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# THE DESIGN DECISION TRAIL: A STUDENT DESIGN PROJECT NARRATIVE, TUTORIAL TOOL AND ROUTE TO EMPLOYABILITY.

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### **ABSTRACT**

This paper describes the invention, development and inclusion of the design decision trail on undergraduate and postgraduate design provision at the University of Northampton. The design decision trail engages with: employability, personal and academic development, inclusive and reflective approaches to study. It can be extended from design to other subjects.

A design decision trail is a student produced, visual narrative of a design project. It includes, dated and edited visual decision points. It is produced concurrently as the design project progresses. A successful design decision trail can enable quick understanding and communication of a design student's progress during their project. It is an informal document through which students can reflect on their performance. It can be used to share project information with staff, student peers and potential employers. It can be edited to emphasise the skills and competencies required by different readers. A good visual design decision trail does not rely on text and therefore can have an international communication advantage.

*Keywords: Design Decision Trail, creativity auditing, project narrative, reflective learning tool, employability*

### **INTRODUCTION**

To Research product design employer needs, D. Attenburrow [1] identified qualities and competences required by employers of product designers. Textural data was taken from Design Week appointments pages, over four years. The data was analysed by word count, under the following headings: personal, creative, technical and computing. Words under the personal heading outnumbered the rest. Employers seemed to want personal professional qualities from their employees. How can graduating design students, show this professional quality through their work?

T. Kotch, a Professor in Health Studies [2] describes the use of decision trails as an auditing tool to establish rigour in qualitative research. Could this approach apply to design studies? A decision trail may help design students show the qualitative nature of their professional personalities, through their project work. I tested a design decision trail approach in my MA studies to monitor and reflect on both written and practical work. All of those MA assignments had to be reader or client centred.

This paper defines the design decision trail. How it works as a creativity-auditing tool to show design thinking and its appropriateness for its readers. The paper continues by describing the design decision trail in context of the student, tutor and employer. The student can visually describe the narrative of their design project. The tutor can use it as a tutorial tool, allowing an overview of undergraduate, and postgraduate projects. For the employer perspective, endorsements were collected to illuminate student's use of design decision trails at interview. The introduction of design decision trails across subjects at the University of Northampton has enabled me to gain a Teaching Fellowship.

## WHAT IS A DESIGN DECISION TRAIL?

A design decision trail is a dated, visual narrative of a design project. It can be edited to suit the reader, who may be a client or potential employer. It should illuminate the student's design thinking, throughout their design project. The suggested format is that of a hard backed A4 sketchbook. It could also be translated for online or other methods of delivery.

### **A Creativity Auditing Tool**

The traditional design portfolio tends to show finished design proposals. The design decision trail can include information from design research sources such as research data, brief, design journal articles, design development sheets, sketchbooks, sketch models, prototypes, CAD and technical reports. Information from these sources aid design decision-making. It can be abridged within the design decision trail to show a convincing narrative journey through the creative project landscape. It can include quantitative and qualitative evidence shown graphically. The design decision trail needs to be presented as a visually engaging communication tool and passport to design employment.

Design decision trail readers may include: tutors, student's potential employers, professional peers, manufacturers, research groups, marketing teams and technical advisors. Careful editing of different aspects of the project can be represented to suit the particular reader. The design decision trail should be visual rather than written. Students are encouraged to integrate photos of models alongside scanned drawings from design development sheets. This may help when communicating internationally. The tutor and student can monitor growth of learning across subjects covered by the project to navigate the mounting complexity of the design project.

## STUDENT PERSPECTIVE

If students haphazardly record the design project, the value of the whole story may be lost. Compiling a project design decision trail can help refine this information. It can enable students to reflect on, and show their best practice from sketchbooks, developmental drawings, photos of models and prototypes from briefing to proposal. Students can convert written research into graphic representations. Technical and aesthetic considerations can be aligned reducing annotation.

The student is responsible for up dating their design decision trail. The more comprehensive the trail, the less time is lost at tutorials as tutors re-acquaint themselves with the project. A high quality decision trail can promote high quality feedback. It can help the student and tutor understand the complexity, depth and breadth of the design project. It can foster the student tutor learning partnership and form the basis of formative and summative assessment presentations. The design decision trail can also be shared with the student's peer group. The informality of the design decision trail can be vital in constructing formal reports.

Networking with potential employers, manufacturers and project contacts can be initiated and developed. The student can have control of how they wish to be reflected in the jobs market. Students are encouraged to send out regular design decision trail, one page edited versions to invite interest, advice and support from external contacts.

### **Tutorial Tool**

The design decision trail can help the student engage with tutors from different disciplines. Each tutor or technician can see previous and ongoing areas of project research. Some design decisions may require the student to revisit the original brief. The tutor may add to previous work or suggest new territories of investigation to encourage the student and increase their confidence.

### **Situated writing and the design decision trail**

The design student needs to understand that, as a professional designer, they are employed to be creative on behalf of others. These can include their employer or client as well as users of their design proposals. The design decision trails need to be dynamic enough to be redesigned, rewritten and edited to engage with different readers. The student may have to edit it to answer a potential employer's job description. The student may use their design decision trail to gain technical support from a manufacturer. Therefore, it is advantageous for the student to keep their design decision trail up to date throughout their project, to be prepared for, and benefit from these opportunities. A visual design decision trail may be useful for international communication. Design students usually exhibit their finished proposals at the end of their course. The design decision trail can be used as an exhibition handbook to describe the narrative and context of the project to engage with passing potential employers. Students should view these encounters as informal interviews. Newly qualified students may have little professional design experience. The design decision trail can evidence how they may perform in work. A comprehensive design decision trail may carry the evidence to reduce the risk of interview failure. The student, of course, should research the company offering employment. Their design decision trail should reflect the job specification, the core purpose of the business, and align the student's qualities and competences to benefit the potential employer.

### **The Design Decision Trail as a Reflective Learning Tool**

Students can use their design decision trail as a shared and self-reflective document of their design thinking and learning. Brockbank, McGill and Beech [3] define reflective learning as involving:

...dialogue with others for improvement or transformation whilst recognizing the emotional, social and political context of the learner.

The design decision Trail can support this and function as a personal SWOT analysis to monitor their strengths, weaknesses, opportunities and threats. A comprehensive design decision trail can illuminate all aspects of a design project. On the University of Northampton design courses, the design decision trail is introduced in year 2 but is used primarily on minor and major projects in year 3. Students are encouraged to personalise their decision trail and design work, yet answer the brief explicitly. Design project visibility and differentiation can advantage the student in a competitive jobs market. The design decision trail can be used as a pitching device at formal and informal networking events.

## **TUTOR PERSPECTIVE**

### **Tutorial Methodology**

Up to date design decision trails can enable the tutor to monitor large tutorial groups and individuals. The tutor may use Post-it notes to insert comments into the design decision trail without drawing or writing on student work. Mind mapping software can be used during one to one tutorials to log key words, images and their relationships. This can give the tutor and student a holistic overview of the project. A laptop used in the student's work area can help achieve this. Tutorial mind maps can be shared with other tutors. Each tutor can see previous and ongoing research through the project. This can enable each tutor to build on existing, or suggest new research and approach.

'Proxemics' is a word first coined by Hall [4] suggesting spatial behaviour. Insensitivity to tutor or student personal space during tutorials can create uncomfortable or intrusive learning environments. Sensitive use of personal space can help create a positive and supportive teaching space. The computer screen can enable the tutor and student to sit comfortably side by side to

view the tutorial mind map on the screen to create a good listening and verbal communication environment. Furnam [5] identifies that:

Sitting opposite a person often symbolises opposition. ... Sitting side by side often symbolises co-operation and support but can be uncomfortable if people are seated too close together or if they feel they are not getting enough eye contact [4]

Leathers [6] describes a proximate environment:

When we use the space that can be perceived directly, we are communicating within the *proximate environment*. The proximate environment includes everything that is physically present to the individual at a given moment. [5]

### **Tutorials and Mind Mapping Software**

T. Buzan [7] identifies that we can remember more through colour, drawings, images and key words in 'radiant thinking' maps as a:

...creative thinking mechanism. That ...utilizes all the skills commonly associated with creativity, especially imagination, association of ideas and flexibility.

Mind mapping software can be used during group, or one to one tutorials. Using computer mind maps during project tutorials, allows the tutor and tutee to identify research omissions. They can suggest remedies to rebalance the project. In one to one tutorials each mind map creates a snapshot of the project at that point. Key words, scanned drawings and photographs can be pasted in during the tutorial. This creative, dynamic record can be revisited at future tutorials. The mind map can then be inserted into the design decision trail as a record of the tutorial dialogue.

The use of the design decision trail with tutorial mind maps is not unlike traditional auditing. The design decision trail could be like a profit and loss statement. Tutorial mind maps as a balance sheet. Champbell [7] describes a profit and loss statement as:

...a summary of the trading activities over the period of a financial year.

The design decision trail describes the creative activities over the period of the project. The tutorial mind map could be seen as a balance sheet. Chambell [7] describes a balance sheet as:

...the financial state of the company on the last day of the financial year.  
...It is sometimes described as a 'snap-shot' of the business's finances on the day in question.

Tutorial mind maps can be dated and saved. Agreed objectives can be prioritised between the tutor and student that can be revisited at future tutorials.

### **National Student Survey**

The design decision trail can help cover many of the National Student Survey questionnaire [8] headings, such as:

- 'The teaching on my course'-The design decision trail and tutorial mind maps can bring together teaching from across the course curriculum.

- ‘Assessment and feedback’ -The design decision trail can be used for both formative and summative assessments. The tutorial mind maps can be used at formative assessment points. The design decision trail and the tutorial mind maps can be sources of ongoing project feedback.
- ‘Academic support’- The tutorial mind maps and the design decision trail can record advice given to support student’s study choices.
- ‘Organisation and management’ - course organisation points can be signposted through the design decision trail during the final major projects when final year students are working more independently.
- ‘Personal development’-The design decision trail can allow the monitoring of student’s personal growth in confidence, professionalism, time management, presentation skills and network building.

Tutors can encourage students to generate contact networks. These may lead to employment. The student could send out monthly project progress bulletins to potential employers. The bulletins can be edited excerpts from their design decision trails.

## **EMPLOYER PERSPECTIVE**

Employers may not fully understand the nature of modern design, or appreciate how design may benefit their business. The design decision trail can help the potential employer understand the scope of the design applicants skills and qualities. If the student applicant has researched the employer’s company they can edit their decision trail to turn their attributes into benefits for the potential employer. An employer will appreciate if an employment decision is made easier for them. If the application was unsuccessful for the student, feedback at interview will be simpler for the employer and useful for the student. Employers may have an established design team. The design decision trail may make it easier for the employer to see how a new or replacement team member could fit into, add value, and perhaps develop new working practices within the business.

## **Endorsements**

From past student feedback from design interviews where the student applicants have used their design decision trails I have collated endorsements from their employers and contacts.

Success at interview at Dyson using a design decision trail (Ian Brough, Knowledge Transfer Partnership Associate 05).

On approaching Design Against Crime, Central St Martins:

‘...I showed them my decision trail and from looking at that they said they liked my ideas and the way I thought. They offered me a place as an intern there and then.’ (Sally Carter, PD graduate 07)

At RSA shortlist interview, to paraphrase panel members: (Ken Grange, Nick Levine)

‘*What ever you do, do not lose that.*’ -referring to the design decision trail document (said to Ben Frost PD graduate 07).

A third year product design student while still studying with us was given an internship with the advertising company, Don’t Panic in the University of Northampton’s Portfolio Centre on the strength of his decision trail. (Dane Ellis, third year product design student 08)

'Having a trail of ones work allows us to make coherent decisions based on fact. Keep up the trail!' (Ross Lovegrove 2009 email to Ben Frost, product design graduate in employment looking for a new job.)

'I saw the head of the design department and he commented that they were interested to see (the design decision trail) as *'he hasn't seen one before and that it does help to show that you (the candidate) can make decisions on your own.'* (Jenni Priscott, Interior Design Student 2011)

'They were very engaged when showing them the portfolio, and the decision trail helped show all the options made and problems overcome. The interviewers commented on the decision trail *'it has been quite a journey for you, and you have a large body of work- we can tell that you have worked hard over the last year'*. If I didn't have the decision trail, then I would have shown them pictures and talked, but with the DT I could go through each stage in the project and remind myself of what I did and talk in more detail and keep the interview exciting and interesting. instead of just showing the employers the finished product, I showed them the whole journey.' (Paul Pilliste Product Design student 2011, Arnold Engineering Plastics LTD., Northampton)

The traditional CV and design portfolio usually describes the applicant's attributes by highlighting skills and experience. These may match the employer's needs. If the student researches the potential employer, their design decision trail can be edited to show the applicant's attributes translated to create focused benefits for the potential employer.

## CONCLUSION

Many design jobs do not appear in appointments pages. University of Northampton design students are encouraged to take a proactive approach by cultivating working relationships with companies contacted during their project work. They can also research target companies and edit their design decision trails accordingly with a view to contacting companies speculatively for work and building their design network.

### **Student Self-marketing**

Many graduating students now have their own web sites. What innovative approaches have students used on their websites to secure work? Research into existing student web sites may identify innovative approaches to job hunting. Do student websites have traditional formats and approaches that may be disadvantageous? Can a design decision trail approach aid the students present themselves online? Can this increase and improve student visibility in the jobs market.

Design decision trails have now been adopted by other undergraduate courses at the University of Northampton Product Design, Interior Design, Graphic Design and Illustration. It will be interesting to see how Graphics and illustration utilise and modify the nature of the design decision trail. Following my success at becoming a University of Northampton Teaching Fellow. For developing the design decision trail examples are to be broadcast on corridor screens.

### **Postgraduate Study and the Design Decision Trail**

Postgraduate design teaching at the University of Northampton uses the design decision trail as part of the curriculum. Knowledge Transfer Partnerships, have used design decision trails to help staff representatives monitor the associate's progress, suggest inputs across their projects and develop their relationship with the company. The majority of our Knowledge Transfer Partnership associates now work full-time for their partnership companies. The Postgraduate Certificate in Creative Industries, showed that the design decision trail can be used students across the creative industries. It is now used on our new MA in Design.

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