DISCRETE OBSERVATION AS A METHOD OF IDENTIFYING REAL DESIGN NEEDS

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ABSTRACT

Consumer observation is widely recognised in the design industry as being a sensible 'starting point for every design' project [1]. In acknowledgement of this and the need to encourage the first year undergraduates to 'think more', the first semester Design Practice module in the Department of Design and Technology at Loughborough University was restructured to include a five week project which would make use of these techniques. The resultant project - 'Looking through the eyes of the designer' is discussed in this paper. Initially this paper reflects on the need to gain permission from the Ethical Advisory Committee at the University to carry out this work. It then goes on to describe the process that the students went through over the five week period and the inputs that were provided in terms of lectures, short studio based inputs and formative and summative feedback. The paper concludes by reflecting on the successes of the project and on where it could be improved in the future.

Keywords: observation, design techniques

1   INTRODUCTION

Reflection on the previous year's programme identified a need to encourage the first year undergraduate industrial/product design students to: think like designers; think creatively and think about the bigger picture, whilst simultaneously supporting them to develop the skill of 'problem finding' a key learning outcome of the module. The challenge was to develop material for a 5-week design project which would meet these objectives.

Building on IDEO's recognition that consumer observation is a sensible 'starting point for every design' project [1]. It was decided that a project in which the students were asked to observe people in their natural environments, develop a design brief around one of the observations, which they would then solve, would meet all these requirements. It would:

- provide them with the ability to carry out observations and identify problems [2-3].
- move them outside of their comfort zone and encourage them to think creatively [4].
- encourage them to think about the bigger picture, by forcing them to observe the way that people, other than themselves (generally white, young, students) live their lives.

The next stage was to develop the material to support this project, communicate it to the staff and write an outline of the assignment for the students. This paper reflects on the challenges faced in getting the project under way and then outlines the process that the

students went through. It reflects on the perceived risks of the project, their successful resolution and how the project could be improved in the future. It concludes by considering the benefits to be had from using this type of approach with first year undergraduate design students.

2   ETHICAL CLEARNACE

As the proposed project centred around investigations involving human participants it was necessary to complete the University's Ethical Clearance Checklist [5] – a short document which allows researchers to identify whether or not a full application is necessary prior to carrying out research. Having answered 'no' to a number of questions including; "Will junior researchers/students be under the direct supervision of an experienced member of staff?" and "Will those being observed and/or recorded be informed that the observation and/or recording will take place?" and many more besides, it was deemed necessary to submit a full application [5]. The alternative would have been to provide the students with pre-selected generic contexts, but it was not felt that this would be suitable for the techniques that this activity set out to teach.

Submitting a full application did carry a degree of risk. The course material had already been designed and if clearance was not granted it would not have been possible to run the programme. In addition to this, there was concern being voiced from other colleagues that failure to obtain clearance might impact other activities already being run. As such it was important to pull together a comprehensive argument which was backed up by literature and best practice from the field of industrial design, as to why the University should allow 110 first year undergraduates to discretely observe members of the general public. Fortunately a number of colleagues in the department were very supportive, recognising that the proposed activity was a key design skill and encouraged the application.

The activity for which clearance was sought was entitled – 'Discrete observation of members of the general public whilst in public places in order to identify real design needs'. The crux of the argument was that discrete user observation – or people-watching, is the basis of anthropology [6] as well as being recognised by leading designers as crucial for good design [1]. The proposal went on to outline:

1. What was meant by a public place. *"A public place is one to which the public has access (where admission has been gained with or without a charge) and where an individual could reasonably expect to be observed and/or overheard by other people, for example in a shop, in the street or in a place of entertainment"* (p7)[7].

2. Why the activity needed to be done – i.e. to allow students to identify potential opportunities where design can be used to improve peoples lives.

3. How it would be managed. In summary it was proposed that following a comprehensive briefing and the completion of practice exercises in the studio, students identify a context (which is agreed with staff) and then carry out an observation in that context. Where appropriate interesting activities e.g. people struggling with technology, are recorded using cameras, otherwise onsite or retrospective sketches are used. Following the activity, students reflect on the observations and use these insights to drive a redesign project. E.g. observing women trying to get a car seat into their cars, may open up opportunities for improving the design of the car seat or the car door.

Ethical clearance was granted on 22nd October 2007 on the proviso that all the students carried their University ID badges, letters explaining the research, including the

principle investigator's contact details, and copies of the Research Misconduct and Whistle-Blowing policy, should they be approached by members of the public.

3 THE DESIGN PROJECT – 'LOOKING THROUGH THE EYES OF THE DESIGNER'

The resultant project was entitled - 'Looking through the eyes of the designer', required the students to carry out a number of discrete observations of people interacting within a range of different contexts (e.g. train station, on the bus, in the car park), in order to identify real design needs. During these observations the students identified and recorded any situations where people were struggling with or working around a problem. All observations were recorded in a logbook as a series of notes and sketches. These problems were reframed into a brief which sought to be broad enough to encourage creativity, but focused enough to clearly define the issue. During the last three weeks the students set about trying to satisfy their brief in a creative and appropriate manner. Figure 1 shows a summary of the programme that was followed.
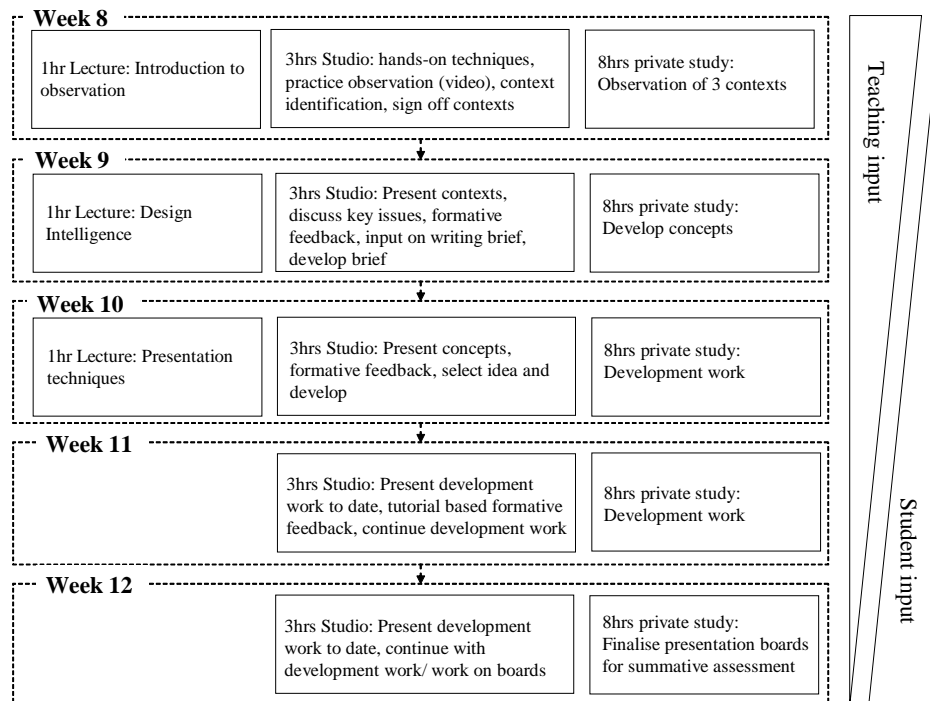
Week 8		
1hr Lecture: Introduction to observation	3hrs Studio: hands-on techniques, practice observation (video), context identification, sign off contexts	8hrs private study: Observation of 3 contexts

Week 9		
1hr Lecture: Design Intelligence	3hrs Studio: Present contexts, discuss key issues, formative feedback, input on writing brief, develop brief	8hrs private study: Develop concepts

Week 10		
1hr Lecture: Presentation techniques	3hrs Studio: Present concepts, formative feedback, select idea and develop	8hrs private study: Development work

Week 11		
	3hrs Studio: Present development work to date, tutorial based formative feedback, continue development work	8hrs private study: Development work

Week 12		
	3hrs Studio: Present development work to date, continue with development work/ work on boards	8hrs private study: Finalise presentation boards for summative assessment

(right side: Teaching input / Student input)

Figure 1 Outline of five-week Design Practice Project

This section outlines the process that the students went through over the five-week period and the inputs that were provided in terms of lectures, studio based activities, formative and summative assessment. It reflects on the outputs produced at each stage, including; observational details recorded in log books, developed design briefs, concept sketches, final developed ideas and the final submission which consisted of two presentation boards, the log book and sketch sheets.

The project started (in week 8) with a 1-hour lecture – 'Introduction to observation'. This outlined the importance of using observation to support problem identification, the types of companies that use it and the sort of things that it can show you. The aim was

to demonstrate the importance of the skill and its relevance to design and design related careers. The lecture went on to outline the issues surrounding ethical clearance in general and in particular the 'code of conduct' that they should be working to. The aim was to treat the students like adults to empower them to take responsibility for their actions. The lecture finished with a week-by-week introduction to the project. The studio session the following day briefly reiterated the process and then gave the students the opportunity to carry out a practice observation in a controlled environment. The students were asked to watch a short piece of video footage of a lady making a cup of tea. They were asked to make notes about what they saw and were told that they would be feeding back to the group. Through group discussion, interesting observations were identified and additional issues were suggested by the lecturer. They were then shown the video for a second time to allow them to recognise the issues that had been missed.

The students were then given an introduction to what was meant by 'contexts' and then carried out a brainstorming activity using spider diagrams on large sheets to record potential contexts for study. The outputs which included; Bingo, doctors surgery, airport, petrol pump and train station were then stuck on the wall to encourage cross fertilisation of ideas. Following this activity the students had a 15-minute briefing on observation which outlined how to observe the context and what to look for when observing a context. This was illustrated by a pre-prepared example of an observation in a supermarket. The rules of observation were also reiterated. The students were then asked to get into pairs and identify 3 contexts to observe. Once selected they had to sign them of with a member of staff to ensure that they were safe and appropriate.

Week 9 started off with a lecture on Design Intelligence which aimed to demonstrate the breadth of scope which can be encompassed by design. The studio work the following day focused back on their projects. After a brief introduction the students gathered round large tables and lay out their logbooks to present back their findings to one of the members of staff. As one context was discussed e.g. the library, those who had also looked at that context were encouraged to offer their observations.   They then broke off to identify which issue they were going to focus on for the rest of the project. Though they were encouraged to discuss their thoughts in their groups the aim was for each student to identify one area to focus on. The discussion process was supported by staff who circulated around the room. The final activity of the day was for the students to develop a design brief. To support this they were shown an example brief and given an outline of the key elements to include. As the students had a go at developing their own brief the staff circulated and supported them by asking and answering questions. All students were encouraged to have a finalised brief by the end of the session so that they could spend the following week moving on to developing initial concepts.

Week 10 started off with a lecture on 'Presentation Techniques' to support the students in the preparation of their final presentation boards. The studio session then provided the opportunity for the students to present back their initial concepts to the staff for formative feedback. This was done in groups of about 20 around a large table and conducted as an interactive session with one of the members of staff. The aim was to help the students to select a specific concept to focus on for further development. Following this session the students were given a brief PowerPoint input to support their development work and then given the opportunity to get on with it.

During week 11 the students continued with their development work and were given tutorial based feedback – with the staff moving round the tables of 4 and talking in depth to each group or individual. Towards the end of the session they were given a lecture input which reiterated what was expected for hand in at the end of the following

week. The final week - week 12 was used as an opportunity to reiterate what had been achieved, provide further tutorial based feedback and to give the students the opportunity to finalise their development work and finish off their presentation boards.

4   REFLECTING ON THE RISKS ASSOCIATED WITH THE PROJECT

Ahead of delivering the project material it was felt that the key risks related to whether the observational video worked (in week 8), whether the students would *manage* the discrete observations, and whether they would be *discreet* in their observations.

Although the video had been trialled with a number of colleagues and postgraduates, there had been no opportunity to test it on students of the right age. However, the activity was a complete success. It proved to be a really useful way of giving the students the confidence that they could carry out observations as well as showing them the sorts of things that they should be looking for. All the students identified issues from the video, which gave them confidence that they could do the activity, but no one identified ALL the issues, which illustrated that there is always more to see.

The discrete observational activities were equally successful. During the feedback sessions in week 9 all the students who had carried out the observations had identified a range of issues effectively. Through these sessions it also was possible to get a relatively clear understanding as to how the students found the activity of carrying out an observation in a 'live' environment. There was a considerable level of enthusism from them when they were feeding back their findings. When specifically asked, a number of the students said that they enjoyed doing the observations, *"when we first got down there I didn't know what to look for but as we stood there all of a sudden I was noticing all sorts of things"*. Many of the students keenly offered a range of observations during the discussion, which demonstrated that they had found a lot out and wanted to share it – in the past they had been reticent about sharing their work.

Finally, with respect to whether they would be *discreet* in their observations, fortunately they were. The department did not receive any complaints as a result of the activity which was very good news. A few of the students reported that they were asked to show the official paperwork, which they handed over as directed and others offered the paperwork to support the fact that they were doing a valid activity, when attempting to gain permission to observe inside specific institutions (e.g. the bingo hall).

5   AREAS FOR IMPROVEMENT

As one would expect having run the activity there are areas which could be improved. A number of issues arose with regards to the students developing a design brief. The first was staff oriented. Some staff were strongly encouraging a product focused brief, whereas other staff were happy with a broader product/service/system focus. The latter was what had been aimed for, but this clearly needed clarifying in the future.

A number of the students struggled with writing a brief, as it was clearly a new activity for them. However despite this the final submission showed that all the students managed to develop a brief, and many of them managed to develop clear and concise briefs which left room for creative interpretation. However, in addition to this some students struggled to select a *good* idea to focus, picking an issue with very little mileage. To reduce the chance of this happening in the future it would be good to demonstrate that some issues can be simply fixed by sorting out bad design inherent in a given situation e.g. the solution to having a menu on the door of a café which is causing a queue would be to move it. Whereas some issues would really benefit from being solved e.g. the pain and awkwardness of putting petrol in the car.

6   CONCLUSIONS

This project has proven to be a success both in terms of meeting the teaching objectives intended and in terms of being well received by the students. It has been seen that there were number of benefits to using this type of approach with first year undergraduate design students. In terms of meeting their learning objectives, it provided them with techniques to help them to identify problems now and in the future, as well as the opportunity to practice identifying problems and developing a design brief. Beyond this it encouraged them to look at the world more broadly, provided a broader picture of what Industrial Design can offer, encouraged them to think like designers and gave those who aren't great at drawing a confidence boost. The aim now is to build on this initial success and to continue to investigate opportunities for improvement.

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