

Development of accessible online resources for 3D Design workshops

Lucy Renton Faculty of Art, Design and Architecture
Kingston University

We received the following equipment from JISC TechDis in October 2007 as part of the HEAT 2 Scheme;

Roland Edirol R-09 WAVE/P3 recorder
External stereo microphone for the above CS-15
JVC hard drive GZ-MG77 2.2 megapixel camcorder
Jessops Tripod TP220
Canon Ixus 75 digital still camera
Video iPod 80 GB
iPod Universal docking bay
Camcorder bag Lowepro Ridge 60
Camera bag Lowepro D-Res 8S

Context

Our original bid focussed on staff using the equipment to build accessible online resources to relating to the rebuilding of our 3D Design workshops as part of our Faculty Blended Learning strategy, which has already seen the development of online support of other Faculty resources, such as the Printmaking workshops, and the Photography studios. It also suggested students would use the equipment to record crit sessions in the bookable teaching space in the workshops. However, as the rebuilding of the workshops overran, we adapted our aims, and have now two streams of enquiry running.

1. The development of online resources to support hands on training in methods and equipment in the 3D workshops.
2. The equipment is being made available to students to borrow to record their work, crit sessions, field trips and other learning events.

Here follows a brief overview of the positive outcomes of the bid so far, as the provision of the equipment has raised many interesting development ideas for the future.

Development of online Resource for the 3D workshops – Staff usage of Equipment

The Faculty of Art, Design & Architecture at Kingston University is in the process of a radical reconfiguration of the 3-D workshop facilities. This rebuilding and restructuring programme will produce an improved layout, with areas dedicated to simple hand tools, more supervised machine areas, a bookable teaching and crit space, and stations for access to online resources. The new area will be interdisciplinary and open to all students in the Faculty. Integral to the Blended Learning strategy which was written last year is the dual approach to the online support for both 'Courses and Resources'.

Our initial bid envisaged using the equipment in the following ways to assist students with a variety of disabilities, but due to the late running of the building work, we have concentrated on developing the online materials and structure.

Edirol and microphone. For staff making feedback to be delivered online or as MP3 downloads via our VLE (we have provision for staff training in podcasting, and access to Dragon Naturally Speaking speech recognition applications to produce text versions, and Audacity editing software). For student use in recording crits and teaching sessions where alternative support methods may be appropriate.

Camcorder/tripod. Staff use in making online video resources to support training given by technical staff and to record crits and teaching sessions for archiving on VLE. For student use, to document 3-dimensional or kinetic work produced in the workshop where they might otherwise be disadvantaged by their disability.

iPod, for staff work in producing pod and vodcasts for students to enhance their learning experience, and access to resources.

Digital Still camera. For staff to produce online support materials, and students to document their research, work in progress and final products.

Appointment of e-developer to assist with online resource for 3D workshops, which will include provisions for needs of various disabilities.

FADA has agreed a sum of money for the next two years at least to provide a dedicated and skilled e-developer to work on the online resource project for the 3D workshop. Consequently, Martin Rees, who has worked with FADA before on some very successful e-learning VLE customisations started work in November on a part-time basis. The Media Services team at KU have also agreed to assist with the preparation and editing of training videos and other materials.

Martin has developed a website structure which will incorporate information from Research, Technical and Academic staff, which is capable of linking in an infinite variety of ways between different parts in a rhizomatic structure. We are hosting a presentation in May to demonstrate the possibilities of the new site to key staff, and they will begin to upload content in the coming year. Part of the content will be a pilot scheme to produce introductory and/or health and safety information videos with British Sign Language (BSL) signing, as our Dean, Simon Ofield, expressed interest in scoping the costs and logistics of online provision to assist potential d/Deaf students in our Faculty. It is anticipated that the video pilot will start in the new academic year, as Technical staff are now fully engaged with the run up to the Degree show. Preliminary research has taken place for this work to start in the autumn, which will make use of the equipment provided.

Joan Fleming, a passionate pioneer in Higher Education for d/Deaf studies set up a session for Lucy Renton at Wolverhampton University in which some of the main issues surrounding provision for d/Deaf students were made clear. The importance of well trained interpreters for the Deaf was explained, as was the difficulty of understanding text transcriptions for the totally deaf, as signing is a completely different language which does not follow the grammatical patterns of spoken language, but rather places actions in

relation to the position of the individual. Joan also gave valuable tips on the best ways of filming interpreters for maximum online visibility.

Contact has been made with Jane Barden, the Advisory Teacher for Deaf students for Surrey County Council, who will be arranging an interpreter for the video material to online, for which funding has been set aside by the Faculty.

Martin Rees has been advising on filming procedure for incorporating signing, as a colleague of his was responsible for interactive displays incorporating BSL at a museum in Swansea. There are some difficulties to be addressed which relate to the timecoding of the video footage with the signing footage, and it is to be expected that there will be some difficulties with BSL signs for some technical words. The recommendation is that the two be filmed separately, and then edited together, this ensures that the BSL presenter does not cover more than a sixth of the screen, as is the case with TV programmes that provide signing. We will have to decide whether to key in the interpreter (requiring a blue or green studio) or present them in another box. This may influence the filming as we may tend toward not having a visible speaking presenter, but a voice over, to maximise visual legibility, particularly for small scale web presentation. Appropriate captioning of the video will sit outside the video window in compliance with DDA regulations. Taking these features into consideration, it is anticipated that producing a signed online resource should take approximately one third longer. Once we have a pilot project, we can project the costs and time scale for rolling out such provision more widely within the Faculty.

As the workshops come fully onstream in the coming academic year, we will be able to pursue the other aims of staff use of audio visual equipment in a live teaching situation, as further equipment similar to that provided by the HEAT2 scheme has been purchased by our Academic Development Centre and lodged with the Library for Staff Loan. Regular Staff Development and training sessions are available in using technology to assist pedagogy.

Student use of equipment.

An invitation was sent out through the University Disability Unit to Students to attend a buffet lunch to look at the equipment, and discuss how they might explore its uses. The majority of students who responded are dyslexic, and Art, Design & Architecture as a whole has a far higher number of dyslexic students than other Faculties. Also invited to the meeting were a representative from the Disability Unit and the Adaptive Technology Unit, the Faculty Learning and Teaching Co-ordinator, and the Faculty Student Support Officer. This event was co-ordinated by the Faculty Blended Learning Leader, Lucy Renton. This meeting provided some stimulating student comments on the student experience of these support mechanisms, and how they could be better integrated. These comments have been taken forward by the representatives, who will be actioning some improvements for the coming year where possible.

“I don’t always know what I need – someone needs to suggest it to me...”

Student P

Some students were already familiar with using some form of recording device in lecture or crit situations, and working with the Adaptive Technology Centre which houses:

- a. "DragonNet" software which recognises speech and converts to type (including a bookable quiet area where this can be accomplished).
- b. "Gold Text" read and write software which scans documents, converts to Word, and then can be 'read aloud' by computer
- c. Transcription services
- d. "Inspiration" mind mapping software
- e. SuperNova and Zoom text magnification
- f. CCTV for reading books with magnification
- g. Specially adapted keyboard and mouse options.

A big area of concern however, was the length of time from initial DSA Educational Psychology assessment of needs, to final processing and receipt of equipment that they could use in the classroom, six months was not an unusual length of time. Once assessed, there had also been problems with the suppliers of the equipment not reacting quickly enough. It was felt that starting a new course at University was already a stressful time, and that struggling without assistive technology just added to the difficulty. There was also a problem for those students considered 'borderline' and therefore currently unable to access this sort of equipment. Some students also expressed concerns that only those students who really needed it should be able to borrow the equipment.

We therefore decided to revise our plan of lodging the equipment with the technicians in the 3D workshops, and instead, arranged with the Student Support Officer that she should keep the equipment, and loan it out to students in most need on a short or longer term basis. We are going to review how this system operates over the coming year, and if successful, will be making a bid to acquire more equipment to support our students, particularly in their first months at University.

Reports from the students who borrowed equipment so far have been entirely positive. Our Dyslexic students have used the equipment in the following ways:

The digital stills camera was used to photograph the information panels at an exhibition on a field trip, where note-taking would not have been an option.

"Saves time.....if I try and write it myself, I think later, 'what have I written?'"

Student S

The video camera and stills camera were used to help a student find their way about both in the university and on location trips, where they were unable to use street names, and wanted to reinforce in information pictorially. This student mentioned that a perfect world for him would be one using something akin to Egyptian hieroglyphics, he reports himself

as having been assessed with “Perceptual Organization of 95 Percentile and a working Memory 18 of Percentile (scale 1-100- where 100 is the best and 1 very poor)”.

3. .

“Once I see an image, a flood of information goes through my head...”

Student T

4. The Edirol sound recorder and microphone were used in a crit to record staff and student comments, and later downloaded to personal computer and iPod. This was felt to be far better than any form of note-taker:

“You get the whole context better”

Student B

Another student mentioned the importance of the equipment in relation to Employability, gaining experience of technological aids, and showing that they were capable of maintaining professional standards in a work context. Some students had previously been lent some equipment by the University Disability Unit, but had problems with compatibility with home computing equipment for downloading. No such problems were reported with the new equipment which was universally felt to be easy to use, and that instruction booklets were not really needed in many cases, which was of great benefit to the dyslexic students in getting started easily on their own.

In conclusion

Although our focus has shifted a little during the project, I feel the provision of the equipment has had a far wider impact than originally projected. It has brought together staff members from different areas of student support around disability, and given them a clear view of how students feel, and where they would like to see improvements or greater communication. We are trialling a system of loan through the Student Support Officer, which responds to the comments made by the students.

There has been a HEAT2 project running concurrently with this one in the School of Architecture through the CEBE, managed by Joanna Bailey, a tutor in Architecture, and the Faculty Learning and Teaching co-ordinator. This has provided some excellent opportunities to share experiences, and to carry forward recommendations and observations highlighted by the projects.

The Dean of the Faculty of Art, Design and Architecture at KU, Simon Ofield, during a meeting in which this project was discussed has expressed a desire that FADA seek to, enhance provision for students with hearing disabilities in particular, so that the impact of the grant of equipment provided for the HEAT2 bid can be seen as seminal in a suggesting a wider strategy of enquiry into improving the opportunities and resources for disabled students studying in FADA at KU.

CODA

Further Evaluation

This will take place once Dr. Ooms return from sick leave.

Ann Ooms is Senior Lecturer at the Academic development Centre at Kingston University and is responsible for educational research and evaluation at the university. She has an MA in Educational Psychology with foci on Learning and Cognition and Educational Technology, and a PhD degree in Educational Psychology with a focus on Educational Research and Evaluation from the University of Minnesota. She also completed a teaching degree and a BA in Social Work in Belgium. Lucy Renton has met with Ann to discuss strategies for final evaluation of the project.