back quite easily and I know that you can do that on screen I know that you can kind of dump all of your images, and you know scroll along them really fast and zoom in and zoom out you know and I draw with digital pens on tablets and on screens I've got big projector you know we do all of that and I love it, but I don't think there has been any project that I have ever done where I haven't filled a notebook. And the best designers I've ever worked with who was really, really clever at making of taking, for a product designer the kind of Holy Grail is to come up with something really, really pared-down and minimalist and lovely. And it has a very simplistic clever way of working, whether it unfolds or clips or catches or whatever. And this particular designer that I have worked with one of the principals at the consultancy that I've work at but boy was he good at that and he spent his, and I probably watched how he worked because I was still quite learning my trade but every
meeting he be head down in his notebook sketching away every single meeting in any company. Every Design Studio meeting he would always have his book with their writing notes, and they would just start appearing one after another after another on these huge long shelves all around his space, and he just mark the dates you know sometimes each book just had a single day because he had filled the old one or a book lasted a week. And his whole life was there you know in the kind of journals as it were. Every project every trainer [unclear 41:28] every that's quite interesting I will sketch it down now I bet that will come in handy at some point it was all there. And the beginnings of all of that for me started in Art School because that's how we were taught [unclear 41:42] just the best illustrator I have ever seen ever, and day one we are all keen there's 26 of us first-year product design school, and he came in and he said look at all that new kit and we are all sitting there [unclear 42:06] kind of pastels and that gouache and all of that pencils you know pool bits of geometry sets all of that kind of analogue primary stuff. And he said I've got a rubbish bin here, he said I want you to take out every single rubber that you have brought into this class. And I am going to walk the tables and you are going to throw them all away. And he said you need to learn to draw such that you never ever have a need to use a rubber, ghost the lines on forms your ideas just press a bit harder to capture the ones that's right all the rest will disappear in that process. And he told us about different you know pencil weight and different and pen thicknesses. How to draw just geometrical shapes and with just 2 line weights that turned it from Flat into 3D just with a few techniques. I am wondering here but his fantastic fly technique, he said imagine a fly walking across the surface, when it turns the corner if the fly disappears make that line slightly wider. So draw a cube, draw a whole [unclear 43:29] of the cube cut the corner of, now it's all one-line weight now go around Imagine the Fly walking across the surface, if it turns the surface of the corner, if it disappears make that line slightly thicker. So you go around the edge of your Cube and you go around half of the circle [unclear 43:47] the cube and you think yes fantastic I can't draw something without thinking about Allen Padgett and his disappearing fly off the corner. And that was just one of a kind of torrent of ideas of how to go from okay so you think you can draw let's see where we are a after the first year because it's coming after you thick and fast. And then use all of these techniques through the projects that you will be giving and develop your skills. And once it's ingrained and once it becomes your kind of support mechanism it's almost your life support mechanism that is what you have got your ability to draw. It's very difficult even with as brilliant as the technique and the software and the tools that we now get to play with, I have never stepped away from it because I know it works. So it's quite interesting when Peter convey to me what your subject matter was, I thought well I could have seen why it has happened, combination of factors I think if the designer saw that a Sketchbook isn't precious and they will not judge on it. I remember one guy used to sit next to the Art School and he had a fear a real fear of a white sheet of paper in front of him. So the first thing that he did was he scribbled in one corner and then stuck his coffee cup and deliberately kind of just messed it up, and then for him it was, now [unclear 45:44]
precious now I can dive in and off he went and it was brilliant and that technique [unclear 45:53] to him at Central mess it up tear of the corner doesn't matter. And when we did critiques where we all critique each other's work it was very important that it was the idea. Now if you are trying to convey to form and subtlety of shape and line, then clearly you had to make some objective judgement on the quality of the sketch in front of you, that's fine but if it's just the rudimentary well I have been thinking about this and then that's what the criteria should be, you know have you understood it or come up with something that actually that's worth hanging onto put a box around it you know and we critique each other, and this idea of it being a beauty contest who could draw and who couldn't, very soon I think kind of got pushed back. You can turn that one on at the end of a project when you, you know you have done your thinking and you have got something that you know will stand up to an argument you know that you are verse in it so you can describe it because of that journey you have been on through your sketching. Now you just throw your presentation skills at it and that is again a lot of it can be learned, and we did one a week with my you know I guess the guy that I remember, one of the guys that I remember Mr Padgett we did one technique a week really, really thoroughly. And then some you like some you thought well I can do it but you know I will pass on that, but this medium and this way of doing things, [unclear 47:53] it just feels right [unclear 47:46] and you used to own those skills at the end of the project once your idea was really, really good. So the emphasis was in my view was in the right territory it's not about lots and lots of pretty pictures because relatively even more so now everybody can do that it's not that difficult, but it's a bit up to it that it's ultimately where you are going to be judged it just comes to life in those kind of presentation bits and pieces. So it's very interesting if I think I guess what your question should be is, for those designers that find themselves you know have gone through the system for undergraduate level you know coming up for their BA, they are doing their major project and they feel like they have a, they are trying to move forward with the brakes on and they don't know why. And they have not been schooled in actually what good sketching is all about then first of all it's too late, but well it's too late for that particular phase because I guess they could have an epiphany I guess you should never say it's too late that's not a designer thing to say, but to be really good even if you think that you are good, and most of us that turned up at the central were actually pretty good you know we weren't finish articles by any means but they sore enough to think, put these people in the right environment, give them process [unclear 50:01] them hard and boy did we work hard, not because we were compelled to but half of us were standing outside of the Art School waiting for the door to be unlocked in the morning at 8. And the janitor would walk around and ask us to leave at 11 at night and all we wanted to do was to be in there because it was the best creative buzz for 3 years. I have touched on that a number of times in different consultancies but there wasn't the kind of free flow experimental level that we had at Art School it's more commercial production.

**Interviewer:** Yes, deadline orientated yes.
**Martin:** And don't get me wrong deadlines are great and it focus the mind you know Rule Number 1 never ever not ever missed a deadline and over-deliver definitely slightly over deliver, but yes so art school was special and maybe I only had a choice of one that's all I could go to in London and that's what I wanted to be but I definitely benefited from it I was kind of at the right kind of introduction to it, and I loved it I loved every single minute of it really, really good. But do your designers that you are talking to, do they feel like they've got a problem?

**Interviewer:** They don't but it's interesting this is why I'm interviewing, the design students is interesting in itself because they are completely unaware that their inability to make any kind of mark on paper or think through any kind of design, they are unaware that that's what should be going on. For them design is having something in your head which you then go and put onto a computer or not having something in your head but you go to a computer and it makes you a kind of half glimmer of an idea and look pretty good actually, and you can get that pass in assessment, that's the trouble I think sometimes the assessment process is you know like all of us we look at a nice image and think oh that's good. And it is easy to see tutors being kind of side-tracked in terms of what they are being presented with, rather than concentrating on the process and considering how that processes is led to the final outcome so that in itself is interesting, but no I mean they don't understand they don't know how to do it they are frightened, and what they end up with is a piece of none design designed at the end of it if you know what I mean.

**Martin:** I know it's just very clear and I mean it's the kind old thing that you know you don't know what you don't know.

**Interviewer:** This is it it's not there and having done this research is where it's been interesting because I've been looking at this sort of psychological cognitive and Theory based stuff around sketching, and how vital it is because yes there is this argument that well do we even need to sketch anymore if we have got the technology, but it comes back to that thought process all of the time and that's what students are, they are not aware that design is a thinking process and not a picture creating process or an image creating process.

**Martin:** It's not the students I don't believe the quality of students has deteriorated in anyway whatsoever it's the course that's not right, and you know end up with something great but there was back to my first year and I can only relate my one experience of going through this, and that we all felt that to be a designer we need to be able show something that people go wow you know and we just want to get to the wow bit as fast as possible.

**Interviewer:** That's the little old ego isn't it.
Martin: It is and it's just so crap. So to actually you know to have your focus change and say hold on a minute we will do that bit and we will show you how to do that bit, or you show us how you would like to do that bit because there is no right or wrong answer there. I worked with a product designer the only thing I have ever seen him do is make stuff, you never see anything on a computer ever, no sketching it's all about his ability to interact in the 3-dimensional [unclear 55:09] and the processes that he has developed to a really high level. And you just sit back and you think okay that's great and that's fine absolutely fine but I think during training there is an obligation that you are exposed to and encouraged to entertain any or all of these ideas to see which ones work for you but I am really surprised even in this kind of, we are in a digital age but I am really surprised that the value and the efficiency and the economy and analogue sketching process that is where it's at its best where it's a condescending of yourself and others that enables you to see and record almost at the speed that you are thinking that's when it's at its best, so forget all of the pretty stuff it's a conscious stream of thought translated into marks on paper that takes you somewhere that you otherwise wouldn't have gotten. Now most designer if it's presented to them that's why we are looking at this I think would probably should give it a chance to be a part of their tool kit. It's what I want to show them you know it's like I would always say just show me if someone's say [unclear 57:06] you know show me just show me show me show me you know, and when I was a lecturer I did presentation techniques and kind of design development and you know prototype preparation and all that kind of stuff you know the whole Spectrum, but you know I guess I would walk home with my pen and my notebook and I would have a real go of my page and then try and draw the student in to kind of join in, and then that page would be ripped out off of my notebook and I would just throw it down and you know make of it what you will or nothing or you know, but it is the vehicle it is like the common language between designers when it's at its best, so it's a real if it's not on the curriculum I can't well then the bit that doesn't sit well with me is it's the critical thinking [unclear 58:20] was centred around the sketching process so if you take the I am making marks on paper away, how do you replicate the critical thinking and record it such that it covers enough ground explorers enough areas challenges enough preconception, how do you do that if you don't do it via Sketchbook, it's probably possible through a combination of other bits and pieces and if a good result comes out of any of these processes then you know that kind of wins the day for me. So if someone is [unclear 59:02] I don't care but if they haven't got there and maybe it is just a factor of the 8 typical undergraduate design course whether it's you know and I can see graphic designers or but never picking up a pen most do but I can see them, because you can sketch so brilliantly straight onto the screen, and you can pull in stuff and you can work stuff you know there doesn't appear to be much limitation and maybe you know product designers are working in the same kind of way they are just working their ideas out in another way, but if what you are seeing is people that are kind of running on empty because they don't have that facility on board and their designs are not as good as they should be, or they are being judged as not [unclear 1:00:14] enough or superficial because [unclear 1:00:10] has somehow been lost and even worst if they you know the further that they have gone through the process of it being an
undergraduate you know they are coming out with an expectation that they have been trained to be a practitioner in their discipline, and they are going to walk away with their first or 2 one or whatever it is and you should be able to hit the ground running and work, and they probably can if they are being judged to have done that well you know but if it's that they are still handicapped by not having this, I'm sorry I am tempted to use the word default skills, that I still think designers most designers that I have met have had and it's just not been introduce and it's not been developed then that is quite worrying not their fault, unless they worked it out themselves which in truth my view is you probably should have done, and your world even more so now is not limited to the school that you go to and the environment that you are you know you can go online and watch. And actually the other day I was watching a Japanese guy doing some calligraphy because we are working on a project that is based on that. And it just I mean I could have sat there for hours just watching the technique and to the school you know this is 7-years to be trained to get to this level to be able to do it by sight in the way that he and she was doing it brilliant really brilliant. So you would imagine that you would have seen or had access to order designers working and the process that lay with it through. And I bet more often than not there was some Sketchbooks lying around, so they should have seen it and thought I will give that a go but I don't know

**Interviewer:** It's interesting what you say about you know students sometimes not having this sort of like you said the default skills. Yesterday I had tutorial with 16 of my they were MA students doing fashion and textile, and they cover anything from Footwear Contour fashion textile fashion apparel anything like that. And they have been supposedly for the last 6 weeks, I brief them in week 1 so this is now week 5 or 6 I can't remember but I wanted to see their Sketchbook development. So I don't want to see, I want to see the initial ideas but I wanted to see them developing through. The bit that I am not interested in is how you present that idea at the end that really isn't the bit that I am concerned about, but what I want to see is everything documented along that Journey. 4 students had Sketchbooks and they were working beautifully and they were developing ideas, all of the others the other 12 all they did was turn up with things they had clipped out of magazine and things that they have downloaded from the internet that was their design research. And they said we have never done this bit before, and a lot of them were Chinese and Indian there were a couple of English girls who were struggling but the designed the thinking and the bit where the sketching would support that They said well we have never done this before it's extraordinary.

**Martin:** It's interesting that you have made a kind of race judgement because I have seen a number of, how is best just to describe this.

**Interviewer:** It's a tricky thing because I don't want to sort of cause an issue but this is definitely showing up all the way through, and I know that the way they are taught is very different at undergrad level so it's not surprising.
Martin: But I have worked on a number of projects with American companies, and the Middle East and Far East a lot. And what particularly the Far East so this is Japan China a couple in Malaysia and Taiwan. What they see and this is a generalized view, but what they see is the best outcome is a combination of probably 3 things, it's kind of Technology of the US so the smart digital technology of the US. The style of Europe and the efficiency of production of the Far East, and if we can combine those 3 things we probably got something and the bit that is the least easy to engage with and understand is this stylistic characteristic that is so evident in what is deem to be good design which is European base. So the technology bit that we can license or develop our own or clone or rip off or whatever, the efficiency bit we know how to do easy we just stare all of these people in One Direction [unclear 1:06:30] and make stuff we are the workshop of the world, but this stylistic design brand value qualitative aspect is really difficult to get a fix on. So when we've worked on projects like that often part of the Rules of Engagement is that the representative from the Far East come and embed themselves in the design practice to oversee look, and there was a real nervousness about this it was often facilitated but what we believe smartly they are trying to do is learn the software, how do we go about this apparently an individual can creatively Wonder off and given license to do that, and creatively create something that will be truly desirable and that fascinates a lot of, it almost preoccupies a lot of Creative Design thinking in the Far East. Now their skills have increased immeasurably over the last few decades, and they've gone past the point of we want to be like you so we will just copy you, so we just clone everything and we just do facsimiles. There is now a kind of self-belief and pioneering creative culture or we have got European designers that have been unplugged and cross and re-embedded to kind of run these studios or be significant contributors to those Studios, but many times I have been working in London where the creative mad chaotic sketch base [unclear 1:08:50] all of the design project would be looked upon as a complete anathema to the way that things are done back home. I have work I was lucky enough to win a couple of design bursaries when I finish Central and one was to go and work with Sony and then stay there for a bit in their wing complex in Tokyo. And to see how they work there I mean totally incredible one level but so, so different than if we would be given a project back at home, I mean it's a different conversation but I've got my Sketchbook out in Japan to start designing what was then kind of a New Kid on the Block which was a portable CD player which was a portable CD player having you know the back of the success of the Walkman [unclear 1:10:01]. And they did sketch but they didn't do it how I felt compelled to give it a go and there was a real interest in I had to present what I was doing not because it was actually we've got none of it, actually you know one did go through it did go through to one or 3 prototype which they fully made did never made it to production, but the best of me kind of first thoughts first idea what if in the way that I was doing it just wasn't how they did it but they use that opportunity for me to go into this kind of glass cube in the middle of the design studio and paint the back of the walls, and they all kind of came in and they wanted me to tell my story, the translation was philosophical story behind each of the ideas, but my ideas weren't based on a philosophy they were based on a kind of a bit more of a pragmatic, the engine is like this we can probably adjust it a bit we've sets up a form but it was more the way
that it was carried and interact with and used and it was those more measurable things, but yes the flip side is in London where this is norm and in region and across the country and I am going to broaden that where almost all design consultancies, once they are evolving there was this kind of frenzy of initial activity where are the good ideas show me, and the most efficient tool to show me was probably capturing the idea in its essence in sketch form. One particular consultancy that I worked at where both the founding partners where sleeves rolled up hands on first class designers that had different skills entry skills, but could visualize anything that you could talk about in a few seconds in front of you the client loved it. And they would get us it was almost like a baptism of fire for a new designer coming in, show me show me what you can do here is the idea and you have to put to one side the this is not a beauty contest they are not judging how good stuff looks they are judging the essence of the idea and we would rattle them out like really go, but one of the partners had a particular method where if I drew something relatively it's quite small scale so it was really efficient, like a mobile phone for example would probably be drawn at about a half or a third of its scale on paper, and you would draw one after the other and you work your way along trying to move it and explore different areas you know the screens and wrap around and keys and flush, and he used to do the same kind of thing and we got on well, he kind of would box one out and then we used to blow that up on a photocopy to true size, if it had just that magic form and shape in those lines, so it didn't matter what we were working on you know it could be washing machines or it could be food mixes or it could be a motorbikes they would all just to be drawn as simply as possible and just a few bits of a few sketches just kind of resonated with the principle of this particular practice. And it was that essence that they were trying to capture along the way from a designer in the studio working on a particular project. So you would say alright this afternoon we are just doing watches and we would all be drawing, and you would probably have 2 or 300 at the end of the day and they would all be kind of looked at and they are just a few areas of a few will kind of pull together and laugh and try to be captured with quite a lot of emphasis on the stylistic aspect, but the sketch was the vehicle to try and bring it out of the [unclear 1:15:29] for them that was it that was the way the most efficient way how else are we going to see 200 ideas in an afternoon and feel like we have got a handful that just might turn into something that we love.

**Interviewer:** Interesting isn't it the quantity the speed and the quantity seems to be showing up as something which is really important.

**Martin:** Speed is relatively important because the more you slow down it's almost like the more you think the more laboured it gets the more lines you draw, the more you Drift Away the more you've kind of start to thread into that area of oh it's got to look nice, and yes no one will forgive you for making something that look shit so you have to get that bit right but you need to be able to turn that bit on at the right moment. So it should be as quick as your thinking or your exploration allows you to develop I guess and for me what I like about it is and if you can see the last Studio I've got this shelf running all the way around and it's magnetic.
**Interviewer:** Are you in a train carriage?

**Martin:** Yes, it looks like that but it's actually, the nearest thing I can describe it to is like a mobile office so it's a hub.

**Interviewer:** Alright it's just that you look so in one-point perspective it looks as though everything is disappearing behind you and like a train carriage.

**Martin:** We moved into an old police station and we took over the ground floor was the office but everything was everywhere. And then my partner and I started our family and I thought I need somewhere, so at the end we got a little plot of land and at the end of that plot of land I thought we will just put what I wanted was an [unclear 1:17:54] trailer that's what I really wanted and I just couldn't, I know because it's such a design cliché I almost, almost got one recently but it didn't work out but I still have plans but anyway we bought this kind of pod thing and then you know we thought but we are designers and my wife is an interior designer you know it's standard Studio and it's absolutely neat and edit right now it needs a kind of a walk through and everything edited and get rid of all of the samples and start again, but I like to have things around me and the sketch idea for me works because very rarely you often, when you do something for me anyway if it is purpose or anything when I am drawing a way occasionally you get that wow I really, really like that, but more often than not it's a kind of well it's interesting but your default critical analytical kind of designer switch gets thrown and you think well is it I don't know, I have to live with it so if I can put it around my environment so even when I am sitting here and I am talking to you I am actually looking across, there is some stuff out of view which I can't show you but there is 3 ideas that are the end result of I think about 9 8 straight 9 were candidates, 3 I really like and they have been up there now for just over a week, and I keep coming in each morning and you just end up it's like in the background you will be processing those ideas your sketch ideas. And these are no more than a [unclear 1:19:56] worked up sketches but enough for me to know that I could then take it to the next level and it all will be fine but I need to make it a base judgment at this level and no more. So I am not looking at how sexy it is I am looking at the kind of essence of it almost if you squinted up the idea what would you end up seeing, and 2 I really like one I've already discounted but I need to have them around me in a sketch rather than a jpeg buried in a file deep inside of my computer it is another reason why it works for me.

**Interviewer:** Yes, it's got like the presence of paper the presence of an image it is much more accessible even though it might be tucked in a file, than as you say something which has been saved on your computer with you then have to go and kind of scurry around to look for, they have a greater kind of immediacy like that don't they I think?
Martin: Well they do for me it works for me and I have developed this kind of process and over the years I know from nowhere or a rough idea of what I think the client is looking for or more so now where my wife and I are trying to be brave that we have been practitioners and trying to get other people to, they come to us and want an idea or something solve and we solve it and we have been developing ideas where we are the clients now, so we actually set our own brief to ourselves, we have come up with an idea and now we are about to go through the process which is going to take about one year where we go, we have been telling other people how to do this and we are going to now do this. So we are going to bring to Market a couple of ideas, so this is where it's really, really important I mean the truth is it was important for clients but now it's really, really important that we get this right because we have got to be the judge and jury but we will go through that process with our Sketchbooks, and they are brilliant you know they don't need charging up they will survive a drop test I love them.

Interviewer: Yes, it's great isn't it brilliant, thank you so much I've just got a list of things that I need you to sort of cover here but you have covered everything, I think. Yes, it's been brilliant thank you so much you have been talking for 1 hour and 23 minutes now. So I really appreciate it thank you ever so much, I have got to go and transcribe all of this now.

Martin: Well edit hard we will be a ruthless editor, there is only a few [unclear] in there if any. [Unclear 1:23:12] you have been scrambling a couple of things.

Interviewer: Yes, what I do is record everything but all of the juicy bits just to make sure that they are kind of out the front of my mind and I have been scrambling down. And I have managed to completely fill up my question sheet with Juicy bits that you have provided me with so that's absolutely brilliant so I do appreciate that.

Martin: Well I did a similar thing in your intro and I've wrote down 6 things that you have said.

Interviewer: Right I can't remember saying anything particular interesting you see it's funny isn't it.

Audio Finish 01:23:45
Appendix 8 – Interviews with students: sketch inhibited

Interview with S2

Speaker 1: It’s okay just giving me a background of who you are what you’re studying and what previous sort of...

S2: My previous sort of...

Speaker 1: Your previous sort of education. How you got to be where you are in your st... you look really nervous don’t look nervous.

S2: I suppose that is a very difficult question think about ourselves.

Speaker 1: It’s horrible isn’t it?

S2: I live next to Clacton on Sea, a little town called Walton on the Naze. Grew up there my entire life and went to Tendring Technology College for schooling. Got relatively alright grades through that then it sort of when like that with GCSEs. It went even further downhill for A levels. I’ve got probably one good A level.

Speaker 1: And what subjects is that?

S2: What’s it called?

Speaker 1: Technology?

S2: It’s not just technology it’s more of a mechanical based one.

Speaker 1: Alright, okay.

S2: I got a B in that at A level. It was just a whim really that I’m here, sort of thing. What should I do with my time? Do I get a job that’s poorly paid and have to work all the hours? Do I go to university to try and better myself, so that’s how I ended up here.

Speaker 1: So was interior design something you’ve been interested in or is it one of those things that you kind of thought I’ll take a punt on that and see how I get on? How did you sort of come to choose?

S2: I was very intrigued by the architecture aspect of it. So I’m more interested in architecture work, but because of my grades. I can’t touch architecture with a barge pole. So I thought this was a good stepping stone in that motion of eventually developing some form of architectural background. So I thought this was a really good starting position I could probably then later do
a Master’s or something on the lines, maybe get a few years’ experience in some form of design practice.

Speaker 1: Now taking you back to your childhood. So this is a very quick question and I don’t mean them to be, taking you back to your childhood can you recall your relationship with sketching and drawing? So as back early as you can kind of remember. Can you remember being at school and doing that kind of thing?

S2: I always had a bad relationship with sketching I just never really go on to be honest.

Speaker 1: Did you do, you obviously did art based things at school.

S2: I did art.

Speaker 1: Can you remember things like painting, the drawing?

S2: It went terrible it was horrible.

Speaker 1: Did you not enjoy it even as a..?

S2: No I don’t know what it was it just never worked for me. The other kids could just, I’m going to mix all colors together and create a wonderful palette of, and mine would just turn us to green mush on the paper, I don’t know why.

Speaker 1: And that’s as far back as, what kind of age do you think you were back then?

S2: I’d have said just before GCSE, because after GCSE I dropped art because up until GCSE you had to pretty much do every subject known to man. And after GCSE you just narrowed it down to like five sort of thing. It was alright, the sketching was okay but, just when you see what other people are doing and then you don’t try as hard sort of thing.

Speaker 1: So you could find yourself comparing your work with other people’s quite regularly?

S2: Heavily yeah, you’re doing your bit of work and just look over and be like, hmmm...

Speaker 1: Why? How old were you when you were doing that kind of thing? It’s difficult to recall those things.

S2: I can remember that as doing stuff like that as far back as primary school.

Speaker 1: Really right, they’re better than me, I’m not as good, so.

S2: I can remember being quite young and doing it. ‘Cos you do it for everything, you do it for football, you do it for your hair, you do it for how fast you can run. Anything you can think of, you can compare it.
Speaker 1: This competitive thing, yeah, okay. With your being at school were there any specific things that happen in terms of what you’re looking at other people’s work and comparing. Have you got things you can remember things that may have been said or done things, or teachers may have said or done things which kind of put you in that frame of…?

S2: Teachers aren’t particularly helpful at anything, if you say you can’t do it, ‘why not it’s simple?’ I’m obviously not finding it that simple. So it causes some form of horrible moment in the class where you argue with a teacher and you get sent out and you never return to that lesson again…so pretty much.

Speaker 1: So did you have teachers who could have made, some teachers kind of compare students’ work in front of the class where you sit…

S2: Oh, yes, all the time.

Speaker 1: Really?

S2: Oh, yes, ‘Olivia over here has made this wonderful landscape’. And it’s like she’s selling it on the internet. ‘It’s just perfect she has it right here so for only $99 you can own this yourself’. And she’ll pick someone else’s work in class and it would never be as good. So she’s got wonderful comments to say about this and the she picks someone else’s work, and it’s yes, ‘good depth’.

Speaker 1: Do you think the teachers were judging the finished product as oppose processes you guys were using when you were doing your art and design at school?

S2: It was a mixture of both. They were mainly interested in what you ended up with, not how you got there, because some kids would do an area of detailed work and work outwards. And some people would stop with like a base layer of a really badly drawn circle and then apparently make the Mona Lisa. Yeah, none of them processes have worked for me at all.

Speaker 1: Okay, interesting. When you’re designing, thinking of your projects and things that you’re doing here, what kind of processes, just describe to me the processes you go through, you’re given a brief, how do you develop or generate your design concepts either in a practical sense, or up here? What kind of things go on?

S2: I don’t know I just kind of think what I wanna make and then that’s like how it goes. So I don’t know, just when we do site research a lot of issues jump out at you. But I always struggle to link those issues to some form of concept. I see the issues I see how I’m going to resolve the issues but somewhere in between it needs to be a concept which is like, I don’t know, a dog’s hind leg. And then my whole design needs to revolve around that concept which I don’t really want anyway in my work.
Speaker 1: Okay, so if you have a concept or you have an idea, does it come into mind or is it something you go and look for in terms of what other people have done? How do come up with those ideas?

S2: Usually Lianna runs through the brief she’s like, this is the brief, and then she’ll run through it with us. Literally maybe five minutes after she’s finished the brief, I am already thinking of, ‘ooh, I can do that I can do this,’ sort of thing. But then that’s when I get a concept and like, I hate concepts.

Speaker 1: Right so you’ve got the ideas going through your head. What do you do with those ideas at that point? Where do they go?

S2: They just kind of stay.

Speaker 1: They float around

S2: Yes they float around for a bit.

Speaker 1: Do you put anything down on paper, do you put anything down in a note book or on a screen, it’s just kind of...

S2: It just stays in there, which is probably my downfall...but I find it irrelevant because as soon as I get a concept, these initial ideas, because this concept will then judge the rest of my work sort of thing.

Speaker 1: So what methods do you prefer to generate design concepts?

S2: I should, probably should employ different methods to designing but I usually just go, ‘that’s good, what’s wrong with that?’

Speaker 1: You kind if, the imagery, the stuff in your mind.

S2: You kind of run with that for a bit and see how far you can go with that. And then sometimes you get to the end of that and you just think of something else. I should probably start doing some mind mapping or something and try to find a logical process for this.

Speaker 1: So when you have ideas and you’re working on your designs, I mean I know of you were working the other day and talking. How do you record your ideas and thinking during the design development process? Kind of asking the same question again really I would say.

S2: I think it’s just due to my lack of, I just don’t put it down on paper, so I’ll have an idea and I’m thinking, that’s really good and if it is really good and it links into my design I’ll put it down or sometimes I just let them die in the back of my head somewhere.

Speaker 1: Why?
S2: Because they’re not directly linked so I’ve got to try and link it to that concept and if the designs aren’t linkable, I just have to be, ‘no that won’t work.’

Speaker 1: If you are asked, like I might get you to do today, if you’re asked to produce sketch concepts how do you feel? What’s your immediate, if Lianna came out and said ‘okay, you’ve got an hour to produce sheets and sketch concepts for this brief?’ What is your immediate reaction and feelings?

S2: I don’t know that’s a bit, it’s a difficult one. I don’t know, I’ll probably struggle with that. Visualising concepts is just difficult, I don’t know why.

Speaker 1: Okay and how do you feel when you’re kind of asked, you’re put on the spot in that sort of situation?

S2: It’s alright, it’ll probably take me about twenty minutes to realise what I’m doing with my life and then I’ll be like, ‘no I need to do this,’ and it’ll probably end up with quite a poor quality sketch at the end of it, and some really terrible explanation as to why this is my concept.

Speaker 1: How do you feel when you have to share your sketch ideas or your development ideas in a group situation?

S2: Absolutely terrible it’s just shocking.

Speaker 1: Why is that?

S2: It’s just the same thing again, isn’t it, like, they’ve got better work than you. Mine might not be as strong as theirs, sort of thing, it breeds that whole, ‘why am I doing this?’ It’s alright sometimes in a group, but if I’ve actually managed to sketch what I want to sketch it’s good. And I’m happy to do it but if I feel like this is not good enough, I don’t want to show it and anyone I do show it, I’m like, ‘yeah, it’s rubbish, like...It’s not beneficial’

Speaker 1: So do you feel again you are comparing yourself and other people are comparing this so competitiveness it’s not spoken of really. But it’s still there?

S2: And then if you ask people they’ll deny it but it is there. If you ask anyone, it is there though.

Speaker 1: How do you use sketches in tutorials? Do you have a tutorial with Lianna or somebody? Do you take your take your sketches along with you how do you use them, do you show them? Do you talk about them? Do you add to them?

S2: I don’t usually have any sketches to show them. I usually have one sketch and it’ll be of a, er, a really abstract sort of sketch. It’s like, ‘oh, yeah, this is what I want to do,’ but it’s like one
of them difficult quality sketches, somewhere in between good and somewhere in between bad. So it shows some form of visual quality but usually I don’t go with sketches. So I’ll just sit and talk about it for a bit and that’s my problem because I always get feedback that says, ‘I want a visual answer.’

Speaker 1: How has the teaching of drawing in your higher education experience, i.e. you being here, how has being taught during or learning about drawing, how has that helped you to generate design concepts? Or has it not really?

S2: I mean teaching in the first year, not really a lot, about a month and a half of, ‘this how you sketch and this how you’re supposed to use a pencil.’ The pressures in different types of pencils and things. And everybody was just left to do what they have to do. Some people naturally pick it up; some people don’t pick it up.

Speaker 1: So is it something you have regular tutorials and classes all the way through the degree course? Or was it something just a block?

S2: It was just a block in the first year sort of thing that had a little bit of teaching for drawing and sketching. In the first year we did a lot of hand drawings, of plans and things, but after first year dropped all of that and now it’s all computer based.

Speaker 1: Okay right, do you think that, this is quite a big question actually. Are there ways, do you feel, there are ways of being taught drawing and sketching, other than the things you have been taught and done in the ways you’ve done it here, that you feel would help you as a designer?

S2: I don’t know other ways or other methods of teaching someone to draw. I mean there must be quite a few different ways of teaching someone how to draw, I’d imagine. I honestly don’t know. Some people are visual learners, some people are kinesthetic learners, things like that, you know, they like to learn by doing. I think it’s one of those things where it’s just, I don’t sketch a lot so I’m never going to learn how to sketch unless I really start sketching and work through the rubbish to get to the good. So it’s something you have to admit that every project you do, the first project you do it at university is rubbish. Even if you think it’s good its rubbish, even that first project you do in the third year, its rubbish even if you think it’s’ good, because you’re progressing the whole way through so in another ten years you’ll look back on this and be like, ‘I thought that was really good at time. I realise what I’ve done wrong there. That’s rubbish.’ Because I do it all the time where I was looking back at last year’s work and I was like, ‘Oh man I thought that was really good at the time.’ My visualisations are rubbish, that’s rubbish the design doesn’t work. This concept is weak as hell, you pick them out, but at the time you’re thinking, ‘Oh that’s really good, yeah.’

Speaker 1: Because you’re putting every bit of your attention into it getting the feedback, is there immediately and you distance between what you’ve done in the past and what you’re doing now. That distance and the amount of knowledge you gathered in that time is huge. So it puts a different perspective on what you’ve done back then. Okay right, do you feel that the
drawing you’ve had, the drawing tutorials and teaching has been relevant to what you need and useful to what you need or is it kind of missing the point and not really giving you what you’d like to have?

S2: I’m sorry could repeat the question..

Speaker 1: Do you think that the teaching of drawing and the tutorials and the stuff that you’ve done here, do you think that has kind of benefited you in or has it kind of completely missed the point in terms of what you need to learn? The stuff you need to learn have you got it from these classes?

S2: I think it’s like breaking an old habit. I’m stuck in the old habit of how I sketch, so I sketch very rough and when I go over it like five or six times until the lines becomes thicker and more predominant on the page. Whereas here they don’t teach, they teach one straight line no stops in between. Whereas I do that funny jagged thing where it’s like sketching a straight line. And when we were originally taught to sketch, it was like, ‘no you hold it firmly, not too much pressure on the page. One straight line lifting the elbow up, I can’t do that. It always comes out an arc.

Speaker 1: So the way you were taught to sketch with a pencil or pen. Was it quite, it sounds like it’s quite prescriptive.

S2: It was pretty much said to us you can sketch how you want to sketch if it works. Sketch like that, but obviously in my case what I’m doing doesn’t really work anyway. And they were like, ‘try this,’ and that didn’t work. I now kind of just do a mixture of the two, sometimes I’ll be really quick and rough and I’ll do really big long straight lines. I get a nice block shape, but when I come down to detail things I do a lot of tiny little sketches.

Speaker 1: Alright, so you have two different modes of sketching depending on...

S2: They done work, even when I use them together they don’t produce good work. I don’t know why. I feel it’s, I just struggle to, I can visualise it in my head. I visualise exactly, I can walk through it in my head, so if it’s a staircase covered in like a hexagonal polyglass pattern, I can walk through it, I can imagine the light coming through it, can’t draw it. It just doesn’t come out, I’ll end up with some terribly wonky steps and a horribly shaped hexagon that doesn’t even resemble a hexagon more of a rhombus.

Speaker 1: So the fact you can see it in your mind very clearly which in itself is quite a gift. Because a lot of people can’t do that, and as you say you can kind of walk around and see and it’s all there clearly. Do you think it is a question of giving yourself the time to keep going back to that image in your mind? Just keep persevering and you get to a point where, actually it’s starting to look not exactly like in my head, but it’s starting to look like something that makes sense. Do you think it’s a question of perseverance and giving yourself time?
S2: For me, definitely, but what happens to me is I’m dyslexic as well and I have quite bad attention problems, just terrible. If I get frustrated by something that’s it, I won’t do it for months. That’s what happens with these projects.

Speaker 1: And that you feel that impedes you being able to persevere?

S2: Yeah, I can’t persevere at all. I have absolutely no patience for that. The only thing I have patience with is models. I used to do airfix models, I can do them fine, but I get frustrated with it, I put them down and I come back and I do it fine. I can’t do it with this, I’ve tried it.

Speaker 1: So here with your design work, we’re talking about sketches, but if you’ve got white card models and things. Do you produce sketch model and things like that to help you? Is that a way that you find...

S2: Really occasionally, I’ll do a sketch model if I’m really trying to work out something that’s incredibly complex I can do a sketch model, but nine times out of ten I just go straight for the finished product.

Speaker 1: Right

S2: And it usually works out alright.

Speaker 1: And that’s based on what you’ve got in your head?

S2: Pretty much.

Speaker 1: So you can visualise that, and then.

S2: I’d turn it into a model and not sketch it.

Speaker 1: If you had a model, if you kind of put together some sort of sketch model and then looked at the sketch and drew from the sketch model.

S2: It’s probably a good idea.

Speaker 1: Have you ever tried that?

S2: I actually have tried that, I think I might have tried that in the past with like because we had to find a door in town, take a picture of a door, bring the picture back, scale it up, then work off the sizes, the dimensions of the door and do like a one-to-one scale picture of the door but it had to be in very good detail. Mine was alright, I focused more on the actual building of it than I did on what it looks like, which is what usually happens anyway. I focused more on structure that what it looks like and it turned out alright. It went pretty well actually, because I didn’t do any sketch models at all, and I just made it and it turned out alright.
Speaker 1: So when you were making it, what information were you referring to, obviously you’ve seen the door. Were you kind of referring what you got in your head or did you have like a survey or photograph.

S2: We had this big glossy print because we got them all printed off by Dan downstairs, really nice glossy prints, and so I was looking at that and just building it, I was just making it into, I don’t know, I don’t know what my process was of doing it.

Speaker 1: But you did any kind of sketching or drawing or working out on it?

S2: Not really, most of it I just found was that, because I did a lot of wood working in lower school and things like that. So I made this out of balsa wood. Because I’m really familiar with the material, because obviously the airfix models and I make motor boats and things out of balsawood, so I’m quite familiar with how it works and it’s tolerances, and I know quite well if you put two of them together and sand and PVA and put them in a curve they’ll take that curve up and this door happens to have a curve on top of it. So I was like, ‘I’ve don’t this before,’ it’s just a replication process. And it was alright. It took a long time to get it into the shape I wanted.

Speaker 1: But was that shape the shape that you wanted to achieve from the door? And you were happy with that and you were working in 3D?

S2: My 3D stuff comes out a lot better than my sketches do. If I try to sketch something, it will be wonky and out of perspective and I’ll be trying to put glass effect on it and stuff like that and it just wouldn’t look right. And I think it’s, I have difficulty, difficult depth problems in an image. You know you see some images and they’re very, you can see where they’ve done lighter lines here and deeper lines to justify depth...

Speaker 1: A real sense of distance within the image.

S2: And what I tend to do is I just sketch and sketch and sketch and sketch and the lines get thicker and thicker and thicker until it’s all one thickness. And the only thing I can do to try and show depth is to heavily shade one area, to show that this is a line, that’s kind of the shadow gives it more depth. But it just turns into one massive dark image.

Speaker 1: So it’s keeping that sense of the three dimensions on a page.

S2: Exactly that, I don’t know, sketching’s never really been my thing. I’ve known people quite a long time who can just be like, ‘that’s what I’m doing,’ sketch it out properly on a piece of paper. Well they can do a Van Gogh on a piece of paper but I can’t do that.

Speaker 1: But give you balsawood and the card and the glue you could creative something.

S2: Relatively alright, it depends on how much time I’ve got.
Speaker 1: Of course.

S2: That door took me like twelve hours, sort of thing, because I left it to the last minute. I think sketching is one of those things that you can teach yourself to do but it’s predominately natural. It’s predominately, you have it, but you develop these skills at a young age. Because a lot of people I know who’ve done fine art things like that, and who’ve done fine art they used to enter competitions for drawing when they were about four or five and they could draw a really amazing lion in the landscape when they were like six. And it was really good and then now they’re doing bespoke art and things like this and it’s incredible to see that from a very young age they’ve picked it up so early and now they’re just carrying on. So you keep getting better and better each time. So what they made when they were six is now incredible because they’re twenty-one. And I think I must have missed that boat for the whole drawing process. Because I remember drawing when I was younger but it never being as good as anyone else’s and that frustrated me so I never did it. I never wanted to draw because why would I? Why would I try and draw when she’s already drawn a lion and a landscape. Well it’s something like that she has drawn the titanic half sunk - I can’t draw that. I can draw a square so it just frustrates you so you never pursue it further.

Speaker 1: Do you think it’s in your head and you could get it out through 3D means and model making means. Do you think it could be, because I know dyslexia varies hugely from people to people, it’s not a consistent thing, it’s very personal. Do you think is an aspect of the dyslexia you have which makes it hard for you to get that out?

S2: Quite possibly, I mean when I had my dyslexia reviewed, I was on diagnosed with it a year ago. Because no one at my school had picked up on it, my school was very difficult because of my attention problems and I use to cause a lot of trouble in classes and things. Arguments with the teachers, whatever, and she said my working memory is absolutely terrible. So I struggled to put short term into long term and that was comes out a lot in my words. So I’ll be thinking it’s really, it would just drop of and disappear.

Speaker 1: And that is related to the dyslexia?

S2: As a working memory, because she tried to explain to me I’ve got my chronological memory and my working memory and the two of them are like two drunk old ladies in a pub. And she said one of them had buggered off. Just putting it as brash as can be, one of them has gone and she also said to me, although my working memory is bad my overall intelligence is okay, so I’ve got a medium band intelligence, I don’t know how to describe it. But she says the working memory holds it back because the working memory doesn’t want to work. But the intelligence is, and another thing she said about it is I’m more of an, I can really heavily notice shapes. She had the shape test with me, it’s another test, break down shapes and things and she said you’re incredibly good at shapes.

Speaker 1: In terms of perceiving them?
S2: 3D shapes out of loads and loads of little bits, and she was like, ‘I couldn’t even do that,’ and I was like, ‘what do you mean, it’s just putting five bits together to make a square.’ You know you see a square on a 3D light sort of one point is pointing toward you in a perpendicular sort of thing. It was one of them but I had to make out of loads of little rhombuses. The one that really threw me, there was one with like, two points at either end and one of them was a very big shape that was more predominant than the other ones, very small little things and that one really threw me because obviously I put the big one in first and then the little ones but it didn’t really work. I tried the little ones in first and then the big ones...

Speaker 1: So you’re ability to perceive and understand shapes and what you see in front of you and to see up here that’s not the issue at all is it? You have a very good sense of that.

S2: I think it’s the whole

Speaker 1: It’s turning it into the motor functions to get it out as it is here. It’s almost like, that’s the bit where the struggle happens.

S2: I feel very disconnected

Speaker 1: Okay thank you for telling me about that. Yeah, that again was helpful actually because I kind of learn that things around this and stuff that you can have.

END
Interview with S3

S3: Before I came here I did business studies, not in University but at college because obviously the education system is different in Denmark so college is more like business-based, it's a lot about like, innovation, marketing, business really and I kind of really like the innovation side of things, and I always have an interest for architectural interior design. And when I went to architecture just to see how it was I didn't really like it, I thought it was kind of too, I don't know I just didn't really like it, I thought it was too kind of like that's the feeling I got at time it was too kind of like personal and not really like a sharing thing, and I wanted some things to do with people as well as architecture, so I chose interior design and then I came here and been here for the past two years now.

Interviewer: You are enjoying it?

S3: Yes, I love it I've developed quite a lot of interest within interior design, and even like last year we went on a trip to New York, no not New York to Kentucky in America. And we got introduced to like, urban planning and stuff I thought that was quite interesting as well. Yes, I really like the aspect of you know like people, designing for other people and how the space is actually going to use, and even now like in my major design project.

Interviewer: So it's kind of user focused rather than creating something and getting people to then use it.

S3: Exactly yes.

Interviewer: Whereabouts did you go to school, can I just ask that because that kind of put things into perspective as to my first question is, if it's possible just to explain your relationship with sketching, that sounds a bit deep and meaningful doesn't it. And sketching and drawing throughout your life I'm just thinking going to school your youngest memories of doing things like sketching and drawing and painting, how did you feel about doing things like that?

S3: One of the things I always love like painting just like doing crafts at home in general, whether that was like picking up a pencil, or it was like even, just I don't know, knitting or something. I always loved to use my hands I can't sit still in that sense, and then it stopped for a while when I got into studies and stuff like that so I didn't really have any relationship with sketching before I came here as a profession or like as a means of kind of communication.

Interviewer: Did you do any drawing at school, did you do any kind of art classes at school?
S3: Nothing, I wanted to do design that was the module I picked at that time but it wasn't picked up so what I got from them was just information, and that's what kind of drew me further into interior design and kind of root as well. But I didn't study it, I didn't learn it, I didn't do anything so even, it might sound kind of dumb but even when I came here people would say, “oh, there's a difference between HB pencils and B pencils,” for me it was just, “I know there was a difference just not that much.”

Interviewer: But you haven’t actually used it to kind of get the understanding - that is interesting. Can you describe any significant happenings, my questions are a little bit long but they kind of get there, describe any significance happenings that have encouraged you or discouraged you from sketching and drawing, you were saying that when you were at school you didn't do art, is it because you didn't have the classes when you were at school?

S3: Yes, I mean we a lot of probably like 10 modules, there wasn't really time for, you know, trying to figure out other things outside of school at that time other than like sporting and other activities, so painting and drawing wasn't really…

Interviewer: And what sort of age are you talking about here?

S3: This is like 16, 17, 18.

Interviewer: Did you do anything like when you were sort of at primary school age, sort of like like 5 until 10?

S3: Yes we did drawing but it wasn't to the point where it was serious, it was more like just something that I did for fun, scribbling things down, or like tracing after things I used to love that as well so, yes that is the only thing.

Interviewer: Was there anything encouraged or discouraged you?

S3: Something that encourage me was obviously that it was a tool that I had to learn or like use and I saw that if I use it and when I used it, it kind of have a positive effect in a way. And what discouraged me is probably comments, or like, “I don't understand this or can you explain it,” kind of maybe a bit of myself saying to myself, “I don't know how to draw,” It's not even from other people, it's kind of from my own doing in a way.

Interviewer: Okay and what kind of other people were making these comments to you, where they’re coming from?

S3: It wasn't maybe comments, it was just like you know grades and stuff like that, it's not directly towards drawing which is like I kind of put it in that context even though it wasn't that context, and then I took it as, “I don't know how to draw.” And I still do in a
way, like sometimes so that's what probably what discouraged me, like I am scared of drawing and getting a bad outcome.

**Interviewer:** Really interesting, okay, so imagine you are in the studio now and you have been giving a brief for your course, what process do you go through to generate your design ideas, how do you go about doing that?

**S3:** I probably do sketch but it is mostly from myself, it's just things that I know and I use a lot like words, so even if I scribble something down I always comment on just to say, “this is what it is this is how it looks like,” this is how it is in my imagination but it doesn't actually look like the way that I want it 100% because once I visualize it it's completely different but that's the way I had it in my head. But if I see it I can see it, that's why I use it just to kind of like to keep the idea and remember it for myself other than communicating.

**Interviewer:** Right so what's on the page is not exactly 100% what you are going to use it's just a way of you getting your idea down to then think about if you need to come back to it, it's like a recall thing. Okay, so once you've got something on paper how do you then carry on to get to a finished design?

**S3:** I do a lot of research. I like research, getting inspiration from different things, and I draw weird connections so if I see a type of paper that’s framed in a certain way, my idea of things, kind of connected to something different and then people say, “where did you get to that point?” I'm just like, “I got it from this thing,” and people can contradict but in my brain it makes sense.

**Interviewer:** At what point in your design do you kind of go on to a computer to start doing that bit?

**S3:** I like to always have the frame of things so obviously it it's interior design the building I like to have that sorted as soon as possible to I know before I have to think and not overthink things and then almost make the design building. So quite earlier on I go on to the computer to sort everything out, you know onto CAD, I love CAD, but yes, once I have like a firm idea of almost how I'm going to do things I jump on CAD.

**Interviewer:** It is very interesting to know how you get to use processes. Okay, what method do you prefer to generate your design ideas, we're talking about sketching and we're talking about CAD and all the different processes you can use to kind of like build your ideas to get to something. What are your sort of preferred, what do you enjoy the most?

**S3:** Again it will probably go back to the research, collecting like images and then kind of getting what I like in these images so it's just like made these weird connections
again and then do my own thing. And then a bit of sketching, which is not nice
sketching it, might be just like a box, and then just some comments on how that box is,
but it's never neat sketches, never unless I'm asked to do it, I don't do it.

**Interviewer:** This is good this is really helping me, okay so, which do you prefer, do
you have you have a preference if somebody said okay you got to choose one method or
another which would you go for or would you prefer to use a combination?

**S3:** I probably prefer to use a combination but then again the neat thing is on CAD that's
my preferred likes sketching for me, it's just kind of like one, two, three, it's just a
starting point and then I move on it's just to get ideas down on paper I just I have it so I
don't have to think about it or like I can develop it then further in that sense.

**Interviewer:** How do you record your ideas and thinking during the design
development process?

**S3:** Writing.

**Interviewer:** Yes, you like writing, some people work just visually.

**S3:** I describe like the atmosphere the materials, the things that, like the idea the
concept, how things of connect further than doing like a nice sketch I don't no. Even just
on my notes in my phone I have like a long list of, “incorporate dog shelters,” or
something, and then I like describe it, square, round, I don't know, something like that.

**Interviewer:** Do you prefer reading to images do you find that you read more a lot of
designs student don't really like reading they don't want to read anything?

**S3:** It’s a mixture of both, I like looking at an image but then getting the information
and then reading.

**Interviewer:** So you are quite happy to read and absorb the information because a lot of
people don't, they just look at an image and skate over it.

**S3:** I like to know the meaning behind an image if that makes sense.

**Interviewer:** Okay, you are back in the studio, just imagine you’ve got a brief, how do
you feel if someone said they want you to produce sketch concepts for the end of the
day, how you feel immediately if somebody says that, what does that kind of conjured
up in you?

**S3:** The first thing is, “oh God I have to sketch neatly,” that's the first thing.

**Interviewer:** Why do you feel you need to sketch neatly?
S3: So people can see what it is, you think it's fear but it's not fear like I am not scared of putting things down on paper it's not that, it's more that when I have to show it to people I'd like them to see what it is, or give the idea justice and I don't feel like my sketches do that sometimes. So it might be the fear of that rather than the fear of sketchings does that make any sense.

**Interviewer:** Okay it's fear of somebody, is it a fear of judgement?

S3: Yess probably that.

**Interviewer:** Yes someone else judging what you have done and being misunderstood or be like you're misrepresenting yourself.

S3: But I think if I have to, you know I will sit in the studio and get a brief. I just sketch it done put it on paper do the rest that I can't and then present my ideas and then use my words as much as possible to present it. And that is kind of like me working around the issue and usually that works for me, and then I come out and people are like, “yes, why not,” so it was good.

**Interviewer:** Kind of covered this a little bit already but if you could kind of elaborate on it that would be great, how you feel when showing sketch ideas in a group situation?

S3: Depends on the group I mean if it is just friends or like even just co-workers or someone doing that kind of development process, I don't mind I just do sketches because I know at that point I can use my words to explain it a further. And I haven't seen or experienced any trouble with that in it, like issues like people usually say, “that's fine I get it,” or they would kind of like sketch on top of my sketch and I don't mind that it's just about getting the idea on the table.

**Interviewer:** Is this with people who are kind of design-minded? People who get it?

S3: But once it's people who don't, that's when maybe I'd just struggle a little bit more, when I'm just, “oh, I've really tried,” I try hard to do it, and then sometimes you’re successful other times it's not successful obviously that feels kind of, “damn it,” kind of thing.

**Interviewer:** How do you use sketches in your tutorials?

S3: I don't really use it in tutorials, other than again it's showing what I have in my head and then I don't mind. I don't mind if it is my sketch and it's rough and it's weird, because again I have my words. I think when I don't get the opportunity to explain things that's when I'm just like, “oh God.”
**Interviewer:** So the textual spoken word part is really important to what you’re doing, I'm kind of trying to think, how you are thinking but they are the kind of starting point for the conversation that will come as a result of what somebody’s look at or seen?

**S3:** I, it is like, I have to be honest, it's not like it's completely bad, my sketching, you can see what it is, it's not like a professional one. And I think, I don’t know I've always been striving for perfection.

**Interviewer:** You are talking about professional sketches and how would you explain a professional, if somebody said well what is a professional sketch what do you mean by that?

**S3:** Like a really neat one so I can see exactly what it is, like every single detail, there's isn't like any, usually you know when you see like architectural sketches you don't really think that's neat. I like that it is kind of very conceptual, and then if you just give it to a person like it doesn't make sense but then once you kind of like explain it they're like, “oh I can see it now.” I like that, whereas the other parts, they’re like neat and everything is like shadows, fields and thickness and everything is like technical.

**Interviewer:** But what you are doing is getting up the design and what you are talking about is professional sketches that's like the hand drawn version of the CAD visual, so it is a visualisation which is a completely different process from the first stage where you are generating ideas and coming up with the solution so yes, that's interesting. Okay, in higher education while you have been at University here, tell me about how you have learned about drawing and sketching what have you been taught what have you learned?

**S3:** I mean just really the technical part of sketching because before again, I've always known how to just scribble things down to draw like a draw box. The thing I didn't know is like you have to shadow things and how the lines in front has to be darker than the lines behind and stuff like that. I was aware of it but it wasn't really like something that I noticed when I draw and stuff like that, so that sort of things we got taught in the beginning. And the majority of first year that's what a lot of what happened, you know you kind of learn how to draw a box, how to draw a cylinder how to do different things, two-point perspective one-point perspective and so on, so that's how I kind of took the knowledge and then combined it with my own and just did my own take on it.

**Interviewer:** I am just wondering if you have any kind of tuition or teaching, you were talking about the scribbly stuff that you just do without thinking. Have you had any kind of any kind of teaching or learning around that process for get the technical drawing the draftsmanship?

**S3:** Not really, it's been like, “go out and draw this building.”
**Interviewer:** So you are told to do it and then you do it your way by sketching, or there is the way that you are actually structurally taught, they teach you in class and that is how to set up your two-point perspective set up your sight line, okay that is interesting. How has the teaching of drawing or what you've learned about drawing in higher education at the University here helped you, or not, in your ability to generate design ideas, has it helped you?

**S3:** Not really, the only way it has helped me it is on marking, because you know when you get taught something you know how they mark it and what they mark it on, so you make sure that these drawings meet those requirements, that's the only reason, and that's the only thing I've learned really. And this is the way that I generally see your education, usually something you get taught you have to meet the requirement and you get graded on it, rather than something, just do whatever you want and then we will grade it on your thought process and how you wanted to do it, that's not to say I haven't learned anything, does that make sense? Always be like when you get told always just scribble things down like, if you having ideas put them down, yes that's separate, that's separate in way but when it came to actually judging the drawing I haven't really taught like how to do things.

**Interviewer:** Okay so having a kind of structured introduction about sketching and what it does and how it works hasn't happen, it's just one of those things that organically as assumed it kind of organically comes out, okay that's interesting, you probably have some thoughts about this, are there any ways of being taught drawing and sketching other than what you have already experienced, that you think would of be of benefit?

**S3:** Yes probably, kind of allowing my style to be embraced in a way and somebody not telling me, but teaching me how to embrace that, and that's not through, “this line has to be thicker than that one,” it's almost analysing the way that I think and the way draw because that is what ultimately helped me like figure out to sketch properly it's just kind of like analysing the way that I think and the way that I like to sketch, and then take that into consideration saying, “maybe you should do this or maybe you should explore this style or do this,” instead of forcing me to use media that I don't feel comfortable with like, using watercolour, “no I don't really like using watercolour,” so yes in the sense that would be better.

**Interviewer:** So I, just to kind of reiterate what I am getting, to go with what you are producing and almost sit down with you as an individual, not as a big group, but individuals ,someone too kind of critique what you have done and suggest ways of developing it?

**S3:** Almost like seeing a potential, because obviously I'm 30 and I've seen it you know with my course mates we’d sketch in different ways and my style is kind of significant, my friend’s style is significant and each person, kind of have their significant styles, and the way that we got taught like generic, fits some people but some
people didn't benefit from it because that wasn't the way that they wanted to do it. So I think it's more about teaching, you know, “you can use markers, this is how you use it, you can use watercolour, this is how you use it,” but don't force anyone to use it, just allow which media is best for each person

**Interviewer:** Right rather than this prescriptive, which is important when you are doing drafting and kind of technical visualisation, but at the early stages if you are not feeling confident, am I thinking you wanting to feel more confident in what you are doing and make it a bigger part of you do?

**S3:** I mean it goes back to like teaching from the beginning, if somebody told you, “oh this is nice,” you kind of get the confidence to keep going, whereas if you don't get that you don't really develop. And that's in a way like what is my personal opinion, needs to be done in a way, kind of like somebody to push you and say this is how you should do it don't do this in that way because it is not going to get you anywhere, and I kind of feel realising people's potential by kind of telling them, “I don't care about your potential, you have go this route.”

**Interviewer:** Yes, interesting, very different ways of doing things, okay, that's the end of my specific questions, there are some things I want to know but I don't quite know to ask them. How do you feel when you know what kind of feedback do you get, you presented your project and you've got your sketchbook you've got your development work your models and your CAD drawings and everything, so you've got a whole lot on display there - how much attention do your tutors or people during tutorials give to your sketch design process, is that seen as being really important?

**S3:** The development is quite important and that's been seen like really important, and that’s when it gets like scribbly but then it comes to marking and that's completely different than the process, so in tutorials and so on you've had, the, “oh that's good nice process nice concept nice development,” and even if it's just like a round circle has like an arrow that points to like another circle, that's still development but then when it comes to marking it's not seeing like that it's just like a quick scribble and it's not really like with using all of those techniques of dark and light, and two point and so on. I understand the importance of two point perspective because obviously that helps you with in seeing what it is, but it's just some things are not as important as others sometimes it is just okay to just have like flat image and you can see what it is, sometimes I feel like that is fine, I need to spend a 100 years on this thing if you can see what it is and I am developing it anyways, and when it comes to visualising in it's going to look way better.

**Interviewer:** Visualising on a computer?

**S3:** Right yes.
Interviewer: And what sort of feedback do you get from your tutors specifically about your sketching or your development ideas?

S3: It's more like, “you need to develop a graphic style, you need to improve your drafting skills this takes several years of practice,” that sort of things and it doesn't help me it just put me down in a way.

Interviewer: That must be frustrating?

S3: It's frustrating because you try, you try your best, and then it doesn't really happen and nobody is really there to tell you okay this is exactly how you have to develop it, if somebody who doesn't know about drawing doesn't know how to develop it, well I don't know anyways.

Interviewer: Okay, thank you very much, jotting some extra notes down here about things that you've said that I wasn't expecting, which was really good. Thank you so much right I'm going to turn off this now.

End
Interview with S4

Interviewer: Okay we are recording, I am going to ask you to talk about to begin with your childhood it sounds a bit weird a bit strange but I am going to ask you about whether you did think like sketching and drawing as a child and what your memories of that are, tell me about that kind of thing what you can remember from way back?

S4: Some of my earliest memories are actually from just drawing and stuff I used to get a lot of big art kit presents and I would open them up on Christmas, and then my mom she would always sit down and do her stuff and it would keep me quiet and it kept me busy for hours, so I think the quieter I was then the better behaved I was. So I think maybe I enjoyed it as well but my parents also don’t think nothing of it so I was still encouraging to do it but I did always enjoy it but I was never forced into it.

Interviewer: And is your mom an artist does she do things like that?

S4: I think nobody in my family is artistic, my aunt used to draw when she was probably around my age now but say when she had kids herself she stopped so she has the talent for it I think but she never pursued it so nobody really is in my family.

Interviewer: Some of your earliest memories are you sketching drawing, okay and what kind of material do you use?

S4: I use paint a lot I remember getting a huge big kit that had tons of oil pastels and tons of crayons in it I honestly [unclear 1:51] I think mainly paint when I was little I think.

Interviewer: Okay and when you started school I mean like primary school first when you first start school I'm thinking all the way through your schooling really, are there things that happened where you were encourage or discourage what was it like at school doing that kind of thing did it change?

S4: I think because I enjoyed it I always do it but I remember when I was in year 2 we had this big project and my teacher was like okay this is like a drawing thing and everybody kind of looked at me and one or two other people like oh we want those in our group. So I think because I did it a lot I was recognized for it I guess and then I was almost chosen to do that project, it's difficult to explain it was like a big display.

Interviewer: Did you always feel encouraged throughout your schooling?

S4: Yes.

Interviewer: And were there ever situation at school where you yourself perhaps we're criticize or you know when you are doing art projects at school and teachers will kind of compared did anything like that happened where you felt you were being favourite or disfavoured, was there anything like that which you felt kind of pricked you or affected you in any way?

S4: A mix of both I think I had two Primary School the first the first Primary School I live in Macclesfield thinking back they didn't encourage me as much but then I went
to Kingsmead primary which is I've never seen a school like it it's really bizarre it's almost like a Hippie school it's a bit bizarre but you can do what you like almost and I moved there when I was about 10 or 11 and at that point I think I was definitely encourage, there was less criticism definitely it was more like this is great keep doing what you are doing I am more encouraged to do it. And there was a lot more like out of school activities that you would be encouraged to join continuously as well so it wouldn't always stop in school it would always carry on after but definitely more that school then the other one.

**Interviewer:** More encouragement because of the nature of the school. And when you move on to things like Secondary School GCSE's A levels what was the like?

**S4:** It got a lot harder because I to think about why I was doing it and did I enjoy it enough to carry on especially at A level, because it got a lot more intense the coursework’s [unclear 4:50] it's like I was painting for the sake of it's like you know what you're doing with it. But yes I guess because I have been doing it for so long I definitely did a lot better in that I feel because I enjoyed it more, so I was always okay at maths and science and everything but I know art and sketching that would always be my go-to thing and I would always put more not more effort in but I would always spend more time if.

**Interviewer:** And did you find the process of doing GCSE in a level where there is an exam and assessment involved. Did you find the more difficult in terms of what was expected of you or the criticism you receive or feedback you got during the process?

**S4:** I find that really, really helpful, I think that I am a person that can't do exams and coursework help me massively doesn't matter what criticism I got I would power through it and I do it and I would always take stuff and chin, because I think especially with the way that everything is subjective one person could really love your work but the next person could absolutely hate it so it's good sometimes to hear both sides, especially in college because I have that criticism doesn't bother me anymore.

**Interviewer:** It's almost understanding a tutor or a teacher criticism can be subjective and often is and accepting it at a particular level but kind of rising above that, so you felt you were able to take on board the criticism that you never took it as any kind of form of discouragement?

**S4:** No definitely not but I think if they said something that I really disagree with I would sometimes ignore them and be like no I am doing what want.

**Interviewer:** Okay now sketching where you are at the moment doing your degree course, how do you feel about sketching and the kind of thing you do on your course is sketching important to you in your course. And how does the course you are on which is interior design how does that relate is sketching is it encourage is it vital is it optional?

**S4:** Encouraged but they always say that when you are in an industry and you are trying to get say you present your idea your concept to the person that's potentially buying it and they don't like one part and they will be like this look good and like that's it and you would expected almost instantly pick up a pen or pencil sketch out without it and
visually show them so they can see and you would have to do that really rapidly really fast. But at the same time one of my lecture Alex he always says don't worry too much about it, it can be a bit rubbish but for somebody that isn't a visual person at all to see even something that's relatively distant and I'm like oh my God how are you doing that kind of thing.

**Interviewer:** Yes, you don't have to be able to sketch to a really high standard to get your ideas across to make that communication with someone, and if you think about it most people can't draw and would never dare draw so the fact that you are sitting there doing that in front of them for them that's a massive thing so yes I totally get that. So it is encouraging it's a kind of vital part of the course but there are different attitudes to it within the tutors on your course?

**S4:** Yes, I think drawing the concepts design stage when we are coming up with our big picture almost then it's not as important you can just do a few scribbles you can get almost like note you're just getting your thoughts down, doesn't have make sense to everybody else but it makes sense to you. And then lectures use that to see that as development of how your thinking changed almost but then towards the end it doesn't become as important because of card software and stuff and you can visualize stuff in a completely different way you don't have to sketch.

**Interviewer:** Okay this is a strange one when you are being ask within your course produce sketches initially how do you feel, it's a very strange question so bear with me. Okay you've got a brief you've been ask to sketch how do you feel about at that moment?

**S4:** It kind of feels overwhelming a bit, but it depends what it is if it is just saying okay draw this then is like your kind of freeze for a bit and you're like oh what do I do what if it's a bit rubbish what if I do it wrong the first time you just kind go with it I guess. I think once I'm going I feel a lot more comfortable but it's starting point that make you a bit like ah.

**Interviewer:** And that sort of feeling within you how would you describe that strange question I know?

**S4:** It's almost uncomfortable which is a bit bizarre to actually thinking about it because like I've said it's probably those compatible things that I can do but if some put you on the spot almost it does make you bit uncomfortable.

**Interviewer:** And what it is that's making you feel uncomfortable can your kind of dissect that in your head?

**S4:** Either not getting my point across and making myself look a bit stupid, or someone is expecting me that I can do it but it turns out it wasn't what they expected they expected some kind of masterpiece, and I am just like I said getting my thoughts down on paper and showing them but then it is not their highest standard they thought it might be if that makes sense.
Interviewer: Yes, that does make sense, so you don't consider yourself sketch inhibited you are someone who is not sketch inhibited you feel fluent and you are quite happy to do the that.

S4: Yes.

Interviewer: Okay when you are sketching how do you feel about making sketches perfect what is your attitude towards things like that, I mean I can kind of guess from what you are telling me already?

S4: If it was just like for my own benefits it wouldn't have to be perfect it would be something I would look back to later and maybe improve later date, but if it's for somebody else even if you say can you draw this right now I would get that uncomfortable feeling and I would think for a second how to make it perfect. But if I am just at home in my room sorting stuff out [unclear 11:17] the next day it just happens.

Interviewer: Okay so this need for perfectionism or need to make things as you feel other people want them to be, that happens when you are producing sketches for other people but when you are producing sketches in your own room and you are going through ideas you don't care.

S4: I don't care as much but if it is stuff that to get handed in if it was going in my Sketchbook I would want it to be perfect, my Sketchbook isn't like scrap book, it is very organized it's very neat, so if it is being put in that then I think I would go over it I would go back to almost.

Interviewer: So when you put sketch into your presentation that is going to be assessed why do you feel the need to do that what is it you are trying to convey to your assessor. Why does it suddenly become important to perfect?

S4: I think proving myself is perhaps the wrong phrase but there's a reason I'm on this course there's a reason I want to go into the interior industry and again I guess it is quite competitive, and I've had that thought in my head for quite a few years now like it has to be distant to get what I want out of it so somehow if it's in my if I do this now it just become a thing I have to be right I don't know oh my goodness I never thought of that before.

Interviewer: Do you think it's because you feel you need to sell your abilities to people?

S4: Yes, I think partly sell partly proving maybe even to myself that I can do it.

Interviewer: Okay when you are sketching do you ever feel that you are being judged I mean obviously when you are being assess people are judging your work when you are in an environment without the students you can't but look and make judgments about other people's work, do you feel about that sometimes.

S4: I tended not to be do you mean like if somebody save my Sketchbook was out now and you're looking through it would I get anxious.
**Interviewer:** Yes, if I had a load of student coming to sit down and everyone was doing a bit of sketching and we are all looking at each other how would you feel.

**S4:** If it is one person I wouldn't mind if it is a group of people I think I would I guess it would be judgment there the more judgment [unclear 14:08] I would go with yes it would make me a bit like what they are thinking because I do kind of wonder what people think about a lot; I know if they like it [unclear 14:18] the effort that I've put in because it been worth it I guess. But if it was just one person looking through it and talking I wouldn't mind as much I think it's when that [unclear 14:30] flicking through.

**Interviewer:** Yes, when you can quit gauge what's going on and what they are making of you. Okay this fear of judgment I am just going to talk about actual judgement do you ever get that, do you ever get people making a remark about your work.

**S4:** What kind of remark what do you mean.

**Interviewer:** Any remarks at all, you know that's fantastic or that's rubbish or mine is better than yours oh you are really good at drawing I mean what kind of judgment do you get from people or does it not actually happen very often?

**S4:** It's funny you should say that it's different because I know in our studio we are quite a small year group that should be around 40 of us but a lot of people have dropped out and there is only 20 so we've become really close knitted, and a lot of us will flick through each other work because we run into each other all the time. But because we are coming on the weekends and we spend a lot of time [unclear 15:26] when the lectures and tutors aren't here we kind of got the hobbit of criticizing each other work and judging it ourselves. Even this morning I was looking through friend’s demo's work and I am I like how you've done that have you thought about doing this, maybe not do it this way because she was going to put a model straight into card but she's already done half the sketches and I'm like just continue doing it it's fine as it is don't worry. But it's funny thinking about that because it I can see what you about now about people getting anxious.

**Interviewer:** Do you feel the fear of judgment is a bigger problem in people's heads then the actual judgment that you are talking about when you are in your studio and you are looking at each other work and discussing.

**S4:** I think so yes I mean it's coming to my head now it's a degree showing a couple of weeks we are going to have our biggest project we've ever done that we've worked on pretty much all year displayed in front of everybody, and then the best ones go to a free range and then potentially employee is going to look at them and then oh my gosh that makes me a bit nervous I guess.

**Interviewer:** Right how are you thought sketching on your course I talking about when you first have a brief when you've got ideas and you got to get them down and you've got to turn them into something that kind of ideation type sketching how were you taught that are you taught it?

**S4:** No we are told to get our ideas down however we can in a note form in a sketch form you can do it anyway you like but a woman she's Sophie too actually she comes in
and she helps you visualize it and tells you a better way to do it almost if you need to help. So she come in a couple weeks ago I basically have this lighting effect I need to sketch it but I can't it she helps me visualize it and she teaches me how to do it using a computer, or by hand if she can but she is a very, very drawer she can look at something for a second and she do it almost like almost like photographic she will just sort it out.

**Interviewer:** So that's looking at something and then putting it down on paper.

**S4:** Yes.

**Interviewer:** Okay but you are a designer that's different you have things in your head with you then developed using sketching. Okay so with what you taught in terms of how to get your idea developed using this sketching media do you feeling that there are any kind of issue or shortfalls over what you've experienced at all.

**S4:** What do you mean.

**Interviewer:** Are there things if you were sort of giving feedback really to your course to tutors your course leaders or future student what would you say to them about this is what I've experience and actually it could be done differently or better?

**S4:** In first year we were kind of very, very almost like crash course of sketching like how to get a perspective view done quickly it would be good to go over that I guess because in first year I don't think it was taken as seriously, but the more important I think it became the more we were told you are going to be expected to do this you are going to have to do it more and more and then even now I am doing it a lot I wish I did have more of that in first year I guess just like a recap.

**Interviewer:** So when you say a crash course how long was that what sort of structure did that take?

**S4:** It was 3 hours or if I can remember right every Monday for a month so in like rocks. But it would have been good maybe to have 1 hour twice a week or just slightly spread out but it was difficult like Monday to Monday it's difficult to remember.

**Interviewer:** That's interesting you are a millennial apparently do you have learning preference that aren't kind of reflected in the way you are being taught, are there ways you like to do things which aren't being done I mean obviously we have technology and things I am thinking about sketching I am not trying to give you an answer here, but you know some people use digital sketching tools they don't use paper everything is paperless. Is that something would be of benefit or would you still prefer to continue the way you do things is that an important thing for you?

**Interviewer:** I think the important things is choice because we can choose to do everything manually or digitally and it would almost depend on what I was feeling that day like if I sit in front of a computer all day I think I've got to get this done quickly I'll get it up digital on one of the big [unclear 20:30] screen and I will draw it and save it. But if I am at home or in the studio room like then I would tend to use paper. I think we
are given everything we need almost we are not told what to do they just kind pass the tools go do it and you can pick what you need.

**Interviewer:** And you are quite happy to pick from what you offered?

**S4:** Yes.

**Interviewer:** Alright when you are working when you are scribbling, how much of what is in your head goes down on paper this is a really strange question I am talking about working memory. When you are drawing and sketching your short-term memory can only hold certain amount of information do you use sketching as a means to get stuff done before you forget it.

**S4:** Yes all the time.

**Interviewer:** And you are aware of that happening, if I don't get it done now it's going to be gone forever?

**S4:** Yes.

**Interviewer:** And when you look at your sketches do you ever see other things in them like hadn't anticipated it's call reinterpretation but I am wondering whether your kind of sketch things out go back to them and sort of think there is something there I hadn't realized.

**S4:** I think this actually happen last week I have just a Sketchbook in my top draw at home that if I need to write something down I will scribble it, and I will come back to it when I have time but I was looking through it and I knew this sketch was off but I was like that actually doesn't look like what I want it to look like then it looks like something else but now I kind of like that so then I redraw it with that element in and then that's the development.

**Interviewer:** And does that happen very often?

**S4:** Not too often every now and again.

**Interviewer:** Does it helps you though when that happens?

**S4:** Yes, it can do because sometimes you look at a drawing and you'll be like something is missing but if by accident you've put the missing thing in anyway. But I don't know if I wrote it down there's no chance of that would have happen so I was drawing like a waterfall and I just draw that down but if I just put waterfall light feather that's what it would be in my head because I drew it I accidentally drew the other thing and then I could sit.

**Interviewer:** Okay so it offered you more opportunities for turning it into something, okay and when you are working you have ideas in your head picture in things in your head as most designers do. Do you do sketching as a means kind of put down and then extend what's in your head and then you take it back into your head and continue on so it's like almost like a discussion you are having with yourself and the paper.
S4: Yes, I do that it might not be in one whole session I say I might come back to it but that does happen that's the way I work usually.

Interviewer: I mean it is very unlikely that people put down a whole design in one go but it's sort of elements of things go down on paper you look at them work it into something a bit more elaborate. Okay so you've got this almost like a dialogue with yourself does it feel that.

S4: Yes, like I draw something down and I stretch and push back [unclear 23:49] maybe go over it with a thicker pen to say okay I'm getting rid of that part because then that part might come back but it definitely changes.

Interviewer: And you are aware of that happening?

S4: Yes.

Interviewer: Okay that's the end of my questions I'm going to switch off now.

Audio Finish
**Interview with S5**

**Interviewer:** It sounds a bit strange to start with but can you take me back to when you were as young as you can remember and talk to me about what you did with things like sketching and drawing and art painting can you remember doing things like that as a youngster?

**S5:** When I was in nursing school we had to draw and we were doing drawing and this was going to go on the logo outside of the nursery, and mine got picked because I do fingers on the people and they say that was really weird for somebody that young to draw fingers on a person, as well I just do like a circle head and like a line body but do the circle hands and fingers.

**Interviewer:** And how old were you at the time?

**S5:** About 3 of 4.

**Interviewer:** Oh that's interesting because there are certain stages of development when children draw certain things because they noticed them and that kind of demonstrates their content development.

**S5:** I've always enjoy drawing throughout school up until now.

**Interviewer:** So when you got into the mainstream of secondary schools doing things like GCSC and did you do a level art?

**S5:** I did it for 1 year and I dropped out of it because it was too much writing and I didn't enjoy it, it was really theory based and analysing paintings and I find it really boring.

**Interviewer:** Okay so when you were at school did you find there was you know the way teachers could be quite critical of students and things happen that sometimes that are said aren't kind of meant to last but they stick in your head when you're young. Did anything like that ever happened to you can you ever remember times when your work was very impressed showing off or compared and you felt really boils up from positive or very sort of negative about things that were?

**S5:** Everyone at school will be like oh you are ready for that drawing [unclear 2:09] GCSC or Art I really want to go and joined it and some people are like oh I just picked it because it's just easy. And watching people draw and I kind of understand why they can't see what I see they draw and nothing is in perspective and I don't understand how they can't see how I see it so I find that quite interesting.
**Interviewer:** So that's something you've always intuitively been able to do?

**S5:** But yes everyone always uses to say that you ready for the drawing.

**Interviewer:** And did you get sort of support and encouragement from your tutors when you were at school?

**S5:** At GCSE level yes but then afterwards no. it's less person I think starting the new 6 form.

**Interviewer:** So you moved to a 6th form college or a different Institution?

**S5:** No but obviously it's new teacher’s new environment new people but I didn't really feel comfortable. And then it was more like theory based and I find that really boring I just didn't want to write about it.

**Interviewer:** Okay so did you do a college course or a foundation course before coming to University.

**S5:** Foundation yes.

**Interviewer:** Okay and how did you find out?

**S5:** I thought it was really helpful because I develop all the skills that I saw.

**Interviewer:** Did you cover lots of different techniques and types of art 3d 2D different methods three [unclear 3:42] making sculpture lots of things. Okay right so you've had quite a positive relationship with drawing and sketching?

**S5:** I really enjoy live drawing as well we did that a lot in foundation I find that I like working out in proportion two things and try to get it right.

**Interviewer:** So it's the observation you enjoy and that's very often the bit that designers find more difficult. Okay on the course you are on the moment how do you see sketching on the course what I mean is, is it perceived as being important or is it kind of optional thing or is it discourage what kind of general atmosphere around sketching?

**S5:** They really push you to do it but for the last [unclear 4:32] I think it’s because it was drawing at my own ideas I find it quite difficult rather than I can observe something [unclear 4:39] but drawing at my own ideas I find difficult so I kind of avoided it, but the next project of my final project because I had been really motivated to do a lot of sketching loads which I don't mean before.
Interviewer: And when you say sketching loads is this a sort of developing ideas process that you are using, so is something kind of come to mind?

S5: It's could be like really basic or just something that I can go back to even if it's a box and a circle I will know what I mean.

Interviewer: It's a point of reference in your head?

S5: Yes.

Interviewer: Okay and are these kind of classes important on this course?

S5: Yes.

Interviewer: This is a strange question but bear with me, when you are being asked to sketch Rose be stands off and says alright everybody I want you to spend an hour sketching and we are going to look at your sketches. What is your instance respond?

S5: The pressure to do it well.

Interviewer: Is the pressure to do it well bigger than the pressure to do it?

S5: Yes, if I knew people were looking at it I would be like it can't be rubbish so I think yes it would make a difference.

Interviewer: Okay and how does that make you feel what was your kind of emotional response?

S5: I think it's not want to do it or try and do it and then I'm like this is all rubbish.

Interviewer: And how are you feel while this is all going through your head?

S5: Anxious I just I just a guess about the result of it.

Interviewer: So the anxiety is to do with outcome of it and what people make of that outcome?

S5: Yes.

Interviewer: It's the anxiety there when you are asked to produce something if someone isn't going to look at it, and then you are happy to do it then, do you still feel anxious?
**Interviewer:** No I feel fine doing it for me.

**Interviewer:** Okay that's interesting so you consider yourself to be not sketching habited, you are interesting because you are very much more a kind of finer observer drawer then a designer drawer?

**S5:** Yes.

**Interviewer:** That's interesting I have never come across someone like you before normally designers do like to draw I don't like to draw fine artist do tend to draw. Right so in a way there is a little bit of [unclear 7:04] within you about having to sketch for your ideas and you thought the ideation as a generation and the growth of ideas?

**S5:** Yes.

**Interviewer:** And with your sketches you are talking about being anxious about having to sketch well, do you feel that pressure is on when you having to do sketching and develop ideas to a stage where you can turn them into presentation drawings or models, do you feel that need for perfectionism?

**S5:** Yes, definitely.

**S5:** And what are you being perfect for?

**S5:** I think it's putting pressure on yourself to do it well, I want to get the best result I think I am better at just quick sketching rather than for a final presentation so I was trying to do that for my [unclear 7:51] and then it just went wrong and was getting so stressed about it I ended up crying because it wouldn't go right.

**Interviewer:** And why do you want to make it's perfect what are you making things perfect for?

**S5:** Visually if I look at something and it's wrong and I don't like it must be being visually perfect in my head.

**Interviewer:** So it's got to fulfil your aim of what it is you're trying to produce. Do other people come into the equation as well when you are handing work having things presented submissions for things.

**S5:** You are comparing yourself to what everyone else is doing so yes it is pressure.
**Interviewer:** And do you feel that you need to perform to a certain level?

**S5:** Yes.

**Interviewer:** Why is that?

**S5:** Because I want to get the best out of the course and I feel like I am capable of some things and when I can't do it annoys me because I know I can do it but it's not working out.

**Interviewer:** So you almost having a bit of a fight with yourself like punch up going on in your head that's interesting okay. So when you are producing sketches in a studio situation with your other students and things do you feel a fear of being judged by other people?

**S5:** Yes.

**Interviewer:** And how does that manifest what I am trying to say is what are you afraid of, I'm sorry these are very odd question?

**S5:** I think it's probably more comparing myself to what everyone has submit, and then I'm like I want to be as good or better.

**Interviewer:** Okay so you are comparing yourself against other people but you want to prove to yourself and do you feel that you need to prove to other people that you are good or it is just a thing that you have with you.

**S5:** No it's just myself.

**Interviewer:** Okay so when you are in the studio situation and you are showing work to each other in a group or you are kind of doing a presentation what kind of judgment do you get about your sketching from people do you get the judgment that you're concerned about getting?

**S5:** It was really critical a lot of presentation we have and I had sketches up I was really critical and everyone was telling me there were good and I was like we are looking at them they are not good they're awful but everyone is like oh no they get the point across it they are good sketches.

**Interviewer:** So [unclear 10:38] your sketches not very refine then?

**S5:** Yes, they are quite sketchy.
**Interviewer:** So in a way did you feel that the people producing them we're producing sketches it's almost like for themselves as part of their thinking process, and you were coming almost as an artist looking up from as finished piece so you were looking at them in a slightly different.

**S5:** I never thought of that before.

**Interviewer:** It's interesting for my research when you talk about sketches people think of sketches are sketches but when you break them down they are often one or two things artefacts, like you know you will see like a pencil sketch [unclear 11:18] something and it is piece of fine art, and the final thing is what you are looking at. But the sketches that designer use when they are thinking through their processes they are not artefacts they are just ways of feeding and answering the brain's processes. But we all look at things as if it's an artefact so straight to where you feel the need to sort of compare and judge and contrast and have an opinion that's interesting. On you course because you are in your 3rd year now aren't you, on course its interior design BA isn't it what kind of teaching how have you been taught to sketch within design as a tool for developing ideas recording ideas that kind of thing for your development stage.

**S5:** Encourage all types of [unclear 12:12] you can have your fine sketches book all your message sketches they are still really relevant so it includes in your work.

**Interviewer:** I am wondering how you were taught to sketch, are you taught to sketch or you [unclear 12:30] to get on with it do you have any kind of structured sort of teaching?

**S5:** In first and second year we had more teaching time it was this lady that comes in and teaches us perspective drawing and how to visual and just providing skills really, and I was encouraged to build on that and I like render and develop those.

**Interviewer:** But from the point of you designing rather than producing a visual or something to demonstrate your ideas to people who don't understand it, within your own process is it there any teaching in terms of this is how to use sketching as a thinking tool?

**S5:** No.

**Interviewer:** It assume that it's an intuitive dialogue that you have with yourself okay. Do you feel with your course there are any kind of sort fall or things which you would like to have done differently in terms of being taught or encouraged with things like sketching at this early design stage?
S5: I think because I always felt confident in doing that I don't see a problem with that. It's a natural thing that comes to me it's about my own ideas by sketching so I have never had a problem with that.

Interviewer: So everything that you have done has been almost at the right point at the right time and you have taken it on board, okay you're really millennial apparently did you know that.

S5: No.

Interviewer: It's because of your age do you have particular learning processes I mean I know people tend to use a lot of social media and things that's not my thing but people slightly younger than me are really into social media everything they do it is kind of online, I am a pen and paper person unfortunately. Are there certain ways of design and going through the process of sketching design and sketching out ideas, are there different ways that you would prefer there be? For example, things like digital sketching tools or do you prefer the manual techniques?

S5: I prefer a manual.

Interviewer: Why is that?

S5: Because I find using software quite difficult.

Interviewer: And what is it about software that you find tricky?

S5: [unclear 14:36] and then it not looking right and then I get frustrated with it.

Interviewer: Okay that's interesting when you are designing and you are scribble an ideas down do you ever find yourself in a position where you have got stuff going on in your head and work in short term memory can only hold a certain amount it can contain everything it needs to know about project at once otherwise it will be just possible. Do you find that you use sketching as a means to get ideas down so they are on a piece of paper or recorded in some way and you are aware of yourself doing that?

S5: Yes.

Interviewer: And does that happen a lot or fleetingly every now and again or is this something you do on a continual basis?

S5: I try and do that [unclear 15:35] paper I need to write a notes to remind myself to do things but yes sketching.
**Interviewer**: An idea of getting stuff out of your head and onto something to record it so you can go back to it. Okay when you are sketching I'm doing this early design development stuff do you ever find yourself in a situation where you have scribble something out and you've come back to it and you see something else in that sketch, see something that you hadn't anticipated or didn't know you would actually draw and now actually I can see something different?

S5: No I don't really go back on my work.

**Interviewer**: Okay also when you are designing do you visualize things in your mind and then put them on paper?

S5: Yes.

**Interviewer**: And all successfully is your putting on paper you're quite good at that how do you feel not in terms of how looks but whether you feel your kind of get your ideas down in the way that you are happy with?

S5: Yes.

**Interviewer**: Okay and then from that how do you take an idea forward?

S5: I keep catching it.

**Interviewer**: And what are doing with each consecutive sketch or each development?

S5: I don't really think of any idea; I just keep refining it I guess or thinking of new things.

**Interviewer**: Okay do you find it as a means of sort of testing ideas?

S5: Yes, I guess so.

**Interviewer**: I'm just interested to know how you because we will have sketched but most people don't stop to think about what they are actually doing when there's sketching so it's really nice to know whether people are aware of what they are doing or not and how far into it you go. Okay if you were to design how something important would the sketching process be being like vital to you as a designer or is it something you can pick up and put down, or is it something that you don't bother with me because you can't do, a lot of designers can work I've a fat guy who's does [unclear 17:57] he designs in head he never draws and he is amazing put it straight onto the computer I could never do that.

S5: I forgot my ideas but I draw them I need to see them on paper.
**Interviewer:** So you can think about what you are doing.

**S5:** Yes.

**Interviewer:** Okay right interesting okay those are all my questions is there anything else you want to tell me like a confession, because I kind of asked all the questions I need to ask of you.

**S5:** No.

**Interviewer:** Okay I will switch off then thank you so much.

Audio Finish
Interview with S6

Interviewer: Okay right can you go back to your childhood, but first of all can you just introduce yourself tell me who you are what course you’re on your sort of background how you got to come on the course here and your sort of education background as well just to have an idea about who you are and where you come from the bigger picture.

S6: I am originally from Thailand I move to England when I was 13 to live with my mom in Baltimore, and because I don't want to be at home so I applied quite far away from home so I show you some [unclear 00:48].

Interviewer: And you’re 3rd year into interior design?

S6: Yes.

Interviewer: So what led you to interior design?

S6: I don't really know I like the course I like what it does, at first I was going to be like interior decorating like just doing wallpaper and cushion but when it come for open day it's something more than that it's a lot more it's more interesting.

Interviewer: Okay so if you go back to your childhood can you remember when you were very young doing things like sketching drawing painting finger painting anything like that can you remember doing kind of thing as a child?

S6: Yes when I was really, really young I just get like pen and paper I just draw all the time and then from that like they even keep telling me as well when I was like younger they were like oh you like love drawing don't you, you enjoy doing that. So I don't know if it's because people tell me that, that I like to draw or I actually like to draw like you know what I mean.

Interviewer: Yes, so people might encourage you to draw so you do it or you just draw and people happen to say that you are good at drawing that's interesting. So your memories of drawing as a kid drawing and painting sketching quite positive?

S6: Yes, it's really positive.

Interviewer: And when you came for example when you come to the UK you were 13 it's obviously you come into sort of UK model of schooling how was that different?

S6: It's really hard I couldn't speak any English.

Interviewer: Right so there was a language barrier, so things like painting drawing art that kind of thing did you continue with that?

S6: Yes, I did.

Interviewer: Okay and how did you find that?

S6: I think that is the most easier thing I can do and I find that I enjoy it when I'm doing it, plus I couldn't speak any English but can now. But then because art drawing art and design isn't like really record a lot of speak writing so I enjoy doing that more.
Interviewer: Because it's a visual thing so when you were at school do you remember the kind of feedback that you got from teachers whether it was positive negative whether they were negative with students at all, what kind of things did teachers?

S6: There were really positive they keep telling me and they even told my parents that your daughter is a really good drawer and she is enjoying it and she should keep it up. But before I apply for interior design I want to do something completely different like nursing or like you carer, but then like even my art teacher he was like you should keep up your art you should let go even though you want to be something completely different but I still to keep doing that.

Interviewer: Okay so all the way through school did you do GCSE?

S6: Art and Design A level art.

Interviewer: And then did you here straight after A level or did you do a foundation?

S6: Foundation.

Interviewer: So you would do more art?

S6: Yes.

Interviewer: So where there are times during for example your A levels and your foundation where you felt you were being criticized or where you always feeling you know again positive encourage boiled by tutors and things?

S6: Throughout my life I always being positive things and positive comment they were just like yes keep going.

Interviewer: And do you that has kind of fed your ability and your desire to continue?

S6: Yes, it makes you feel more confident as well.

Interviewer: Okay so we covered school and development when you are designing for example a course here would you just think about where you are at the moment in your third year. How important is sketching to you and I am thinking of that the sketching that you do when you have a brief the very early stuff where you are getting your ideas down and working with ideas before you get to the stage where you are visualizing and presenting, but is the process of working through stuff. Okay is that important to you as a designer doing what you do within the university?

S6: I think so because like you draw even though it's not good it's just like a little sketch like no one, like other people won't be able to understand but do you understand it and it's like getting your idea through saying how it's going to work sometimes I find it difficult myself, even though I can draw but sometime when you get image in your head but when you trying to draw it out you couldn't do it, specially like you draw it out okay that work but then when you are trying to do it on a computer like cad it just wouldn't work it's like a completely different thing so you have to think how am I going to get this sort of paper [unclear 6:02] paper to the cad it's really difficult.

Interviewer: So do you find it hard going from paper to cad?
S6: Yes.

**Interviewer:** Is that a big step and how is it difficult how do you find it difficult that's a difficult question to answer isn't it, just kind of think the kind of processes you go through when you are taking your sketches and putting them onto CAD what are the difficulties you've encountered at that stage for the bits that you find challenging?

S6: I tried everything like say make a model as well but it just wouldn't work I don't know it's really difficult but I just rethink say I was drawing a desk and it couldn't get on the CAD and so I need to think how that is structured and how it's work.

**Interviewer:** Okay does the sketching process you go through does that help you to resolve the things like how things are put together how things are constructed?

S6: I am not quite sure.

**Interviewer:** Okay and do you think that the sketching you do is it crucial to your designing, or is it something you do because you feel you have to do it, or is it something you do and you enjoy and you would do it anyway?

S6: I think it's a bit of what like your kind of have to do it as well but then I like enjoy doing it at the same time but even though sometime it's hard to get your idea of from your head.

**Interviewer:** So when you are designing do you see a picture in your head of what you are trying to create?

S6: Yes.

**Interviewer:** Okay do your sketches always come out the way you see them in your head?

S6: No.

**Interviewer:** How do they come out do they come out kind of like the idea in your head or nothing like it?

S6: It's not exactly what I want but I can see you know what I mean it's not exactly what I want but it's close enough but I’m still not happy with.

**Interviewer:** So at that point do you keep working on it?

S6: Yes, until I get it right exactly what I want.

**Interviewer:** Okay and on the course you are on how important is sketching on your course?

S6: It's really important.

**Interviewer:** And what do your tutors sort of tell you and make you feel about sketching and working through your idea in this very obvious way?

S6: Drawing is very important so you have meeting with clients you've have this ability to be able to draw in front of them to show your idea.
Interviewer: Can you not?

S6: No.

Interviewer: when you are being asked to sketch and you are put in a position where someone says you need to sit to sketch either for a client or in a group situation where we all sharing our sketches, what is your first response when someone says that to you how do you feel?

S6: I feel uncomfortable I don't know for everyone but for art student when you draw on table and someone stand behind you feel uncomfortable like why are you looking at me like don't look you know what I mean I feel exactly like that, so I don't know if I have confidence to draw in front of people.

Interviewer: Is that because you are anxious about what people think of your drawings?

S6: Yes.

Interviewer: Do you feel people judge your drawings then?

S6: Could be.

Interviewer: When you are on your own sketching do you get that kind of feeling then?

S6: No.

Interviewer: If you are on your own sketching are you able to just scribble ideas quite happily

S6: Yes.

Interviewer: Okay and as soon as someone is watching you.

S6: I can't do it.

Interviewer: That's interesting everybody feels that way it seems, okay so you get this anxiety of being watch, okay when you are in a group situation as well is it more difficult if you are in a group of peers of a student?

S6: Yes.

Interviewer: And what it is about having other people around you for example your other students, what makes you nervous about that?

S6: Just scared that they are going to judge you in your head it's not that good anyway just scared that they were going to judge you.

Interviewer: Judge you well or judge you harshly?

S6: Harshly.

Interviewer: Why do you feel they would judge you harshly?
S6: I don’t know it's just the feeling I have it could be good and it's does nice but then you know yourself is not good enough but then they say oh that's nice.

Interviewer: Okay so is that judgment are you assuming that other people are better at sketching than you are?

S6: Yes.

Interviewer: Everyone seems have that problem, so you assume everybody is better than you?

S6: Yes, when you see their work what they've sketches you say oh my God that is so good how did you do that I wish I could do that.

Interviewer: That's interesting so do you consider yourself to be a sketch inhibited do you feel inhibited when you have to sketch things, anxious nervous not actually wanting to do it?

S6: No.

Interviewer: You don't feel inhibited but there's that levels of anxiety of being observed or judge?

S6: Yes.

Interviewer: Okay when you are doing a design sketch how much effort do you go to to make it perfect?

S6: Not that much.

Interviewer: Okay do you produce them quite quickly?

S6: Yes.

Interviewer: And are you able to put them down and move on to the next one or do you have to finish something to understand before you then move on?

S6: No I just finished them quickly and move on to something else.

Interviewer: Okay do you find that they are more important as tools for getting your ideas out then they are things that you show someone like a demonstration of what you have been doing. Is it more to do with your processes?

S6: Yes.

Interviewer: So it's actualy driving and helping thought processes?

S6: Yes.

Interviewer: Judgement talking about people judging your work in favourably does that concern you when you put your sketches up where you have portfolio?

S6: Yes.
Interviewer: What sort of things do you think people are judging you on?

S6: I don't know maybe I'm just how thinking it but then it's just about being confident really you think your work is not good but then people might think and okay like sigh or they might be yes that's good, but then whatever they say I just tend think because my mind-set to that standard that and it's not good whatever they say.

Interviewer: So you set yourself quite a standard and even if someone say it's good and they like what you've have done if you are not happy with it, it still doesn't count okay. So when you are producing and presenting sketches in a like a group Studio situation or something do people actually make judgement and say things to you about the quality of your sketches either good or bad?

S6: Good yes they do.

Interviewer: Okay so what kind of bad things do people say to you about your sketching?

S6: They won't say it.

Interviewer: That's interesting as well because everyone is frightened of being judged, but the actual judgement people get it's very rarely negative that's interesting okay right on your course how were that early sketching design process are you taught to design using a sketch process at all?

S6: Yes, in first year we got this manual technique like hand by everything but for me I find it harder because I never learn perspective drawing before like one point two point three point, and I am just finding it difficult they do teach you how to do it.

Interviewer: But is it not too maths of it the geometry of a two-point perspective drawing you have to learn the higher levels of vanishing point and everything like that, that's slightly different from doing early sort of scribbling sketches to help you think are you giving any kind of tuition on the scribble just thought process sketches or do they assume that you just go away and somehow you will do it?

S6: Can you say that one more time?

Interviewer: When you are taught to draw do they encourage you to go through the process of design using scribbling in formal sketches or is the tuition you had on things like this is how you do a visual this is how you render that is how you construct a perspective?

S6: I think it's a bit of work they teach you like this is how you do it; we don't really render by hand just sketch just scribbles but we don't really get taught how to draw.

Interviewer: How to turn those into a presentation drawing.

S6: Yes, but we use mostly on cad.

Interviewer: So you move the cad at that stage okay do you think there are any kind of drawing and sketching things that you would like to have learned about be taught about were missing course at all?
S6: I think maybe more on hand sketch because we don’t really get to like first yes the whole project but then it's not really it does help because they taught you but then it’s not properly so the second year you don't get taught at all.

Interviewer: Okay so by the second it's assume that you know everything that you need to know to carry on, okay do you get any kind of tuition on how to design sounds bit of a strange question because your designers but do you feel that there is an assumption that somehow you know how to design or somebody teach you this is how the design process works these are all the things that you go through in the process?

S6: I don’t really know to be fair like first year I don't have a clue what design is was like, there were like this project on apartment design they don't really taught you how to design as in like okay you do this first and you move on to that. So I am just kind of like everywhere I just do what I feel is right and then when it comes to this year no I don’t think they taught me.

Interviewer: Okay so it wasn't a formalized process?

S6: It’s not like you do this first and then you move on to this next step, it's more like you do what you think is right.

Interviewer: Okay so it left to your judgment and your intuition and creativity, okay right now as millennial because you are of that particular age group the technology you use relate to things like cad and rendering and things like that, are there any other sort of learning preferences that you have ways of being taught or ways of learning that aren't used on your course which you think might be useful to encourage the use of things like sketching or are you happy with everything?

S6: Yes, happy.

Interviewer: Right know when you are sketching I’m going to get you to think about when you are in the design process and you’ve got an idea and you are scribbling and scribbling do you find that you sketch to put ideas down before they go out of your head?

S6: Yes, I do that Just a quick sketch.

Interviewer: Okay because the memory you have to deal with problems can't contain that much information, so sometimes you will lose it but what a lot of designers do is they stuff done before it's gone so do you find yourself doing that?

S6: Yes, even when I'm going to sleep I said I should get up and draw you know I am in bed ready to sleep I don't know when I lay down all the ideas coming from my head.

Interviewer: Okay and how do you see those ideas do you see them hear them feel them?

S6: See them like okay this could work it should be like this or this but sometimes I am sleepy I just try and remember it for tomorrow.

Interviewer: Okay so that's when you sort of jump out of bed scribble something down and then you can go to sleep knowing that it's okay, okay that's fine. How much do you do that when you design is it something you are constantly doing or is it every now and again you will suddenly get an idea and you sketch it down?
S6: You do something and then something else pop in your head and say okay that would be good so just write them down even if I don’t draw I still write them down this could be a good idea do this do this.

Interviewer: Okay so you are making like records of your instant thoughts before they vanish and fade. Okay when you look at your sketches your rough sketches do you ever look at them after you produced them you go back and look and think I can see something else in my schedule that I haven't deliberately put down its call reinterpretation it's something that designers then to do without thinking about it but I'm just wondering whether if you do that very much with your sketches?

S6: Yes, when I go back to it I look and say that could be better I should add this to it but then you couldn't change it.

Interviewer: Okay when you look at scruffy scribble sketch you and go back to it maybe a week after you’ve drawn do you ever look at it or go through your sketchbook and gosh that would make a really good something that I didn't realize at the time do you [unclear 21:20] yourself like that?

S6: To be honest I don't [unclear] sketching.

Interviewer: No that's fine there is no right or wrong answers I'm just really interested in that.

S6: But sometimes I don't really go back to my sketches and look at it like this could have been better, but just when I look at it I think I could do something else rather than.

Interviewer: Okay so it kind of suggests other things to you that you haven't thought of okay when you are designing, and we talked about this already you see things in your head you have a picture in your head and then your kind of get it out onto paper how often do you do that is not something you are constantly doing when you are designing seeing things in your head putting it on paper?

S6: It's constantly.

Interviewer: So you are doing that you're putting things onto paper and then are you seeing what's on the paper, and then that's when you think that's going to work that's not going to work okay so it's almost like it's feeding it back into your brain?

S6: Yes.

Interviewer: Okay so you seem to do more seeing as than reinterpretation [unclear] it's interesting because it doesn't correlate with the learning style because you are clearly a very visual person in your head you see all of this stuff. Okay that's interesting alright let me just think and see if there's anything else I got to ask you, there probably isn't okay I'm going to switch this out now.

Audio Finish
**Interview with S7**

**Interviewer:** Okay right could you start of just so I've got it on record name your course and what sort of further or higher education you've been through to get onto the course here if that's possible?

**S7:** Well my name is S7 I studied interior design, I'm currently right now in my third year this is my final year. And like how I got here in order to get your here I did in Secondary School I did art and then I went on to doing btec art which is a bunch of different art modules.

**Interviewer:** Is that the 2 year btec instead of doing A level art it's like you do it at college?

**S7:** Yes, instead of exams it's like coursework so we just do a whole bunch of work. And then I was interested in design I used to be interested in fashion design but I've got more interested in interior design because for some reason I've always just wanted to design buildings or interiors or rooms I've always interested in that and that's why I wanted to take on this course I enjoyed it so much. And when I came for like the interview like when you come for the open day I've seen like some of the work that they do over here that they've done, and that definitely was for certain years I've really want to do this I definitely wanted to be a part of this and I know that I can make a great career out of it because it's not an easy career but I know that I am good at art and I know that. Because I am good at this can definitely takes me forever on it's something I am really passionate about.

**Interviewer:** And are you enjoying it

**S7:** Yes, I am enjoying it I like that the fact that in our final year right now we are designing anything we want we can choose what we can design we choose our boarding, so that's one of the reason why like I am enjoying it right now.

**Interviewer:** So it's kind of your baby that you are working on?

**S7:** Yes.

**Interviewer:** Oh great that sounds good. Right to start with this is a bit strange but bear with me can I take you back to your childhood, obviously you have been doing art all the way through it's something you clearly enjoy. Can you tell me what it was like when you were little did you use to do a lot of art sketching drawing making things what sort of things did you do?

**S7:** This wasn't even in school this is just me at home I always sketch and I knew that I have a passion for art seems like a young age. I've always loved art I loved painting I find it so relaxing it's something that I am good at other than other like courses like maths and other stuff I've always loved art. Art is the place that I know that can take me somewhere else I've always loved art It's such a great person and I like the fact that I am still doing it and it's something that I love, that's what I love so much about it. I love to
draw and even my teachers have notice that from like a young age so that's what has pushed me to continue doing any art related things.

**Interviewer:** Okay so as a little one as a kid you'll be doing sort of painting drawings scribbling. And when you got to say doing your GCSE at secondary school and then on to your btec at college, how were your tutors what were they like were they very critical or were they very supportive. Can you remember situations where perhaps there was criticism or encouragement things like that?

**S7:** There was criticism and knew that the criticism was because they knew that how much potential I've have. There's some points where I will do my work and I will be at my strongest point, and then I do work and I'm at my lowest point again and they know that I'm better than that they know that I can do more. So I think that with the criticism I found it a bit harsh but then I realized the only thing they are trying to do is push me to be better because they can see how much potential I have, but I like the feedbacks.

**Interviewer:** What kinds of criticism did you get from tutor’s teachers?

**S7:** For me it was the colours so if I am painting a portrait they would be like you have to mix this colour more we did a lot of portrait drawing or sketching so I have to plan this more it's mostly blending in. It's not necessarily to do with my sketching it's mostly in terms of painting so that's where I got more criticism but when it came to sketching I was always good with that, but it was always like the painting that I got the most criticism with.

**Interviewer:** Okay so it was the issues of colours?

**S7:** Yes, the colours.

**Interviewer:** So are you happier working with just line I supposed to colour, or because some people particularly sort of interior and architecture student they very much go for the black line and the white paper they feel comfortable with that, and as soon as they apply colour they start to get a bit nervous. Is that something you can relate to?

**S7:** Right now yes I can relate to it, if you see majority of my sketches and I've not done any watercolour I've not used any colouring pencils or crayon or [unclear 4:57] it's mostly just black and white sketching. But when it comes to me doing it on the computer I'd kind of but for some reason when I am doing it on paper I don't feel like it's going to look as I want it to look like in my head so that's why I just keep it black and white.

**Interviewer:** Okay so that it's almost like your brain works is in that way. Yes, that often happens with people who design buildings and structures because it's a clarity of it possibly. Okay right you are in the University now doing your degree you are in the final stages of your degree, with the course you have been or still on what is the position and importance of sketching, how do they make you feel about sketching is it vital is it optional is it something you can do or not. How much do they kind of get you to do that kind of thing?
S7: I was just going to say this before when they used to say you guys need to sketch I didn't think that it was, I knew it was important but I didn't get a big deal out of sketching because normally everything is in my head and I can just do it on the computer. But if I want to design something and sometimes I can't explain it I have to draw it, so I've got this layout pod in front of me now and sometimes I can't, I want to design it but I can't so I will sketch I will do a lot of sketching. This is just display I am doing a retail project right now and this is just the display, and I've just been doing a lot of sketches of how my space could possible look are a part of the space and it's helped me so much. Now if I didn't sketch any of this my space wouldn't look as good as it does now because we recently got a feedback sheet and then they told us stuff we can change, and I've just being sketching like crazy. And then my pace is being looking more and more interesting like when you look at this pace it won't seem like a retail space it will seem like you are in some kind of Museum exhibition and that's what I want people to think. But I think sketching has helped me so much so this page is full of sketches and it helps a lot.

Interviewer: I know notice with your layout pad your kind of pull the sheets out work on the sheets. Do you find it easier to do that than have it in a traditional sketchbook where you turn the page turn the page?

S7: Yes, because when I turn the page I don't know for some reason it just doesn't feel good whereas with the layout pad it's thin so I am able to draw on top. I can do a quick sketch with a pencil or a pen and its really thin paper so for some reason I am not scared of making a mistake I am not too picky.

Interviewer: Do you think it's because the paper is so thin and you will see through it it's almost like sketching on toilet paper it doesn't almost mother if it's not great?

S7: Yes, that's how I feel so I just do a quick sketch and even if it's rough I am still able to understand it and I will just put my little notation on the side. And if I am designing something on a cad software I can always go back to my sketches and the see what I've done and if for example something doesn't look right I quickly go back.

Interviewer: Okay so you keep all of your pages you keep everything?

S7: Yes, I keep everything I just keep them, and then I will probably put onto a Sketchbook lay onto show development to show how I've got them.

Interviewer: Okay so when your kind of submitting these sketches you said you've got some feedback from your tutor. What was the feedback you got?

S7: The feedback I had was in terms of a process a model making so they wanted to see my I don't think that I had enough development work. So they wanted to see because we made up a model before of the pace and they wanted to see me try something with their model. So let's say I take a picture of the model and then I scan it and then I draw it so I could have done that, that would possible got me an about mark. I could have research more on certain things that related to my space because a lot of the stuff I've put in my space they are not in my Sketchbook so I just skip those parts. But if I had put more sketches in earlier on like the ones that I've done now then probably maybe to say [unclear 9:09] for me and also I always ever think in my head I always think maybe
they are not going to like this or maybe this is not going to look nice, or maybe they're not going to understand it so that's why I just keep everything to myself because I'm too scared.

**Interviewer:** Keep it in your head and if you put it on the paper suddenly it becomes real doesn't it, and then someone can look at it?

**S7:** Yes.

**Interviewer:** Okay that's interesting so they're keen in you to sketch I mean I know Rosemary likes to get people to be able to sketch in a meeting situation.

**S7:** I think sketching is important, I think for me it's definitely important because I still want to be able to draw like I've loved art since a young age and I don't want to stop that. And I can see why she is pushing people because sketching definitely helps you to bring your ideas out there more instead of staying on the computer like the traditional way. Sometimes like the industry I think they want people to be able to sketch in front of their clients quickly do quick sketches and that's like a good skill to learn. And that's one thing that I've definitely thought myself and I've just practicing a lot and I've gotten better.

**Interviewer:** Absolutely it's a really kind of sort after skill just rough sketching it's just so useful just to get an idea out.

**S7:** Yes.

**Interviewer:** Okay this sound a bit strange but again bear with me I am going to ask you about emotional issues to do with sketching. Okay right you are in a studio for example you and your group, and one of your tutor says okay I want you to pick up your pencils and we're going to spend half an hour sketching out an idea for something, and at the end of that we are all going to look at each other sketches. What is your immediate response to that kind of request?

**S7:** I am excited I am really excited that's the kind of stuff I like to do if someone mention anything about sketching I am so happy because it's the only part of this course that I know it's my strongest point. Like even when I am around like people that don't do architecture or anything to do with art it's something that I have always been good at and I've always been strong at that so I get really excited because I love to sketch so much I love to draw. Even if everyone else is having a bad day or they don't like doing it for me it's really exciting.

**Interviewer:** Okay do you get a sense of anxiety if you have to sketch and someone is looking at what you are doing?

**S7:** No I don't mind I actually love it I really like it.

**Interviewer:** And how do you feel when a teacher is looking at your sketches

**S7:** It depends what kind of sketch they want me to do.
Interviewer: This is it there is different type of sketches but what I am thinking about is the kind of sketches you got here where you've got an idea in your head and you want to get it out on paper so you've then got a point of reference to work from that sort of early design stage. How do you feel when your tutor is kind of browsing through your work or giving you feedback?

S7: I really don't mind because I know sketching you don't have to do it to scale there's no scale for sketching there's none of that measurement. If I am not there, then I am obviously going to have to put a notation because they might not know where it is but if I am there and then the tutors pretty much understood what I am trying to sketch. And I don't really get criticism on I've never like being criticized on how I sketch or they've not be able to understand, they understood the kind of stuff I've sketching.

Interviewer: Okay so it does the job. Okay do you ever feel inhibited about sketching at all or is it something you feel very fluent and happy to just do?

S7: No I am happy to just do it it's something that I love it doesn't bother me and I love it so much.

Interviewer: Okay some people get really anxious about it so I am just interesting. When you are doing these sketches I mean these are obviously kind of an instant idea sketches you are working on. How much do you feel the need to make your sketches perfect or do you not at all?

S7: I used to that's probably that's the issue with my sketching before the feedback because the tutors are looking at it I'm always making it perfect. And then when you spend too long on a certain like a sketch or design that you are doing then it kind of gets frustrated and I just want to leave it. But whereas with now I know the tutors aren't really going to look at it right now because it will not be marked on the sketches right now. But for some reason like for these [unclear 13:32] I've just been sketching like crazy even though it's not clear this is basically meant to be and a shovel like a mine and I just did this in front of my friend I was just demonstrating something to her, and then I just did it for some reason and I didn't feel any pressure I just did it like that.

Interviewer: Okay so it doesn't make you anxious in any way?

S7: No.

Interviewer: Okay well that's good. Social issues with your peers when you are in a group and you do have to put your sketches up we're going to have a critique for example. Do you feel anxious or how do you feel about the idea of other people in your group your other sort of peers the guys on the course judging what you've produce do you get anxious about that?

S7: I don't get anxious I don't think about how my work is going to look I don't think about that I just know in my heart like this is what I've drawn and I know they will understand it; I don't think too much about what they are going to think about my work.
Interviewer: The actual appearance because some people get very caught up with what a sketch look like rather than what is demonstrating and what is kinds of dose for your thinking process.

S7: Only for that way if it's like let's visual that you've done from cad because I have seen people in my course I've seen the other peers in my course and I know that that's not the most of the strongest points. And then that's the only time I feel that I'm under pressure. But when it comes to sketching wherever if it's like a quick sketch or like a really detailed sketch I don't feel any pressure at all because when I did art in college we always have to show our work in front of people so that's where I gain the confidence from that, so I don't feel any pressure at all so I would easily do a sketch in front of someone like I don't feel pressured I don't feel scared I don't feel anxious I feel excited because I love to sketch or draw.

Interviewer: Okay that's good, when you are in those situations and you are having like a critique or if you are just in the studio like you were earlier with the guys milling around. Are there ever situations where people say things about your sketches either positive or negative, do you hear people saying positive or negative things about other people sketches?

S7: No I have never really heard anyone talk about anyone sketch, whereas someone will talk about their own skates and just say this is not good but do you understand what I am trying to draw, it's never really liked she can't draw or anything like that or he can't draw he can't sketch I've never really heard.

Interviewer: So you don't hear none of that you don't sense any of that any criticism or judgment going on.

S7: I didn't sense that any judgment because not everyone in our class is come from like an art background, that's why a lot of people their strongest point it's like cad and all of that and computer. And whereas with me and some other guys we've come from like an art but no one really judges anyone and I don't really judge anyone for their sketch because it depends on if you feel comfortable so I've never really heard that.

Interviewer: Okay that's good, right on your course on your course how have you been taught about sketching I don't mean producing visuals or doing life drawing or anything like that, but doing this kind of thing have you ever being taught how to sketch ideas and work ideas out what did that involve what happened there?

S7: In our first year so they will talk about how you can do quick sketches so we had a tutor her name is Sophia Mitchell she does stuff like sketches of Photoshop work, and then she will tell us that sometimes you have to do rough sketches or in some cases you are going to have to do detailed sketches. So if I am trying to produce like interior like a certain area on I will do a quick rough sketch and then I will do a sketch with like blue paint with a different pencil qualities and markers just to shows your development the process that's what we have been taught. I'm happy the way I have been taught because when it's me sketching I've not really been taught how to sketch interior so in terms of interior is like perspective and all of that it's not really [unclear 17:42].
**Interviewer:** You are taught the rules and how to set up perspectives and how to do your sort of technical drawings but this is more to do with just your thought processes just you working with you and putting things down on paper to work through problems. So you have had some sort of tuition in putting ideas down and working with them that way?

**S7:** Yes.

**Interviewer:** Right are there any shortfalls in the kind of teaching are there anything that you would like to been taught about sketching for the design development that you haven't been taught or do you think you've got everything you need for your sort of work and your future career?

**S7:** I think I've pretty much been taught a lot it's just that at that point I didn't understand, like I didn't understand why we have to do rough sketches I didn't really understand. And what I think helps me is when I look at designers works and when I look at their portfolio I see they do rough sketches they start from rough sketches and they start developing, and as you look and you start to learn and you start to realize this is what I'm meant to be doing so the teachers have taught us but it's up to you to start realizing it. And for me I realize like later on which is kind of disappointing but it's better now than later.

**Interviewer:** Yes, well some people learn everyone learn differently and you just take things on board when you are ready to. And okay so say in the studio you've come up with some concept sketches like this. How far will you work these sketch before you go onto cad or do you like to get onto cad as early as possible how do you prefer to do that?

**S7:** I like to work in between so sometime if see like I'm sketching something and I don't feel like it's working in a sketch I would actually like to see how it is on cad just to get an idea of it, so I would quickly move onto cad just to quickly get the idea because when it comes to sketching and seeing how it work that's where I get a bit impatient I really want to just see how it's going to look.

**Interviewer:** Okay and is that in terms of having an image in cad which you are then rendering writing and may be rotating.

**S7:** Even on Photoshop like I can get an image or software and I can manipulate things on Photoshop and that's how I visualize it but I have to draw it on paper first before I put it on Photoshop.

**Interviewer:** Right do you prefer to use the software to develop your ideas or do you prefer to use this sort of manual technique?

**S7:** I like to use both but I think that this is important I think this one is more useful because I have done more sketches on here then I have done on Photoshop. Because the software there is certain things you have to do and it takes a long time whereas on paper it's just there and you can scribble, and then if you'd get the first one wrong you can always look at the first one you did and do a new one and improve it.

**Interviewer:** Do you find it slower to use software?
S7: Yes, it's slower but you get more definition but it's definitely slower.

Interviewer: Okay that's interesting. With things like sketching would you be up for using something like a digital sketching tool or would you always be happy to use paper. I'm just thinking that people of your generation as a millennial as everyone calls them, they are very kind of into technology and social media it's how you do things. Are you still happy to use that instant pencil and paper thing?

S7: Yes, I would still be up for it even if it's like the next 10 years I would still do it. Because the digital is good because it gives you that colour and the definition. The computer does things for you even though you are drawing you can always edit things on the computer, whereas with sketching it's just there it's something that you can't take that away.

Interviewer: No, okay right when you are sketching does this ever happen loads of ideas going on around in your head you've got a brief for a project you've got all these ideas going around in your head. How quickly do you put things down on paper or do you tend to store them in your head for as long as you possibly can?

S7: It depends on if I have the idea or not, if I have an idea and I know that it's going to go out and I am going to forget I have to quickly sketch it out or let's say a brainstorm that's how I normally do.

Interviewer: Okay so once you've scribble something down on a piece of paper, do you find that your brain kind of leaves it alone?

S7: Yes, because I know I can come back to it and be that's what I sketch and I can develop that. Whereas if I store anything in my brain and then I look at other things maybe those things will take over. So I want to put down my first ideas and then put down different ideas and then whichever I like more then I will work with that.

Interviewer: Okay but is it important for you to get it out of your mind and on to something?

S7: Yes, it's really important.

Interviewer: kay right that's good working memory because you're working memory can only hold about that much, and once it's full it's like you start to forget things and you think oh I remember to do something, yes that can be a problem. Okay when you've got your sketches and you are scribbling away and you are going back over things that you might have drawn previously, do you ever look at your sketches and think oh God yes I've never thought of that, that could be something completely different it's called reinterpretation do you ever see other things in your drawings that you hadn't intend to put down?

S7: Yes, I think that's happen to me like once or twice I've gone back and think I could have used idea this would be really unique I don't why I didn't do that to it because I think when you get a feedback from the tutors and it's exactly what your sketch is to be for and then I kind of tend to think of or they might not like this that's what always
think. And when I go back to it and then I think they could have like this idea I know they would have liked idea I know they would have liked it so it has happened to me.

**Interviewer:** Sometimes you see things in your drawings that you actually I didn't planned to draw but there are like oh okay does that happen all the time it's just something that has cropped up you know occasionally?

**S7:** Yes.

**Interviewer:** Okay right that's interesting when you are designing how do you do it do you get a picture in your head or words in your head or things in your head that you put down on paper. Or some people will start scheduling things that they are not really sure about and from it they we will start to see things which they then carry on scribbling and developing which comes first?

**S7:** I get a picture in my head I get an image in my head and then that's when I will sketch it out or I will research on any similar things, but the majority of the ideas that come into my head it unlikely to be on the internet so I will catch it first.

**Interviewer:** Okay so it's in the head it comes out as a sketch how closely do your sketches tend to match are they a good match or they're not a good match?

**S7:** I think that pretty much match a lot of the things that I've pictures or anything someone has told me so if a tutor is telling me an idea you can possibly do this I picture it quickly in my head and then when I finish that mini tutorial I quickly go back and I sketch it down so it stays in my head.

**Interviewer:** So you visualize things really clearly okay that's lovely right I think I've ask everything I need to know from you I'm going to turn this off now.

Audio Finish
Interview with S8

Interviewer: Alright what I am going to do it's some questions but more sort of like tell me about things me about things rather than me asking you specific in a yes no kind of way. So to start with just so I've got it on record and I know how to identify you can you just tell me your name what course you are on what institution you are at and how you got to get on the interior design degree as well what sort of further education or A levels or whatever you want through okay?

S8: My name is S8 I am in interior design third year DMU. Am as to how I got on to the course?

Interviewer: Yes, what was the process you got to come here?

S8: I've actually got a funny story I didn't have any art background and the last time I did art was in year 9.

Interviewer: So that's [unclear] before GCSE wasn't it so you didn't do it as a GCSE I am getting?

S8: No I was going to do it for GCSE but my mom said you can't do anything with that so I said you know I will just have dropped it. but I did graphic design in for GCSE but I was just kind of like making [unclear 1:05] or like designing a stage or something like that, and then I went off to college to do and I did Childcare I got a diploma in childcare. And then after a year I just sat and I was emplacement and I just sat there and I was like I don't do this for the rest of my life. I wanted to do something creative that's always what I've wanted so I was thinking to other product design architecture or interior design, and I decided to go for interior design because half the time I go into buildings I just like looking at the interior I just find it fascinating. So I thought I will just apply for it maybe I will might not get in because all of them are looking for art so I just bought a Sketchbook and I used to draw do a little painting in there, and then I just go to interviews with them. I actually didn't think I was going to get into DMU I was having like a really bad day and I was like I am not going to get in because I have been rejected quite a lot so I was just saying I am not going to get in. But I had an interview and he was like yes we will accept you and that was it.

Interviewer: And you are happy you are enjoying the course now so you are a bit stressed now yes I know I can imagine okay brilliant thanks for that. Right going back to your childhood we will ask question that seems a bit random but it will make sense as we go along so don't worry. Going back into your childhood where you the sort of child that did a lot of painting drawing scribblings sitting at table doing that kind of stuff, and did you enjoyed it what sort of reaction did you get from people around you?

S8: Mom used to have a go at me because I used to waste a lot of people making models like just random models I just get bored and that's what I'd do. And then I do like little drawings as well like me and my sister we had this portrait you know this school portrait [unclear 2:47]. And one day I sat there and I draw it out in crayon and she was so happy with it she put it up on the wall and she was like this looks so good, and every time people would come in they would be like who did that and she would say S8. And
I was like in the year 7 at that time and everyone was so excited about it, and I was like I do this in school. Even school I used to be good in art as well but that was just something that I knew how to do. And people use to always be fascinating like oh you are such a good drawer and I just thought it was just something easy.

**Interviewer:** Right so as you went through schooling did people your teachers attitudes encourage you or where they critical of you or what was it like doing art at school?

**S8:** They were actually quite encouraging but they didn't actually go to encouraging you into like do you think you are going to do something with it, but they were like you are really good all of this stuff, and they would always try to push me like do better and things like that.

**Interviewer:** Okay right on the course you are on at the moment what is the position and importance of sketching, what do they tell you on the course about the need for sketching. When I'm thinking of sketching it's when you are designing when you are at the early stages of designing and you are working with your idea not the stage where you are producing a sketch which you then render or you can do on Cad but the actual idea development stage. Tell me about what they sort of ask of you or expect of you?

**S8:** They ask for sketch developments like your first initial ideas [unclear 4:37] basically what you need to do like you just sketch like an idea of that sketching ideas of what you want to do, and then you just have to develop that and then as you go along you just keep developing your sketches and using like different like including paint sketching with pens using different mediums and pencils. I think it's important because at first you don't what you are doing and it's easier to just draw it out and then you can get it in like trying to actually bring it into what you want to do.

**Interviewer:** Okay so are they quite strict in terms of it's expected that you do that you go through a sketch process, or are they quite so flexible and say well you know do it the way you feel happiest?

**S8:** I feel like they are quite strict like you should sketch, but for me I feel like it depends on what type of project you are doing as to how much sketching that you need to do.

**Interviewer:** Okay so with a project perhaps where you don't feel there is a need to do so much sketching how does that different from a project where you feel like I really need to sketch here?

**S8:** One of the projects I remembers it was the assemblage that was mostly sketching because you had to like sketch out what you want your safe place to be or you're like favourite place like. So the project we are doing now because of what my topic is about it wasn't more about sketching because the idea had already come from the concepts so the concept was already in the design, so it wasn't a lot of that to do with sketching it was just like just sketching of what you want in the space, but there wasn't much sketching of the actual interior of it, it was more like on Cad.

**Interviewer:** Okay the presentation was on Cad.
S8: Yes.

Interviewer: Okay when you are sketching or if you are in a studio situation and Rosemary or somebody suddenly says okay we are going to sketch for an hour, in a studio situation and then we are going to put our sketches on the wall. How do you feel when someone kinds of springs that up on you?

S8: Depends on what we are sketching.

Interviewer: It's fine be honest it's absolutely fine there is no right or wrong answer here at all?

S8: I wouldn't feel comfortable with it at first because I like prepared I like to think about things before and before I do them so I am not that confident in sketching I am okay in sketching but I wouldn't be like oh I am confident I can just sketch this and I know what it is, because I will do it rough and I will be like this is this, this is this. And I have to use that colour for you to understand because I wouldn't like be really confident in it.

Interviewer: Okay and how would you feel I mean when you are in a situation when like the other students how do you feel knowing that they are possibly going to be seeing what you are doing how does that make you feel?

S8: Actually I used to be so scared because everyone had an art background, everyone's like oh I did Art in GCSE and I would just sit there like I haven't done any sketching in a while I don't even know if I know how to sketch anymore. But now we've gotten used to preventing work and the more I see other people sketches it gives your ideas and it encourages me to do my sketching, and if I show you my sketching like you know people have put an input into it, and that would help me as well develop so I don't think it is bad now because everyone has different styles of sketching.

Interviewer: Oh yes it's a real personal thing it's like handwriting isn't it really it's that everyone has their way of doing it. Okay do you sometimes feel sort of anxious or inhibited or I really don't want to do this. When it comes to being made to do stuff like sketching producing a portfolio of development work using sketching on your project?

S8: Yes, I feel like that.

Interviewer: Why is that?

S8: Because sometimes it's just like your project doesn't needs sketching as much it's just like you are a designer you can't really sketch I kind of like to go and play with it, like sometimes you just need to model it up instead of sketching it out.

Interviewer: Okay and what kind of modelling up are you talking about here?

S8: Kind of like using Cad or foam board just to see how it would turn out if you can't sketch it because somebody [unclear 8:44] just sketch so you need to make like a model that's what I had to do in one of my sketches because I just can't I tried to sketch it I went to Sophie and she is like I can sketch it so I had to make like a model for me to be
able to actually draw it, that's kind of like pressurizing, but we need to see more sketches. Some people aren't that confident in sketching but they are more confident in other areas.

**Interviewer:** So do you find when you are doing you got your idea and you got a sort of sketch, and then you start to make something in Cad. Do you find that the sketching is difficult to do it's difficult to get your ideas out of your head in a way that your kind of see them?

**S8:** Yes.

**Interviewer:** Right but do you find the sketch modelling do you find that more easy too kind of represent your thoughts?

**S8:** Yes, I think prefer modelling because I was used to do that when I was younger I found out that that's something I love about the course I love the modelling I just don't like the sketching part the whole development stage, if you just give me models I will be fine and that's okay but when it comes to sketching it's not my strong point.

**Interviewer:** You say it's not your strong point why do you feel it's not your strong point?

**S8:** I think it's because sometimes I just feel like because I didn't do art I didn't get all of these sketching techniques.

**Interviewer:** So you feel a little bit of disadvantage from the other guys maybe.

**S8:** Yes, so that's why I just don't feel like it's something that I would say I am really good at, I can sketch but it's not like I am really good at sketching it's just that I can sketch that's it.

**Interviewer:** Okay so when you look at other students in your group look at the sketches do you compare your sketches with them?

**S8:** Not anymore.

**Interviewer:** What was it like when you did because when we compare things you know we can't help but do that, but I am just wondering how did you feel your sketches compared with the sketches of other people in the group?

**S8:** That's why I didn't really want to show my work and every time they would be like oh you got to show your work I would just rushed through my work and be like this is this, this is this, and then I be like that's it so I didn't really feel confident in showing it out but right now I don't really mind because everyone has their own style that's what I've come to realize it's not about the competition.

**Interviewer:** Do you feel pressured though that there is some sense of competition or judgement when you are doing sketch work in the studio and there are people watching and milling around?
S8: Sometimes you can tell like people are just kind of looking at other people to see oh that's good, and then you see like oh I need to do something like you know I need to switch this up to make it better all of this stuff, but I think that's what happen in them design industry anyway. For me personally I would look for ideas and I will be like oh that's really nice, and if someone wants help I will try and come up with something but I won't feel like my design is not good enough but if I wanted help with something I would be like dude can you help me with this what do you think I could do all of this stuff, it's not like I just feel like I can competition any more.

Interviewer: Okay so the competition the centre competition was there but your kind of did that in your own style more and you are feeling more confident.

S8: Yes, because I feel like everyone just has their own little style like you see this work and you know yes that's her and she has done it in her own style and it looks good and then it's someone else and they have done it in their own style and it looks good as well. You can't really try because I tried to do what they were doing it wouldn't turn out like, it would look anything like.

Interviewer: When you are doing a sketch you are talking about making them look good do you feel the need to make your sketches look good, so you've got your ideas and they are kind of going down and your scribbling and you are working and you are then working with your sketch models with your sketches models. With your sketches do you feel the need to go back to them to make them better when you show them to someone else, or do you just kind of feel that's done its job and leave it there and move on to my next stage?

S8: I don't really like going back to sketches because when I am like drawing I like going out and I completed it and that's it I don't like going back to it because when I go back to it I just like feel the need to just rub out all of these mistakes like no I don't want this all of this and this stuff. So I would rather do draw something else instead of like going back to it, I've never really wanted to go back to drawing when I am drawing if it was in like art lesson I would want to do that thing in just one day I didn't like having 1 hour today, and then having another hour next week and another hour I just want to do that all in one day and just get it over and done with.

Interviewer: Okay so you feel the need to kind of get it done get it out of your bout and then move on to the bit that you feel comfortable with.

S8: Yes.

Interviewer: Again going back to the situation in the studio slightly strange question. Do you have a fear of judgement do you have a fear of people looking at your work and being negative critical or unkind in anyway?

S8: Yes, I do because I don't know if it's our year group but their quite judgemental in a way so sometimes it's just like over the past two years and you've gotten to know people and their reactions and how they react and everything, so your kind of know who to go to, to ask for help and I won't judge you so that's what I I'm like but sometimes in the studio I just put my earphones and I just do my work I just try that no one is looking at my work. I never used to like work in the studio because I felt like everyone was
looking at my work and they were judging me, but right now I just don't care anymore I just put my earphones in and like that's it.

**Interviewer:** Okay do you feel students who kind of come in for the lectures and then vanished off and then don't use the studio do you feel there is an element of them being anxious about people looking at their work looking at their schedule and their development is that some of the reason they disappear?

**S8:** Yes, I think some of them just last year because they weren't doing a lot of work at the time as well, they would only do it like last minute so they would just leave out afterwards, yes I think some of them but they do a good work as well but they just don't do it.

**Interviewer:** They're just like to keep it covered up and do it at the last minute which that's quite some standard practice okay. So in the studio for example you are putting your sketches up you are having a group critique, what do people say about sketching the actual judgement that you get?

**S8:** About my sketching?

**Interviewer:** Yes, or that you’ve seeing other people have, do people make encouraging remarks or unkind remarks or critical remarks or help or remarks?

**S8:** They make good remarks and hateful remarks, well they don't do say like bad remarks to my faces they probably might say it when they go away but no one says anybody remarks in my space is they do give like encouraging like something that you can do something that you can improve on, they would say oh that's really good [unclear 15:36] say anything bad hopefully.

**Interviewer:** Okay because a lot of people worry about being judged and having people look at their work and thinking and saying bad things. But from my research it's a case of nobody actually says anything horrible very rarely so it seems like the fear is there but it doesn't actually turn into anything. Okay on your course have you had any tuition during your course at any point which has enabled you to sketch out ideas and work with your ideas on paper. Obviously you are taught how to do your technical drawings and visual perspective and things on Cad as well, but the actual developing of design on paper using sketches is that something you were taught to do?

**S8:** No I don't think so because all we had was just we have been taught how to use perspectives and all of this stuff and it's like go to it, and it's was like how [unclear 16:2] you will be showing them your sketches and they're like you need to change this and this and this and sometimes you will be like I remember my friend she couldn't draw this one thing and then she went to a lecture and she was like how do I do this and he said you just doing one of these technical drawings and she was like but I do I do a perspective and she was just so confused and she wasn't really help in that situation [unclear 16:57] try and do it on Cad or try make a model of it just so she can be able to draw it out and explain her ideas.

**Interviewer:** Okay so the earlier on stuff where you just have the initial ideas and you need to sort play with them somewhere where you can see them you are not actually
taught this is what you do with an idea it's kind of assumed that you will work it out for yourself?

S8: Yes, a lot of the stuff even the Cad it's just really irritating.

Interviewer: Really?

S8: Yes.

Interviewer: Okay so kind of covering things like short falls on the course are there things that you would like to been taught about using sketching and design development making your ideas grow and develop before you get to that drawing up putting on Cad stage just stuff that you think might been helpful to you?

S8: I think I have a lot more sketching lessons sometimes we really didn't understand why we were doing them because it was a basic thing it was just [unclear 18:00] but it was just like why do we need to do so it was just like part of a project like you just had a Sketchbook and you just had to bring in a book full of sketches of perspective and it's like why, and there was this 3 point perspective I remember everyone was upset that day like why would we ever I don't think anyone is using it to be honest.

Interviewer: 3 point you don't tent to use an awful lot I mean Architects can use it with things like skyscrapers where you need that sense of you know things disappearing off in the third sort of dimension but yes that is interesting. Okay if you had something like a digital sketching tool where you have like a stylus and a pod and you can sketch on a screen I supposed to using sheets of layout sketchbooks whatever would you prefer that or are you quite happy to use the kind of sketching tools the manual stuff, or would you prefer not to sketch at all because I know you more of a model making person?

S8: I prefer the stylus you know that the [unclear 18:58] that we have I prefer using the [unclear 19:02] to do the sketching because that way you can trace over like if you do a model and you can put it on and you can draw over it, and it's easy to like change colours rub it out do all this stuff put different layers on, I prefer doing that than doing actuator the manual and paper stuff. Because that's a lot harder to work at as well like trying to drawing a straight line you have to use a ruler stylus it's just a shift and then it makes it all straight for you.

Interviewer: so it actually does some of the stuff where your kind of have to practice to get the lines really straight and it takes hours of practice.

S8: Yes, it does it.

Interviewer: Okay so it's actually being quite helpful when you are needing certain type of things?

S8: Yes.

Interviewer: Okay when you are designing do you ever get pictures in your head how do you see I design before it comes out into the real world?
S8: I kind of see myself in the room.

Interviewer: Okay so if you close your eyes or not close your eyes is it in your head or do you imagine it around you?

S8: I just imagined it around me because I am designing in a space that I didn't want to be in so in my head I just think how would it looks that's why I try and picture like drawing it from being inside the room kind of.

Interviewer: Okay so it's kind of in your head, do you find when you come up with ideas you need to get them onto paper or on to something else to get them out of your head so that you don't forget or do you find that your kind of contain everything your head?

S8: sometimes I feel like I have to draw it out and you know in the notebook sometimes I do like little tiny sketches just so I remember what I was thinking at that moment when that was said. And then I will try and draw it out big and it won't come out I'll be like no that's not the idea. And then I will try and develop that idea and see what it would be and do some research on it.

Interviewer: Do you rely on putting stuff on paper to kind of take the pressure of your brain to work everything out and remember everything, that sort of working memory [unclear 21:05] working memory offload.

S8: Because in lecture sometimes they'll be talking and you have this idea and it's like do I listen what if I forget, so I just draw it out get it out get it out and then I can carry on listening and see if I can get more ideas.

Interviewer: Okay just like a little timestamp of your own thought okay and when you are working with your sketches and you're in the studio and you got your layout pad or whatever and you've got little piles of sketches and the stuff you are doing. Do you ever go back to sketches that you have done earlier in the day or on another project and see things in your sketches that you hadn't thought to draw like new stuff appears in sketches that you hadn't considered?

S8: Yes, I do get that sometime?

Interviewer: Does it happen very often or is it like once in a while?

S8: If I look back on the old project probably know that there is a lot of stuff that I could have done in that space, but then I always try and related that to this project like if I could have done that what could I do on this one, so it's kind of like trying to fix that issue by doing it on this project.

Interviewer: Okay so you pull ideas from other project into current project that's quite common designers tend to do that you know they will have an idea which will go on through several projects in certain ways. Okay and when you are designing what's the first thing that comes to you is it the idea in your head or it be it might vary from project to project, or do you sort of start out sketching something that you're really not sure
what you are sketching and you think actually that looks like something I could turn into something else what sort of comes first do you feel?

**S8:** I think it's the design and then I tried to put it on paper.

**Interviewer:** So it's kind of in your head first the idea comes first and then you develop it?

**S8:** Yes, because as I talk and you get like these ideas like oh it's about this and maybe I can do this too yes it's just kind of that process.

**Interviewer:** It starts up in the mind and then grows in reality.

**S8:** Yes.

**Interviewer:** Okay there was another question that I was going to ask you, when you are designing how I mean if you look at the length of a project it's really difficult kind of judge all project the same because they are all very so much. But how soon do you like to get on to the Cad stage of a project, do you leave it until the last minute or do you like to kind of get on quite early or do you do Cad work and sketching together with your models?

**S8:** I think that's changed over the years for me because I hated Cad in the beginning of year. I remember the first PDP session because I had Brian and he was like how are you finding it and I was like I hate computers and that's the first thing I said to him, and I was just like I am terrible I didn't know how to do it but now I am pretty okay with vector works I prefer to do my Cad in vector works and sometimes I feel like it's easier for me to do it on vector works and then see how it will turn out and then if I don't like it then I can always change it or I do like a little sketch and then try and put that on Cad as well, and then I just keep going back and forth and seeing how it works .

**Interviewer:** And how easily does Cad allows you to get your ideas from your head you've scribble it on paper but it's in your head at the same time isn't it. How easy do you find it is to get that into Cad in the way that you've got it in your head?

**S8:** I think it depends on project because if it's like just not complicated shapes I find it really easy but sometime I have like my current project in [unclear 24:28] I'm doing a braiding pattern and trying to do that on Cad is probably the hardest thing I ever had to do, and I still can't do it so I'm still working on it so it's just kind of like a matter of just manipulating it and making it look like it's on Cad.

**Interviewer:** I'm just wondering how soon in a project you like to get onto Cad and do you prefer Cad to the manual stuff?

**S8:** I think I prefer card more than the manual because I feel like when I am doing the manual I'm still really behind, but when I am doing the Cad it shows progress.

**Interviewer:** Right so you feel at the same level as other people even though you don't feel you've got the art skills or haven't had them the Cad stuff kinds of allows you to make up.
S8: Yes, and I am able to show my ideas probably more than the sketching.

**Interviewer:** Okay and what it is about Cad that makes you show your ideas property what is it about Cad that makes you feel yes this is actually working for me now?

S8: because I am doing like carve room on Cad is so much easy you have to do [unclear 25:38] extrude and that's it. But then drawing it out it's like hold on how do you draw a carved room is it like how do you show the carve in the ceiling how do you draw this I find that a lot harder and that's like one of my biggest issues but if you can do it on Cad because you can easily manipulate things on Cad. And trying to draw it on paper it's just confusing it's just like does the line go here does this line go there.

**Interviewer:** So you find Cad is more kind of instantly satisfying it is easier to work out okay just trying to think if there's anything else I need to ask you, a slightly random question I've not anybody this one before but this is based on something I was talking about with one of the lecturers earlier, handwriting enjoy handwriting, do you do a lot of handwriting or you prefer to use keyboards computer.

S8: I don't really like typing I like handwriting actually and I kind of always liked it because I could change my handwriting and every time I change my handwriting it seems really fascinating it seems like a new thing that I have just learned and I will do it, but when I am doing it on the computer sometimes I just find it really boring it's just like you just sitting there typing.

**Interviewer:** It's just like the process rather than the feeling behind the process okay that's interesting, right I think that's all I need to ask you sorry some of the questions very strange and random but it's a research to get me to kind of understand how you think and feel about what you do when you are doing it.

Audio Finish
Interview with S9

Interviewer: Okay to start with can you just tell me your name and what course you are on just so I know exactly what file I've got when I come to deal with it?

S9: Okay no problem my name is S9 studying BA architecture I am in my final year.

Interviewer: Okay lovely right when you were very little what did your background have you been through like the UK University system or have you come to the UK to study?

S9: I came to the UK to study but I wasn't actually born here I was born in Nigeria, then I move to the UK in 2003 with my mom and my sister.

Interviewer: So did you go to high school here?

S9: Yes, I did.

Interviewer: And then did you do A levels or foundation course?

S9: I did GCSE A levels and my sates as well.

Interviewer: Okay right and what were your A levels in?

S9: My A levels where in sociology psychology and chemistry way off.

Interviewer: Nothing to do with architecture [unclear 1:12] sort of maths physics arts that kind of thing?

S9: [Unclear] is it okay if I can explain?

Interviewer: Yes, please do as much as possible.

S9: Okay no problem I've always had passion for your art and design that's always been my, I just like to paint draw and sketch. And when I was younger I always used to do like painting of artist and of fashion I feel like I have my own fashion line and stuff. So when I got to Secondary School back everyone is talking about career and what are you going to do I am just like I don't know I stuck in a bubble. But I knew I had the love for science as well like chemistry physics not really but chemistry more. So I remember one time I spoke to my uncle and I was just like oh architect sounds nice but it was quite a basic understanding of what architecture was I feel like it was just mostly building you know construction, which is a insignificant part of architecture but I didn't understand the humanities aspect of architecture but the people and you know species you design it for the people for communities so it's not necessarily I am going to construct a building [unclear 2:25] but it's taking into consideration the people you are designing for. So I had work experience as a youth assistance our Community Centre called Myspace it's in [unclear 2:41] London. So my role was as assistant you are working with adolescent engaging them in activities and there was this building that we was working
and it has the form of a caterpillar and obviously a caterpillar signifies growth change meant to move and I was just like oh this sounds nice so I saw that the area wasn't the most affluent area but I saw how this building it's a brought community it help people to develop skills it was just like a celebration you know bringing people together, and I remember I saw how the spaces where laid out I saw how people were utilizing the space and it was kind of like a shelter because obviously outside that building things are going on but inside cocoon. So I spoke to the manager and I was just like oh Steve you designed this building and everything and he started telling me about how her name is Shelly Smith. And what she did initially before the design that she sat down the youngsters the elders and she just discus okay what would you like in this building what do you want to see what are your ideas. And obviously he did tell me this is what they said but I had a general understanding that this architect really he was more passionate about the people and he saw how that reflected in the design, so from the use of lighting to the building form and everything I was just like you know what architect it sounds like an amazing career because you are design people as well as art and the whole, but it's most important about the people so that's how architecture like my passion for it was birth.

**Interviewer:** And the fact that you've got a background in sociology and psychology you understand the human aspect so you relate to it very much from a kind of human user-cantered point of view that interesting lovely. Okay when you are in high school here and doing your A levels and things, did you carry doing things like drawing sketching scribbling that was always part of what you did was it?

**S9:** Always yes apart from the maths the science and I picked Art and Design so Art and Design was let my major so it was one of those subject I didn't see it as a burden it was more of a passion so I would stay up all night if I have to do a painting I would do it because I just love to paint, so yes Art and Design was definitely one of me.

**Interviewer:** So what were your tutors like when you were studying Art and Design at school, were they very supportive?

**S9:** They were amazing very supportive I remember her name her name, her name is Miss Lewis she was my teacher because she was very supportive she saw that I was passionate so when I wasn't able to visualize my final project is like she would sit down and she would bring out like [unclear 5:30] sheet of paper whether you do this whether you add more white paint and all of that, and she would sit me down as well and she was very supportive like from the beginning to the end so Miss Lewis was my teacher.

**Interviewer:** So you had a really positive kind of relationship with that particular teacher well that's good. Okay now with your architecture where you are at the moment studying in your third year, how important is sketching to you and I am talking about the kind of sketches you do at the very early stage of your design when you've got a brief and you've got to get some ideas together and start working them. Is that something you do a lot of or do you have other ways of doing it or tell me about how you do things?

**S9:** I realized the importance of it in my final year because that was one aspect I brought into architecture school but over the years I've kind of lost it because obviously the 3D modelling and stuff so you kind of get drawn into rendering, you've kind of get drawn
into Sketch Up and all of that, but I’ve realized that as a designer I need to cultivate what I have and I’ve realized that sketching is so important because especially now I’m doing a wallpaper factory project, and I literally have been sketching I wish I had brought it for you I wish I brought it. But I’ve realized it because I visualize this factory it’s in my head and I had to sketch it down how I want the spaces to look like, how I want the spaces to be organized as well. And then also of an office I had this idea of a form and circulation so it would be like 4 offices but stuck on top of each other then have some sort of like circulation unit so it’s like I’ve sketch it out because this is the idea I have now is the process from sketch to president then from president to technical studies and from technical studies to your final so I’ve realized that sketching is so important for me.

Interviewer: So in your first and second years did you do as much sketching then or did you do other things instead of did you work in different ways?

S9: In first year I sketched a lot second year sketched and stuff but finally year I am sketching more because I have realized that depending on the project you are doing you could take different methods as well. So after my review with one of my tutors he said because you designing a wallpaper factory you need to be delicate in your approach because every project has a different you can’t approach it the same way, so obviously of a wallpaper factory you need to consider materials okay how do you want this material to look like how do you want them to connect okay I can sketch this out this is my imagination of how I want [unclear 8:15] to look like I will sketch out so I realized it's really important so third year definitely.

Interviewer: Now you are in your third year you now realized how vital is you've taught the design process. Okay if you are in the studio just imagine yourself in the studio settings with your other third years around you, and one of your tutors say we are going to sketch ideas for an hour and then we are going to pin them on the wall as group. What's you are first feeling about that what's your first reaction to being ask this is what we going to do?

S9: My first reaction would be like for an hour really can we just get for like 10 or 5 minutes because sometimes it would be like.

Interviewer: How does it make you feel when someone sort of throws that at you?

S9: I am shocked I am surprised.

Interviewer: Okay is it like anxiety is it anticipation?

S9: Anticipation I would say more because it's just like okay so if we are going to sketch for an hour what are we going to come up with, how are we going to develop this sketch I would say I am anticipating I'm expecting it.

Interviewer: Do you have sense of short of dread at all like oh God I'm being to do something I am not comfortable with or?

S9: Oh no I wouldn't feel dreadful because I like to sketch.
Interviewer: Okay so do you consider yourself to be sketch inhibited to have anxiety around sketching, or do you feel like you are somebody who would quite happily just sit down scribble ideas?

S9: Yes, I am happy to sit down and scribble ideas because when people for me personally if I realized something in my head I need to put it down on paper so I am willing to sketch and get [unclear 10:06] and sit down with my tutors and be like frank for example I will be this is my sketch I have this idea of this type of space what do you think so yes sketching.

Interviewer: And when you are sketching those sort of early rough ideas sketches how perfect do you make your sketches or do you not worry about things like that?

S9: I don't worry before actually yes during GCSE it was more perfect because I have this idea of how I want it to look, so if I am looking at certain image and I want to change that image to how I wanted it I will be like okay it has to be perfect so what I will do is I will do like grids that's what my Art and Design tutors told me I would draw grids of that image grids of how I wanted it, and line up like the nose the eyes and everything to match. But I've realized that with architecture school you don't have time for that, when you say you want to design a space and for example there is no time for perfection you have this idea and it's just like we are sketching I just okay this is how I want it to look this is how I want wall to look and what's the quickest way 4 lines like 4 lines 4 line a box you know that the farm is a box rectangular if it's dome I don't have time to like slow.

Interviewer: You have to get them out quick, okay so you don't feel that you need to make things look perfect at that stage?

S9: No not at that stage.

Interviewer: Okay when you are skating in a studio and you've got all the other guys around you working, do you feel anxious about other people looking at your work and judging it is there an element of that at all.

S9: There is an element because obviously we are all designers and some are more advanced than others so it's like your drawing looks good and it's just I wish mine could have been better. But one thing I have realized is everyone is at different stages you can compare yourself to anyone because you have to realize that as design we are all different we are going to see things differently we are going to sketch things differently, so rather than saying am, it's more like okay this can you help me. Because with one of my classmates his name is Jake I think he's from Hong Kong, and I showed him the idea a wallpaper factory and my sketches initially they didn't make sense but just by talking to him because his details drawings are amazing like he could sketch a Cathedral and it looks exactly and it does it really quick, but for whereas you know it's different so when I sat down with him he understood me just by me speaking he just sketch it and it just got me. So I've realize in the studio there is no time for compare it's more like okay you have this idea how can you help me how can I help you.

Interviewer: Okay and when you are in a studio situation and you are skating away do you actually get judgement from other people from peers you sort of the other student.
Do people say things or is it positive or is it negative or is it helpful, does it make you feel a bit rubbish?

S9: I would say it is positive and negative because I've realized if you really want to do well in design school you need criticism like you need that feedback you don't need someone to oh your work is good and you know your work is not good. So I've realized that when you are being criticized for your work or other place [unclear 13:42] not from a spiteful you see it but when people genuinely want to correct you and say your work is not that way I think you could do this better, so yes I wouldn't say I feel like intimidated by it I am more appreciative because you took your time out the show concern regarding my work.

Interviewer: So even if it's sort of slightly negative or discouraging you kind of see the positive in it?

S9: Yes.

Interviewer: That's interesting, okay so on your course how were you taught or are you taught to use sketching as a design thinking tool, do they teach you to do that or is it something that your kind of expected to find your way to do or?

S9: I would say we were taught because first year when we started I'm trying to remember our first project. We design a Pavilion next to opposite of the [unclear 14:44] Building and early stages of that design we were because we had all these ideas of how we wanted the Pavilion to look like and that's what we've been taught about President so I would say come into architecture school we have been thought about during the concepts stage you need the sketch even though you don't know how to go on YouTube learn look at tutorial because they've always encouraged because you can't just say you have an idea and go straight to 3D modelling it wouldn't work, how would your design develop and that's why they've always encouraged us from first year concept stage learn to sketch. But one thing I've realized with architecture school is that every design tutor is different, because with my second year one of my tutors called Frank, and Frank he's like me like we have this idea we need to sketch it out and he encourages that even I seen his third year studio how he tells his students get like an A1 roll sheet like if sketch something on A3 paper why don't you blow it up on A1 then from there you look at that space and you kind of extruded and [unclear 15:57] it into it and say okay [unclear] so it's like you're dissecting the drawing so I've realized that architecture school definitely encourages you, but over the years every tutors is different some tutors say just going to 3D modelling some tutors start off with sketching so yes I would say we have been taught.

Interviewer: Okay so on your course do you feel that there's any kind of short falls or failings in terms of how you have been taught to use sketching or what they've shown you or what they taught you are there things that you think they could have done better or differently?

S9: Differently I would say because I had a discussion with one of my course mates from last year and she didn't know how to draw. And with her new design studio group tutor was stressing like you need to know how to draw but she is like I can't draw. But then I feel what the school could have done better is have like workshops like okay this
is how you do architectural sketches and stuff. But then I believe it's also depend on the individual you know taking that initiative to go on YouTube because we are in a generation where everything is available where the library has how to do this how to sketch this so it's just a matter of you taking ownership of your education and go in and teaching yourself to learn.

**Interviewer:** So if somebody is being taught how to sketch but can't be bothered to put it into practice. Do you feel that the more people get their education it's based on their personality and their attitude?

S9: Yes, you have to [unclear 17:45] Brady's talk today she was just like the importance of your co-values you have to be determine you have to take ownership of education, because in the University like you are an adult like you can't expect to be pampered you can't like oh you know this way, no you have to take initial it's completely different. And one thing I've realized is that with your tutor they are there to help you and I've realize one thing with my tutors is that once they see you are determined and you are willing to learn and you are willing to put in the hard work you see that relationship form that's why sometimes you see oh my tutors this my tutors that, no my tutors not this it depends on you as a student so you know take ownership take responsibility so definitely.

**Interviewer:** And how important do you think that relationship between student and tutors is?

S9: It's so important because it's like you are on the journey and you don't know like, because I've realized that sometimes it took me time actually I would say in third year I am more appreciative because you have tutors they have a wealth of experience they've gone ahead we are talking about years they've gone through the system, so it's like they have all these theories they are filled and it is they want to pore out. So I have realized as a student once you're willing to learn and they are building a relationship of you so it's so important I think it's so important.

**Interviewer:** That's interesting, okay with things like sketching and we are talking about Cad and 3D modelling on computer. Do you think there are situations where you would prefer or would've preferred on your course, do you use things like digital sketching or would you prefer to remain using the instant pen and paper approach, do you think a digital sketching would be beneficial or does it really not make any difference it's the ideas that are important?

S9: I don't know I never use digital sketching do you mean like those kind of pads?

**Interviewer:** Yes, like a tablet with stylus where you can literally sketch onto the screen?

S9: No really I think I am more of a pen and paper, because it wouldn't have the same kind of quality that I would like.

**Interviewer:** Right when you are sketching how often does this happen you have an idea in your head it's kind of in your head and you can see it and you are kind of working around it or throw it whatever. Or you working on a brief and you've got loads
of ideas coming into your head, do you put those all down on paper or do you kind of keep them in your head?

S9: I put them on paper because I realized that when I have them all here I am just stuck, once it is on paper I know that this is how it might look visually because you are thinking of so many things so definitely put them all down on paper.

Interviewer: Okay and does that help you think more clearly once it's down on paper?

S9: Yes, because I see this is how it might look in the concert stage this is not the final product but this is a general idea of how the feel of it.

Interviewer: So in putting things down on paper you are kind of offloading your sort of immediate memory?

S9: Yes.

Interviewer: And when you look at sketches that you've done about last week this morning and you go back to them, do you ever find yourself looking at sketching and thinking oh God I can see something different in that, that I hadn't anticipated that wasn't in my head when I drew it?

S9: So I am just going to refer back to the wallpaper project with the office side of that project it's like I looked at the way I sketched out it's like okay form materials circulation but then when I looked at the sketch again I said oh okay so I have this rectangular form why don't I cut it in half and extruded and have the circulation in the middle instead of rubbing it outside, or I can have outside and inside so you have 2 volumes split up then I could have extruded it so yes definitely.

Interviewer: So things kind of come out at you that you haven't expect, how useful is that to you as a designer?

S9: It's so useful because if you go into Sketch Up. And it restricts you to a certain extent actually it actually does because you are just seeing boxes but then when you go back to your sketch you see more than a box you see how can these few spaces connect with each other, how can I'm trying to give you an example, where can this window's be position whereas if you have a box you are just like oh.

Interviewer: So a sketch provides you with more possibilities where is something in Sketch Up is like that's it ends of thought very interesting. Okay so when you are designing and you see things in your head in your mind eye of course mentally imagery, and then you get your pencil out and start scribbling and putting things on paper that happens quite a lot does it. Mental imagery that's what you are doing, are you also or do you ever do this your kind of scribbled some down because you really don't know what you are doing so you've just kind of scribble an idea out, and then you look at that idea and then develop it a little bit in your head. So it doesn't come out of your head immediately it's sort of appear on the paper and you work through it gradually does that happens?
S9: Yes it happens yesterday actually we were having a lecture I can't remember his name he is an architect I think from [unclear 24:03] I was talking I had this idea of like I am trying to remember it, yes but the that wallpaper factory because I was speaking with tutors about because one of the constraints with my site has to do with daylight, so I just drew 2 rectangle and I said let me just cut the window and have kind of like a triangle window that cuts into the wall, and I looked at that at first it just started off of basic but then when I looked into it I said okay light can actually flood into space whereas it's not just a rectangle there's a way that can cut into the wall to have light come in.

Interviewer: So it works with the angle of the sun comes in and it works with the angle of the sunrise okay.

S9: It does so at first it was just like let me just draw a box and stuff but when I look back at it I said okays they are like okay [unclear 25:08] section detail lighting and it grew on the page.

Interviewer: And it grew on the page I suppose the thing in your head going down on the paper, well that's interesting thank you I think you have answered all my questions I can't think there's anything else I need to ask you about I think you have covered so much and it's been a really useful actually I should just turn this off.

Audio Finish
Interview with S13

Interviewer: Okay right to start with could you give me a little bit of background as to who you are what you are doing, your background in terms of what you've done before you come here where you come from just to give me a little picture of who you are as a student that will be great.

S13: I do product design BSc here so I haven't really done much create stuff before this I did A level product design and then they were like oh yeah you've got a natural ability; I take it on further so I decided to do it here. I don't know I always enjoy drawing but when it comes to actually technically that's where I struggle a little bit. But being at BSC we don't do as much as drawing as BA's do and so we do a lot more cad work.

Interviewer: Okay so it's more cad oriented and because it's a BSc I presume its more technology and engineering based rather than a creative approach to product design. I am going to ask you to go back when you were younger at school or nursery or as far back as you can remember that's okay. Can you talk to me about what you used to do with regards to things like painting drawing colouring can you remember doing that kind of stuff?

S13: Art was my favourite subject at school so yes I really enjoyed I think more the more practical side rather than actually sitting down painting wasn't my favourite kind of thing. I definitely prefer using paints over pencils and stuff like that.

Interviewer: Okay and why is that?

S13: I don't know I think with pencils I just lose patience after all with the whole shedding, and with the paint I can do a little bit more with it.

Interviewer: Okay is it like a freedom the paints if you?

S13: I think it's more like abstract stuff of paint rather than hand sauce.

Interviewer: Okay right and where you always somebody who enjoyed sketching drawing painting through school?

S13: Yes, pretty much.

Interviewer: Okay so with your schooling I presume you did GCSE art?

S13: No academics.

Interviewer: Okay why did you decide not to do it was a conscious decision?

S13: No it was actually my school I didn't do any creative subject I only do academics.

Interviewer: Okay so you had no choice?

S13: No.

Interviewer: Did you do A level?

S13: Product design at A level.
Interviewer: Okay so when you were going through the stage of doing product designs and having to be coming up with ideas and having to work through them, how did you do it to that stage when you were doing your A level, drawing sketching ideas generating ideas I am thinking of?

S13: I think the actual concept like coming up with the concept is where I struggle it's more the development where I felt like I could have a little bit more.

Interviewer: Okay so it's your initial ideas you have to struggle with?

S13: Yes.

Interviewer: So once you've got the idea where is it, is it in your head is it on paper?

S13: It tends to be more in my head and then when I've got the idea that's when it comes onto paper.

Interviewer: Okay so you work from your head to begin with okay interesting. And when you were doing A level product design and you were working through ideas, did you ever have a situation where you had to kind show to a group do sort of presentation of anything?

S13: Not so much in front of a group just more to like the self-tutors.

Interviewer: How did they respond to work you were doing where the encouraging where they critical, did anybody make you feel like I can't do this or I'm not really good at this?

S13: They were very, very encouraging actually they will be like okay maybe you should sketch this differently or do this differently but very much like on my side kind of thing like they wouldn't give too much criticism.

Interviewer: Okay right so I am going to ask you about where you are at the moment on your third year of your BSC, how do you feel like things like sketching and drawing the ideas stage rather than the presentations stage. How do you feel that is important is it important to you as a designer and what does it give you?

S13: It's extremely important I think but it's probably the bit I enjoy the lease.

Interviewer: Really, why is that?

S13: I don't know I just find especially technical sketching I just find I don't know because I'm very much an artistic sketcher other than technical.

Interviewer: So do you find it more easy to observe something and then draw it?

S13: Yes.

Interviewer: Right so you can like a fine artist would observe a situation and then record it using their media. So do you find it more difficult to have an idea and work through an idea on paper using it for design purposes is that where you struggle?

S13: I think I struggle with 3D sketches as well I think that's kind of difficult.

Interviewer: Okay why is that do you feel I ask very difficult question sorry?
S13: I have absolutely no idea one my friends was maybe you can't see very well in 3D I don't know.

Interviewer: Do you see things in your head in a 3D?

S13: Yes, I think it's just to getting it from my head to paper.

Interviewer: Right it's that traveling down the arm that switch that happens to a lot of people though. Okay how important would you rate the need for sketching for what you do in your course do you think it's vital?

S13: Very, very important I think sketching is what helps with the actual initial ideas, I don't feel like you can go and cad it up straight away some people can but I don't it's very [unclear 5:52]

Interviewer: Okay so much of the design process do you spend doing this kind of scribbling sketching working on ideas before you then work on a visual whether it's a drawing visual or a cad visual?

S13: About 2 or 3 weeks to actually come up with this sketches and then it will be on cad.

Interviewer: Okay and do you just sketch or do you collect stuff; do you look at other images?

S13: I do I make mode boards and stuff for inspiration but it's just mainly sketching.

Interviewer: Right this is a strange question but beer with me if you are in a group situation in your studio and one of your tutors say okay I want you all to sit and sketch for an hour and at the end of it we are going to look at the sketches. What is your instant response to how do you feel if someone says something like that?

S13: When I am in a group I don't feel like I am the strongest sketcher so I feel a little bit on edge if we are all just sitting there sketching.

Interviewer: Okay so on your own how do you feel?

S13: I feel a lot better doing its own because obviously there's no pressure.

Interviewer: And why do you think that is?

S13: I think it's just pressure let me feel like oh you need to live up to that sketching standard.

Interviewer: So do you assume that everyone else's ability is greater than yours everyone is better than you?

S13: Sometime it's not assumption it just I know because I've seen their work before, when no one knows each other I think that's a bit better because obviously you don't if people that were worse than you.

Interviewer: Yes, so you have no idea of where you sit in terms of the standard. Okay so you feel that standard of sketching is not necessarily as good as other people is?
S13: No I think I am quite in an average middle.

Interviewer: Okay so would you consider yourself to be inhibited do you find that you sort of get into a state of anxiety or you don't want to do it or you put it off?

S13: It's not so much anxiety I think it's just putting it off.

Interviewer: Okay in a group situation when you know people that makes you anxious once you get started how do you feel though?

S13: I think once I kind of get into the flow of it it's okay. I think it's just that initial bit that I struggle, if I take some time with something it comes out a lot better than if I just do it rough.

Interviewer: Okay so if someone said to you okay you've got 10 minutes to sketch our concept and this is your brief, does that help you if you've got a really sort of short time frame to do something?

S13: It makes me think quicker but in terms of sketching no I don't know.

Interviewer: And what is it about your sketching that it doesn't help?

S13: I think it just take me a long time to get the actual from done. If you tell me that it will come into my head quite a lot quicker just getting it down.

Interviewer: Okay so when you are sketching do you feel that you need to make things perfect, or do you feel like you can sketch something quickly and move on and not worry too much about it?

S13: When it comes to initial I do it quite rough, it's just when it gets more to the development stage that's where I am like no I need to be perfect.

Interviewer: And what is it you are making it perfect for?

S13: I think it's more to help me see it visually, and also when I am taking it to the tutors they can see exactly what is that.

Interviewer: Okay so it's the quality of the information. And does it worry you does it concern you at that stage when you are producing something quiet sort of highly finished, does it worry you at that stage what your other students your peers feel?

S13: No really.

Interviewer: When you are in a situation and you are possibly doing presentation of sketches going through stuff in a studio situation where you have to sort of present your work, how do you feel about other people looking and judging your work does that make you anxious at all?

S13: It makes me nervous.

Interviewer: Okay what is it about that, that make you nervous?

S13: I am not sure because I know they're not going to come up to me and be like hey your sketches are not good; I don't know I think it's just what they're thinking in their heads.
Interviewer: It's not knowing what they're making up your work because it's almost untested at point. Okay and when it comes to presenting your work your sketches what kind of judgment do you get from your peers?

Interviewer: I don't really get anything.

Interviewer: So nobody kind of make a negative remarks or discouraging remark?

S13: No.

Interviewer: Okay so do you feel like the fear of it is going to then?

S13: Than what the actually reality is.

Interviewer: Yes, I am interested in that a lot of people say that actually they haven't thought about it until I actually asked them. Okay right so in your course it's BSC so it's most of technology-based engineer based how are you thought on your degree course to use sketching or drawing what kind of tuition do you have our modules?

S13: We don't get it at all?

Interviewer: So do your tutors assume that you know how to sketch stuff?

Interviewer: We've already been told that BSC in general will lot more skating ability than BA so we do a lot more technical stuff, but I mean all the sketching techniques that I've got been taken from A level

Interviewer: Right so it was you're a level gave you the foundation for what you are using now okay so you don't have any kind of hand drawing or hand rendering kay interesting. And how were you taught to design, strange question is there a process that you are in encouraged to go through obviously you get an idea in your head you have a brief you get the idea in your head and then you have to start of start doing with it, do your tutors sort of suggest like a routine or a route to go down?

S13: Not so much because I think everyone does work very, very differently in our course especially, so I think they just more leave it to free will.

Interviewer: Okay so they assume that you are able to work through these problems in your own way.

S13: But if they see that you are kind of drifting apart they will try and narrow it down a little bit be like okay maybe you should sketch some forms of thing sketch some shapes look at other inspiration but it's nothing really.

Interviewer: Okay so there's not a particular chain of things that you go through interesting, do you think that, that process if you haven't done A level and you come straight onto the BSC with no sort of sketching or drawing skills do you think the BSC course do you think they were using like a [unclear 12:58] in sketching and drawing and being able to get your ideas down on paper and work through, them do you think there's a shortfall where they kind of missing something locking?

S13: In a way because we have said in the past we wish we had some sketching lessons because we do see BA and we see the way they render their stuff it's different.
Interviewer: Okay so is there something that you and your peer groups have sort of complained about or mention?

S13: We have mentioned it before; it looks to be like a lot of the BSC they've landed it themselves but I mean I think like what I said before I am more of a learner where I need someone to help me through it rather than.

Interviewer: Just be left to find your own way okay, so you like to be given like a structure of things and then you can work to that structure and then develop your own way of doing it?

S13: Yes.

Interviewer: Okay so on the BSC there's no specific sketching designing tuition?

S13: Just designed modules but nothing to do with sketching.

Interviewer: And as a millennial because you are a millennial did you know that, all that learning preferences the ways of learning and ways that you would like to do things because your age that all covered in your course, I mean sketching is very much a manual thing there are some digital means of sketching there are digital tools that designers use, or would you prefer just stick with pencil paper pen you know the manual stuff do you have preferences about that or does it not really matter?


Interviewer: Okay and why is it you prefer the digital?

S13: I think it's just the finishes I can get it's much better than what I can get on paper and also if I had made a mistake easy to rub it out than start a new paper.

Interviewer: Okay so finishes of the things you are designing do you mean like the rendering the surface treatment?

S13: Yes, and even if I am just sketching on a computer you can rub things out easier you can get the lines to be nicer than the ones you using on paper.

Interviewer: Okay so when you are designing something using the digital stuff and you make a mistake your kind of erase or undo, do you keep that and then because you know it's sketching you sketch something if you don't like it you put it don't start another one so you've always got a record of your previous moves. With the digital stuff if you undo your kind of have lost that and you carry on until the very end but you don't have record each individual stage, is that how you work with the digital?

S13: Yes, I will just lose it.

Interviewer: Yes, so you are happy to lose that sort of developmental work in order to get that sort of perfect finish okay interesting. So I am going to ask you to think about when you're sketching and when you're scribbling down ideas and working with your brain on getting an idea to a stage where you feel you can kind of go and visualize it or develop it further. When you are designing do you find that the ideas and stuff that are coming up your mind do you find yourself sketching as means of getting that out so you don't overload your mind or just as a record.

S13: More as a record.
Interviewer: Okay do you find yourself in a situation where you think I had a really good idea and now I didn't record it it's gone; does that happen quite a lot?

S13: Not so much I would say I haven't got quite a good memory.

Interviewer: Okay so you do retain a lot in your mind you are happy to do that when you are designing?

S13: Yes.

Interviewer: Okay so it's more of a record so you can go back to something later on and work on it again. Okay and when you are looking at your sketches do you ever do a sketch or produce a sketch and then go back to it and see something in your sketch that you hadn't anticipated a new shape a new idea?

S13: Sometimes when say if I've drawn the shape wrong I would be like actually I prefer this word.

Interviewer: Okay so it's that kind of unexpected find in there, does it ever leads you off in a completely different direction?

S13: To a point yes.

Interviewer: So it's almost like the sketches is kind of driving your thought processes okay. And you have explained this already but which way round do you tend to work more is it the idea first and then the sketch goes down and you develop or do you find yourself scribbling something down and something grows out of it.

S13: It's a little bit of both I think of it but then the drawing takes me.

Interviewer: Yes, that would suggest something and you go and investigate. Okay that's interesting okay I think I've ask everything I need too going to switch off now thank you very much.

Audio Finish
Interview with S15

**Interviewer:** Lovely right okay just for the benefit of my recording so I know who you are to begin with, can you just tell me your name what course you are on what you are doing on the course. And also how have you got to be on the course what process you went through to go from school to get to this stage if that's possible, you just give me a bit of a background of who you are if that's okay?

**S15:** So I am S15 I study product design BSc at De Montfort. I studied in the sixth form at the school that I previously attended at High School, and I studied graphic products ICT and maths so I took 3 A-levels to apply to Universities. And I wasn't really sure what I wanted to study to start with I thought I wanted to do graphic design and I came to open days and had a look around and thought actually no I like the look of product design more. And then when I came for the interview here I actually applied for the BA and in the interview the person who interviewed me said I think I want you to study BSC because you doing math and you probably have a bit more understanding of that so he persuades me and yes.

**Interviewer:** Okay and you are in your third year now, or is it a fourth year because it's a sandwich you do a year out don't you?

**S15:** Yes, so it's 3-years studying at De Montfort and then a year between the second and third on placement

**Interviewer:** Okay so your placement work was with Jaguar Land Rover.

**S15:** Jaguar Land Rover and it was initially a 12-month placement and I liked it so I extended it to 15 months so I stayed a little bit longer.

**Interviewer:** What does it, it sorts of run through summer months?

**S15:** Yes, it started in June and then it was due to finish again in June but then I stayed there until mid-September and then came back here so of October yes.

**Interviewer:** Brilliant lovely okay so right I'm going to ask you some really strange questions but bear with me there is reasons to my kind of approach so it will come clear hopefully. Okay going back to your childhood what kind of relationship did you have with sketching drawing painting scribbling that kind of thing did you do a lot of it?

**S15:** I was a child yes I always was making things all my toys I didn't play with the toys of such I made things for the toys, I was always wanting to had an [unclear 2:33] I use to put painting on it making a mess paper Mache the things I do as a kid that was mainly like it.

**Interviewer:** So was it more like you like doing the making the 3-dimensional stuff, because a lot of children just do things like painting stuff on paper 2 dimensional what did you do?

**S15:** I did a bit of both really initially when you are younger I think you do probably a bit more drawing and painting and things like that, but then yes I think I then started to
enjoy okay I like making some things you know 3 dimensional and then painting that whole sort of thing.

**Interviewer:** Okay and that was something you did all the way through your childhood or do you remember doing it a lot until a particular age or a particular stage in your childhood?

**S15:** Particularly primary school I would do things like that. I would say probably when I went to secondary school not so much but I still always enjoyed my technology classes, and they were ones that I get excited for, for that day you know I felt oh I am going to make something you know even if it was sewing it was in the woodwork shop a few technologies I just like doing that type of thing.

**Interviewer:** So it was making tangible stuff that you enjoyed okay that's interesting, did you've kind of carry on with things like drawing and sketching and scribbling during that sort of secondary school stage or was that something you’ve kind of didn't do as much of, and did you do GCSE as well and did they involve that kind of thing?

**S15:** Yes, I chose to do graphic products as one of my GCSE, well a lot of schools don't offer that I think they just sort of do art and stuff but my school yes offer a bit more of a design approach to art and I preferred that one so I chose that one for My GCSE, but probably in my spare time I didn't do as much in Secondary School drawing and things every now and then I would used to like drawing Disney characters. I was never really one for coming up with my own drawing I would always look at a picture and then try and replicate it, I was a bit more I struggled to come up with something myself if that makes sense I used to look at other things and try note what aspects they've got.

**Interviewer:** Almost in the way a fine-artist observes and then reproduces something, so you could observe you found that something you enjoyed more was to observe and then reproduce on a sheet of paper or through model-making or something like that.

**S15:** Yes.

**Interviewer:** Okay that's interesting. Okay so when you did your sort of GCSE and A-levels things involving sketching drawing did you have to keep Sketchbook or hand in portfolio of stuff at all?

**S15:** Yes, for graphic products we had to do the bulk of work very similar to the product design degrees here it's sort of a portfolio and then you make model type thing, so it was just like a more toned-down version so you wouldn't do as many sketches or like initial ideas I think we used to call it. And then yes you would probably just then from one of those sort of pick it change it slightly and then you go this is my final idea. So yes there wasn't as much of a design process but it was this similar sort of thing.

**Interviewer:** Okay so it's like a precede process.

**S15:** Yes.
**Interviewer:** So do you feel that you were when you are at school where you’ve kind of marked and assess on things like the process, or was it the actual outcome which was the most important part of what you were doing?

**S15:** No it would take into account all factors so I think it was a very good introduction to this type of course because I think my tutor he had studded graphic design which is different to product design but they use a similar sort of process, so I think because he was used to working in that way he tries to make us work in that way which work well, and yes I felt like I've benefited that from when coming to University I had a bit of a background as well.

**Interviewer:** Okay did you get any when you were doing your GCSE and A-levels. Did you get feedback from tutors that you can recall that was very positive and encouraging or at the other end of this [unclear 7:00] have made you think I am not sure I am good at this or left you feeling kind of a bit crust fall?

**S15:** I did get a lot of positive feedback particular if they've got parents evening when you go when your parents are there and oh yes S15 is good at this, but probably not too many criticisms obviously in some areas that would have been not that I can really recall.

**Interviewer:** But you didn't have any sort of remarks from teachers which made you think I am not actually good at this?

**S15:** No.

**Interviewer:** That's okay I just want, some teachers are very vocally and they can be quite discouraging and sometimes it does affect people and how they do things late on. Okay right sketching where you are now doing your course at the moment nearly at the end of your year scary. How important throughout your course and working with Land Rovers as well, how important has sketching being as part of your course. And I am talking about the kind of sketching you do when you are given a brief or a project and you've got to come up with ideas and develop them into something through a process of thinking scribbling developing to a stage where you can take them on to visualize or make models or whatever, but it's that initial sort of ideation development stage that's important.

**S15:** That is one thing that I don't particularly like about a project so I much prefer the part where I know what I am doing then I've just got to make it work type of thing. So the sketching for me I think doing the BSC it's probably not as much emphasis on it as the BA anyway so one respect yes the BSC work for me because I don't have to probably too much on the sketching, but I don't know I don't mind it now when I was a kid I definitely enjoyed sketching more than I do now. I don't know of which because you look at the competition of designer and think oh well those are really good I am never going to get that good so it's not something I want to focus on or whether it's because, I just don't think oh yes I want to sit down and sketch that is not something I want to do in my spare time I don't think, so when it comes to that part of the projects it's not the [unclear 9:30] to get to.
**Interviewer:** Okay so if you are given a design brief or you know this is your project for the next 6 weeks, and you've got to come up with something and then present and develop it properly. How do you go about doing that initial design development getting all the ideas in?

**S15:** I would probably start with some very rough just speaking my mind on the paper really and then I wouldn't spend too long on that, I think I would try and if I had a few different ideas that I saw I'd probably try and pick elements from a few of them which I liked and then try and incorporate that into another intervention and then try and probably improve it from there so I wouldn't necessarily pick one design that I've Just scribble down and go with that I try and look for ways I can make it better, but I feel like a lot of my development comes from maybe when I Cad Model and then I change it from there on so my sketch phase is probably not as big as it should be, because I feel like I progress when I've seen it maybe 3-dimensionally.

**Interviewer:** Do you do Cad modelling I know of product design have things like [unclear 10:50] but do you do the Interiors and architectures guys do a lot of White Cad modelling. Does that kind of modelling help you when you are developing things?

**S15:** I can't say I actually did any of that with my main project this year no I did I think it is mainly me putting it into a Cad model and then being able to see on the screen. And actually doing some rotations and doing rotation and movements okay so suddenly it's at 3D thing in the space.

**S15:** I think because as well when I was on placement I did my placement in surfacing so surface modelling, and work between designers and engineers so the designer's would come and draw your picture and then I try and take the picture and then put it into the Cad so I think it's really influence my work this year as well. And I did do in my project this year I sort of did A Cad model I thought okay that's getting there I printed it off and when I looked at the physical thing it's not how I wanted it, so then I've gone back to the Cad model and Change that. Every now and then I have done some sketches when I wasn't sure what would look best instead of spending time implementing that into the Cad model and then I've [unclear 12:10] and do it so if it doesn't look very good then I would probably draw what I've got already and then sketch on some.

**Interviewer:** So you are looking at the 3D stretcher on the screen, and then drawing from that because you said you are good at doing the observation drawing So You observe then you draw and then you are able to develop from there that's interesting.

**S15:** For example, I did a facet design on one of my part so it was plain to start with and I thought no that doesn't look right, so I sketch the form I had and then I drew a line texture on it and then I drew the facets and little sort of directions on it and then from that I thought okay well I like look at the facet one I will put that on the model and see what that looks like so yes.

**Interviewer:** So your 2-dimensional stuff which kind of is a bit of sketching actually turns into 3-dimensions sooner than it does for other people perhaps I am not sure I
mean it depends, but when I go through all my data what I get that you seem to be more comfortable working in this sort of 3D environment as opposed to on a flat sheet or something okay that's interesting.

S15: But then I could easily like I've said go back to sketch after looking at it in 3D, I feel like I get a better understanding of whether it would work or not in 3D than I do from a sketch.

Interviewer: Do you find sketches more difficult to read from then?

S15: In some respect yes because I know on placement some of the designers who didn't have a very good 3D understanding would draw you a front a side and a top view, and that wouldn't be 3 dimensional possible so you try and model it and say look no it doesn't work so from some respect I think 3D makes more sense to me.

Interviewer: That's interesting right slightly strange question when you are asked to sketch and I know in the BSC it's slightly less sketching than on the BA. If you are asked to sketch and produce sketch images or submit sketches or put sketches on the wall or sometimes you have kind of critiques and things. How do you feel when one of your tutors says okay we are going to do some sketching so we are going to go up on the wall and we are all going to look at each other's work, how do you feel what goes through your mind and how do you feel?

S15: Not too confident because that's not one of the things that I feel is my strong point, so when somebody wants you to show of something that you are not too good at it kind of takes that away a little bit, so maybe it's not I wouldn't look forward to it I would probably spend a long time sketching to try and make myself happy with what I'm doing because I know that's not something I am good at so I have to put more effort in to get to the standard where everyone else is at.

Interviewer: So are you making yourself happy when you spend time on these sketches or are you making other people happy and see you in a better light then you would necessarily, you know if it was just your sketches and you wouldn't have to show them is it a different situation?

S15: Yes, because I've done this in my project actually now you've pointed it out when we did on the very first assessment so it was to come up with 3 concepts so it was very sketchy, sketchy and we had to do sort of a mini presentation in front of everyone so my sketches were going to be in front of everybody. And I spent more time again looking at images of say people's [unclear 16:00] and things on Google trying to replicate those I spent a lot more time trying to go around in fine liner putting a bit of shading on to make them look a bit more lifelike. If you look through my portfolio most of the sketching are just pencil drawings after that because I know that my tutors are going to be looking at them but I feel like after that point my sketches were mainly for me communicating my ideas and I don't think a bit of fine liners is probably going to make a huge amount of difference in me getting that point across, so does that make sense.

Interviewer: Yes, absolutely it does make sense so therefore your eyes only and then your thoughts your thought processes then you don't feel compelled to make them looked perfect they are just a working tool.
S15: Yes, I am quite happy with okay I like to use a ruler but pencil would be okay for me I feel like I've got my point across, I know that the tutors will be looking at that but I am not standing in front of everybody showing off my work.

Interviewer: Okay it's a different situation okay interesting. So do you feel that you are kind of inhibited I mean you are talking about being slightly anxious and it's not your favourite part, you do feel that you are to some extent a bit inhibited or reluctant or preferred to use other media. I am not trying to get you to say yes I am sketching but I am just trying to sort of to get an idea of how you perceive yourself really?

S15: I am quite critical of myself I think I am probably not the worst Sketcher in the world, but because I am not the best I don't want to show it off I am not saying I am best at everything else but I feel better with doing other things.

Interviewer: Okay right so in a situation where you are possibly showing your work amongst your peers and other tutors. Do you have a fear of being judged by other people do you think that's quite a big part of what the anxiety could be or the reluctance could be?

S15: I think maybe yes I think a lot of I just don't like presenting in front of people in General so maybe I mean not necessarily related to just sketching but I don't particularly look forward to presentation in front of everybody in that type of thing. I think it's because when I am watching somebody present I'm thinking in my head maybe criticism or things that they've done good and I am aware that other people will be thinking that about me, so I am a bit okay I wonder what they are going to be making of it.

Interviewer: Okay and when you have presented work in a group situation like that, what sort of judgment have you had from peers and tutors have you ever had any sort of negative?

S15: Not that I can think of they have not really said anything negative, I don't know how I just get myself worked up about it and probably not for that bigger deal really for any particular reasons.

Interviewer: So do you feel that your sketches are almost a kind of an aspect of you so you are talking about being quiet anxious about you know we have to stand in front of a group and pretend it is kind of drawn-out horrible situation. Is it that you feel your sketches are kind of a part of you like they are an aspect you know like fine artist produce work and it is a kind of an aspect of the extension of them. Is that how you see your sketches or do you see them as something very separate?

S15: I don't know I think they could be [unclear 19:46] me in a way I've never really thought about it like that.

Interviewer: They very much show and sort of map out your thought processes so they are very kind of closely linked to how you think, so I wonder whether I mean unconsciously because sketching is something which people tend to do very unconsciously it's just something you do. I am wondering whether because it's a very it's
like singing in the bath it's that kind of you know I will do it but don't let anyone see it. I just wonder if it's that sort of that kind of thing?

S15: It could be because I use sketches as a way to get to the end result and I am normally like at the end of a year project presentation, you'd probably not going to be looking too much at my sketches because I am going to be showing you the final thing, so I feel like I may be phase over the sketches a little bit to get to where I want to be so yes I probably don't put as much emphasis on the sketches as if I were an artist or somebody who that sketch is the final piece of work that type of thing?

Interviewer: Yes, it is purely a process mapping a process.

S15: Yes.

Interviewer: Okay in your course at the moment are there any things to do with sketching or that early stage of design ideation concept development, and using sketching too kind of support that process. Are there things in your course which you would like to have had been taught or shown which you haven't at all, are there sorts of gaps you feel and this isn't something I would go and discuss with your course or so don't worry it's just for my research. Are there things you think God I would like to have been taught XY or Z?

S15: We as BSC never got taught Photoshop and that's a huge part of a design tool, I'd already been introduced to Photoshop on my year 10 work placement 2-week long thing. And yes I have an old vision of it for myself so I had already been able to use it become familiar with it before starting the course so I knew a few basic tools and things like that, but we never got actual lessons on that I think the BA students did. And then there is other software for sketching like Sketchbook Pro and things like that but yes the BA's they do get sort of lessons on how to use these things and I never got any digital sketching lessons which I've never really delved into digital sketching too much because I am probably a bit afraid of it.

Interviewer: Is it because it's digital or is it because again this sketching thing which you are not quite so keen on?

S15: Yes, probably a bit both really.

Interviewer: Would the digital make it more kind of palatable is the idea of having possibly a digital sketching tool, would that make it less unpleasant for you?

S15: In a way because I think you wouldn't have to start with pencil you get a more defined line to start with I think with a digital sketch, and it probably easier to because I like to trying odd markers but I am not very good with actual pen markers but I think I'd may be the fact that you can undo it on digital sketching is very reassuring whereas the fact [unclear 23:24] something down on paper and like I can't just undo that so yes and I don't like having to redo a paper sketch I like to do it and then move on to the next one.

Interviewer: Okay so with sketches you draw them and then you move on but you keep the last one you've done so you are kind of building up a pile where with digital you literally.
S15: I feel like I keep working on one.

Interviewer: Yes, you have that one thing so it's slightly different. Okay were you taught on your course it's a bit of a strange question, were you taught on your course how to design this is how you design this is the process you go through. I am just curious in that Because it's product design and what I am interested to know how much you are taught?

S15: I think that would have been more I probably do in the first year and we did have a lot of sort of lectures the first year but at the time I didn't feel like they were relevant, I would go into it and sit there for an hour and think why have they just told us about that, but actually when you look over like lectures that they gave you over the whole year they actually did compile to something that was given as indications of go look at this or you know delve into that, and I probably didn't take too much notes of that when I should have done.

Interviewer: Okay so is it that the design process for you is something that you have learned as you have gone along, is it an intuitive thing that you’ve kind of have within you anyway?

S15: I think I felt that having studied graphic products which was a design process before coming to University, I felt like when I got here and saw all the peoples work in the first year I felt like I have a better understanding of what some of those did because I had already had that previous knowledge, while some of people may come from fine art but there is no exam process and you just go with it. So I think it's probably stems from high school and I think of how I used to do it then it's just obviously enhanced it coming to University and build on it and oh you should have this in here at this point and that type of thing.

Interviewer: So when you think about designing something do you have this sort of not a fix set of things you have to do because every designer is different and every project is different, but do you feel confident that you know what you need to do to get to the end stage?

S15: I think I would start off the problem I would probably start with some sketches or a research area or look at what people would want from that product or that kind of thing. I mean for my project this year my research played a huge part in it, and so I did a survey and the results I got from that basically lead my product to be what it is and to be fair I’ve never really done as much research in previous projects and probably struggle more, so I think that was a learning curve this year I've realized actually the more research I've done the more it's helped me so then it's just obviously enhanced it coming to University and build on it and oh you should have this in here at this point and that type of thing.

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So then I figured out what functions and what my product needed to do and then from those points then I could see okay well it needs a button here it needs this here and then I was able to put that into sketches more easily.
Interviewer: So the aesthetic then goes from the actual working of the product, and does that sort of development of the working when you are talking about coding and talking about the electronic side. Is that something you use a sketching process for or note taking process or is it purely the styling and the aesthetic?

S15: Probably I would just use sketching for more Aesthetics but not use it, well I use it before the electronic stage the concept of the initial what do I wanted to do so if I leave my product behind an alarm goes off to let you know you have left it behind, so I did like some rough sketches to map out that in the visual.

Interviewer: So you could see how it was going to work not necessarily look but how it was all going to link.

Interviewee: Yes, so I think what the functions are of the product when I work those out then I was able to sketch it easier because I knew what I needed to include, because I feel like if I had start sketching before I knew what the product was going to do, that had been not had accounted for [unclear 28:33] and things where they needed to be.

Interviewer: Yes, okay right I am going to ask you about working memory of loading you know when you are designing and you've you got lots of things going on around in your head, and sometimes you end up with too much stuff and you forget things. Do you use sketching or any kind of note making or scribbling or anything on paper to actually get the ideas out of your head so you don't forget them?

S15: I do that.

Interviewer: So how often do you do that is it something you do a lot when you design do you find that you end up with just too much stuff in your head, but some designers work purely by in the mind they don't jot anything down?

S15: I find that if I sit down to sketch I can't think of anything, when I am doing something completely not related to my project it will come to me and I will think I probably need to write that down and then I will just go grab a scrap piece of paper and scribble it down. And I will collect those up and then when I go to sit down to sketch I will be like oh yes I remembered I was going to do that and that and then try and transfer them.

Interviewer: So when you get these things that you need to put down on paper in your head, is it a sort of list of things or is it an image or is it things like a colour or a surface or does it varies?

S15: Yes, probably it varies really I mean particularly form like a way a shape could be or maybe how a feature will fit into another one, because I did a sort of like a Smartwatch type additional to my product and I was trying to think of a way as in some of the fit bits clip out of the housing that you put around your wrist so I was trying to think of a way that I could do it that was obviously different to fit and a little bit unique. And then I just had this idea it could slide in instead of popping in and out so then that was something that just came out of nowhere and then I had to scribble it down. And then I was think okay well I've got an angled it's quite a main feature on my medication K so I want to try and incorporate some of these features into this. So then I was
thinking how can I get an angular feature on their, and then I was making breakfast one morning I thought that's how I do it and I then just jotted it down.

**Interviewer:** Was it something for making breakfast not knowing [unclear 30:57] and just jump in that's interesting isn't it.

**S15:** I started thinking about it I am always trying to think of a way to solve it and then every now and then it will just probably pop there.

**Interviewer:** Okay and when you are sketching so you sort of scribbling down some ideas your kind of working on something developing. Do you ever look at things you've sketch and see different things in those sketches, so you’ve kind of reinterpret them as something different or in a way that you hadn't set about doing?

**S15:** Yes, because sometimes the idea that I have in my head doesn't look like that on paper, so then when I look on the one on paper I think oh actually that's good or actually that's not what I was thinking about at all, and then have another go and draw what was originally in my head or try and build on the one that was on paper that I hadn't originally thought of.

**Interviewer:** So these possibilities sometimes come to you purely because you have made a mark on the paper and something has come out that you haven't anticipated, do you then work through it and you kind of then take it forward?

**S15:** If it's something good about that sketch then yes I will try and include that.

**Interviewer:** Okay there is something called [unclear 32:10] and seeing that when you are sketching. And seeing [unclear] is what you are doing when you are kind of visualizing something in your head and then you put it down on paper and sometimes it does or doesn't come out the way you'd hope. Do you find yourself doing that a lot is it the imagery or the shape the aesthetic of the items that it's in your head then you kind of get it out, or do you find that you scribble out and then you think actually it's in there somewhere I am going to push it forward? I mean people use a combination of the 2 and sometimes and not realizing?

**S15:** When I see it in my head I probably don't see the full picture I probably see an aspect of it, so as in okay I wanted that angle of line in there, so then I put it onto paper with the rest of it and then it made sense or didn't make sense.

**Interviewer:** Okay so that's kind of testing what's in your head, and then when you put things down on paper and you are not quite sure where they are going, and you are seeing things come out of them does that happens to you as well?

**S15:** Yes, when I draw it on paper it won't necessarily look like what was in my head but I can see from that sketch.

**Interviewer:** Something else possibly you can work with.

**S15:** Yes.
Interviewer: Okay that's interesting right I am trying to think if there's anything else I need to ask you. As a millennial you are a millennial because of your age did you know that?

S15: No.

Interviewer: Millennials tend to like technology social media you know everything paperless. I mean you were talking about using things like Photoshop and stuff with packages things like a digital sketching you may or may not interested in sort of pros and cons. Do you feel that you learned better using technology than by use manual hand drawn hand demonstrated old fashioned if you like ways?

S15: Not necessarily solely technology depends what it is some things would benefit from being in something in technology that would make sense, but then something’s the old fashion way wouldn't make more sense.

Interviewer: So would you stick with a Sketchbook Bits of Paper or a pen hand drawn things hand scribbled ideas, would you stick with that if somebody came and said here is a wonderful tablet with a stylus for sketching your ideas and storing them?

S15: I would probably have a go with the tablet but I wouldn't scrap all.

Interviewer: You would still revert to that element.

S15: A bit of both I'd probably take I did it with my boyfriend has got one of them [unclear 35:21] that you sort of plug in. And I did a sketch on paper I thought was okay I scanned it in and then try to enhance it on Photoshop with the pen so if somebody said you know here you go draw stuff digitally I would try and narrow down what I was going to draw by normal sketching and then probably put my more final idea on the digital one.

Interviewer: Okay but would you [unclear] your kind of early thinking process as still going down on paper or going straight into a digital?

S15: Early thinking would be paper I think.

Interviewer: Okay right I think that's all I need to know.
Interview with S16

Interviewer: Okay right could you just so I've got a record at the beginning of the recording, just tell me your name what course you are on the University you are at and where you are at with your course at the moment?

S16: So S16 product design BSC at De Montfort University, and I just about finished all my handing I've got one more to go and then it's just degree show and [unclear 0:35].

Interviewer: So you are almost at the end?

S16: Yes, almost finish.

Interviewer: Okay it's that nice feeling.

S16: Yes, and no I mean I am going to miss being at University it's been a kind of very comfortable environment I enjoyed coming in and doing work as long as the projects don't run forever, but you can't stay on that for long so you have to move on at some point.

Interviewer: And you did a year internship is that correct or you didn't do it?

S16: No I didn't do any placement.

Interviewer: Okay because I know some of the guys did a sort of year between the 2 and 3 and they did a year out.

S16: It's actually half and half.

Interviewer: Right and have you got sort of things planned work-wise when you finish are you applying or taking some time out?

S16: I haven't start applying yet but I need to do things in terms of CV and portfolio for myself and I do want to take a bit of time to rest, but with things like the degree show I feel like it's more of a relaxed piece and so I signed up for one.

Interviewer: Yes, it's quite nice to be doing that okay right how did you get to be on the product design course what process did you go through from the end of secondary school when your sort of 16 just talk me through what you have done between times?

S16: Well I started when I was 16 I was doing my GCSE modules and it was really on what I prefer doing and it's between history and graphic design, so in A-level I went on to doing design math physical and history drop the math because I didn't like it, it was too hard so it was kind of like tossing between history and Design. And history I didn't feel I had enough career options really it was very vague kind of feel to go into, I felt design partially more enjoyable and also just had a better career Prospects. So I actually went to a different University first, I went to [unclear 2:34] and I didn't really like it there it just didn't suit me and it didn't fit so after a time I decide to leave, and I spend the next 5 or 6 months actually working at a primary school so I learned the support system. When I was there one of the teachers said she had been to a degree show at De
Montfort I was quite impressed, and I still felt I wanted to go to university and get a degree and do design. And De Montfort is very close on from [unclear 3:06] so I went for an open day quite Quiet One and I looked around and I thought it was quite interesting I spoke to a few tutors and I apply through clearing because was worried I had to spend another year in [unclear 3:24] University but I managed to get in the last bit and start my degree.

**Interviewer:** Okay right can I take you back to your childhood just talk me through the kind of relationship you have had with things like sketching, drawing painting making marks on paper or anything do you remember doing that kind of thing as a kid was it something you love doing or weren't bothered about or?

**S16:** When I was a child I used to kind of typical art class things I think I fairly enjoy them but not to any particular degree, but I do remember when I was about 10 I went on a holiday in Greece and obviously you know I spend a lot of time on the beach and kind of just doing nice things. And there were parts of the day it was so hot and you had to be in the house and it was a bit bored. So I went and got a paper [unclear 4:15] notebook and some drawing colour and I just started sketching and I really quite enjoyed it and I like the idea of kind of doing concept sketching stuff. One of the things I'd seen was people doing it for films like science fiction films and that seems like really quite exciting and interesting and I really like that. And my older brother he does the same thing as me he is a product designer so he is quite good at sketching and he showed me some techniques and I just quite enjoyed it, it was quite a nice thing. It was quite frustrating because I wanted to get it just right and as a child that's difficult.

**Interviewer:** So the kind of sketches you were doing at that particular point in time on your holiday, where they sketch of things that you were seeing views, or where they things that were kind of generated by your own mind that you were putting down on paper?

**S16:** I would definitely say my own mind there were kind of thing that a stereotypical 10-year-old thought was cool like robots and kind of soldiers and stuff. And I had it was a booklet for a game and I'd try and copy the sketches from that and get them right, because it was just things that seems cool to me it wasn't so much like Landscapes and real life it was very imaginative.

**Interviewer:** Okay going through education did you do art GCSE?

**S16:** No it was graphic design.

**Interviewer:** Graphic Design okay going through that process and also with your A-levels where you are doing sort of creative subjects. Did you ever had any sort of incidence or issues with tutors been supportive particularly supportive because sometimes that happens you have somebody who really kind of supportive and gives you that lifts you need. Or did you find that there were incidents where you were being perhaps criticize unfairly or discouraged from doing that kind of thing?

**S16:** I will definitely say GCSE it was more mix because there was students there who weren't particularly interested in schools and you just pick topics it is kind of less Focus but the teachers I really enjoyed, and when I got to A-levels especially I really [unclear
the teachers I’ve had I was very fortunate they took a real interest in us they really tried hard they were, it was just a lot of fun it was a really enjoyable environment work together really help us out support us, and it was definitely kind of you’ve got the sense for it maybe designers are kind of just more fun more enjoyable it’s like a more interesting kind of area. And definitely I had excellent teachers designing but I think I had quite excellent teachers in A-levels in general, but design definitely stood out for me people this is the way they interact it was more real word it was more fun it was more kind of less teaching it was like students more kind of [unclear 7:12] level.

**Interviewer:** Okay things like sketching where you are now with your course how important has that been for you I mean some students just don't find sketching is a necessary part they don't choose to use other means of generating. It's the generating and creating of ideas at the early-stage of the design process I am looking at. So I am wondering do you actively use things like sketching or mark making of any kind, or do you go straight on to things like Cad 3-dimensional model making?

**S16:** I have to say sadly sketching isn't my strongest suit as much as I enjoy it physical pen to paper those people are just far more talented and spend a lot more time practicing. So I do prefer the actual kind of do my work to try and jump on to Cad earlier because I feel like I can get a more realistic View kind of change things quicker and it's less frustrating, but when it's kind of without the time constraints especially something I’ve more gone into this year is digital sketching in Sketchbook Pro and stuff. And I really like that being able to you know when you go onto YouTube and you find someone who is very good and they create something really impressive and you think I want to be able to do that, it's a real it gives me enthusiasm because I would love to be that good it's just the time constraint of you have to get work done you have to make progress, Cad I find is easier to do that with.

**Interviewer:** Right it's easy so do you find Cad is an easier thing to take an idea and model the way you see it in your mind's eye, then by picking up a pen and using a piece of paper.

**S16:** It's a lot easier and I think the important thing is it's a lot easier to get an idea across to someone else if it's just your sketches maybe you see some details that someone else's missed or maybe they view it in a different kind of, you haven't been able to display the detail perspective or something. Cad is a kind of more physical it's there that's what it is you can rotate it around and look at it and kind of get any idea easier.

**Interviewer:** When you’ve got a Cad image in front of you and it isn't a sort of pretend like a 3-dimensional it's a model in space. Do you find that you do all of your development with that directly or do you take that and perhaps draw from it, do you use a combination of either observation and putting that down on paper, or do you stick solely with that particular software package?

**S16:** I would have to say a lot of it relies on where you are and what's available I mean if I am in front of a computer I would probably go to Cad first and try and make some kind of detail changes, but if you are working with something else and I often have like a little A5 kind of notebook with me, if I get quick idea before I lose it I want to just sketch it down quickly so it is really where you are and what setting you in the boat. If
the computer is in front of me, it would be Cad first otherwise it's kind of a sketch again idea.

**Interviewer:** Do you use sort of physical modelling [unclear 10:26] that kind of thing White Cad?

**S16:** Yes, I have done it's something I use quite a bit but the problems I find doing too many creations iterations of that it's quite time consuming and you can skip like quite a bit of progress if you go straight for the Cad model, and if you look at the Cad model and really Analyse That you can probably cut out a bunch of your first iteration of physical modelling because you can make it close to what the feasible for a product first, but once again it's the time constraint so if you had a lot of time to show your progress and show your thinking you would be excellent but it's deliverable against development. [Unclear 11:13] modelling is very good and it's usually better when you work on like a milling machine because it's more accurate I find with my [unclear] models often come out not the way I want them.

**Interviewer:** Okay so the Cad process the software it's that sense of reliability you know exactly what are you going to get from that particular software so it's kind of trustworthy.

**S16:** Yes.

**Interviewer:** Okay so say you are in a classroom situation with your students and you are being asked to sketch in response to design brief or something. How do you feel when you are told that you have got to sketch, what is your sort of physical and emotional and mental response to that sounds a bit of a strange question I am just trying to gage how people responds, when they perhaps are a little bit inhibited or prefer to use tools other than manual sketching?

**S16:** I have to say it depends on who I'm with at the minute because I know the people around me and I am comfortable with them it's less worrying but there is always that thing of you know someone else is better at sketching, theirs is going to look better I would worry that I am not going to be able to do what I want in time and mine is going to look rubbish next people you always worry about the comparison, but I try and kind of remedy that by thinking I am not trying to create a masterpiece I am trying to get my point across so taking that approach helps.

**Interviewer:** Do you think that there is a misunderstanding or a kind of confusion between the ideation sketches you know when you are producing scamps rough stuff, and it is helping your brain to work and the kind of sketch where you are producing something which is an artefact in itself. Do you think that's a sort of a crossover and a confusion amongst sort of your cohorts of students as to you know an ideation sketch it doesn't have to look fantastic but it has to be functional. And a presentation sketches is something much more you know it's different, do you think there is this confusion?

**S16:** I think there is a kind of a problem because you get different lectures different tutors they want different standards and it's hard to match that, but the problem is really I suppose with people personally I am very self-critical of my work, and I think a lot of designers are they try to get things just right. And it's very difficult to say when you've
got time it's difficult to say [unclear 13:56] I can move on from that and you want it to look just right you want to really impress someone with your work so kind of saving that until the end can be difficult, do you want someone to go for your entire work and think wow that looks really good.

Interviewer: So it's a kind of impact factor on top of this process where you are putting your ideas down and working through them okay. Do you consider yourself I mean there might be a yes no or sort of in between answer to this? Do you consider yourself to be a bit sketch habited do you find you know is it something you feel kind of inhibited in terms of I would rather be doing it a different way, I mean what you have told me so far is creating a sort of an idea of where you are coming from?

S16: It's certainly not my strongest suit I know that I am better than some people at it, I enjoy it but like I say I always want to do something that looks nice that looks impressive. And I know that there are people on my course who can do what I can do in 10 hours they can do it in a couple.

Interviewer: Okay and do you have with your own sketches when you are presenting say a portfolio of support work for something. Do you have this need for perfectionism and how do you go about it?

S16: If I were going for say an interview and my portfolio and I wanted to present something I would want to spend a lot of time making it very good, because the worry with that is if you share something with someone and they say that's really amazing and they expect it from you in a few hours half an hour and you've done it in a day your kind of showing capabilities that you have [unclear 15:45] in the time frame that they want.

Interviewer: Okay that's interesting okay with your course at the moment are there this is a bit of an odd question; have you been taught how to design or is it assume that is something which kind of happens either intuitively or subconsciously?

S16: It's kind of half and half it really depending on your lecture approach really I mean obviously there is a lot of emphasis from University you have to learn this yourself practice is the way to go especially on this course, but you will have some lectures I had one lecture this year for example who said to me we are not here to spoon-feed you, you have to go and figure this out for yourself. And I have another lecture who said look this isn't the best way to do it I will show you and I will teach you and you will learn from what I have [unclear 16:45] with you but this is the best method for it.

Interviewer: And which way do you prefer being taught?

S16: Definitely the second way I find that if I am giving ideas I can run with it a lot more if I am kind of left to start from scratch by myself I certainly struggle. And I feel that as much as I appreciate I am not going to have someone around me all the time who tells me this is exactly how you do it [unclear 17:10]. Being frank I pay for a service I pay for the service of being taught the best way to teach me I feel is to show me and me to kind of copy and develop myself and that's the way it suits me.
**Interviewer:** Do you feel there are other students who perhaps don't enjoy sketching as much and kind of avoided it if they can. Do you think they would benefit or have they said that they would benefit or have you seen them benefit from being taught in that more sort of linear you know didactic sort of I am the teacher and I am showing you how to do this you look you copy and you repeat? Is that something that you think would be successful?

**S16:** I think very much so and I think especially because I am BSC we had a different module in first year it was math and science and BA had a sketch module. The sketching module taught them some basic techniques and I think it's the technique it's the ideas of things you didn't think of that helped your kind of really make quick Improvement, is what we would benefit from it is just the time constraint where they have so many teaching hours. And because we are BSC you are doing math and science and the BA are doing the sketching and I think those are only a lot in the first year kind of like can't we have a few sessions on how to sketch because it really helped us that was a very much [unclear 18:26]

**Interviewer:** That is interesting okay are there any other shortfalls in terms of how you have been taught on your course that you would like to see done differently, this doesn’t go back to a tutor it's completely confidential. I am talking about being taught techniques for sketching are there other sort of techniques and things that you think God I would like to have been sat down and shown how to do that, or how to Think Through a particular process?

**S16:** Yes, definitely there is kind of it makes a real difference we had a tutor come in the second year who just seems to have a lot more enthusiasm for us and [unclear] interest and that makes it really different and so I am kind of its more interactive with you. But the big problem kind of is with the developing industry I mean for example, we had taught a program in second year 3DS Match it's a rendering kind of program which is basically being scraped down [unclear 19:25] of key shocks and that's what the second years have been taught, and we want to use key shocks it's a lot better for us and it works a lot better but we've kind of miss the boat on being taught the software because we were too late so we have to learn how ourselves [unclear 19:40] and that's kind of the problem there is no one’s fault in particular because it is better to say this software doesn't work teach this one but when someone has already come through you kind of have to start from scratch to learn it, and there is a lot of points when you are going to try to render massive degree impressive degree board kind of sense I wish someone gave us a special few hour session on the basics to learn.

**Interviewer:** Okay when you are using sketching when you are in that early stage of design putting your ideas together developing ideas, how much of that is actually done via-sketching can you sort of think of it as maybe a pie chart or a percentage?

**S16:** The actual kind of forming an idea to take forward is kind of %80 %90 sketch there is a lot of it but that comes from making bullet points of what you want to a specific ideas and forming that into sketches.

**Interviewer:** So that's not necessarily a Sketch that's literally sort of mark maker it's on a page so that almost is still consider to be sketching because you are taking something
from your head placing it somewhere in the real world and working with it, but that is something which is that a larger part of what you do?

S16: Coming up with initial ideas?

Interviewer: Yes.

S16: It's obviously it is very important at the beginning because it formed the entire process of where your design would go and that the degree kind of level the [unclear 21:24] level it is your design it's not a client’s so you can change it a lot for example, my design at the beginning of this year started with a hand held devices change to kind of compact product for it to stays underneath the table. And it's a massive shift but it really drives where you go but there is a point where your kind of have to stop and say this is what it is I am moving forward but you do that relatively early on.

Interviewer: Okay so as a designer do you feel most comfortable when you are working digitally or do you feel most comfortable when you are working sort of manually on a piece of paper or [unclear 22:17] straight with the pen or pencil which point of the process do you feel like I am really enjoying this, you know you get that sort of designer buzz you are kind of in the zone you are in the design, what point what kind of methods make you feel most comfortable?

S16: I suppose it's kind of developing the Cad model when you know you have got something good and you know you have a good idea a good [unclear 22:45] and you can just kind of run with it and try different things with it and even the finishing off when you are kind of like you are making the last little details that really make some things stand out. Because it's kind of this you can design it to be typical example the difference between a very cheap phone and an iPhone they do the same basic thing it's the little details the real Fitness that makes a massive impact, and that takes a long time to get right but when you do it you are very proud of the nice things you noticed about it.

Interviewer: Yes, you give it the edge that it wouldn't otherwise have okay. I don't know if I've asked you this already I don't think I have this is the third one I've done today so my brain is I feel like I am in Groundhog Day. When you are in a situation when you are in studio with Sketchers and other people around you, I'm just asking you to think about those sort of fear of judgement that a lot of people get like someone is going to look at my sketches and they're going to laugh, or someone is going to be sort of critical or rude or someone is better than me that kind of thing. Do you have those sort of things goes through your head?

S16: I would do certainly in a new environment people I didn't know, when it's people you know and they know you and they know your strengths. For example, I am not massively strong with sketching but they might look at me and say okay he is not very good at that but I know he is good at other things so there is that kind of, but when it's the first impressions and you are trying to show off there is a lot of pressure and it can be definitely a nerving.

Interviewer: Yes, almost like I need to kind of establish a kind of.
S16: A sense of quality you don't want someone kind of looking at you and thinking you don't deserve to be.

Interviewer: And in those situation have you ever been unfavourably judged have you ever heard anybody say you know may be critical or harsh things or remarks or anything that have come in those situations?

S16: It was definitely a few students in the group who are very blunt and it’s just the personality they have if they think something they will say it. And it’s really how you respond to that so some people have the kind of thing oh well I am going to go prove you wrong. And some people are very self-critical say oh no you are right, and some people just get irritated and say get lost. I don't really like being rude to people so I won't say get lost but my attitude is more kind of like if you are going to say something if you are going to be critical be critical and offer advice don't be saying that’s rubbish.

Interviewer: Has that ever happen when you be in a situation where you've had to sort of defend your work from other people in a studio situation?

S16: Yes, there's has been time where people have come over not like horribly but have said that's not particularly great I don't think he has done a particularly a good job. And often it is just kind of a thing of when they say it it's probably a reason to say which is probably true and it does take a hit you think that's my work and it's harsh to say it but you do have to have the mind-set of okay even if they are talking rubbish in which case you feel confident in what you have done or they are right in which case okay I need to work on this I need to improve it it's really how you respond to it I think.

Interviewer: Okay do you do something called working memory offload, do you when you are designing early stages got a bit of paper and a pen. Do you find that you have so much stuff in your head that you have to put it on paper in order to get it out somewhere before it's gone?

S16: Yes, I would say generally I do I mean there is always that irritating thing of for me I can [unclear 26:51] so you can't help but to have your mind Wonder on your Design product and think about it when you've just come back from working on it, and it's very irritating when you lose those kind of sharp ideas that you think oh that's something that might be something good. There is a temptation just to make it a bullet point even something that doesn't explain it but brings your mind back to later on when you remember.

Interviewer: Yes, like a little signpost back to that moment of awareness.

S16: Yes, definitely it's important to have because as much as I think anyone no matter how good they are you are going to forget some things you do it is important to note them down.

Interviewer: Okay and do you also do something call reinterpretation it's when you scribble something down and maybe you've go back to it, and in that drawing in that image you see something that you hadn't envisaged to begin with or planned to begin with. You see maybe a shape or a structure and think actually I hadn't intended to do
that but that looks really good I am going to carry that on and work with that, does that happen very often or is it something that happens you know once in a blue moon.

**S16:** I wouldn't say it's massively common because especially when is your own design it gets so stuck in your head in certain ways very difficult to kind of be reinterpret it but every so often you do come back to something and it's not so much of a change as something you kind of add on and you think well if I did that and then also did this with it that would work but kind of looking at it in the new way is more difficult because it's like when you are starting ideas they always say make sure you don't kind of get Focused and fixated on one idea for [unclear 28:34] concept because very good chances it's not going to be the best that you will get stuck in it and you'll just do iterations with that idea, and it's quite I wouldn't say dangerous but it limits you certainly.

**Interviewer:** Okay so when you are designing when you are coming up with your initial ideas do you find that they are in your head as sort of fully formed ideas as detail or a surface as a visual thing?

**S16:** No I wouldn't say so much I'd say it's more kind of they perform certain features they have certainly little kind of characteristic that your kind of you build around more.

**Interviewer:** Right so it's almost like the requirements are there.

**S16:** Yes, and then your kind of try and find a way of creating concept out of those.

**Interviewer:** Okay and how do you then go from that little sort of bullet points in your head, how do you go from that stage into here is something I can now go onto Cad with or do you go straight onto Cad to do that?

**S16:** No I definitely kind of put them down first but what I might do if I have a list of 5 bullet points I might start off by Concept out how to do 2 of them, I'm going to look back at the list and say okay how do I corporate a third one how do I change and modify for a fourth one, your kind of you have to start somewhere with the basic things and kind of build on it I find.

**Interviewer:** So it's not the whole thing at once it's kind of bits which your kind of building up together to give them a kind of holistic.

**S16:** Yes, because if you try and do everything at once you are going to be I think overwhelmed a bit frankly it's important that you don't kind of try and fit everything into once otherwise it's just going to be something unfeasible in the end.

**Interviewer:** Okay right let me just check here I think I've got everything I've need I have asked you everything I need to I should switch this off.

Audio Finish
Appendix 8 – Interviews with students: sketch fluent

Interview with S1

Interviewer: Alright, what I’m going to do, I got some questions to ask you anyway because you enjoy sketching (inaudible) kind of enjoy sketching. Can you just tell me just for my records up here, your name and the course you’re on and what sort of, how you get to be on this course? What you've done before in terms of this like ‘A’ levels and college or whatever?

S1: Right. Do you say my age as well?

Interviewer: No your ‘A’ levels

S1: My A levels, okay. I’m S1

Interviewer: Hello S1

S1: S1

Interviewer: Yes that’s ok. So just so I know which (inaudible) obviously you don't sound like (-) but yeah, it helps. That’s a good thing.

S1: I’m on the interior architecture and design course at the University of Suffolk and originally I did intent to study architecture. I did six months at the University of Westminster, straight after doing my ‘A’ levels. I did fine art A level, biology, chemistry and maths and yeah. Then I ended up thinking I wanted to be an architect and I struggled so much. I did not enjoy the layout of the teaching. The type of teaching and I didn't enjoy the class size because it was massive. Whereas current is a massive difference. The classes were about a hundred in size and then coming to like ten people max is a big difference. It’s a bit more intimate and you can have the chance to talk to your tutors and you have a better relationship with them but I took a couple years break in between leaving University because that completely put me off and I went to, I think it was a wedding and they had like the after party at Isaac’s and in the morning I walked along the waterfront and I saw the waterfront building and thought oh, that would've been amazing to go to the university and to be able to look out in the open water and then I wasn't going far in my waitressing. So I thought, oh maybe, because I do want to do some sort of designing job and nobody will take me on without some sort of degree. Yeah, I just randomly turned up to one of the open days and I spoke to the head tutor, gave me an interview and yeah. Just went from there basically.

Interviewer: Okay, what was it about the architecture degree you didn't like? You talked about the class size but how did it differ in terms of the (inaudible)

S1: It wasn't as creative. I felt it was a lot more structured. You were very, it’s very linear. You weren't allowed to branch off, didn’t use any colour, wasn't that imaginative.
Yeah, it didn't suit me in general, and it was a lot of stress being in the center of London and the commuting and, because I had to commute in from Wembley into Baker Street every day and you get in the rush hour trains and it’s so expensive. It’s just a load of things but yeah, the course definitely wasn't for me and having to do that for seven years. Definitely wasn’t an option.

Interviewer: That's a massive commitment if you’re not enjoying it anyway

S1: Yeah so that put me off for a long while.

Interviewer: Okay, interesting. Bit of a strange question. Can you go back through your sort of younger years, your childhood? Can you recall your relationship with sketching and drawing throughout your life? So can you remember doing things when you were little at school?

S1: My Mum has always encouraged us to be like very creative at home. We'd always be doing like painting, drawing, cutting out, colouring books. Anything creative and arty and we'll do a lot of homemade stuff. So even if it’s like cookery it’s, we didn't use a lot of technology. I was never into TV or computer games, anything like that. I've always been more hands on with that sort of thing and all the way through school I’ve always been encouraged to just to keep on going with like the creative side of it. Like if you brought home a painting my Mum will always put it up on the wall and they'd always talk about it and yeah, it’s not something that they just hide and, ‘oh, great, that’s good,’ just put it in a cupboard. It’s always put up and you, yeah, I remember me and my Mum had this like weird little game that we used to do when we were younger because we didn't have like computers or anything. We'd have loads of magazines and we'd build our own imaginary houses because our house is pretty awful. Now this is how I’d like to live. This is how I’d like my bedroom to be. Cut out people from magazines and toys and different room layouts so you can put you own lamps in there and your own desk and yeah, by the end of it I’d have like, but normally it would be like an A4 page per different room and you just build like a mansion type idea. Just lay it out all on the floor.

Interviewer: Just from the magazine cuttings?

S1: Yeah, you just add to it every week end.

Interviewer: Yeah.

S1: Yeah, your house will just grow really with you but I loved that game so much.

Interviewer: Yeah, yeah.

S1: So just being able to create your own little world, really.

Interviewer: Yeah

S1: I don't know, there was just no limit which I quite enjoyed.
Interviewer: Right. So did you do, can remember doing things like painting and drawing at junior school or primary school or doing that kind of thing at that age?

S1: Yeah quite a lot of them. I remember one was like, the butterfly one where you like paint it and your hand prints and you fold it and you open it up. I always remembered being at school. You got all of them on this washing line, like idea, like, drying, yeah.

Interviewer: And you enjoyed that?

S1: Yeah, I didn't really enjoy doing GCSE because they put a lot of focus into laying out your sketch book. It had to be very presentable and all your titles had to be very neatly written and very laid out right angles, all stuck in perfectly, no smudges on pages whereas you come here and it’s free. It’s your sketchbook

Interviewer: Yeah, yeah.

S1: But GCSE no, it was very…

Interviewer: So was it GCSE that was the point where you started to have a slightly different relationship with sketching that you felt, if you felt differently?

S1: I felt a bit more restricted. I still enjoyed it because I chose to do that course but it was a lot more structured and I didn't feel I was free with it but it was arty and there was no other courses at school that I wanted to take and then you got a little bit more free when you went into 'A' level; and my tutor and me didn't really agree a lot because I like to draw from photos and yeah, we used to argue about that quite a bit. It was only my second year that I started like, looking for myself or I've been looking through the eye of the lens and we actually started to get along a bit and she taught me quite a bit about drawing and my relationship of actually looking through my eyes and using my eyes and using my eyes for myself rather than relying on a camera.

Interviewer: Okay. Were there any significant happenings that have encouraged or discouraged you from sketching and drawing during your schooling?

S1: During my schooling, like, if I got a bad review on a piece of work on my GCSE, your tutor is like, this is awful or this isn't right, that would dishearten me but if you got a review back from someone and it’s bad, I’m very self-conscious of my work. If someone told me it’s not right I don't have it in me to stick up for my own work. So if someone tells me it’s bad, I instantly, ‘yes its bad it’s horrible.’

Interviewer: And it is very, art is (inaudible) very personal thing…

S1: Yeah

Interviewer: Personal to you because you created it and then you got somebody who's judging you based on what you project. Okay, right. When you design around here, you’re here now, not at school, what process do you go through to generate your design concepts?
S1: I’d read a lot but well, we start a lot with looking at the precedents. Like different examples that followed this brief that we’ve been set and normally take elements from that I might find interesting and create like a collection of that and I dunno. We used to go down this metaphorical route that which our new tutor doesn’t really like. Stamatis, he isn’t down this metaphorical thing because I remember with one of mine was the, was it the stairs or something where I did an octopus. Yeah, stairs, I must have done an octopus, and wen through like, Art Nouveau, and there was a certain staircase and I took an element from it. I kept on drawing and drawing it and then somehow it changed into this organic shape and then I saw an octpus in it and then the octopus and the tentacles kind of helped me with the movement of my stairs and how they unfurled and opened up and closed like a tentacle would, but, yeah, that’s how I normally go about it but then we did that with our most recent project and Stamatis just like slated everyone’s if they did a metaphorical type of route and they said we stuck to it too faithfully. That we should be a bit more broad with what we wanted to do. So we got quite lost, well I personally got quite lost with that because his idea and thought process is a bit different to Lianna’s. Yeah.

Interviewer: Well that's interesting. Okay, so when you generate concepts you start out with obviously the brief…

S1: Yeah

Interviewer: And do you put pen to paper straight away or do you…

S1: I get very scared at the beginning of a project. I get very scared to start the first page in my sketch book. Once you get that initial, like one or two pages done which is like research, then I’m a it more happy. I’m a bit more free , but I get really pent up and scared about any project before it starts

Interviewer: Right

S1: Just that idea of having a fresh sketch book, you just don't want to ruin it. By the end of it it’s just a mess

Interviewer: Yeah, yeah. Is it the thought of being judged by other people through your sketch book or is it the fact that sort of white paper, writers’ block feeling?

S1: Yeah, writers’ block and it’s the fact that this could be put towards your grade so it does kind of count. If it was for my benefit, it wasn’t in a course it wouldn’t really matter as much or anything to me and I would be like, ‘yeah it’s fine.’ The fact that I know this could be like a story kind of. ‘oh, first page of the story.’ When you start writing the story back in literacy and you'd have to do your first sentence, I hated doing that. It’s just that initial start off that I don't really like.

Interviewer: Yeah, yeah, okay. What methods do you prefer for generating your design concepts? What sort of ways about doing it do you actually prefer?
S1: I, loads of little sketches, loads and loads of sketches then quite often I’ll try to do like photos with small very stupid little card models and try and figure out the workings out with them and then you go back to your sketch book and try and draw it. Then you come up with an idea and think, ‘oh this will work,’ and then you try and do it and your card model and you know, ‘oh, no, that’s not going to work.’ I had, like, my studios opening up the flaps and this may (inaudible) but some of the flaps overlapped and then I got to figure out whether or not I wanted all the flaps to open and if they were going to fold up so they could actually open up together. Yeah, I use my card models a lot for that. Just, I find it hard to think things out in my head. I have to physically see it or do it myself. I can't just think about it in my head. I have to put it down on paper.

Interviewer: Okay, okay. Do you find the sketches helpful or 3D helpful? Which of those is the most…

S1: The sketches have to start it out. I need the sketches to know how I’m doing my models

Interviewer: Okay

S1: …and then the models influence skethes and sketches influence models but I have to have the sketches first before I do the models

Interviewer: Right, so you always start off with the sketching before you go into model making

S1: Yeah

Interviewer: And then that kind of pushes the process forward. Okay interesting, right. How do you record your ideas and thinking during the design process?

S1: Loads of random notes everywhere.

Interviewer: Are you notes or sketches or a combination or..?

S1: With the last project I had, I had actually had a book that’s was just mainly notes and measurements and just random little drawings but my sketchbook is mainly just drawings but quite often I have words in my head or just like a sentence, ‘oh, this could be this and this could be that,’ and quite often my sketch book doesn't make sense. It’s like loads of different corners have taken up where I’ve just run out of space and I'll go back to it there. It’s just like a collage really.

Interviewer: Yeah, yeah. So it’s literally recording your thoughts in whatever format.

S1: Yeah, just got to get it down on paper. Sometimes it just a panic just to find a piece of paper that I could write it down on.
Interviewer: (inaudible) for example this morning, how do you feel if someone gives you a brief and says, ‘okay produce sketch concepts?’ What is your sort of instant sort of (inaudible)?

S1: Run away. As soon as I get a new brief I want to run but then you spend time thinking about it and quite often if you look at what other people are doing it kind of, it motivates me. You see other people getting on with it. You’re like, ‘I can do this, they can do this, I can do this.’

Interviewer: Yeah

S1: But if I was on my own I’d probably take a couple of minutes for that. I would grab a coffee and try to do it in my own time but if you see someone else getting along with it kind of, I find it as a bit motivational

Interviewer: Okay and what is that fear, when you get that sort of, ‘I’ve got to get away from it?’ What is the fear? Can you kind of dissect that and…?

S1: It’s a challenge. Being given a new challenge I always find daunting. Especially when you haven't had any like build up to it. You don't know. It’s just like dropped on you. Oh no

Interviewer: Right okay, that's daunting isn't it? When you’re in a situation where you have to show sketches to a group how do you feel in that kind of situation?

S1: If I spend quite a bit of time and I've thought about it a lot then I’m happy. So but if it’s just a random little one it’s just like (inaudible). Don't really want to show that. If I know what I've drawn and I've thought about it then yeah, I’m happy to show.

Interviewer: Okay, so the initial sketches you kind of do for yourself, would you be happy showing those in a group situation or do you have to prepare something for the group situation?

S1: No, I wouldn't want to prepare anything. I feel I can talk about most of the stuff in my sketch book but when it comes to doing a presentation, yeah, I always feel like I have to have notes. It’s like all of my memory is just gone by putting it up on a screen I’ve instantly forgotten my whole concept, my idea, everything. But, by having my sketch book like I don't know, it’s like that connection because it’s mine really whereas a presentation is just like a little snippet of everything

Interviewer: Yeah, that relationship isn't quite strong maybe.

S1: Yeah, I haven't got the relationship that I have with my sketch book
Interviewer: No, that’s actually fine. That makes total sense. When you have tutorials for example, with Lianna or somebody else, their design tutorials, how do you use sketches in design tutorials. Do you use sketches in design tutorials?

S1: It’s normal just like a quick run through because you got so much to show them in a small amount of time. You just end up like flicking through the whole content of your book and you; I just tend to focus on the ones that I feel might have some promise in them.

Interviewer: So you’re happy to share those with your tutors (inaudible)

S1: Yeah, because they've always told us like the more information, the more drawings, the more material we show them, the more feedback they can give us and I understand how that works. I mean if you go to them, let’s say, 'oh well I’m thinking about doing a box that will open up like this', but like, 'how would it open up? What would it look like? Why?’ But yeah, if you’ve done like loads of really random fast sketches just on this idea then yeah, that can help you out quite a bit because sometimes I feel that my sketches can help me out a lot more than I can talk.

Interviewer: Yeah, yeah they can

S1: (Inaudible) my words escape me (inaudible) and say, 'what's your idea?" (Inaudible)

Interviewer: Yeah, no that makes sense. (Inaudible) Right, whilst you’ve been in higher education, here not just ‘A’ levels but just here, what kind of teaching have you had or received for drawing and sketching ?

S1: Just drawing and sketching alone, erm, not a lot really. I don't, we were meant to have a live drawing class at some point but I feel like whenever we start a new year it’s just literally like, you straight into a brief. We don't really get any warm up exercises and when we first started Lianna wasn't here. We had Mike who was just taking over for the first six months until Lianna came in because they head had already gone into another university. So everything was up in the air until about Christmas time in our first year. So I think that is when we could have done a bit of preparation because we've all come from different areas and different backgrounds. To like, have a similar set of skills that we can all use, would be beneficial to us. If someone had just run through like simple sketching techniques or something. I feel like, we're very left on our own and maybe you just got a YouTube video or something that you could use to help you but I feel if we had someone actually come in and show us some techniques or something. I think we might have had a couple of small exercises with Lianna maybe in second year but nothing massive. I think we had a Photoshop one but that's technology based

Interviewer: Yeah, so you don't have like a regular drawing sketching visualisation or visual research-type module.
S1: No

Interviewer: Okay

S1: I think in second year we had one that was just like CAD drawing but there wasn't like physical drawing.

Interviewer: Okay, okay right.

S1: Oh no, actually we did. We had technical drawing with Ellie in first year but that was just like plans, sections...

Interviewer: That's drafting as opposed to hand sketching...

S1: Drafting but not creative sketching, no.

Interviewer: Yeah, yeah, okay. How has your experience of what you've been taught drawing-wose in higher education, how has that helped you or not, in generating concepts? Has it been helpful?

S1: I think it's made me braver, to be a bit more experimental with what I look at because when I first come here I was still in that mindset, being an architect where you're very restricted and you got to have links to everything. Which is not very free flowing with your ideas but now we're here, I don't know. It seems to be there's less boundaries. It's as long as you can back it up with a reason then you're good to go really.

Interviewer: Okay, okay. Do you feel that there are ways of being taught drawing and sketching different from what you've received to date that you feel would benefit you? Is there anything you would like, that would have been useful to you?

S1: I think, like what we, I think we were meant to have is like a life drawing class. Its just being able to on the spot, very quickly just be able to pick like a figure or just, or maybe just an object really and maybe, being able to focus on how light would affect an object because light is a very big part in how the building plays its role. So seeing how that can react with materials and what sort of shadows it created and yeah, just being able to draw it n your sketch book might be able to make you think how a building would work as well with light.

Interviewer: Okay, right. I'm trying to think of anything else I need to ask you but I think you've covered everything I need to know.

S1: Okay.

Interviewer: Well is there anything else you want to say about sketching? That's a very random thing to ask isn't it?
S1: I just wish we had maybe like a starter week in first year where we could just experiment with like materials, everything is on the table and you’re given like loads of exercises to do in one day and maybe at the same time you’re taught to use different materials as well. So this is like a technique how you can use watercolour but they’re all like really fast techniques that we could use in our sketch book that might be helpful for us. So obviously not how to do watercolour painting that would take five hours. Just very quick techniques that we could all find helpful for us when we use our sketch books.

Interviewer: Yeah, yeah. So it’s that kind of tuition in terms of being taught technique…

S1: Yeah

Interviewer: …Which would help you in getting your creative ideas across.

S1: Yeah, in the long run.

Interviewer: Yeah, yeah.

S1: I mean, yeah doing it in second or third year is probably not as great as if you did it in first year.

Interviewer: Yeah

S1: But doing what we did today was like really helpful because I think we were all like a little bit rusty and a little bit scared to like use different materials. It’s just like, ‘oh yeah, we do have this and this and this in our cupboard,’ because I have no idea I had half the materials I did.

Interviewer: It’s funny isn’t it, how you end up with drawerss full of things you’d forgotten.

S1: I’ve got three lots of water colour paper that I have no idea that I had and like, ‘I did actually buy some, and I bought another lot as well.’

Interviewer: It’s amazing what you accrue isn’t it? Yeah

S1: Yeah, and the mind mapping as well. Can’t wait to get on with that. I’m hoping (inaudible)

Interviewer: You found that helpful didn’t you?

S1: Yeah, I started having a go while you were running through it with them, on my project.
Interviewer: Yeah

S1: But I feel like there's so many different angles that you can take with a mind map.

Interviewer: Its one of those things where you could, it could grow and grow and grow and grow, and if someone else can do it from a slightly different perspective their’s would be very, very different.

S1: Yeah

Interviewer: But as I was saying there’s no right or wrong really. It’s the…

S1: No, it’s just a way to get everything out.

Interviewer: It’s the tool to help you get your ideas out in no particular order in a way that makes you see some sense and all the stuff you need to think about.

S1: Yeah, I think it’s just creating the brief that’s scaring me. Like, I’ve known quite a bit about my site now but it’s knowing that a brief to set, I’m just trying to find the issues in the actual location that you could solve with it but I don't know whether or not that’s the right route.

Interviewer: Yeah.

S1: Because mine's actually in Ipswich. Did you hear about the shooting in Ipswich? Somebody got shot. I don't know if it was Sunday or Monday.

Interviewer: Oh last week, yeah.

S1: That’s was right outside my halls of residence. Literally just around the corner from where I live. So it was just curiosity, I was like looking into crime and it has the same crime rate equivalent to Leeds and Leeds is a city and yeah, I was just like looking at the amount and the type. It was quite interesting. There was 208 reported crimes just in September this year. It’s mad. A lot of it antisocial behavior but still…

Interviewer: It still affects people.

S1: It’s crime and it can affect a lot of people, antisocial behaviours, especially elderly people. It makes them scared, and then also start looking in particular in this road where my site is at, and the type of residents that there are, because it’s mainly a residential street and yeah, a lot of them are elderly and theres actually elderly people's home at the top of the road. So I don't know. It’s just knowing where to go. I'm getting all this information but knowing how to combat it

Interviewer: Right
S1: Because one part says, ‘oh the, all these elderly people they need more leisure activities, more things to get active,’ then another part of me is thinking, ‘well do you combat the crime that could be affecting these elderly people.’

Interviewer: Yeah

S1: Well there are so many issues that you want to handle

Interviewer: Its, yeah, you can't build Rome in day. Is that what they say? I think what you can do with your mind mapping is to map everything down that you could possibly think of and from that, knowing what your time frame is and what your deadline is likely to be, thinking, ‘ok, I can't look at that section because that’s just beyond my ability.’

S1: Yeah

Interviewer: You know, ‘I can be aware of the crime statistics or whatever but actually it’s not something I change using design.’ Whereas the, you know, providing your clients with what they need is probably the way to go. So yeah, I know what you mean. It’s like how far do you grow it and then you can't address everything.

S1: I mean crime is a massive thing that I was thinking about like crime prevention techniques or things that you can do to sort of give these younger people a thing to do rather than being antisocial, but I don't know.

Interviewer: It’s such a, it’s a mire, isn’t it?

S1: Yeah (inaudible)

Audio end
Interview with S10

**Interviewer:** Okay right could you just to begin with tell me your name what course you are on, and how you got to be on the course you are on what are your sort of process of getting into this course was?

**S10:** My name is S10 everyone knows me as S10.

**Interviewer:** I was going to say you are (-) on the email that really confuse me I thought you were two different people okay but you are S10.

**S10:** So getting to the De Montfort well actually it was more of luck because I'd originally done my A levels and I went to college to do my foundation because in school I was told that I wasn't clever enough to do architecture, so that [unclear 0:49] my confidence quite a bit.

**Interviewer:** Isn't the school wonderful like that?

**S10:** I really enjoyed school but there are times now when I am doing things and I don't feel smart enough to do them, and I do end up doing them but there is just a little part of me that like it's like I can't do that I was never good enough at school to do that. So I went to college and we had 4 different modules there and one of them was fashion, and I did this project and I did this big paper dress and I did really well and I enjoyed it so I thought okay maybe I should do fashion so I went down that area in college and then apply to University and I went to Westmont City University to do fashion I went there for 5 months. And I like to do things if I do something I like to do it the best I very can and I kind of realized that as much as I enjoyed question it wasn't something that ultimately wanted a job in I didn't actually kind of fit into to that environment. And throughout your final projects there are student spending up to like 24 grand on their final things, and I just kind of felt like I am never going to be able to spend that much on a project and I want to be able to do this the very best, and also London was crazy expensive. But with [unclear 2:22] the course and then came back home work for a bit and re-apply to UNI and I actually didn't think I was good enough to apply for architecture so I applied for I think it was 3 interior design courses one model making course and a special design course, so I was like oh God I can't do architecture. And the course at Liverpool John Wall 3 weeks after the [unclear 2:53] got cancelled so I had to pick another course and I was like maybe I should try that one architecture course. So there was only certain amount of University that will take applicants after the [unclear 3:07] and De Montfort is one of the top ones so I pick De Montfort, and I was like oh God I am not going to get it.

**Interviewer:** What grades where they asking for where they asking for A levels grades or the fact that you've already got a foundation and you'd being on a degree course did that kind of help you to get in what were the criteria?

**S10:** I can't exactly remember I think you had to have your English maths and science in C obviously and above, and I can't remember the amount of credits I think it is but I got like a distinction in my foundation and a level so the totalled enough points for me to get in. And I was so nervous going to UNI I was like I am definitely not going to get in.
and I actually did get a place obviously because I am sitting here. And in my first year I won top design student and my second year I got top design student for the whole year. and this year my first project my studio project I got a %100 in my 30 credit module.

**Interviewer:** Wow brilliant so you are not doing too badly then.

**S10:** I mean the pressure is definitely on for this module and I've really been like, it's really difficult but it just kind of made me realize how wrong schools can be and the amount of time I got to struggle with things, I don't know if anybody else kind see the struggle, but there are times that I don't feel like I can do it.

**Interviewer:** And does that take you back to that point of being told [two person speaks]

**S10:** My mom saying but you can do it look how far you've come.

**Interviewer:** That's it you're just kind of proving them wrong all the time, okay so when you are a kid as far back as you can remember drawing scribbling sketching art painting that kind of thing, was that something you enjoyed as a kid do you actually remember doing things like that?

**S10:** If I could have done that through my child what I would have done I was always making dens like setting up games for my sister and her friend so they could have like fake school and they would have to have art classes. And I used to do all kinds of drawing I used to love drawing and I still love drawing that's one of the one things that I always come back to. And I also love painting I used to do a lot of like finger painting to make really different pictures. And there is what's it called it's a spiral graph where that you draw on I used to love those [unclear 5:46] I can't think of anything exact.

**Interviewer:** So it was something that you always kind of did as a kid it was a kind of ongoing thing I'm guessing?

**S10:** It is like a hobbit almost.

**Interviewer:** So were there okay you are a kid you are happily painting sketching spiral graphing and things at home, where their situations you are talking about things that happen at school. Were their situations at school where you were kind of discouraged or encouraged or made to feel awkward about what you were doing with regards to things like drawing painting that kind of thing?

**S10:** I remember there was this one project I think in think in year 4 and I was with my friend in college and we were put into peers and we had to put together it's almost like a mood board but we'd done a huge one and it was meant to be a poster and have all the text and things like that. And I wasn't really very good at writing and putting my sentence together and things like that so I'd literally and I think we did on some Cad's drew loads of different Cad's and just do this message thing on Cad's I think the text was discouragement. But we love the project we thought it was absolutely brilliant but we got screw chance if we don't put any text or any kind of actual English written things onto it.
Interviewer: And was this in an art class or an English class or can you remember?

S10: I don't think it was art because it was about a certain subject that you had to research into.

Interviewer: Okay and the way you presented it was visually?

S10: Yes.

Interviewer: Okay and what was the feedback was sort of it wasn't textual enough there wasn't enough written information. And how old were you roughly was that 9 or 10 years old?

S10: I think so possibly.

Interviewer: Okay interesting and when you got up towards doing things like GCSE then A levels, how was your tutors where they very critical were they very supportive?

S10: My art teacher hands down were the best teachers in year 9 he notices my I don't know what he noticed about my drawing but he invited me to life drawing and I ended up going for about 5 years, and I wish I could still go but it really, really helped me and I really enjoyed it. But the majority of teachers because I couldn't like if it was maths if there was diagrams or pictures I could do it like that but if I had to figure out I had to work out like in a more mathematical order like I just didn't get it if someone would sit and explained it to me once in a way that I can understand, I don't get it because I initially failed my maths GCSE and then I retook it and I was really lucky that my, actually Carla my friend his mom is a maths teacher very, very good and she helped me and went through with me like one evening after school during the week to then pass that.

Interviewer: So visually if it was explained in a visual way so did obviously enjoy things like I would say geometry trigonometry?

S10: It was things that I could picture and finding ways to put it into that [unclear 9:33] at the times tables and putting it into the we would have like the 20 and 2 and then 10 and 8.

Interviewer: So it was like a pattern everything was a visual pattern for you.

S10: And I've noticed a lot that I work very much in pattern rather than by number so even like simple things like on my phone instead of doing the number I do the pattern.

Interviewer: I watch countdown occasionally and I am really good at the words but when it comes to the numbers I can't add up or multiply in my head I have to physically see numbers in a shape like it would be on a dice and I would have to physically add them up from the shapes so yes I can relate to that. Right sketching you are here now think about what you are doing here. How important is sketching to you not as a presentation tool when you are doing visuals but as a process that you go through from when you get a design brief our project to help you build up your design thinking into
something which you can present that sort of early stage or we call it ideation or a different word for it. How do you see sketching in respect of you as a design?

S10: Imperative my processes in hand drawn because of the digital site of thing I've kind of picked up and learn being here so that was another thing that I kind of feel like oh I can't do but I don't know how to use Photoshop I still don't know how to use it completely. But the majority of work that I've done from the point that I've started to finish and even my final pieces would have been hand drawn. But half the time it's writing list and scribbles and drawing parts out that I don't quite understand I'm still drawing parts of my project. So with like my project I've done this year we had a 3-week project and you had to put together a kind of whole presentation or a whole kind of Mini project and for me I think about the end result and how want that to partially look and start from the beginning. And I started it with A4 chasing paper and I just write down everything that's required from the brief, and then I sketch out like a site pad and out things would work on the site and the kind of ideas of things that I have kind of seeing, so I don't always rely on precedent I know it's really heavily told to do but I kind of feel it then doesn't become my idea I kind of feel like just taking that because that look pretty. And so I tried to do that towards the end and then implement that kind of thing into my design but I like to draw it out I like to kind of have like a visual thing that I can refer back to and see and understand how it to works by actually throwing it.

Interviewer: Okay so it's a way for you to test your ideas and store your ideas so you've got like a reference to go back.

S10: I think I've got like a booklet from where I started to where I am now, and then when I had feedback with tutors I will normally draw but I would have to give them a piece of A4 tracing paper, so that then goes into this little booklet and I can see the process and where they've said that why don't you do it this way I can then see how my design will change but all the tutors are heavily all your feedback is hand drawn they hate digital feedback.

Interviewer: That's interesting okay as someone who enjoys sketching and it is something that it is so quiet intuitive with you, if somebody in a Studio situation says to you okay we are going to spend the next hour sketching out ideas for different design or just exercises in sketching how do you feel emotionally and physically, how does being asked to do that?

S10: Happy.

Interviewer: Right why do you feel happy can your kind of dissect that a little bit sorry it's a little bit of a strange question?

S10: It's familiar isn't it like it's a new kind of thing that we are sketching but when I went to life drawing I learned all different kind of techniques as how to draw things really quickly and I've kind of learned really different styles of drawing and different ways of working. So if I were like going to draw a building outside I know there is a way that I can draw it to scale or it's as much to scale as it could be. Or if I want to do like a really quick not a completely accurate drawing I know I can do more like line counter attack drawing so far me I have already kind have gotten as soon as they tell me what kind of thing they want I have an idea of how exactly I am going to put together.
**Interviewer:** Okay is that something because you feel familiar with the tools you are using and the materials?

**S10:** Possibly I think I mean sometimes my drawing looks absolutely terrible. But I think it's because I like to do it and I am not afraid of making a mistake and I think a lot of people when they are asking to draw they kind of have this white sheet of paper and it is like oh God where do I start.

**Interviewer:** So when you draw at the beginning of a project you've just got to come up with some scamps and ideas and just work through some thinking, how do you do your sketching what kind of materials do you use what kind of paper or pads or surfaces do you use?

**S10:** I definitely got a pen addiction I actually have one pencil.

**Interviewer:** like your favourite pencil?

**S10:** My friend bought it for me it's a clutch pencil it was a really nice clutch pencil and I never thought I would sketch with a clutch pencil but it's just so nice to draw with and if I lost that pencil I would be so upset.

**Interviewer:** I've got one like that it's a very old blue clutch pencil that used to belong to my dad I can't do anything without it it's like my lucky pencil.

**S10:** Yes, and then pens I have quite a lot of pens.

**Interviewer:** Black pens coloured pens drawing?

**S10:** Primarily black pen possibly a different colour but I like to work by the kind of 3 colour rule depending on what drawings it is as well because that way your drawing kind of has more uniformity to it but primarily black pen and a different pen with it.

**Interviewer:** So you don't consider yourself to be sketch inhibited you don't sound sketch inhibited at all in fact you are at the complete opposite end of the scale which is good for me I am looking at sketching ambition but you are brilliant as a kind of control to understand the very opposite end of the spectrum. When you are doing these initials scamps how do you feel about perfecting your sketches do you feel that you need to make them perfect or do you not even think about things like that?

**S10:** It depends on what I am drawing so if I am doing like a blind contour attack drawing which is where you draw, like if I was going to draw you I would look at you and not have a look at my pen piece of paper so it is one continuous line. So on the study trips what I did for them the trip to Berlin is I have a little pack, because to me a Sketchbook is meant to be sketchy it's not meant to be perfect, but you know like the restaurants they have the little waitress pad where they write down your order, I've ordered a pack of those because you can just do a little sketch and then rip it off. So like we would go to a building and I would sit there and I just [unclear 18:] draw the outline and draw it how I see it look back at it kind of add a little bit so that it come out a little neater, so then I have like all these really quick sketches and then I'd kind of
put them [unclear 18:16] Sketchbook but then put these all in the order from like the start of the day to the end of the trip, and I put them all together stick them in my Sketchbook and I would work in them and kind of draw back into things and kind of refine things.

**Interviewer:** So you revisit them from the initial [unclear] sketch to something which is more traditional.

**S10:** So now these sketches will then lead into kind of start to the end.

**Interviewer:** But the need for perfectionism isn't based on other people's judgement of your drawing it seems a lot of sketch inhibited people they feel very compelled to make their drawing perfect whatever that might mean because of their fear of judgement, you seem to produce drawings to record information and then revisit them, you don't seem to be under that same pressure that sketch inhibited people seems to bear this burden of which is interesting.

**S10:** I know I am a perfectionist with my work but I think like my development work I don't feel the need for that to be pretty because it is not my final pin up that's going to be [unclear 19:33] try to kind of like focus on every little details until it is as good as it can be. But it has to convey a message more than it is and that's something that I definitely learned over the past 3 years because it's very easy to do pretty drawing but it's what that drawing tell that's more important, so for me as much as I want my drawing to be pretty as it can be it's more about what that drawing can tell you which isn't as easy.

**Interviewer:** That's fine, so when you in a Studio situation and Neil or whoever says everybody stick your drawings on the wall we are going to have a critique do your kind of feel anxious about things that, does that kind of thing worried you or get you nervous?

**S10:** Depends what I've drawn and it depends if it's him.

**Interviewer:** If we are thinking about purely design concept sketches very early on say they give you a half hour to come up with some scribbly sort of concert and then we will put them on the wall so it's a really kind of informal process, do you get sort of anxious about that or are you absolutely?

**S10:** I get very because I think I have a certain way of working I get people wanting to see what I have done in very quickly like the pressure from other people rather than the pressure then what I've pinned up I find difficult.

**Interviewer:** So what is that pressure from other people about what are they wanting to see or experience?

**S10:** Our course is a very competitive course and I never expected to do as well as I have previously done not in a million years. And sometime I do he like there is an expectation and people will make comments with things that I have well previously I've had some quite unkind comments which I think we said more as cheap comment.
Interviewer: Were there from peers are tutors?

S10: Peers.

Interviewer: Okay can you give me an example it sounds a bit gory to ask but what kind of things do people say when they are judging you work?

S10: I think it would be like some really nasty things because obviously like the last 3 years like Neil had been I really good tutor and I've had tutorials with him and he has helped me and I've been told that I am Brenner’s I've been called name as bitch which is just unkind I've been called just kind of like really petty things.

Interviewer: Does that come from male or female students or is it that kind of across the board?

S10: When Neil said that I might be getting %100 in the lecture in front of everyone, I mean I couldn't explain it but one of my flatmate who sit next to me she literally got up and left when the lecture is over and I was like okay thank you.

Interviewer: It's interesting that we all aspire to succeed.

S10: But a lot of male people on our course do not like it.

Interviewer: Right that's interesting because architecture is by tradition of every masculine male-dominated profession, it's just interesting to see how you've experience that kind of thing I am sorry about that that's not very nice.

S10: They can call me what they want but.

Interviewer: It's jealousy it's irritation that they can't do what you do and that's the only way they can vent it but is still horrible I know what you mean it's horrible.

S10: When people say things like that it just going to make me want to work harder.

Interviewer: Okay so in your course how are taught or are sketching in terms of not presentation drawings but how to sketch your ideas how to put pen or pencil onto paper to work through your ideas is there any specific teaching.

S10: Our year is very much being a guinea pig year because we [unclear 24:28] when we started and we obviously move buildings as well and we've gotten new tutors in they are doing new things so the work that we see from the first year is very different.

Interviewer: Yes, it's very different they are going back to very much hand drawn work.

S10: Yes, when I have my interview they would like oh well we would have like a day where we spend like learning how to do water colouring and I was like wow that sounds really brilliant, and then I started obviously because in Raymond had a lot more it was a lot more technology focus so we never have those days instead we would have we had the tutor at times Chris Watts that did Communications which was a module and we
didn't get a huge amount of time with him what we would get taught how to draw in [unclear] and not so much the drawing development I don't think I ever really got that we got more of a digital focus into things so when it came to drawing I kind of felt quite comfortable with it already because a lot of people in my year that had very like mathematical or science background it didn't have the kind of arts background that I previously had I know they did really struggle and there were times where I have helped out people and kind of showing them ways to draw things or do things I mean our year is quite good as much as we will all help each other out with different things so like if one person is really good at one thing they will happily kind of show you how to do something if you ask in vice versa which I think it's really good.

**Interviewer:** Are there any perceived issues or shortfalls in terms of what they teach you about how to do things and you are talking about water colouring and you weren't actually getting the watercolour tuition you were expecting, are there things on your course which you think we need that but it doesn't happen in terms of?

**S10:** Life drawing and I remember I did speak to Neil about this quite a while ago but he said that they didn't just get the number for it, but I don't know if it's because the architecture courses back with all the other ones whether or not it's something they should really.

**Interviewer:** Yes, within the faculty in terms of being in the same building in the same environment.

**S10:** It just makes everybody drawings so much stronger.

**Interviewer:** You are a millennial apparently because of when you were born your age group. Do you have learning preferences your use of digital tool digital sketching anything which isn't provided which you feel that you would have liked to provide on your course, or are you happy with the manual kind of instantaneous?

**S10:** In terms of digital software I mean a studio should get Adobe at a reduced rate which I don't think the UNI should have to provide but software such as Rhino which I am using at the moment but it's too expensive for me to get on my laptop, I think the UNI should subsidize it maybe not all of it but maybe pay a percentage.

**Interviewer:** Have you tried a website called Software for Student?

**S10:** No I will have a look.

**Interviewer:** I think it's software4students but yes if you've got your student card you might be able to yes, you should have a look. But in terms of doing things like your ideation and you're sketching your early stage stuff would you want to change that if someone said we've got this fantastic new product or digital sketching tools, would you suddenly go oh yes I must use that or would you be happy to continue the way you are?

**S10:** I think making because obviously everything goes towards a kind of digital end anyway but the process is very much hand drawn, I don't think sketching will ever die out especially for our course it's imperative, for you to like visualize it in your head it's very difficult because I don't always explain things particularly well but I can draw it so
if I can't explain it which if I haven't had much sleep it is very difficult but I think I am always very sceptical with digital stuff.

**Interviewer:** Okay why is that?

S10: It's unfamiliar pen and paper is pen and paper, digital pen digital paper but I would love to be able to sit down and see how much I could actually do with that.

**Interviewer:** So when you are sketching working on your ideas do you offload your working memories I'll explain; you are talking about creating ideas images in your head do you create a lot of images in your head do you see three dimensional things in your head?

S10: It's the problem that I am having at the moment.

**Interviewer:** Right so it's all in there you can see it you can visualize it your kind of walk around it turn it around, you then use sketching to actually put those thoughts on paper and how successful do you find yourself at that do things come out the way you want them to generally?

S10: In UNI yes then I realized [unclear 30:25].

**Interviewer:** But that is good because it's funny giving you feedback okay and do you use sketching for other things I mean you've got a list of things that you got to think about within your design certain things do you record information about the brief things I need to remember all the time so it's not just putting down that image that's going around in your head it's lots of other stuff as well.

S10: It's kind of just like try to get everything out.

**Interviewer:** And at that point do you find that you are able to kind of relaxed and stop, almost having it going around in your head, do you feel once it's going down on paper you feel more relaxed about it because it's there and you can go back to it?

S10: I think that when it's in my head it's not logical and it's not ordered, so sometime you've got all these different things and you have to think about one thing and another thing just interrupts. So kind of getting everything out even writing it down on a list organizing the information it helps to kind of organize that in your mind as well.

**Interviewer:** Okay so it's a way of making logical all the stuff that's [unclear 31:45] around and it is kind of storing it for you do you feel like you go back to things?

S10: I think maybe it's not [unclear 31:54] so you can then think about it more logically.

**Interviewer:** Okay and when you are sketching and drawing and scribbling stuff and it's very vague do you see things in your sketches maybe you put things away and come back to them a day or week later and you are kind of going through stuff. Do you see other things in your sketches that you hadn't anticipated seeing to begin with things which you hadn't intended to go down on paper and it's like oh God actually there is something there which I hadn't thought of?
S10: Yes, so sometimes with a proposal if I can't figure out how to draw it I will model it, and one of the projects at the moment I model this scheme and it was quite simple but my idea was sitting in my head I couldn't show all of it, so I have 2 pictures of it then I load the opacity printed out and I draw over the top of it, and there were kind of spaces that they're drawing over it and then I look back at it and I was [unclear] then I add to it and I said okay that actually looks that way rather than the way I intended it to.

Interviewer: So it kind of showing you new opportunities that you not even realize were there.

S10: Yes, I kind of drawing over it like I kind of understand more of what I was trying to get with the model but I didn't do that successfully so I don't if the 2 work together to do that.

Interviewer: Okay and when you are sketching and you've got scribble bit going down on paper do those scribble bits kind of do you see them as a way of testing your ideas, so you've got your idea in your head you put it down on paper to a degree does that then help you to kind of develop it to another stage and another state, do you use sketching in this sort of iterative stepping stone type of way?

S10: Yes, like I know even at the end of the project I will still be drawing bits on pieces of paper and I tend to do that when I pin up work, I will pin up like the really quick sketches because to me they are the ones that will explain what I am trying to show more than like a kind of plan I mean an AutoCAD like a plan drawing of the building will show a certain amount. But like I think about things three-dimensional so I sometimes find it difficult to put it flat so like I am trying to figure out my projects at the moment the whole time I've been thinking about it this three-dimensional thing.

Interviewer: So that's thinking like an architecture think, think as an environment or unclear 34:47] rather than lots of student design in plan you can't get them to think in three-dimensional I just don't understand how anyone can get through courses particularly some interior design students I've seen who just work on a plan and somehow everything works out but it doesn't because they have not been through that process, right I've got to the end of my bizarre questions thank you ever so much I am just going to switch it off now.

Audio Finish
Interview with S11

Interviewer: Right okay can you just to start with tell me your name what course you are on and how you got to be on the course what sort of process you went through from sort of high school that kind of thing to get onto the course?

S11: I am S11 I'm an architecture bachelor's, after my GCSE I did my A levels which I didn't do too well in but managed to get into University. At my A levels I did maths with mechanic physics and art and was my best subject.

Interviewer: So you did your A levels did you come straight here from A levels.

S11: Yes, straight from A levels.

Interviewer: Okay that's fine, okay just going back to sort of childhood if that's okay a bit of a strange question but can you tell me about your relationship with sketching as a child did you use to do things like drawing painting scribbling, was that something you did a lot of?

S11: Far more drawing than painting I tended to not mess a lot up, so I prefer drawing with pens and pencils I wanted to be an artist since I was about 5 so throughout my childhood I was always either if I couldn't play any games that were to do with designing I would draw enormous section, although at time I didn't know that they were sections. I would draw these enormous sections through buildings of castle, and things reorganized them and they spread over A 3s and A 2s.

Interviewer: So you were designing buildings before you even realize what design building was about?

S11: Yes, sort of fantasy type thing it's not anything particularly down to earth, and like I say castles and sometimes spaceships and things but yes section through buildings and plans.

Interviewer: So you were quiet sort of structure in the way you thought at that time?

S11: Yes, and like I said when I sketch I didn't tent to paint things I've always favourite more lined work than sort of a shading and the scribbling, it's always tended to like I say be very definite lines.

Interviewer: Yes, so as you went through childhood into sort of high school high school GCSE A level, where their situation can you recall situations where you perhaps felt very encouraged or discouraged by your teachers in respective things like your drawing and sketching?

S11: Not that I can remember I've always got on quite well with art teachers throughout my schooling. I remember having my art teacher at A level one of them was very how to describe it she was very out there I suppose in the way that she wanted me to work I suppose I struggled with that quite a lot, because I've always like I said being quiet neat and quite tidy. And a lot of the experiments that we push to do were quite different and
quite out of my comfort zone. Obviously I give it a go and tried it but as soon as I left my 6 form I went back doing the drawings that I've always done.

**Interviewer:** Okay that's fine but they didn't make you, they're just only encouraging you to try things you have not done before.

**S11:** Yes, trying to push me away from this quite structured way that I've always drawn, but I don't really remember any point being pushed away from doing sketching or from drawing and just trying to be push further I suppose so in a way that's encouraging.

**Interviewer:** So it was obviously seen as something you were good at and they were trying to encourage you to kind of going to other directions as well as.

**S11:** Yes, I use my A levels as well to create portfolio that would help me get into architecture, because like I say I've been thinking about being an architect for a very long time so my final pieces for A level where based around houses. And in fact at GCSC as well as I drew one of my final piece was quite hilarious screen sort of elevations which I really enjoy doing, but I was encourage to sort of pursue the Avenue rather than being pushed away from it.

**Interviewer:** Okay but you've never felt discouraged or have negative feedback or you're not producing things in the way we want you to produce them you've not come across that through your high schooling at all?

**S11:** No I think they were a few times when particular with Sketchbook I'd moved on in my head in working and moved on, and I was asked to go back and do something else to make a drawing make more sense that I was working on now. And in my head I struggled to conceive that in fact this year as well I've had a tutor that wanted me to go back and add colour to a drawing that I've done, and I'm in my thinking I don't need the colour on drawing I've explained it in black and white, but she very keen for me to go back and work on this drawing a little more even though I've progressed in my head further away from the stage. So I suppose it was quite discouraging for her to say that she couldn't understand the drawing without the colour.

**Interviewer:** And you've mentally move on to another stage it is quite an irritating thing to have then go back and revisit I know what you mean. Okay so with your course what you've been doing with architectural here, how important is sketching to you and I am talking about the kind of sketching you do very early on in a design where you've got to come up with ideas and work them into something which you can then develop into something more tangible. How important is that sketching process to you or is it not important?

**S11:** I think it is important I quite struggle to make sense I suppose of what I've got in my head without putting it down on paper in some way. But a lot of people in my course will work starting out very conceptual drawings and then move on, but as soon as I put my pen to paper it tends to come out building ships in somewhere or another.

**Interviewer:** You are very lucky because some people struggle.
**S11**: Yes, although it can be quite constraining sometimes that I've already thought especially because some people did incredibly exciting project that have moving walls and free-flowing farms, and then I am quite brutalises and quite modernises in the way that I think.

**Intervener**: So when you are designing at those early stages and you've got to come up with ideas do they come into your head first before you put them down, or do you put things on paper and create something.

**S11**: I suppose I get sort of flS14ing images and then putting sketching create help collect them and so it gets out of my head and become a bit more comprehensible. But the ideas coming to my head first but the app flS14es and so [unclear 8:43] that I can quite see where I'm going so I have to put it down.

**Intervener**: So what happens if you don't put them down?

**S11**: I really thought about that.

**Intervener**: Sometime you'll get like a little bubble or something in your head don't you an idea.

**S11**: It goes completely I got an incredibly poor memory and dyslexic as well, and the type of dyslexic that I have impacts my memory short-term long-term memory I am in something like the top %10 of the population but I am very, very low in short-term memory so if I don't write something down or draw something then it can go, and I will be thinking I had an idea about how I was going to deal with this particular problem and then I can't remember, so I have to put it down somewhere or another.

**Intervener**: So it kind offloads we call it offloading working but working memory but you're working memory can only hold a quite a small amount of information, and being dyslexic maybe it's more difficult to hold information so getting it out is really important to you. Okay if you are in the studio with your other 3rd years and one of your teachers says okay we are going to have an hour of sketching I would like you to come up with ideas for something and then we are going to put them on the wall and have a look to have a critique. How do you feel when somebody put you in that position, what is your immediate response and how do you feel when someone says alright it's sketching now?

**S11**: I think it depends how far along I am in the project if it's coming up with brand new ideas then I suppose I feel a little anxious particularly because quite often what they might be expecting is rough things but I wouldn't feel comfortable showing people these very rough drawings particularly because like I said I've always work very neatly. And I have to get my drawings to a stage that other people will understanding before I feel comfortable showing them. I think primarily because it's a word about it being judged because I can't take criticism quite hard sometimes particularly when it's to do with art. I had a critque a couple of weeks ago where I pinned everything up and one of the people who was judging it said if I was the client it was a pharmaceutical research, and he say if I was the pharmaceutical company I would write a check and give it to you now and build it. But as a designer it has no poetic quality and it was sort of I was in a [unclear 12:04] for the rest of the day. But it wasn't because the building itself had no
poetic quality it was the way in which I presented it didn't get across my idea and I was kicking myself for a very long time. I had a tutorial the other day and my teacher came up and say have you gotten over the critic I was like yes I think I will live. But it was this idea that I'd stumble in trying to explain my idea through my drawing, so I feel like it has to be clear and concise before I can show it to someone.

Interviewer: And if it was something that wasn't particularly concise if it was scamps on layout pod or something how would you feel about showing those in a situation where your peers would be looking, would you feel comfortable?

S11: I feel like panicky sort of feel the need to make things feel presentable, and in a way I don't want to say finish because it's not finish it's a working drawing but presenting it in a way I supposed prettifies it not making it rough around the edges when it's pinned up.

Interviewer: And when you feel the need to as you say prettify or finish things more highly, what is it you believe other people will be judging you on?

S11: The quality I suppose because everybody draws differently and everybody has different style, but I have this fear of people looking at it going this is a really horrible drawing it's just not pleasant looking at.

Interviewer: So you are concerned about what people make of the aesthetic of the image?

S11: Yes, and I am concerned about that and I suppose as well I take offense sometime when people would judge that first, because we are studying architecture not drawing and so if I get a critic where tutors the first thing that they said that drawing could better off, I will go away and talk to my friends after and go I wish I'd speak about the building and the ideas first and then talk about the presentation, but I suppose that link back to needing it to be clear for them to understand.

Interviewer: So do you class yourself as sketch inhibited or do you feel quite comfortable with sketching, obviously you sketch and you feel you need to produce your sketches to a high level of finish to feel comfortable showing those?

S11: I don't think it's particularly a high level of finish it's just a pretty drawing because quite often if you have a tutorial then you will do very quick sketches and it can be quite pleasing as a quick drawing. But it's whether or not other people think that it's a please enjoy. And I suppose that's why I like black and white quite a lot because it's clean, and there's less chance of it to look dirty as a drawing and smudged. And I suppose in my head I would link a dirty to an unpleasing drawing.

Interviewer: Okay but generally you don't feel sketch inhibited you would be quite happy to sit down and scribble some ideas out if somebody said come up with something in the next half hour you wouldn't run away screaming?

S11: No I suppose I sketch quite freely.
**Interviewer**: Okay so when you are in a critical situation in a studio and have you ever been judge I know you talking about one of your tutor said something could be finish differently, or do you get from your peers from the other students, do people say things are they encouraging or discouraging or is it not really initiative?

**S11**: Sometimes although I quite often have a scepticism as to whether or not they are telling the truth sometimes. But equally if somebody says something negative towards my work I'm convinced to your word a little bit. But I suppose we do receive quite a lot of input from peer’s people come up and see your drawing and go oh that nice or whatever they have to say about it. And I did a drawing recently it was quite sketchy I had an elevation to do and I did it all without a ruler and black and white pen using various different thicknesses and I was quite proud of it so I left it out for people to look and go that really nice and then oh yes thanks, but that is just a sketch, I spent quite a lot of time trying to get it.

**Interviewer**: But you felt you needed to convey something in your ketch which was a visually appealing to people and not just contain the design that you were working on.

**S11**: Because I think that a lot of people on my course even more so than the tutors will quite often judge your presentation before they will judge anything else and sometimes it's difficult to see pass that and I suppose I am guilty of it as well if I see a drawing I really don't like, then I will think.

**Interviewer**: I think it's something we all do it is just kind of being aware of when you are doing it and be able to look beyond that that's important. Okay so on your course how are you thought about sketchy designs sketching rather than presentation sketching, sketching out ideas working through concepts are you thought that or are you not taught that?

**S11**: This is change with architecture recently and our first year of University we did a module which is called communications which is to do with expressing your ideas and things, but as well how to I suppose to come up with ideas in a way. And every tutors are different in the way that they would mentor you into doing, so some tutors would say write down some words and then do a drawing from those words and those come out quite rough or write passage about how you want people to feel and then try to do that. Or you might try to without coming up with any text first you might just come up with a process so if you got a building that's trying represent a particular process that's happening within it, so if it's a factory or something you might draw a sketch that represent and that might then slowly mov. But I suppose in more recent years it's not being pushed as much I suppose this year they've sort of come to the conclusion that we will come up with your own ideas, it's assumed that it will just come to us now whereas in first year was far more aided I supposed in health.

**Interviewer**: Okay so do you perceive that having being on the course and toward the end of the course have there being any issues or shortfalls in terms of what you have been taught in order to be able to design in terms of sketching. Is there stuff you feel you still need to know or would like to have done?

**S11**: I am not sure about short falls again it complicated because with our year it was different because they had quite poor teaching, and I think that we were [unclear 21:03]
well with sketches technique and how to sketch. But I suppose it wasn't particularly
pushed ever as to a specific way you need to go to come with an idea, it was push more
you need to experiment to find what mattered what works best for you, so some people
like to draw and then move as quickly as they can onto a computer and some spend an
awfully long time drawing in 3D drawing in plan, the sort of sketch that you can come
up with it's quite a fSion moment in architecture to have a hold up clip pack of rough
drawings. So I build it and got %100 recently and she did it and it's showing in the
lecture and everyone sort of turn to each other [unclear 22:01] we are to do that because
they were saying it's really good to see all of your working and your thought process
through sketch, and so there's this fSion of keeping all of your tasty bits of paper at
the moment and [00:22:18] them and hanging them, hanging the [unclear] clip so tutors
can flick through. But you don't want to call it portfolio because it is very rough work
lots of [unclear 22:328] pages with bits coming off the edges and scribbled out bits, but
I suppose personally I even find that I tried to make that as neat as I can.

Interviewer: It's just the way you are there's nothing wrong in that it's everybody work
slightly differently. Okay are there any sort of preferences that you have learning I
know very much education now is about making things as digital as possible and as
clean as possible moving away from paper and pen. Are there things that you would like
to have had on your course for example digital sketching tools, or do you just feel that
the way you sketch the immediacy of paper and pencil and pen is preferable?

S11: Well I know that before we move back onto campus we had a few screen that have
stylus pen and you can sketch on them, but the way in which you had to acquire pen is
very convoluted and complicated and the people just ignored it they didn't bother with
it. And we were never taught how to use any programs on the computer to do with
sketching on the screens because I know that there's a computer lab in this building that
you can go and there all depends and you just can sketch. I think that would be
incredibly useful because it could transfer far quicker into programs that are more
vector-based or even you could sketch into program that are victor- base, and then you
have the basis for any line work that you want. I do wish that we had been taught how to
use those.

Interviewer: So that digital sketching tool that sort of hybrid ization of the process
would've been useful.

S11: I think it would never entirely replace sketching on paper because it's quite often I
will be sat at home and I will be working on AutoCAD until I just start sketching, or in
particular if I am working on a drawing and I think that particular little bit I am not quite
sure how I am going to deal with that rather than messing around on the screen or draw
it rather than trying to get it there is something more fluid about it.

Interviewer: Is it because it's more instantaneous or it's more immediate it's in front of
you don't have to go through a process sitting and working out how to make the
functions works.

S11: I don't know if there is more in between you and the idea when you have your
mouse and the mouse is connected and then that you've got to move the pointer. So if
you had your stylus and draw it I think it would be [unclear 32] than if I was working on
a computer that did have the touch screen might I not reach for the paper I might pick up the pain and load up program and draw, but like I said we've never taught about that.

**Interviewer**: That would be interesting that's something that maybe they should be thinking about.

**S11**: Yes, and there's only a certain amount of screens in our studio that allow you to do that.

**Interviewer**: Interesting so when you are sketching your ideas out you are talking about offloading your working memory we've discuss that. Do you ever look at sketches you produce yesterday last week whenever and see things in your sketches that you haven't actually thought about begin with in terms oh my goodness I never realized that look like XYZ whatever?

**S11**: I suppose yes but more in a negative way sometimes. I've drawn and elevation and I've been quite close to a drawing then I put it aside and I might see it a few days later or an hour later or something and I will think it kind of look like a face do I want my building to a face.

**Interviewer**: So you see things in your drawing and you are critiquing those things as you go?

**S11**: I quite often see various different imagery in different drawings that I have done.

**Interviewer**: Do they take you off in a new creative direction sometimes?

**S11**: Sometimes but I can get quite stuff as well if I've drawn something I suppose because I do line-work it feels quite definite definitive, and so I will be working to those lines and I don't sometimes break out of that but yes I do sometimes look at drawings and think I did quite see that way at the time.

**Interviewer**: And when you are designing to what extent do you see the image whatever it is that you wanted to create is that in your head to begin with, do you see it clearly in your head or do you tend to put scribbles down on paper and read what you see and then turn it into something what come first do you think?

**S11**: I think to an extent I do have it in my head but it's nowhere near as developed as when I start sketching it's almost as though there's a linear process from conceptualising in your head to extending that onto in pen and paper, very rough drawings at first and then it slowly it sorts of goes from your head slowly to these renders that done on computers and take hours to create.

**Interviewer**: So you do rely quite heavily on that linear that process of developing, developing redrawing, redrawing?

**Johnson**: Yes, so in my head the idea like I say it isn't developed enough and once I start drawing it's almost as though the fog can go start to remove.

**Interviewer**: And that's how you start defining the details?
S11: Yes, it's defined in the particular characteristic, it's not so much through my head it's more to sketching tool.

Interviewer: So without a sketch tool you would find it quite difficult to get your ideas, couldn't straight on to a computer and produce what's in your head?

S11: No I think I would find myself reaching for a pen if someone just gave me a computer and says design a building for this spot I think okay I'm just going to get my pen and paper draw. So I think it is incredibly important and it helps you explore more because even though I said my line work can more sometimes restrain me slightly, it doesn't restrain me anyway near as much as creating something on the computer 3D modelling it feels very clunky to try and move whereas if you've done sketch and you think, but the other day I was in tutorial and I come up with 7 sketches of different window options and I made quite neat little template of one was in elevation and there was a smaller perspective drawing. And during my tutorial we got out a bit of tracing paper and we sketched over one of my drawings and say what if we move that window onto this other side of the building I know it was sort of the thought to have been done then it had being worked out but that window is going to move but through tracing paper and drawing over a sketch that I already had, whereas on the computer you would be a modelling this window and then you would be taking step back and looking at it comparing it to the other one whereas you sort of just flicking through the different sketches and it's almost more instantaneous and easier to think through I suppose I don't know how much that since that make.

Interviewer: It makes a lot of sense that sort of instantaneous hands on thing that's nothing between you and the idea. But when you are working with a computer there is the mouse there is the keyboard there is having to know all the functions and then how do I get it to do what I wanted to do, with pen and paper it's like I will just scribble it out quickly.

S11: Yes, and I suppose as well that's part of the beauty when you see a really nice sketch and you think how they you can see their thoughts more than a computer digitalizes drawing and quite often there is a beauty to hand the drawing that there isn't to computer [unclear 32:02] design potentially it is because people you can see the thought processes more and you can see the closeness.

Interviewer: It's not being interpreted using someone else's idea of what is correct it's just your interpretation instantaneously produce, brilliant okay I think you've answered all my questions thank you very much and I should switch off now.

Audio Finish
Interview with S12

Interviewer: Okay can you just tell me for the records your name what course you are on and how you got to be on your course as well in terms of A level foundation and things like that?

S12: My name is S12 I am 21 studying architecture third year BA and I really liked architecture when I was 13 years old it's a really odd age but I told my parents I wanted to be an architecture. And they were shocked and told me no change because I did tell them before I wanted to be a hairdresser. And yes I just got stuck to it and ever since then I've been working towards to do architecture, so the school that I was at for GCSE weren't particularly helpful with helping me so I picked a few GCSE which they told me would be fine to get into. Because I wanted to do art GCSE and my parents didn't want me to do it so I didn't pick it and then most Universities do actually want you to have an art. Luckily for A levels I went to a really good college and they're really accommodating and they said I can do it without doing at GCSE and gave me extra help.

Interviewer: So you did A level art?

S12: A level art without the GCSE.

Interviewer: Okay and what did you do what were your other A levels?

S12: My other A levels where I did history maths and physics.

Interviewer: Okay so did you going to do a foundation course or did you came here straight from your A levels?

S12: Well not straight on I took a gap here and I actually worked in an architect's office for a year.

Interviewer: Okay and how helpful was that?

S12: Okay what I have been told it's going to be very helpful for my [unclear 2:00] because I was not employed as someone would start helping them out on the architecture stuff I was employed more on the admin side of things, but every now and then I'd dip in if they needed help. So I got to understand the basic of adobe victor work software which meant when I came to [unclear 2:21] adobe came really easily and AutoCAD wasn't too hard it was just the 3D modelling that I had to get to get a grip on so it did help me. And know it did help out as well in because I know how to speak to clients I know how to do all the contractual.

Interviewer: Almost like the non-design stuff that the architects have to do.

S12: When I turned up at [unclear 2:46] and was speaking to people doing their part 2 they were like can you help me.
**Interviewer:** So the part 2 is what is covered by the master's degree is that right so that includes professional properties?

**S12:** Yes.

**Interviewer:** That's good so that obviously was helpful to a degree?

**S12:** Yes.

**Interviewer:** Can I take you back to your childhood were you a sketcher a drawer or a painter as a child?

**S12:** I did lots of drawing.

**Interviewer:** Okay and was it something you did all the time or whether a particular age is where you did a lot and your kind of didn't do any more for ages?

**S12:** The only time I stop drawing was GCSE.

**Interviewer:** When you weren't allowed to do your art.

**S12:** But otherwise I was always drawing my mom would get paper.

**Interviewer:** And what kind of things did you draw?

**S12:** Anything sometime I even started just before my GCSE I started drawing floor plans and I started looking into floor plans, but I used to do a lot of sketching sort of people and I did a few art classes for painting because I wasn't very strong at that and I thought I needed to get better at that for A levels. But they weren't ever very pretty unless I spend a really long time on them, but it was just that I like to draw a lot so it would just be if I see something I would draw it.

**Interviewer:** So you did drawing of where the things that you saw observation drawings or were they things that were you are talking about floor plans creating in your head.

**S12:** With observation I'd start with trying to make it look like it, but then I just go off and do my own thing with it.

**Interviewer:** So you've then invent something but it was more of a kind of a mental process rather looking at something and replicating it?

**S12:** Yes.

**Interviewer:** When you came to do you say you didn't do GCSC, did you have sort of High School tuition in art and design drawing sketching anything like that, that you can remember and where tutors helpful are discouraging, was it a particular standard static that they wanted everybody conform to can you remember anything like that?
S12: We had art teachers and they were really chilled out about it to be honest I think they were genuine they just let you do your thing; I was really happy with the work that I made or not before GCSC. And they would sort of set you I task but they wouldn't never say that's incorrect if that makes sense.

Interviewer: Okay when you get to A level, what was it like doing art at A level?

S12: It was a big jump obviously.

Interviewer: How was it different?

S12: I'd never done art in a way that it's going to be efficiently examined and had to eat key points. And then I didn't know how to start it how to start a project because I hadn't done that before either because it was always be what your sort of teacher told you we were going to make. I remember we made this paper [unclear 5:54] fish type things but it would be stuff like that they'd would set you project. So when it came to a level it was sort of more find your own project that was more difficult for me.

Interviewer: Okay so it's that sort initiating something that you are interested in sufficiently to turn it into a project over a period of time. Once you got into a project though what kind of feed did you get from teachers?

S12: My teachers are very happy with it, I've been told that I work with a lot of passion so even if it doesn't fully hit the spot they know that there's a lot of work that's gone behind it and I did end up winning award at the end of A level because of that.

Interviewer: What was that for?

S12: For commitment to art.

Interviewer: Excellent so it was a quite an encouraging positive experience being at school doing A levels even though you haven't done the GCSC did you have extra tuition?

S12: They were just really helpful.

Interviewer: Just more supportive and they'd give you a little bit more time than the other student?

S12: I had a situation I couldn't leave college until gone 5:30 sounds odd, the college technically was meant to close around 5 so they would leave art classes open for me and my teacher would stay because he was not only an art teacher he did like am, I can't remember what he but he was sort of high up the actual running up the college and he would stay and do his work in with me because they knew that I would just wait train station so they were really, really good.

Interviewer: Okay right with your degree course at the moment where you are and what you are doing. How important or maybe it's not important tell me about sketching and how you use it or don't use it doing the design process, and what I mean by the design process is you have an initial brief our project and you've got to come up with
ideas and develop them into something tangible. I am not talking about the kind of sketchy that you would do you know rendering or putting onto computer. It's thinking sketches that help you develop ideas do you use sketches a lot for that or do you do other ways?

S12: I mainly do I start off with sketches they are very crude and I start off with a load and then all sorts of write what each one is trying to show even if it's not showing it properly. And then I'd use that as the next stage which then leads me onto model making, so I tend to go from sketching to model making back to sketching if the model is not correct.

Interviewer: Right so you're 2D inform your 3D and the 3D your kind of exam in that and then rework that in a 2D format if necessary so you are kind of going back and forth between the two most that's working.

S12: Yes.

Interviewer: Okay do you ever work without using 3D model or do you find the 3D models actually create a different way of thinking about things?

S12: The 3D models I always use because they do that there is an element when in 2D that you just can't tell if it's going to work I don't know how it makes sense but once it's 3D it's like I completely understand it especially with architecture.

Interviewer: It's that sense of is that space enough you can draw it a million times but you still can't quite tell until it's.

S12: And also understanding you try and get what the thickness would be roughly to the materiality that you want to also use so you can do a sketch and then say there is going to be plaid in this amazing corten steel or something, and then you try and make a model which is similar thickness you can tell whether or not if it does work, especially at the moment I'm doing one that's a project that's to do with an old existing building and it's trying to get when you create that 3D model again that it makes more sense than just a sketch alone.

Interviewer: Yes, it's almost a kind of visibility in terms of your materials and the design okay. When you are in a classroom situation in the studio and someone says right class we are going to sketch for an hour then we are going to put for stitches on the wall and a critique as a group, how does that kind of thing make you feel?

S12: I wouldn't like it.

Interviewer: Right this is good it's not good but this is good for me. How does that make you feel what kind of emotional response very strange question I do apologize, what's your immediate sort of physical or emotional reaction to that?

S12: Dread.

Interviewee: Okay where does the dread come from?
S12: I don't like having my drawings necessarily marked against someone else's drawings or compared to them because I think it's the ideas behind those that are actually more important.

Interviewer: So it's like the process and what goes on in your head is the important bit and not the way to sketch necessarily looks as an artefact.

S12: Yes.

Interviewer: Okay and do your tutors look at sketches like that do you feed they look at them as artefacts to be judge as a picture, or do they see the processes within the image?

S12: That's the thing if it sorts of have the right texture you sort of 2 images you have to have the process one, and then you have to have this is the final grand design type situation. So I think if they saw the grand design one and it didn't tally up to process one they just draw across over that grand design one because that doesn't make sense. So I think they prefer to see almost and I think that's why it is important to have those drawings on your final pinup as well all of how you got to that point a quick overview because if it doesn't make sense and they have been working with you all year and they are like how did they get to that then that's just an image that's not a natural product.

Interviewer: Yes, so there is no sort of narrative of story that is develop to get to the final image?

S12: Yes.

Interviewer: Okay so your initial response if you are asked to do things like sketching and then demonstrate it.

S12: Oh by God I am scared.

Interviewer: Why do you feel scared though why do you feel that fear?

S12: I don't know I think that it's similar thing when have you know you are going to be marked in front of people because I get that same feeling just [unclear]. And I remember I used to get it when I did extra art lessons we used to show our work at the end and I'd also get the same feeling then. But I would always get a lot more positive than I would have thought I was going to get.

Interviewer: So the fear of judgement does you think that's greater than the actual judgement and criticism you've get in reality?

S12: Yes, it always is I always like I come out feeling ready and that's what helpful with the sheets that they gave us after or [unclear].

Interviewer: So you've gone through that whole kind of anxiety purses and you've got some sort of positive criticism and good marks from it. That's interesting because everybody I've spoken to who sketches is terrified of what people are going to make of their sketches, whether they're sort of sketch inhibited on not there is the sense of I'm going to be beating up with this and nobody ever is the reality is people aren't that cruel
it is interesting okay. So when you are sketching away in studio ideas early stage, do you feel the need to make your design development sketches perfect?

S12: No.

Interviewer: Why is that?

S12: Because it's a process and I think that's when I sketch a lot with tracing paper, so you get it closer and closer to that end result so just by reimagining it and going over it so I think you're fine one is a better version of the first one that you started with piece of chasing paper but it doesn't mean it's not as important.

Interviewer: Absolutely okay so you are happy with sketches that aren't pretty beautiful perfect you would be happy to show something scribble couple of different pens sticking up and you can explain your way through it do you feel comfortable doing that?

S12: I wouldn't say comfortable but I know my full process so I know that what I am saying isn't me making it up I know it's a well-developed idea. And me and my tutors actually say that I tend to work in scribbles because that's my whole processes it's all comes out scribbles on top of scribbles so I don't actually work very neat until the final end result, and I tend to have to go over my process and pick up points [unclear 15:21] you make them neat so that people who don't understand from start can.

Interviewer: So you revisit to a later stage and fine in order to kind of communicate the process the process is there you've just got to communicate the hopefully someone who isn't familiar with the way you work.

S12: Yes.

Interviewer: Right how are you thought to sketch for design purposes on your course, or do they assume that sketching is intuitive and it's something that you can just do?

S12: I think they do actually sort of expect you to come here with certain sketching knowledge because obviously it's a BA and most people have some sort of art type qualification so I think they think that's the basic level. To be honest we haven't had much in terms of this is how you can sketch it's more I think it's when we do the study trips the field trips abroad, you are with your tutor and you are with people who are even better than you or worse than you. And you all sort of sit at a cafe after you've done some sites and you started sketches and you finish them off that's when you actually start learning that's how I find my sketching before and it wasn't that great and it's improve not because necessarily the University's done anything to help it but because the people I am around helped me.

Interviewer: Okay so is it the case that you are kind of measuring yourself against the abilities of other people other peers?

S12: It's not so much that there is always going to be people who is better than you, and it's more that you can appreciate that they are better than you and you asked them all to do that.
Interviewer: Okay so you are actually learning in terms of techniques and observation, okay so you are picking up strands of their process and applying to your own work?

S12: I think that's the thing about architecture as a degree is it doesn't provide you necessarily with all the tools to do everything it that it provides you with being able to talk to people and appreciate that somebody is going to know something better than you and it makes it easy to just go up to someone and talk to them and ask for help even if you don't know their name and you can see that they are doing something and you want to know how to do it.

Interviewer: So that's sort of peer critiquing and mentoring is quite important.

S12: That's why the studio is really important.

Interviewer: I mean the space you've got there is fantastic and it's really nice to see I mean I don't know what years were in there today but I could tell people we're working in very different levels quite happily all alone side one another.

S12: Yes, it's good everyone appreciates the studio.

Interviewer: Okay are there on the course have there being any shortfall in terms of things you would you liked to have been taught about using sketching or learning techniques or learning thinking processes which didn't happen?

S12: We have been told I don't know if you've heard our year is almost like guinea pig year.

Interviewer: Yes, I keep hearing the word guinea pig.

S12: Yes, which meant that when we were told about [unclear 18:44] and everything we were all told that we were to get this great art you would sort of learn everything by hand at first you would get a really good understanding of how to draw architecture by hand and how to represent with watercolour is pencils and that sort of didn't happen for our year we got so it's [unclear 19:07] communication our side was very heavy in AutoCAD Photoshop.

Interviewer: Was that at first your level?

S12: First year level.

Interviewer: So you went straight into the digital tools?

S12: We had 3 sessions where we learnt how to do plan section and the elevations by hand. And then from that it was all to make those look nice in Photoshop and then from then it was how you can reproduce them using this guide or AutoCAD and then put it into [unclear 19:39].
Interviewer: That's interesting so would you have preferred to have spent more time learning the manual techniques at that stage do you think that would have benefited you, or would you have kind of got to where you are now anyway somehow?

S12: I think it would be nice because we see a lot of the first years and what they are doing and our final pinups almost looks very the same in our first year. And whereas they've sort of told now to explore materiality explore different ways of expressing things and stuff like that whereas we were told there is a set way you must follow it. But I think after that year it got more flexible and I don't think it was necessarily the tutors want in that way. I think they wanted us to start because architecture is becoming very digitally dominated they wanted to make sure they provide some sort of you know we really good at providing a digital understanding but I think we would have gotten to that point anyway because you have to just from being in studios.

Interviewer: It's the kind of industry standard and it is how things are done. Okay as a millennial because that's what you are apparently would you I mean you were talking about using a lot of digitize sort of techniques and things from the first year onwards but do you feel that things like digital sketching tools would of been beneficial or do you feel that the kitchen the manual approach the instantaneous pen and paper thing is the best way to go, do you feel you’ve kind of missed out by not having a digital version of something which is?

S12: No not at all I don't know I've never liked the idea of sketching straight onto a computer screen.

Interviewer: And why would that be?

S12: I don't know I honestly don't know, there is something about it when even if it is on the screen I don't know it's sort of makes you think that you need to be a slightly more neither a slightly better understood. Whereas I could literally it's just anything I could scribble straight away I don't know it's just that you can find any piece of paper I don't know I have never used anything to draw onto a computer and I have never looked to doing going oh I'm going to try that. Not because I want to know how they do it but how does that work in terms of actually getting what they want to come across because I don't know I think there is something hand and pen to paper.

Interviewer: What is it about hand manual pen paper?

S12: I don't know I think you get more of an understanding if it's flat it seems to make more sense then it's staring right back at you because you can't see the move that you have made previous to it and sort of understand the line and where they have moved from more than a computer, because there's nothing down it's a line on a different screen that isn't actually connected to where that pen you are drawing from.

Interviewer: Interesting so when you are sketching do you find yourself mentally visualizing things and then putting them down on paper before they disappear from your head?

S12: Yes.
**Interviewer:** Is that quite a lot of the time is that a constant or is it no and again?

**S12:** I gets flowery and then I'll just sketch and sketch and sketch and then I will try and figuring it out again.

**Interviewer:** Okay and when you are at that sort of early stage and you are thinking of all these different things you need to consider; stuff is coming up in your head I got to remember this got to do that. Do you put that down do you get that out of your head and onto paper at that stage as well, or do you find yourself attending a lot of it?

**S12:** No I've got terrible memory no I sketch it straight away.

**Interviewer:** Can I ask are you dyslexic in any way?

**S12:** No but people have asked me if I am because I have terrible memory and I am really bad at writing but anyway.

**Interviewer:** But you've never had any kind of official assessments or anything.

**S12:** No nothing.

**Interviewer:** That's interesting because I've interviewed 2 people so far both guys actually who are dyslexic who have very short working memories who can't retain information for very long and they really rely on recording it so maybe I don't know that would be interesting it's just a different way of doing things isn't it. Okay when you are sketching or you've been sketching and you go back to your sketches and you sort of looking over things you've done earlier on. Do you ever find yourself seeing things in your sketches that you haven't actually deliberately put down do you see we call it reinterpretation do you see things which actually that looks completely different I am going to turn it into something else, almost like suggestions coming back at you from your sketches?

**S12:** No I don't actually I think I would like to. I get very stuck so when I get stuck on my ways I find so when I've got an idea.

**Interviewer:** Okay so the idea is in your head what happens then?

**S12:** It has to be that idea.

**Interviewer:** It comes out and then what do you do with it?

**S12:** and then I will sketch it try and make it, if it doesn't work I will try and sketch it again to make it to work.

**Interviewer:** So you keep working on that until it comes back at you in the right way.

**S12:** And if it doesn't then I will start all over again I never reinterpreted the previous sketch.
Interviewer: So you are very almost dogmatic about this is what's in my head this is what it's going to be like?

S12: In the project that I’ve doing the moment I’ve had 4 completely different floor plans and layout of how the building would look because it didn't work so it just stopped and started again because the sketches weren't right.

Interviewer: Why don't you go back to the sketches and work through rather than going sideways onto another concept?

S12: Because I tend to find that I do actually try and make it work for as long as possible, and there is a thing where because you will do other types of studies of the space and it is a thing where they just don't mesh together.

Interviewer: So it's almost like a testing process and the test doesn't come out conclusive or positive and then you move to one side and continue with something different?

S12: It doesn't intend to be creatively different but just might be something that I have realized does really work well and something that doesn't work well at all. So my floor plan to me to everyone else it looks very different but to me it still has a lot of attribute from the first one because the sketching ideas are still the same ideas just slightly different form.

Interviewer: Right just interpreted very slightly differently so the thinking is pretty much the same okay that's interesting. So you go through this process of getting it out on the paper so offloading it, looking at it testing it trying bits and getting to a point where you either carry on with it or you move sideways to something else. Okay right I think that's all I need to know well I don't know I mean maybe you were going to tell me something else I need to know but I don't know that do I. I think that's pretty much all that are the question that I need to ask you about.

Audio Finish
Interview with S14

Interviewer: Okay here we go we are no recording, right okay first of all could you just find the benefits of the tape just so I've got a record and I Know Who You Are just introduced yourself, tell me who you are what course you are on what you are studying Etc. just so I've background of Who You Are?

S14: My name is S14 I am a product design BSc student I am currently finishing my final year at University.

Interviewer: And that's at De Montfort?

S14: At De Montfort yes.

Interviewer: And your BSC as opposed to be okay lovely right. Just give me a little bit of background as to how you got onto the course here did you go through the sort of A-level route or did you go to college and do a diploma?

S14: I probably have one of my more unusual routes I went to college and dropped out after a year because I decided I didn't want to do it anymore.

Interviewer: What did you do at college?

S14: Graphic design IT which I dropped out of really quite quickly, films studies because I thought that I could get to watch films rather than do any work and photography.

Interviewer: Okay and where were you doing that?

S14: That was at Derby College.

Interviewer: Okay and that is a further education course or was it a degree course?

S14: It was A-levels at college I dropped out after a year and so bombed around for a few months and decide I am going to just do something with my life so I join the Army. 7-years later I come out of the army having found out I can get my degree paid for by other people so I thought I wasn't going to pay why not.

Interviewer: Yes, absolutely considering the cost of it now.

S14: [Unclear 1:53] I started looking at [unclear] with not a really clear idea of what I wanted to do or maybe I just wanted to go get a degree, initially because my background of a nature was essentially Construction so I trained as a architectural technician for a year. I take in architecture engineering architecture civil engineering but I am shy to math so the civil engineering was kind of out architecture engineering look fairly interesting and I really like the look of architecture but the length of the course.

Interviewer: Yes, it's quite prohibited there are other ways to get there in fewer years and still come out as qualified student.

S14: Yes, as well so looking at these degrees I was literally actually for DMU just stumbled across product design in the perspective of online, and I said okay being a
BSC course it has a mixture of the technical sides of engineering as well as the more artistic artist idea so I said okay that seems like an interesting fit, so I applied to various universities with very little in the way of qualification to be honest [unclear 3:10] off this architectural technician role essentially so it's a few technical drawings other than that just have a few sketches.

**Interviewer:** So you had a kind of portfolio with the technical stuff that you've done already okay.

**S14:** Yes, so in terms of [unclear 3:28] points I have very little so my junior is pretty much weren't interested but one his name is Claude accepted me and he asked me for an interview and I went for the interview and quickly they accepted me so here I am not the standard really [unclear 3:49]

**Interviewer:** Interesting right so going back to your childhood can you remember doing things like sketching and drawing as a kid what were your kind of memories of things like that and how old were you?

**S14:** Right from [unclear 4:10] over my memories anymore pretty more what my parents have told me, but yes it was from I was a very young age I was always doodling drawing various pictures, my parents has told me about stocks of various things I drew as a kid and they actually showed me some not so long ago and I was actually astounded myself by looking back to it, looking at the age I was it's sort of 5 or 6-years old and drawing really quite competent things I was like wow that's really good but I didn't touch it again for many, many years.

**Interviewer:** Okay so what sort of age were you when you are kind of remember not sketching anymore was it when you got to school?

**S14:** In school I sketched a lot actually thinking about it because I did an art class, it was one of my GCSE so I was still drawing up until about 15 or 16 and it will pretty much have stopped there until I return to education 10 years later.

**Interviewer:** Okay so when you were doing stuff for your art GCSE and you were doing your stuff at college your [unclear 5:14] type stuff creative stuff, what was it like then what was it like for you to sketch in terms of what did they expect of you where they supportive of you did you have people who were very critical of you or was it something you just got up and.

**S14:** In terms of teachers?

**Interviewer:** Feedback from teachers or peers.

**S14:** People always recognize I was very good at it and they always sort of if you want something draw you can speak to S14 he can do it sort of thing, so it's generally really quite supportive in that way and I enjoyed it as well I find it quite relaxing.

**Interviewer:** Okay and then that kind of ended when you finish your college and went into the army that's when you sort of?

**S14:** Yes, and even at College probably like graphic design wasn't really so much drawing stuff.

**Interviewer:** Was it mostly digital?
S14: It wasn't digital a lot for me it was paints a lot, which is ways I am talking about we are doing like magazine like layout and stuff but we are still doing it manually which is weird, but yes I suppose I was also using sort of those fine motor skills but maybe not actually drawing pictures so much.

Interviewer: Okay right where you are now with your course and what you're doing in your sort of education stuff, how do you feel about sketching is it something that you feel is vital to what you do or is it something you feel you can get through the process of Designing without having to draw you don't want to draw, how do you relate to sketching now?

S14: I think my view on it is probably [unclear 6:54] over the course when I first came in I had probably zero knowledge of the course really but quite quickly those skills came back to me, so again I've sort of identified this one was able to quite ably put fourths down onto paper. So now it's sort of course development so I work in an industry for a year again where I did a lot of sketching actually.

Interviewer: So the course here is like a sandwich course it is a 4-year degree so you did a year out in.

S14: Yes, 4-years and I did a year in the industry and again I did a shedload of sketching there, and I think the type of sketching I don't think you have to by any means as long as you can communicate an idea to fellow designers confidently and preferably very quickly, you don't need to be drawing mass of pieces but on the flip side there is a massive advantage, it's a very useful tool to be able to show a client a concept or an idea of a product that's not so well refine like if you are doing like a Cad render or anything, it's done the thing is more resolved than it is and so we can show a really nicely rendered digital sketch or manual sketch. [Unclear 8:18] then sort fill in with the gaps a little bit and sort of get the ideas [unclear] about I am thinking you have done too much in that way although not to essential by any means to do the job I think the employers will always look to someone who's got that skill it's an additional tool that you can use in the design process so yes sort of get an idea across.

Interviewer: So when you are a year out in industry did you do a lot sketching was it all sketch based?

S14: The first 6month because the department I was in they had quite a lot of designers very abled designers but they were more technically bias, I mean not had many people in that department who were sort of quiet fluent or happy sketching.

Interviewer: So these guys were more digitally orientated where they?

S14: Yes, well we have to quickly do sort of hand sketches as ably as I was I think that was a sort skill set I was able to sort of [unclear 9:18] while I was there for the first 6 months somebody else can do this no one has really not been doing much of before I used to get a lot of work doing that.

Interviewer: You became sketch [unclear 9:36] okay that's interesting so this organization that you went into obviously saw what you could do and kind of buying into it which is great. Did your kind of get feedback from clients and people within the company about what you were doing and how you were doing it?

S14: What do you mean in terms of how?
**Interviewer:** You know the fact that you were sketching and other people were kind of like asking you to sketch and you were producing sketches more rapidly than other people.

**S14:** [Unclear 10:10] I’ve been able to show clients something about having to resolve too much.

**Interviewer:** So did you kind of get pulled along to client meetings?

**S14:** Yes, I went on to a few client’s meetings Workshop of brainstorming so I think the pivotal of that sort of skill would be able to sit in the workshop create someone’s ideas and I have to sit there and quickly knockout a Sketch and then obviously this is what you are thinking, there might be a sort of the [unclear 10:38] of where to be in terms of quick loose sketching [unclear] you got that more in depth rendering.

**Interviewer:** The end I am looking at is this sort of ideation stage the thinking process as opposed to here is a beautiful sort of hand rendered something or other, that’s kind of a slightly different process it’s what goes on in your head more and comes out through your hands that I am interested in.

**S14:** Getting ideas down I think you can do that quickly is such a valuable tool especially amongst clients who they are not the designers they can think conception like people you would be working with.

**Interviewer:** And what sort of feedback were you getting what sort of things were clients saying or doing when you were sitting in sessions you know maybe sketching and doing rough stuff for them?

**S14:** It was just extremely [unclear 11:25] sort of see now the picture paints a thousand words you can literally paint the picture and explain even your idea or a lot of the time people will come up with ideas and you can bring that together in a format people can then comprehend.

**Interviewer:** Okay so did you find that kind of speeded up the process of getting to watch the client wanted?

**S14:** Yes, it certainly won't slow it down I think it sort of fills in the gaps especially for some of my client’s meetings would have various people from the company they might have various technical people there, then they would have the non-technical people and all these engineers [unclear 12:12] away and engineering and it would be completely over the head and then if I can sort of fill in the gap from what the Engineers or more technical designers.

**Interviewer:** Okay you very often get some of the marketing people as well have a big idea about what they want to do but can't actually explain or Draw, so it's almost as if that process for your clients was kind of making the ambiguous less ambiguous?

**S14:** Exactly yes.

**Interviewer:** Okay so it was kind of crystallizing stuff in front of them.

**S14:** Yes, so instead of having someone to sitting over thousand Post-It notes with words or.
Interviewer: Yes, things we need to do when we get back to the office.

S14: Yes, we can sort of more concisely draw a quick sketch of what the thing might look like bring up a few key points with a few words or just bring it to life a bit.

Interviewer: Okay great so sketching for you is important?

S14: Yes, I mean like I said there is so much of it it's also the type of sketching as well if it's all design rated and it is solving a problem or even if it's like a nice visual to present I enjoy that, what I didn't enjoy so much was putting I don't know what's the word [unclear 13:23] fluffing out PowerPoint making it look prettier by throwing in [unclear].

Interviewer: Right by taking a digital thing and making it look hand rendered for the purposes of presentation?

S14: More just the case of like here is a presentation that we are sending to a client's we want to put a picture in here to show what it could look like, so we have not really going through the process here.

Interviewer: So the thinking process haven't been gone through to get to that end stage?

S14: They are just wanting a nice drawn picture oh this is what it could look like well no because we haven't gone through the process to find out what it could look like it's just making something look nice.

Interviewer: And this was coming from designer's other designers?

S14: That would be from business Developers.

Interviewer: People who didn't understand the design process?

S14: Yes, exactly the business developer is always like can you just spend 8 hours a day just drawing this really nice looking picture so I can put it in a PowerPoint, it's not really designing anything that's why I didn't want to do that anymore I wanted to be involved in actually making something getting hands on the stuff.

Interviewer: Yes, Absolutely. This sounds a bit strange as well a bit sort of fluffy and girly and I don't mean it to, when you are in a session in a Workshop session in your product design course and you are required to produce sketches in a short space of time or come back next week with the Sketchbook. What is your initial response to that to being asked to do things like 10 pages of sketches in 2 hours or something?

S14: To be honest that has never really come up on my course as such the people in BA they are much.

Interviewer: They are much more sort of aesthetically driven.

S14: [Unclear 15:16] I want x amount of pages whereas we are expected to be more technically unclear 15:22] because I have been able to do that as well I have sort of trying to bring the 2 together, I never had module where it's a case of like here is a high-end give me 50 pages of illustration.
**Interviewer:** Okay but how do you feel when you know that you are going to have to sit down and sketch something to get through an idea or get through a brief to a place where you think yes I've got something there?

**S14:** I think that's worse way of going [unclear 15:49].

**Interviewer:** Really, and why?

**S14:** Personally if you are having to something done or a certain amount of stuff and I feel like I need to be enjoy doing it, and I have to be sort of relaxed. If it's like I've got 24 hours and it needs to be done, then you just filling paper and it's not really.

**Interviewer:** Right so that sort of pressure kind of almost stops you being creative because you are kind of clock watching.

**S14:** I mean I know a lot of industrial designers we love iterating and we will just spend sketch after sketch tiny little detail, I think there is a certain amount of [unclear 16:35] we have done exploring enough Directions for what you are producing it looks right and it's good but I think there's a certain degree with the industrial designers where they've got this idea of the process and do this process and then we will do x amount of iteration, and I sort of get quite labelled with that just drawing same thing over and over again were a sort of slightly different angles. I think that's why me being on the BSC course I'd rather be figuring out how it's working out with technical details as well as try to bring it together to something that looks nice rather than concentrating solely on sketch.

**Interviewer:** Okay right so you don't consider yourself to be sketching inhibited you enjoy sketching it's something you do; do you keep a Sketchbook do you keep notebooks things like that or even sketches where you are drawing anything real but you know just a source of putting your ideas down?

**S14:** I just scribble [unclear 17:44] nearby.

**Interviewer:** No that's fine it doesn't matter just interested to know, and when you are working on something an idea and you are kind of scribbling sketching and building the thing up, how perfect do you try to make do you feel the need to make things perfect.

**Interviewer:** Initially again going into a [unclear] in the industry has made a big difference here because University is not real and what you are handing in to be marked I spend the first year especially in the second I spend ages on a sketch page to make sure it's looking beautifully and expectedly presented not even redraw it and it's pointless I'm just wasting time but because you are getting marked on what you are handing in that's the sort of mine said I had so it had to be perfect. And then here in the industry I realized it's not the end goal at all it's just a process just a matter of getting ideas down. So when I present nice looking sketches but initially it will just be a scribble on page just working through the idea for myself, then I will develop some of the things that have legs and produce sort of nicer looking sketches that other people can comprehend, but if the first sketch looks a mess it doesn't make any sense and it's fine it's just for me then I will sort of develop that [unclear 19:07] that other people can understand.

**Interviewer:** Okay when you are in your sort of peer group within your year or within your sort of cohort with the other student. How do you feel about things like presenting sketch work about your very rough stuff when you are just producing it for yourself?
How do you feel about presenting that and being judged do you feel pressured that you are being judged by tutors and peers or do you just not give a thought?

**S14**: I think it's to [unclear 19:34]

**Interviewer**: Right how was it when you first started the course obviously something has changed has you've gone through the process?

**Interviewer**: First when I start the course especially in the first year I kind of sort of sat around presenting the work and it is you do feel like you are being judged or everyone is sort of gauging how well you are doing compare to others, I think there is definitely an element of pressure their naivety I would say but once you sort of get past and realizing it really doesn’t matter.

**Interviewer**: So what are those sort of feeling of fear what are you of?

**S14**: As far as for me if I am doing something I like to be good at it and maybe not be the best but certainly held in regard as knowing what I am doing, the thought of being found out as a fraud and not actually knowing what you are doing is always at the back of your mind.

**Interviewer**: Okay so in those situations when you have possibly sort of put work up on a wall or had folios or had work out where other people could look at it, what kind of judgment have you had had you heard from people about your work?

**S14**: That gentleman has been very good.

**Interviewer**: That’s interesting most people have these same fears of being judged unfavourably against peers but nobody has ever been harshly judge by anybody so the reality doesn’t match the sort of fear so that's kind of an interesting thing, so you have not had any kind of nasty remarks negative feedbacks sort of discouragement I know it does happen sometimes you know you might come away from tutor where you are feeling fed-up or?

**S14**: Well it depends because you are always going to get some students who especially in the first year maybe [unclear 21:36] they don't really want to do anyway so you always get some students who don't really care anyway, because I've came in very focused on where I wanted it to be at the end so I always been sort of towards the top of the course certainly.

**Interviewer**: Now this is to do with how you are taught on your course are you actually taught how to sketch.

**S14**: No.

**Interviewer**: Is it assume that you can sketch that you can work through ideas?

**S14**: I think presumably the process of getting into the University require a certain amount I've been able to.

**Interviewer**: Right but once you are actually here.

**S14**: I suppose it is assumed.
**Interviewer:** Do you do any life drawing or fine art based drawing observational drawings at all.

**S14:** No in the first we share I think 3 of the 4 modules with the [unclear] course and the 4th one is when they do all the, like we teach you how to draw and that's when we go down the road and do math and science so we never had that teaching of such.

**Interviewer:** Okay so it was assumed that you would come in and know how to do stuff?

**S14:** Yes, you need to figure it out for yourself to some degree I mean our course because it sits between sort of 2 discipline you can be on a spectrum of [unclear 23:02] you can get people who are borderline engineers and maybe can't draw but they are not overly concerned because they make things and figure things out [unclear 23:12] a bit more technical to bias so I think it's left up to you to decide how much of that you want to do.

**Interviewer:** Interesting so are you taught how to design?

**S14:** Yes, we are taught a process I would say.

**Interviewer:** Can your kind of describe that process I know it's different for every sort of object but obviously there is some sort of generic overarching and sort of process what I've taught?

**S14:** Well initially you're very much setting the brief where that's given to you in some form or another where you having to go out and find it yourself that's sort of like the research stage of the process, so that's identifying a problem or need and then coming up with some viable solutions to that, and initially it might be a case of interviewing the people who this probably related to creating personas doing surveys questionnaire anything to get sort of inside of the head of the user. Two streams here anyway because you've got the user and then the designer [unclear 24:33] is working what's the overriding system so again our kind of course is just sort of shrug in sort of 2 different directions so you end up basically doing 2 things sort of identifying sort of mechanically or electronically was required you are also looking at the user Focus.

**Interviewer:** So you collect your user information so you know who your end user is likely to be their demographic what their needs and wants are, then you are collecting information about the technology the possibilities what can be done. And then you get to the stage where you know okay this is the problem this is the information about these 2 streams I am going down. And is it then assumed that you will come up with the solution or do you go through a process from that point with the situation?

**S14:** Yes, sort of moving into concept generation where again this is very depending on what the product of the problem is, on my personal project the concept generation stage [unclear 25:40] we are not even doing any sketching really because I sort of knew it was going to be an appliance of some kind but it doesn't really matter sketching out what it is looking like or anything, so I am still trying to figure out what's going in there what it needs to be doing, and the various sort of mechanical electrical things that will enable difference Direction Within that The sketching was kind of on the back burner where it's more of human factors kind of issue.

**Interviewer:** Okay do you find yourself doing more sketching and scribbling when you are working through the kind of soft human [unclear] centric issues as opposed to the
technology issues, you work that out in a different way is that all in the head or how do you?

S14: If I saw you sketching but in a different manner throughout my project I had a logbook where I write notes and to be sort of orthographic sections of how parts come together how various mechanisms.

Interviewer: Okay so this is to record existing and potential sort of tractors and format and systems.

S14: Yes.

Interviewer: Okay so your approach picking up the pencil for that is a different process to the one you use for figuring out what the design process is.

S14: That is, I am writing those bullet points [unclear 27:11] of 2D drawing section of a mechanism or even like a system diagram block diagram.

Interviewer: Okay so you have this sort of two definite approaches okay. With the course you are on do you feel that there have been any shortfalls in things like sketching drawing working through design ideas, any stuff that you feel that you would have liked to have learned about or being shown how to do that hasn't happened, this doesn't go back to your course so don't worry it's all completely confidential?

S14: Yes, and no for me personally because I've had a natural attitude of an interest it's been quite easy for me to go away and sort of develop my own skills and to go okay well what's the way of doing it how do other people doing it.

Interviewer: So you feel motivated to fill in the gaps, how do other students handle that sort of situation.

S14: I think for a lot of my course they would prefer a modular to go for [unclear 28:24] this is a good way of doing things.

Interviewer: Right they want to be taught a process, this is it you want to be taught everything but you can't be taught everything because everyone is so different. Okay do you have a preference for things like technology social media that kind of thing, I mean do you use digital sketching or is it all [unclear] is it all pen paper?

S14: A bit of both again sort of if it's problem solving if it's sort of developing ideas, I don't really do digital stuff if it's a nice attractive render to show someone.

Interviewer: Okay so you are happy to stick with the manual stuff.

S14: Yes, it feels more natural having that sort of feedback.

Interviewer: How does that process actually feels when you are drawing, and when you sit with a screen and a mouse Etc. it's a very different feel. Is there a greater sort of attachment Detachment when you are with a computer attachment when you are with sort of it is like a kind of intimate thing because it's coming straight from your head down your arm unto the paper? I just wonder if you can express or explain that how it differs?

S14: It's more fluid I suppose and you make a mark and it's there I don't use pencils at all I just use a pen, where is if you are using it digitally you can just control it [unclear
controls it it's more focused on making it look, and you have to put more effort into making it look less perfected and structured whereas with the pain is more it's more fluid it's more natural.

**Interviewer:** Okay do you do anything called working memory off-load you probably do I mean from what you described you do. I will just explain your working memory is a short-term memory that you are using when you are designing that's the bit of your brain that you are using not your long-term memory which relates to way back, but it's that sort of Here and Now stuff and research has kind of suggested that we can only retain and manipulate certain amounts of information. And above and beyond that you start to kind of need to put things down because you can't keep it all going and juggling it all in your brain at the same time, do you find yourself doing that is it something you do using sketching?

**S14:** I think I probably do.

**Interviewer:** That's fine most people aren't aware of it it's just that I kind of Define it for this you know we will have sudden idea and think we've got to scribble that down because I will go away and it won't be there anymore.

**S14:** Yes, if I got an idea I will jot down I always jot down bullet points written first and then just sort of I might do a quick sketch.

**Interviewer:** So you have got this sort of [unclear 31:38] memo All These Little Things that kind of is your memories and then you've kind of interpreted it somehow on a page, okay do you find yourself doing that a lot?

**S14:** Yes, my log book is bullet notes and sketch.

**Interviewer:** And when you've have got sketches on a page and you go back to something you might have drawn a few weeks ago or on another project, do you ever go over things and think oh my God that could work as something else that looks like something else it's called reinterpretation, do you ever look at things and think oh my God that could be something else that I hadn't intended for it to be?

**S14:** I would say so I think that's why I didn't just sketch it anyway that's just like looking at anything and saying oh that would be handy here oh that would be [unclear 32:22].

**Interviewer:** Yes, it depends on your frame of mind and what you are doing at the time.

**S14:** I think it's important to as a designer if you actually want to be good at your job you need to be everything it needs to be [unclear 32:35] looking at it objectively.

**Interviewer:** So it's reinterpretation of everything around you not just what you are producing as a designer.

**S14:** [Unclear 32:45] switch my brain on my work now I need to think of an idea so I kind of sit there at a desk and think of something.

**Interviewer:** So if you scribble something down do you ever do that you scribble something down but you are not really sure how [unclear 32:57] and then look at it and think actually there's a shape their and pick a shape out and run with it, does that sometimes happen if it doesn't it doesn't matter I am just kind of.

**S14:** It's almost like you don't think when you are thinking.
**Interviewer:** Sometimes you think a lot and then you put it down a lot of times you just half-heartedly scribble and then your kind of see into it and draw things from it.

**S14:** Probably in terms of Aesthetics and shape it's almost one of the best ways to go it's not to think too much just put some lines down on a page and then like you say I could work like this.

**Interviewer:** Let that process lead you rather than you pushing it forward okay it's interesting. And there is also something called [unclear] and seeing that which it sounds really boring but I kind of guess that you've already do this mental imagery you've got something in your head that you see your kind of envisage what you like something to look like or be like, and then you place that on the page and then develop and developed. And also this process of scribble, scribble, scribble what can I see in there oh interesting shape I like that I am going to develop it so these two things happened you find.

**S14:** What was the second one?

**Interviewer:** The second one is where you scribble half-heartedly or you just do something.

**S14:** Well the first one I think that is what I intend to do I come up with idea and then I jot down, or if I see some more ideas then 2 sketches in well it's the same sketch probably [unclear] my ideas and then that's when I either sort of used [unclear 34:45] even images from Pinterest or something similar, or just throw some lines down on a page and see if it makes anything nice.

**Interviewer:** Okay right cool I think that's everything I need to know brilliant thank you for your time.

Audio Finish
Interview with S17

**Interviewer:** Okay lovely right I have got some slightly obscure question to ask you if that's okay, it sounds a bit weird about your relationship with sketching. Can I start off by asking you about what kind of sketching you did as a child and not necessarily designed base sketching or sketching with any particular sort of end you know to it, but how did you relate to that kind of thing as a kid, did you do a lot of it or was it something that you didn't really do?

**S17:** Yes, I remember my dad used to work for Lloyds and he had a big stock full of paper that we are putting back into the drawings, and I used to tear the paper off and do sketches on each one I used to sketch all of the time, I used to draw all of the time when I was much younger. I usually used to copy things copy drawings and things that like that or draw I used to draw people a lot like their faces and just portraits of people.

**Interviewer:** And when you were at school what was your relationship with that kind of thing like at that point, because most kids really enjoy the sketching and drawing stuff at school, and then they find that later on it becomes more of a problem and they're kind of told that they are not very good at it, I mean what was it like for you?

**S17:** Are we talking about primary school or Secondary School or both?

**Interviewer:** I am just thinking all the way through I mean if you have any kind of insights from the whole kind of experience I would be interested?

**S17:** I can't really remember my art classes at primary school but I know that I have certainly enjoyed it in secondary school. Probably a little bit less creative just as there was sort of more strict guidelines on what we had to be producing and drawing.

**Interviewer:** And what kind of guidelines were you given can you remember any sort of specifics or incidents where you had to kind of had [unclear 2:23] to certain things?

**S17:** I remember doing digital light and we were drawing shoes and just doing 3D sketches of shoes. It wasn't necessarily something that I wanted to draw but it was still fun. And I remember seeing other people's drawings in my class and I have referred to mine and that sort of, it was nice to kind of see their Style and learn from them.

**Interviewer:** How did that make you feel when you were in that so situation when you were comparing what you were drawing and what other people were drawing at that stage, because some people dread it some people don't mind?

**S17:** Envious of other people skills I think.

**Interviewer:** Oh really so you assumed that you weren't as good as they were?

**S17:** Well I do yes it's subjective isn't it, I remember seeing a couple of people sketches and I thought that I personally prefer to look at theirs.

**Interviewer:** And what kind of age group would you be; would that be like secondary GCSE type A?
S17: Yes, it had to be 13 or 14 years old.

Interviewer: Okay and did you do a GCSE or A-level in art or art based subject?

S17: I did GCSE and then I started in year 12 in the first year of A-levels and decided to drop art within the first term just because of how time consuming it was compare with, like I sort of wanted to focus on my maths and physics so I didn't do it for A level. I was just going to say that I still carried on doing art through [unclear 4:30] it's just not at school.

Interviewer: What about the GCSE how did you find that as something that you had to do. Was it quiet restrictive or was it quiet free, what were your tutors like what kind of encouragement or criticism did you get from them what was that whole process like?

S17: I had a brilliant towards the end of GCSE I had a brilliant art teacher she used to come around and give everyone specific point, and she used to give us different, encourage us to use different mediums like the ink pen with the water brush and all sorts of things around those things [unclear 5:19] different mediums I suppose and I quite enjoy trying those out But GCSE in general I remember one big project was a 10-hour painting that I did, I didn't really have much opportunity to build my painting skills within the class, the class at the time which would have been useful. So I wasn't the best painter but I gave it a good go and I was surprised actually at my marks, they were a lot better than I expected because I wasn't really a painter at the time I never really painted I just spent about 10 hours getting what I could down on paper and add down on the canvas and it turned out okay.

Interviewer: And was that a piece that was used as part of your exam or assessments?

S17: Yes, so that was my final piece that was my final GCSE piece.

Interviewer: I see okay. This is a slightly weird one as well but bear with me. These questions are a bit odd but there is a reason for it. How do you feel about sketching and picking up a pen or pencil and making marks or expressing ideas?

S17: I am sorry I missed that.

Interviewer: That's okay. I am asking about your perception of sketching, so when you think about picking up a pencil or pen and just making marks or putting ideas or observing and putting it on paper. How do you feel what does it make you feel and can you express that in the words, I am sorry this sounds like some kind of psychiatric assessment and it really isn't?

S17: I love it actually; I love it you know I can't really explain why it's just another way of expressing what you are thinking I suppose because sometimes I find that I am quite a visual person. So rather than as in another way of expressing what you are trying and what you are thinking instead of through a dialogue. Physically expressing it through drawing it feels good I suppose and especially when someone else sees your drawing and gets see something in it as well.
Interviewer: Right okay so if you I mean even now because I am guessing that you do some kind of sketching or ideation within what you do, I know that you are an engineer and that's all kind of figures and facts I am getting, but do you use sketching in your work at the moment?

S17: All of the time yes so I did this one today.

Interviewer: And what kind of purpose would a drawing like that have what would you use that for?

S17: So I use that as a conversation and earlier on this afternoon he just says I wish that we have got some cables going across the corridor slab. And we can't have them beneath the slab we have to have them within the ceiling board. So I just drew that as a communicative tool to say to the mechanical engineers can we do it would you have any objections to us doing it like this, and it was a way that worked structurally.

Interviewer: Just going back to when you are at school I am sorry this has just come up and I hadn't thought about it. You talked about being you like the sort of visual aspects of learning and you like, have you ever had any kind of learning assessment done in terms of what kind of learning you are?

S17: Not that I can remember but I feel like I've sort of diagnose myself with it.

Interviewer: Yes, you do don't you when you find things easier than other things?

S17: Yes, and I've sort of come to a conclusion that I am a visual learner so I do a lot of spider diagrams, so I am just tabled in diagrams and things drawing that how I always used to revise.

Interviewer: Do you write lots of lists or do you prefer to do a diagram than write lots of list and do things?

S17: Well I do I do a lot of list as well.

Interviewer: But I am guessing your preferred way is more visually based?

S17: Well usually I will do a list in a visual way and sometimes I will do little diagrams with it I write a lot of list.

Interviewer: Okay just thinking if you had a choice of looking at image to learn about something or reading a book about it which would be your preference?

S17: Well it depends on what it is. If I could either have a picture of something with labels on what everything is, or description of it in a passage in a book I much rather have just the image, because I can remember the image and then when I am trying to remember what it is I go back to that image and it's all in a space in my head it's like a CD playing.

Interviewer: I know exactly what you mean okay. Can I ask you about emotional issues this is getting slightly a bit weird but it's really helpful? If you were asked to sketch at
work or you know if someone says can you run up some sketches for something. What is your initial response how do you feel when you are asked to do that?

S17: Currently I like that because I touch quiet and I have quite nice emotions just as to sketches just the word and just the idea of sketching is something that if I, you know if I sort of met up with friends and I say I’ve done a lot of sketching today at work I feel like that's seen as a positive thing, the people who sort of say oh you were sketching that sounds fun, as opposed to something more negative like going through emails or going through spreadsheets I mean I feel like sketching it’s got fun things.

Interviewer: Is it because you feel that you are in a position where you can create something from a seed in your mind. I mean when you are looking at emails you are not doing that you are literally kind of sorting information but I just wonder whether it's that process?

S17: Maybe it's that connection with creativity yes I think that you are right. Creativity and expression and your own kind of I mean I feel like everyone's sketch is going to be a lot different than everyone [unclear 13:27]

Interviewer: Sure the individuality of it. Okay when you are sketching I know a lot of students have this problem they have a real need for perfectionism. How do you relate to perfectionism when you are using sketches do they have to be spot on before you show them to anyone or you are quite happy to turn out really rough scamps and sort of talk around them with somebody? How do you approach it?

S17: I used to be much more perfectionist about it but now having to produce sketches quickly it's been [unclear 14:08] as long as they serve their purpose I feel like I am not too valid anymore but actually with that I almost feel like I prefer some of the rough ones anyway.

Interviewer: Right and why is that?

S17: So just the aesthetic it really looks nicer.

Interviewer: And when you had to make your sketches more perfect, what were your reasons for doing that what did you feel that you needed to achieve by doing that?

S17: Just because they are a reflection of you and when someone looks at them you want them to think oh that's quite good. So others rather than yourself I suppose others perception.

Interviewer: Sure okay. Another slightly odd one do you have any when you are using sketches at work at the moment do you have any fear of being judged by other people, I know that it's different from being in college Where You Are sometimes people are really kind of sensitive about that but obviously where you are now you have got your own way of doing things. Do you have any kind of fear or reservations about other people judging what your sketches look like when you are using them?
S17: Sometimes if I don't think it's a very good one or it hasn't got enough information on it sometimes but usually no.

Interviewer: Does it depend on who you are sharing them with or not?

S17: Yes, I suppose it does if I am sending it to someone that needs it for a certain purpose and need it as soon as possible, and they are going to look on it and take the information that they need from it and get on with the design in building something then I am not so bothered but if it was something that I was going to send someone for a presentation and that was the end of it, and they were just going to put it in the presentation or share it as an example then I would be a little bit more nervous about what it look like.

Interviewer: Sure okay. Have you ever had any negative kind of criticism or anything said about the quality of your sketches the way they look where you are working now? Hello!

S17: I am just thinking.

Interviewer: Sorry I thought that we had lost connection because I can see your face and certainly you look very distant like you have gone somewhere, I am so sorry.

S17: Critical feedback but more based on the information rather than the sketch itself.

Interviewer: Okay so it's what it contains and convey rather than how it actually looks immediately to someone else that's the important thing.

S17: In terms of purely aesthetic I think mainly positive.

Interviewer: Okay that's good. Can I just take you back to your, you did A-level and what subjects did you do those in?

S17: Math physics and French.

Interviewer: Right okay and from there I am assuming did you go to university to do a degree in engineering or was it a degree in something else?

S17: It was a degree in structural engineer no architectural engineering.

Interviewer: Okay architectural engineering okay so has you done your ROBA, does it take you through that or is it purely engineering for architecture that you studied?

S17: The architecture module was purely just for a little insight into that field and it was a [unclear 18:33] that I did so I [18:36]

Interviewer: Okay right and where have has did you do that?

S17: The University of Leeds.
Interviewer: Okay cool, during your course I know that it's an engineer base course and you obviously did your architectural module or your architecture bit. What kind of drawing teacher ship did you get through that course?

S17: We had one technical drawing series of lectures right at the beginning which was learning the different [unclear 19:15] that represent different material purely using rulers and [19:23] papers to draw section and [19:25] and details and elevation so quiet regimented.

Interviewer: So you learned how to do your sort of survey drawings and then your kind of projection and orthographic stuff I am assuming?

S17: Yes.

Interviewer: Did you do anything sketch base or observation based freehand at all?

S17: Nothing we had no lecturers or classes or organize drawing of that kind no. I did do a nice symmetric for my final project where I just did a quick sketch of the building I've design but it wasn't necessarily something [unclear 20:30].

Interviewer: Okay would you have liked to have teaching or time within the course that you have done free hand and ideation sketching, would you've found that useful do you think where you are now?

S17: It was quite a lot of parking’s in the degree.

Interviewer: Was it 4-year degree?

S17: 4 yes, not necessarily perhaps I'd be persuaded that in terms of if it was going to help a certain part of my [unclear 21:08]. I mean if I wanted to do that I probably would have studied architecture, and with my University degree I was more concerned with understanding the critical of engineering rather than learning about sketching, I mean it's something that I like doing in my spare time, so since I've been in BDP I have done a couple of Life drawing classes and do sketching in my own time but it's not something that I would necessarily [unclear 21:43] in my course.

Interviewer: Okay can I just ask how long have you been at BDP?

S17: Two and a half years.

Interviewer: And did you go there straight from graduation?

S17: Yes, and a couple of months and then go straight BDP. I was going to add something there.

Interviewer: I am sorry please do chip in anything that you want to tell me that's great.

S17: Because I do remember and it's good that you actually met John because I do actually, I remember a specific time when John and someone from the magazine from
the Civil Engineering magazine where going around a building that I have designed as graduate. And we were taking them around with some other members of team. And John asked me to sketch he was asking me about the build-up in front of everyone, the build-up of the slab and the junction between the beams and the columns and how it's supported. And I explained it and he didn't quite get something so he said could you just sketch the section, and I was very, very reluctant to sketch it because I knew that the magazine editor was there and I hadn't looked at my sections for quite a while and I was worried that I wasn't quite going to be able to, I was very reluctant to drawing it and it ended up him saying oh is it like this that he drew, so that's the time I can remember in BDP where I've been very reluctant to sketch. And probably if I just gone for it, it would have come and I would have been able to draw quite a detailed section on how it was built up but under that sort of pressure I wasn't prepared to do that.

**Interviewer:** Yes, your boss and the magazine editor is a little bit of you sweating really.

**S17:** [Unclear 23:45] because I didn't know exactly what the build-up was.

**Interviewer:** This is it it's strange because so many people I have been interviewing are afraid of doing things in case they are getting it wrong but actually when they do it they don't get it wrong and that's the strange thing.

**S17:** The drawing itself can be used as a tool of working out what it is in the first so even if you didn't know it to start with you sort of work it out with drawing, and you can almost just chip in and then you both work it out together, oh no actually it can't be like that I must have got it wrong because otherwise that wouldn't be supported and then you sort of work it out and draw it and then you know.

**Interviewer:** Absolutely so it's like a communication tool rather than just something that tells someone how will work.

**S17:** Exactly.

**Interviewer:** Okay right I think because you are not still at University you are a graduate and you are working, I think I have covered all of the questions that I need to ask you. Yes, I think I've covered everything that I need to know. Thank you so much is there anything else that you want to tell me anything exciting about sketching that you want to tell me.

**S17:** I am not sure as I say nothing's come to mind really. I've started doing squiggly lines rather than straight lines I start doing squiggly lines because I think they look nicer

**Interviewer:** Squeaky yes so you are kind of developing your own sort of vocabulary using lines?

**S17:** Yes.

**Interviewer:** That's quite nice when you suddenly find like a little Arrowhead or a little circle that add so much to what you are doing. I know what you mean when I discover
something like a new pen with a new weight of line I just get really excited so I can relate to that.

S17: That's another thing I am finally [unclear 25:49] the tools.

Interviewer: What kind of tools do you prefer to use when you are sketching.

S17: I use this it's a mechanical chemical pencil.

Interviewer: Do you ever use ink or fine liner?

S17: Not really I just can't rub it out but when I am not at work I do yes I use it.

Interviewer: What about things like paper when you are at work. What kind of peppers do you use or substrate do you use?

S17: Just anything that I can find around me A4 or A3 drawing paper.

Interviewer: Okay do you ever use like a digital sketching tool like Wacom or something on your pad or it's just manual traditional?

S17: I have used one of those before for Photoshop and I love that, that was brilliant and it was really quick and efficient and easy to rub out and change the line thickness.

Interviewer: Is that's something that you would prefer to use if you had the opportunity at work, would you use it more or was it all of the time would it replace what you are doing?

S17: It could do in certain scenarios yes, so it's the marking of drawings and things like that that's [unclear 27:10] it's just a case of Investing in tools like that and getting good at using them, and also the added pressure and of the tool not working but I like the idea of just having a piece of paper and pencil, [unclear 27:35] because of the internet or slow or you can just do that.

Interviewer: Yes, absolutely brilliant I've got lots to go on here. Thank you very much I am going to turn the recorder off now if that's okay?

Audio Finish
Appendix 9 – Learning style questionnaires

The VARK Questionnaire

How Do I Learn Best?

This questionnaire aims to find out something about your preferences for the way you work with information. You will have a preferred learning style and one part of that learning style is your preference for the intake and output of ideas and information.

Choose the answer which best explains your preference and circle the letter next to it. Please circle more than one if a single answer does not match your perception. Leave blank any question which does not apply, but try to give an answer for at least 10 of the 13 Questions.

When you have completed the questionnaire, use the marking guide to find your score for each of the categories, Visual, Aural, Read/Write and Kinesthetic. Then, to calculate your preference, use the Scoring sheet.

1. You are about to give directions to a person who is standing with you. She is staying in a hotel in town and wants to visit your house later. She has a rental car. I would:
   a. draw a map on paper
   b. tell her the directions
   c. write down the directions (without a map)
   d. collect her from the hotel in my car

2. You are not sure whether a word should be spelled 'dependent' or 'dependant'. I would:
   a. look it up in the dictionary.
   b. see the word in my mind and choose by the way it looks
   c. sound it out in my mind.
   d. write both versions down on paper and choose one.

3. You have just received a copy of your itinerary for a world trip. This is of interest to a friend. I would:
   a. phone her immediately and tell her about it.
   b. send her a copy of the printed itinerary.
   c. show her on a map of the world.
   d. share what I plan to do at each place I visit.

4. You are going to cook something as a special treat for your family. I would:
   a. cook something familiar without the need for instructions.
   b. thumb through the cookbook looking for ideas from the pictures.
   c. refer to a specific cookbook where there is a good recipe.

5. A group of tourists has been assigned to you to find out about wildlife reserves or parks. I would:
   a. drive them to a wildlife reserve or park.
   b. show them slides and photographs
   c. give them pamphlets or a book on wildlife reserves or parks.
   d. give them a talk on wildlife reserves or parks.

6. You are about to purchase a new stereo. Other than price, what would most influence your decision?
a. the salesperson telling you what you want to know.
b. reading the details about it.
c. playing with the controls and listening to it.
d. it looks really smart and fantastic.

7. Recall a time in your life when you learned how to do something like playing a new board game. Try to avoid choosing a very physical skill, e.g. riding a bike. I learnt best by:
a. visual clues -- pictures, diagrams, charts
b. written instructions.
c. listening to somebody explaining it.
d. doing it or trying it.

8. You have an eye problem. I would prefer the doctor to:
a. tell me what is wrong.
b. show me a diagram of what is wrong.
c. use a model to show me what is wrong.
d. what is wrong.

9. You are about to learn to use a new program on a computer. I would:
a. sit down at the keyboard and begin to experiment with the program’s features.
b. read the manual which comes with the program.
c. telephone a friend and ask questions about it.

10. You are staying in a hotel and have a rental car. You would like to visit friends whose address/location you do not know. I would like them to:
a. draw me a map on paper.
b. tell me the directions.
c. write down the directions (without a map).
d. collect me from the hotel in their car.

11. Apart from the price, what would most influence your decision to buy a particular textbook?:
a. I have used a copy before.
b. a friend talking about it.
c. quickly reading parts of it.
d. the way it looks is appealing.

12. A new movie has arrived in town. What would most influence your decision to go (or not go)?
a. I heard a radio review about it
b. I read a review about it.
c. I saw a preview of it.

13. Do you prefer a lecturer or teacher who likes to use?
a. a textbook, handouts, readings
b. flow diagrams, charts, graphs.
c. field trips, labs, practical sessions.
d. discussion, guest speakers.

Source: https://www.utica.edu/faculty_staff/bemmons/fall2006/ucc101/general.pdf
**Felder Solomon Index of Learning Styles (ILS)**

**Learning Style Questionnaire**

*Directions*

To complete the questionnaire please circle "a" or "b" to indicate your answer to every question. You may only choose one answer for each question and you must answer every question. If both "a" and "b" seem to apply to you, please choose the one that applies more frequently.

1. I understand something better after I (a) try it out. (b) think it through.

2. I would rather be considered (a) realistic. (b) innovative.

3. When I think about what I did yesterday, I am most likely to get (a) a picture. (b) words.

4. I tend to (a) understand details of a subject but may be fuzzy about its overall structure. (b) understand the overall structure but may be fuzzy about details.

5. When I am learning something new, it helps me to (a) talk about it. (b) think about it.

6. If I were a teacher, I would rather teach a course (a) that deals with facts and real life situations. (b) that deals with ideas and theories.

7. I prefer to get new information in (a) pictures, diagrams, graphs, or maps. (b) written directions or verbal information.

8. Once I understand (a) all the parts, I understand the whole thing. (b) the whole thing, I see how the parts fit.

9. In a study group working on difficult material, I am more likely to (a) jump in and contribute ideas. (b) sit back and listen.

10. I find it easier (a) to learn facts. (b) to learn concepts.

11. In a book with lots of pictures and charts, I am likely to (a) look over the pictures and charts carefully. (b) focus on the written text.

12. When I solve maths problems (a) I usually work my way to the solutions one step at a time. (b) I often just see the solutions but then have to struggle to figure out the steps to get to them.

13. In classes I have taken (a) I have usually got to know many of the students. (b) I have rarely got to know many of the students.

14. In reading non-fiction, I prefer (a) something that teaches me new facts or tells me how to do something. (b) something that gives me new ideas to think about.
15. I like teachers (a) who put a lot of diagrams on the board. (b) who spend a lot of time explaining.

16. When I'm analysing a story or a novel (a) I think of the incidents and try to put them together to figure out the themes. (b) I just know what the themes are when I finish reading and then I have to go back and find the incidents that demonstrate them.

17. When I start a homework problem, I am more likely to (a) start working on the solution immediately. (b) try to fully understand the problem first.

18. I prefer the idea of (a) certainty. (b) theory.

19. I remember best (a) what I see. (b) what I hear.

20. It is more important to me that an instructor (a) lay out the material in clear sequential steps. (b) give me an overall picture and relate the material to other subjects.

21. I prefer to study (a) in a group. (b) alone.

22. I am more likely to be considered (a) careful about the details of my work. (b) creative about how to do my work.

23. When I get directions to a new place, I prefer (a) a map. (b) written instructions.

24. I learn (a) at a fairly regular pace. If I study hard, I'll "get it." (b) in fits and starts. I'll be totally confused and then suddenly it all "clicks."

25. I would rather first (a) try things out. (b) think about how I'm going to do it.

26. When I am reading for enjoyment, I like writers to (a) clearly say what they mean. (b) say things in creative, interesting ways.

27. When I see a diagram or sketch in class, I am most likely to remember (a) the picture. (b) what the instructor said about it.

28. When considering a body of information, I am more likely to (a) focus on details and miss the big picture. (b) try to understand the big picture before getting into the details.

29. I more easily remember (a) something I have done. (b) something I have thought a lot about.

30. When I have to perform a task, I prefer to (a) master one way of doing it. (b) come up with new ways of doing it.

31. When someone is showing me data, I prefer (a) charts or graphs. (b) text summarizing the results.

32. When writing a paper, I am more likely to (a) work on (think about or write) the beginning of the paper and progress forward. (b) work on (think about or write) different parts of the paper and then order them.
33. When I have to work on a group project, I first want to (a) have a "group brainstorming" where everyone contributes ideas. (b) brainstorm individually and then come together as a group to compare ideas.

34. I consider it higher praise to call someone (a) sensible. (b) imaginative.

35. When I meet people at a party, I am more likely to remember (a) what they looked like. (b) what they said about themselves.

36. When I am learning a new subject, I prefer to (a) stay focused on that subject, learning as much about it as I can. (b) try to make connections between that subject and related subjects.

37. I am more likely to be considered (a) outgoing. (b) reserved.

38. I prefer courses that emphasise (a) concrete material (facts, data). (b) abstract material (concepts, theories).

39. For entertainment, I would rather (a) watch television. (b) read a book.

40. Some teachers start their lectures with an outline of what they will cover. Such outlines are (a) somewhat helpful to me. (b) very helpful to me.

41. The idea of doing homework in groups, with one grade for the entire group, (a) appeals to me. (b) does not appeal to me.

42. When I am doing long calculations, (a) I tend to repeat all my steps and check my work carefully. (b) I find checking my work tiresome and have to force myself to do it.

43. I tend to picture places I have been (a) easily and fairly accurately. (b) with difficulty and without much detail.

44. When solving problems in a group, I would be more likely to (a) think of the steps in the solution process. (b) think of possible consequences or applications of the solution in a wide range of areas.

Now turn to the scoring sheet so you can see where your preferences are.
Learning Styles Questionnaire

Scoring Sheet

1. Place a "1" in the appropriate spaces in the table below (e.g. if you answered "a" to Question 3, put a "1" in Column "a" by Question 3).

2. Add up the columns and write the totals in the indicated spaces.

3. For each of the four scales, subtract the smaller total from the larger one. Write the difference (1 to 11) and the letter (a or b) with the larger total.

<table>
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<th>Visual/Verbal</th>
<th>Sequential/Global</th>
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<td>b</td>
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Total (add up each column)

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<td>a</td>
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Larger – Smaller + Letter of Larger (see below*)

Source: (Bradford University n.d)
### Appendix 10 - Learning style table of results – inhibited students

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<th>Felder Solomon ILS</th>
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<tr>
<td>Read/Write</td>
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<td>Kinesthetic</td>
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<tr>
<td>Auditory</td>
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<td>Sequential/global</td>
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<tr>
<td><strong>Strongly kinesthetic</strong></td>
<td></td>
<td>Strongest global, strongly sensory &amp; reflective</td>
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<td></td>
<td></td>
</tr>
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<td>Sequential/global</td>
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<td></td>
<td>Strongest visual &amp; intuitive. Strongly reflective &amp; global.</td>
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<td></td>
<td></td>
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<td>Sequential/global</td>
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<td>Strongest visual, strongly intuitive &amp; sensory</td>
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<td></td>
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<td><strong>Balanced auditory &amp; kinesthetic</strong></td>
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Learning style questionnaire table of results – inhibited students, continued...

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<p>|   | Strongest visual, Strongly sequential &amp; sensory |</p>
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