



Ulster University -Belfast Campus - 16th November - 11th December 2015

Background

With many HE and FE institutions considering the greater use of active learning pedagogies, the Digital Classroom Roadshow was conceived as a facility that would allow a greater number of people across the campus to have hands-on experience of a fully equipped digital learning space, so that better informed decisions regarding future acquisitions and investments could be made by all stakeholders. These include; Learning and Teaching, Academic Development, Estates, Timetabling, IT and AV, and the Student Experience.

Whilst the roadshow required furniture and technology selections to be made that would be used throughout the project, it was explained that there was no attempt to say that the roadshow configuration was the only solution. Different pedagogical requirements must be enabled by the correct selection of furniture and technology, and not constrained by it.

Workshops, presentations and discussions during the roadshow would allow stakeholders to consider different furniture and technology configurations that also support the use of dual pedagogies (Active Learning and Didactic) in the same space without the need to reconfigure furniture for either to be achieved.

Using the Digital Classroom

At each of six Synergy tables, teams of students can simultaneously connect their wireless devices to the screen. Visual content from either a single device can be shown, or images from 2, 3 or 4 devices can be compared and contrasted together. A document from any device can be worked on together by any number of students using their own devices, and the finished file can be instantly shared with every team member. This co-collaboration of information - a compelling feature of the Kramer VIA technology - drives full-participation from everyone being engaged.

From a portable control pad, the tutor can instantly share the live content - including Full HD Video - with all the student tables. If the tutor wants to talk to the class, all the screens can be 'blanked' with a single click on the control pad.

For the roadshow, a highly intuitive system has been designed so that students can wirelessly connect their own devices, and quickly transition from thinking to doing without the technology getting in the way.

Post Event Report @ Ulster University

16th November to 11th December



Digital Classroom Engagements

Workshops / Discussions:

Duncan Peberdy, the external consultant who originated the idea for the Digital Classroom Roadshow, was scheduled to be at Ulster University each Monday and Tuesday to run a series of workshops for both staff of Ulster University and external participants.

Participants were able to bring their own wireless computing devices and experience the connectivity and usability available to enhance the student learning experience.

Teaching:

Having experienced the digital technology during one of the first workshops, Dr. Madonna Heron arranged to bring a small group of students into the space

to conduct a session on 'Computational Mathematics'. Despite travelling from their normal location at Jordanstown, the experience for the students was extremely positive. Their feedback included:

"The software was very useful and easy to use - helped make the class more interactive."

"The workspace should definitely be considered for future teaching purposes."

"Definitely more interactive and far more beneficial than a standard computer lab. The technology is good as it can be separated for individual tables or used as a group."

"Very useful being able to interact with each others work."

"Enjoyable. Once you get past the initial connection issues, it is actually quite simple and very useful to use."

School of Computing and Mathematics:

Michael Crozier (Technical Planning and Development Manager), together with colleagues came to experience the technical aspects of the Digital Classroom with a view to how campus-to-campus, and home-to-campus connectivity could be achieved, with the latter able to support students who for whatever reason could not be present on campus.

They also uncovered another potential for implementation, using university-supplied equipment instead of students' own devices as a state-of-the-art PC Lab. This would assist with the tuition of specialist software that for reasons of cost or complexity students do not have on their own devices.

Capture and Streaming using Relay and ShareStream

Kenny McCartan (Education Technologies Analyst [ICT]) and Gerard Ross (Digital Usability Engineer [Office for Digital Learning]) ran several sessions in the Digital Classroom.

Flipping the Classroom - Planning the Learning Design

Fiona McCloy and Aine MacNeill (both Instructional Design Consultants) and Richard Beggs (Creative Design Consultant) all from the Office for Digital Learning, conducted two sessions on curriculum and course design for new active learning pedagogies that were attended by both colleagues from Ulster and external participants. Feedback from two very well attended sessions were:

"Encourages a new learning experience for staff to discover the potential for new methods of delivery of course content in engaging and innovative ways."

"The format worked really well. Encouraged interaction between participants."

"Really good idea to have a dedicated digital classroom space, but 'room' could be in a better location. The idea is great though."

"The layout, desks and technology used was very good, ideal for small group interactions and discussion."

Post Event Report @ Ulster University

16th November to 11th December

Digital Classroom Engagements (continued)

JISC - Workshops / Discussions:

Supported by Jason Miles-Campbell - Head of Jisc for Northern Ireland and his team - participants from Queens University and every college in Northern Ireland were invited to experience the Digital Classroom. Once again, these were very well-attended workshops and created great discussions on space design, furniture and technology.

The ability to come into the space and share experiences and discuss future directions with a wide range of institutions was greatly appreciated, and there have already been follow-ups from a number of these institutions on developing their own experimental spaces.

Architects CPD Presentation / Discussions:

As architects are also a major stakeholder in the development of learning spaces, and one of the aims of the roadshow was to invite architects into the digital classroom so that they could be updated on new developments for dual-pedagogy solutions. The take-up by architects was very low, but those who did attend found it invaluable and couldn't understand why more of their industry colleagues hadn't attended.

The numbers:

In addition to several unscheduled visitors to the space; people who had seen the space but not booked onto specific sessions, over 190 people took part in the various training sessions, workshops, teaching and discussions. Many expressed a desire to revisit the space and/or arrange for colleagues to do so had they fully recognised the potential for learning and teaching enabled by the advances in technology, classroom design, furniture, etc.

Digital Classroom - Positive Outcomes

The classroom clearly demonstrated some of the exciting developments in technology enabled learning that are available to enhance the student learning experience and provided a good test bed space for exploring these. There were a number of features available that most institutions who visited do not currently have on their campus, such as screen to screen sharing, ability to control the screens from a mobile device and co-creation by students of documents and other digital material.

From the discussions and feedback, the following features were identified as valuable to enhancing pedagogical approaches:

- Screen sharing between tutor and participants
- Screen sharing between participants
- Sharing content from mobile device apps
- Multimedia: playing back video media files
- Drag and Drop function to take files from a cloud to a storage area on interactive pcs so they can be shared instantly with everyone in the session
- Ability to work collaboratively on files and documents so that participants can co-create information and be fully engaged together intellectually
- Using show desktop feature to annotate over a document or webpage, and then save that as an image file.

Features that were available but considered to be less valuable for current learning and teaching were:

- Chat facility to send instant messages to other participants (although this could be a great way for students to send questions to their tutor in a larger seminar-style environment)
- Using the whiteboard-feature for interactivity between participants.

Post Event Report @ Ulster University

16th November to 11th December

Digital Classroom - Challenges

As a temporary installation, the digital classroom was not connected to any of the university networks or Eduroam. This meant that internet access was unavailable and participants needed to come prepared with the appropriate software apps on their devices. In learning environments like this, where multiple wireless connection points are required, there has been a reluctance to integrate such rooms on to the wider network infrastructures. In my experience, there has to be a management directive to make this happen, or someone within the responsible department with a 'can-do' attitude to creating the network management for these rooms, as they do require a higher level of technical integration.

Michael Crozier and his team from the School of Computing and Mathematics identified full integration as a must-have for obtaining the best student value from such rooms, and for achieving the campus-to-campus connectivity they thought would be a big advantage to Ulster University.

Unfortunately there was no formal engagement with ISD in the Digital Classroom, despite invitations to join workshops, join the discussion with the School of Computing and Maths, or to setup a separate conversation. This was even more disappointing as representatives from the technology manufacturer were in attendance.

However, building on similar experiences and frustrations around the issues of connectivity at the previous venue - Teesside University - the Digital Classroom Roadshow project has initiated conversations with the networks team at JISC, and meetings are being held in early January 2016 to see if a Jisc-template for connectivity to the Eduroam Network can be achieved. The experiences at Ulster University with academic design and development staff has certainly helped identify the absolute necessity for this.

Digital Classroom - Conclusions

There was widespread praise for both the simplicity and wide scope of the technology together with the ease-of-use for tutors to control the room from a mobile tablet - in this case an iPad. Of the two table designs featured in the roadshow, the Synergy Plectrum tables were preferred for the way that they encourage collaboration around the table.

As part of a rich learning landscape of different spaces and the facilities within them, the Digital Classroom is just one solution for creating spaces that support dual-pedagogies without the need to reconfigure furniture that reduces valuable time on learning tasks.

Given the amount of interest in these spaces at Ulster, Queens, and every regional college in Northern Ireland, perhaps there is an opportunity for someone to create a centre of excellence supported by Jisc and DEL that includes other new developments, which creates great reputational advantages for the host, and increases the student engagement and attainment benefits throughout the sector in Northern Ireland, and which drives down costs for everyone from such a unified approach?

Digital Classroom - Successes and Thank You

With the Greater Belfast Development under way, Professor Diane Hazlett quickly identified that having the Digital Classroom based at Ulster University would allow many colleagues to have meaningful access to the fully-configured space, from which further discussions and decisions about new learning spaces can be positively influenced.

I would like to put on record my thanks to Professor Hazlett and her team in the Centre for Higher Education Research and Practice (CHERP) for their hard work in making the four weeks in Belfast so successful. My thanks also extend to Louise O'Boyle from the School of Art for providing the space, but also for her enthusiasm and physical support on-site.

I would also like to thank Professor Nixon for visiting the Digital Classroom and allowing me to provide a brief overview of the student engagement if supports, and to Professor Denise McAlister for spending so much time experiencing the Digital Classroom and exploring the many future possibilities at Ulster University with such developments.

Duncan Peberdy - Droitwich.Net - 21st December 2015