NO MATTER WHERE YOU ARE: TUTORIALS AT A DISTANCE

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ABSTRACT

Coventry University's Department of Industrial Design has recently won the Queen's Anniversary Prize for Higher & Further Education for its work in automotive design.
The Centre of Excellence for Product and Automotive Design (CEPAD) is committed to exploring technologies supporting innovative and exciting methods for teaching. One of the specific projects is exploring e-communication to support dialogue and interaction between tutees and tutors.
This case study reviews the use of 'Skype' supported by blogging, as a distance based tutorial tool for a Design Analysis module. The pilot was run with a relatively small group of students engaged in the final year of MDes level Transport, Consumer Product and Industrial Product Design. A reflective commentary was written throughout the teaching and an 'exit' questionnaire was completed by the participating students. These two viewpoints will be examined and a strategy proposed for the further development of the 'distance' tutorial system.

Keywords: Distance Teaching, Tutorials, Skype, Blog

1 INTRODUCTION

The Department of Industrial Design at Coventry University recently won the Queen's Anniversary Prize for Higher & Further Education for its work in automotive design. Building on its reputation of more than 30 years, Department of Industrial Design is continuing to pioneer new developments in the field. It is regarded as a centre of excellence by the Higher Education sector internationally and also by the automotive industry itself for its contribution to the education of tomorrow's world-class designers.
Key to this success are its innovative industry-focused courses paired with complementary applied research activities, which have been highly influential in helping to maintain the UK's position as a leader in automotive design.
The Centre of Excellence for Product and Automotive Design (CEPAD) is committed to exploring technologies that support the development of innovative and exciting methods for teaching and learning. This is demonstrated by a variety of activities:

- Digital Interaction Studios to support international and collaborative approaches to the exploration of design processes
- Exploration of working methods to engage design students and design professionals from culturally diverse backgrounds
- Building links and creating bonds with international client industries and design practices

- Conducting research into the threshold concepts that produce design understanding and the impact of the internationalization of the design curriculum.

One project explores working methods for the development of distance teaching; exploring methods of communication, supporting dialogue and interaction between tutees and tutors; a wider community of design tutors and experts will become accessible to the design students. Easily available systems and formats are key to the success of new practices, reflecting the needs of users and industry standards. One of the tasks is to examine the uses of social networks, blogs and other Internet based communications methods as potential ways of working across distance. Examples will look at both teacher to a group located within the university and teacher or expert collaborator external to the university looking in on student groups.

This case study covers a pilot use of 'Skype' Internet based video conferencing application as a distance based tutorial delivery method for a module on Design Research and Analysis. It was run with a relatively small group of students engaged in the final years of MDes level Transport, Consumer Product and Industrial Product Design. Additional communication and sharing of work was achieved though a blogging system via .Mac, the benefits and pitfalls of this supplementary support system have also been reviewed. A reflective commentary, written by the tutor plus an exit questionnaire completed by the participating students will be examined and a strategy proposed for the further development of the 'distance' tutorial system.

2 SETTING THE CONTEXT

The University provides a VLE called Cuonline, based on Blackboard. This is quite a complex environment though very useful as a repository of course related documentation and for course management, however it is not very user friendly. A greater disadvantage, one that impedes general student acceptance, is that servers are frustratingly slow, sometimes failing to upload larger files, at certain times of the day.

Students also have access to the Pebblepad VLE which offers a different mode for collaborative and private working, the creation of an e.portfolio and a blogging facility. The disadvantages of this system for design students include lack of control over the appearance of the interface, the restriction on size of artefact that can be uploaded and the laborious process for adding anything to any file. The program is also noted by students for its instability and the difficulty of successful access and uploading at certain times of the day or away from University premises.

Our design students are very critical of the performance of the tools provided, often finding the appearance and processes required within these electronic environments off putting. Our students are highly visual, technically adept people who expect to operate in a useable and intuitive way. Many of them prefer the operating environment offered by Macintosh, with its drag and drop facility and high quality visual appearance.

2.1 The choice of tools and interfaces

The author is an Apple-Mackintosh user in preference to PC; having both a MacBookPro laptop and iMac desktop as work platforms. University sites are easily accessed via web-mail and Coventry University portals with personal files being accessible through a remote desktop function. The advantage of the .Mac account is that the author is familiar with the interface and is confident about developing web page content and as a .Mac member a variety of file sharing and communications options are available.

Skype was chosen as the conferencing application because it was commercially tried and tested, free requiring nothing other than web-cam for video connections. It had been tested alongside 'ichat', was more reliable and not blocked by University firewalls, thereby being accessible whilst connected to the university LAN or externally. Students were familiar with Skype; many already having addresses, and were positive about testing it as an addition to face-to-face tutorials. Both Mac desktop and laptop computers have integral cameras, however this doesn't impede communication if a student doesn't have a web-cam, they can easily opt to telephone or chat.

2.2 The teaching context

Skype tutorials were piloted with 12 students studying MDes Transport, Industrial and Consumer Product design. They were in their final year, having opted for a professional enhancement year and taking a research led approach to design. The module was Design Project formulation/Design Research and its aim is to support students undertaking a substantial piece of research that will underpin major design projects.

3 ANALYSIS OF SKYPE USE

A simple questionnaire using a Lickert scale to record responses, where the choice was between high/good and low/poor was used to collect opinions on the communication tools used within the module, covering both Skype tutorials and the use of Blogging. The six-segment scale was chosen in order to force students to decide which side of the high/low, good/poor response they wanted to record. Respondents were given the opportunity to suggest improvements to the Skype based tutorial system and were also asked whether they'd tried to speak with the tutor via Skype from any other location.
All questionnaire responses were anonymous. The students were introduced to the questionnaire and given the opportunity to clarify any of the questions, for instance question 1 referred to the quality of reception of the video conferencing rather than the content of the tutorial discussion.

Table 1 Skype Questionnaire

Skype tutorial questionnaire – video based tutorial sessions		December 2007
Q1	Quality of contact	high OOOOOO low
Q2	Quantity of contact	high OOOOOO low
Q3	Use of time	good OOOOOO poor
Q4	Usefulness for group work	high OOOOOO low
Q5	Usefulness for individual	high OOOOOO low
Q6	Substitute for face-to-face	good OOOOOO poor
Q7	Can we improve skype tutorials?	
Q8	Did you use skype from a location other than the CEPAD base room?	

The evaluating group, 8 out of the original 12, means that the results have no statistical significance, but it is possible to gain a feel for the success of Skype as a tutorial tool.
In terms of quality of contact, in reference to the sound and visual qualities, the overall result was from high to medium. This suggests that the contact between the University and the remote workspace was adequate for effective communication via Skype. However the quantity of contact was not considered to be sufficient. The Skype tutorial

sessions were restricted by the available access to the CEPAD base room and timetabled contact times mirroring the usual teaching timetable. However this is a typical response from students, who given the opportunity would always like more contact time. In response to question 3, all the students felt that the time spent communicating via Skype was useful and a good use of the time available. Two students commented that they'd have got more out of the session if they'd had a specific topic to discuss.

All respondents considered the value of Skype for group work was rated as low. This maybe a reflection the inadequacy of the location of the Skype enabled machine, as it was located in an open access base room and the inability of the whole group to be seen or heard by the tutor. Taking turns to sit in front of the machine with the web-cam prevented real group discussion and using Skype for group activities was abandoned early in the pilot study. The majority of students felt that the Skype tutorials were an effective addition to tutor contact and preferable to chat or e-mail based discussion. It was more spontaneous and the conversations could flow more easily between one topic and another. However restricted length of time meant that discussion were more effective if the subject of the conversation had been prearranged. About half the students felt that the Skype tutorial was a reasonable substitute for face-to-face tutorials held in the staff member's office and all mentioned that maintaining weekly contact through this system was preferable to fortnightly contact.

One student demonstrated a consistently negative view of Skype as a system for remote tutorial contact, though there were no openly critical comments written on the questionnaire sheet. Though this reflects the view of only one student out of twelve, it represents about 8% of the student group, which would become slightly more significant if we were dealing with a larger group. The students were consistent in their ideas for improving the way the Skype tutorials should work in the future. Most of them suggested that the system could be used beneficially for group work if they had access to more machines that were enabled with web-cams and Skype accounts. They would also like to have enabled machines in studio spaces rather than having to use the CEPAD base room, which they have to be given special access to for the purposes of the pilot study. All wanted more time and clearly scheduled appointments. They generally felt that better preparation for the session was required from both student and tutor. Another major issue was that of being able to show work and this difficulty is reflected in their requirement for better preparation e.g. sending image files to the tutor for review prior to the session.

Some of the issues, drawn out via the questionnaire, had already been noted during the current teaching period and systems put in place to try and alleviate some of the problems.

4 BLOGGING

The blog was an optional tool for data collection, research discussion and presentation space. Each student was provided with a simple template containing their topic statement, provided to the tutor, and a space for an illustration as a starting page. Additionally there were pages for delivering course materials and notices plus notes pages providing a commentary on current conferences, web publications, pod casts, journal papers, book recommendations and other design research related information.

Students were asked specifically to upload a conceptual framework, a research plan, a research presentation and a contents page for the design research report. However, as the blog was optional, several students opted not to engage with the majority of exercises after the initial request for a topic statement and accompanying picture.

4.1 Analysis of Blog contents

To get a better sense of the way in which the blogs were used and their success as a research tools the individual entries were examined against a set of content indicators. These were: research topic statement, peer comments, staff comments, discussion responses, reflection, links to resources, visual material, attached files, conceptual framework, research plan, presentation, contents page, additional material.

Table 2 Blog Analysis Framework

Submission	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Topic statement	1	1	1	1	1	1	1	1	1	1	1	1
Peer comments	2				2		1	3		1		
Staff comments	2	1	1	1	5	2	3	4	1	2	1	1
Discussion responses	3				9	7	4	5	2	8		
Critical thinking	1				1	1	1	1		1	1	
Links to resources		2			4			4		4		
Visual material	1	1	1	1	1	1	1	1	1	1	1	1
Attached files						1	1	1		3		
Conceptual framework	1	1			1	1	1	1	1	1	1	
Research plan								1		1		
Presentation	1				1	1	1	1	1	1		
Contents page	1											
Other	2				1	1	5	3		2		

A quarter of the students didn't really engage with the blog, submitting the bare minimum to create a personal page and failing to add the requested course assignments. However the majority did contribute to their pages and were more motivated to create discussion and commentary. The benefit for these students was that they received more input from their peers and the staff. Looking at interactions from peers shows that just under half of the students took time to look at other people's pages and offer comment and/or guidance towards interesting and relevant links to resources. Half the students added elements that were in addition to the requested items. These included a variety of visual representations of thinking and research organisation; samples of inspirational discoveries and in one case the completed design research report.

The majority of the students found the blog a useful work and communication tool, supporting their research activities and providing reflective and discursive space and a third of the group made over twenty postings not including the staff responses. Feedback from the students indicated that though there were flaws in the early part, during the creation of the blogs, this additional route to feedback was generally appreciated. Some students were familiar with blogging and quickly became confident in the environment. Once they had their own named pages, these were happy to express views and uploaded various elements including visuals and links to other resources. An additional benefit was that they were able to upload visual materials such as drawings

and diagrams that they wished to discuss prior to Skype or face-to-face tutorials for staff to view.
Very little negative feedback was received about the use of the blog. There were issues with the set up process and delays caused by having to provide text and an accompanying visual, though this was not rated as a serious or unfixable problem. Some mentioned that they'd have liked more written comment from staff even if they had received verbal feedback in face-to-face sessions.
There was only one student who expressed deep reservations about the blog, the root of this being embarrassment at being dyslexic. Sharing his blog with peers as well as staff made him feel vulnerable and reluctant to expose himself in the blog.

5 CONCLUSIONS

From the student's viewpoint, the combination of using Skype, to increase the occurrence of face to face tutorial opportunities, and the use of individual blog pages, as a repository for design research activity, has proved a successful strategy. Their preference for face to face tutorials and visually coherent and adaptable environments rather than the more commonly used text based VLEs has been met by the combination of tools. Another benefit is that they can access both tools equally easily, without passwords, from their own computers as well as those at the University. They can still use Skype for tutorials, even if they don't have a web cam as the phone function can be used.
From the tutor's viewpoint there is a need for further experience with the capacity and potential of the particular blog programme. This needs to be developed without the pressure of teaching through the medium during experimentation. A smoother and more structured set up and interaction with the blog can be achieved with higher skills levels.
Taking a more integrated approach to the use of the blog and Skype as teaching tools, used by all module staff will help students engage more effectively. It is important that the initial experience with individual blog pages is made as simple as possible so that students are not discouraged, especially those who are less adept at switching between modes and technologies. A strategy to deal with the needs of dyslexic and other students who demonstrate reluctance to use the tools has to be developed to support them. It is also clear that both tutors and students need have specific objectives for the outcome of a skype session and to create a flowing dialogue within a blog.
The overall feeling about this pilot study in the combined use of Skype and blogging is that is it successful. Further development and refinement is necessary but as a strategy to enable distance-working practices between tutors, students and other external parties it is worth pursuing. This work is currently being extended and re-tested with a larger group of students on MA Automotive and MSc Industrial and Transport Design.

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