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TELL us all about it: Establishment of a Technology Enhanced Learning Laboratory

What it is?

The Technology Enhanced Learning Laboratory (TELL), formally introduced to the University of Southern Queensland (USQ) community in early 2008, is a physical, multi-purpose space located in an area previously used as a television studio.

The first iteration of the TELL has been created on a "lightweight" budget relying predominantly on the updating or relocating of existing infrastructure, hardware and software. However, as with a project described by Tom, Voss and Scheetz (2008, 42), even with a limited budget,

workstations offers a choice of operating system (Windows and Linux) and image (USQ Staff or Student Lab) where three groups of three can work. This use of the work space for collaborative activity aligns with the findings from the MIT Technology-enabled Active Learning (TEAL) project (<http://icampus.mit.edu/teal>). Other work spaces include two large oval tables with power outlets and ergonomically designed chairs, a circular padded couch for group-based activities, and two long high movable tables (with stools) with multiple outlets to support the connection of electronic devices. The choice of furnishings and floor treatments has aimed to create a contemporary, welcoming environment. Furniture configurations can be seen in Figure 1.



Figure 1. TELL furnishing (Photo taken from Observation room)

The Lab includes an access grid that supports multi-point video conferencing and consists of an ensemble of resources including several multimedia large-format displays, presentation and interactive environments, and interfaces to Grid middleware. For some time, this technology was housed elsewhere on campus and was not used effectively. With its relocation to the TELL, the aim is to raise the profile of access grid and its role in supporting learning and teaching in dispersed locations. The TELL has Windows PC and Macintosh hardware, streaming Satellite TV to an LCD monitor, wireless network functionality and wireless tablet PCs. Power and fixed data points are supplied to tables across the space via ceiling umbilicals. The room includes an elevated observation deck with audio capability allowing unobtrusive observation of learning and teaching situations.

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Why it is?

The space is located in a building that houses the University Learning and Teaching Support Unit and is associated with the USQ Australian Digital Futures Institute (see <http://www.usq.edu.au/adfi/tell.htm>). The term "laboratory" has been chosen because it conveys a sense of innovation, newness, experimentation, prototyping and improved learning through the application of innovative pedagogy and the creative use of technology.

this experimental space needs to guide USQ in "evolving new approaches to learning appropriate to our context".

The Lab is quite different from existing physical learning spaces such as lecture theatres and ICT training rooms. It embraces the 'next generation learning space' concept by adopting an open plan, studio-style room, with flexible, configurable technologies and fittings. A seven-foot circular table fitted with Sunray

USQ is a regional, multi-campus institution with more than seventy-five percent of the twenty-six thousand students studying at a distance in local, national and international locations. Given the regional spread of students, the gap between the service provided to on-campus and off-campus students has to be considered. To reduce this gap and also support the investigation of innovative approaches to learning and teaching, the concept of the TELL was conceived. The concept aligns with the University Vision to improve learning



Figure 4. TELL in use for group brainstorming sessions (Photo taken from Observation room)

learners who can usually identify their needs, prefer flexibility, but need some structure and support. In addition, experiences that are isolated and unrelated to the “now” can be irrelevant for these learners. Adults also need to be able to reflect – on the activity, on the learning environment, on their interactions with others and then relate it to what they already know and do.

What happens here?

Use of technology-enhanced learning spaces at USQ has, until recently, focused on on-campus teaching and the use of videoconferencing to link the Toowoomba campus with its two other campuses located at Fraser Coast and Springfield. The intent of the TELL is to encourage USQ teachers to think beyond this and be given the opportunity to easily access and trial other potential technology solutions.

The TELL provides a space where staff can explore the pedagogical aspects of learning and teaching technologies and be challenged to rethink the possibilities in using a physical space with technological enhancements. It provides an experimental prototype, ICT-enabled environment for exploring the effective use of ICT and to link USQ staff and students at remote locations. It also aims to create a visible and high profile environment for ICT innovation and exploration and to provide a proof of concept space for future deployment into learning and teaching environments.

The experimental research and development intent of the TELL suggests that the space should not be used for regular timetabled classes as the aim is to make it available for trial-based activity through an electronic booking system. However, teaching staff are encouraged to trial the efficacy of the TELL with their own “real” classes with the intention of deploying successful ideas into mainstream activity and other teaching spaces in the University.

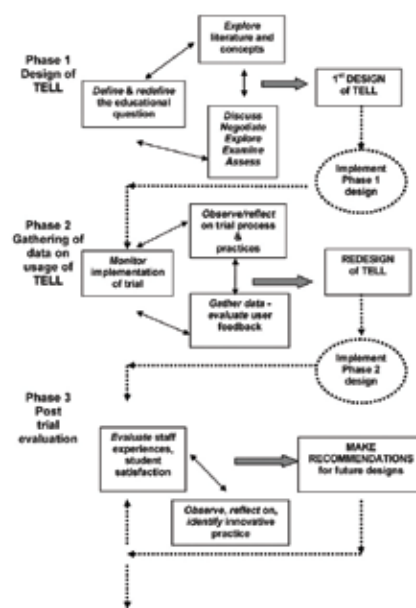


Figure 5. Evaluation design

During semester 2, 2008, two academic staff members were awarded Learning and Teaching Fellowships. Part of their respective projects include trialling software and hardware in the TELL with the intention of documenting effective means of using learning spaces and technology to enhance learning and teaching. In addition, industry partners are being actively sought to support the refresh of infrastructure.

How is the space and technology used?

It is early days in terms of the regular use of this space by teachers at USQ. Now that an online booking system is in place and more teachers are becoming aware of the space and its potential uses, the expectation is that its usage will increase. Figure 4 shows the room being used for a brainstorming and training session. Recently, a

video has been produced to promote the space to the USQ community. The video can be viewed at <mms://WinMedia.usq.edu.au/ICT/TELL.wmv>

How was the facility evaluated?

Many “flexible” classroom designs are now in operation around the globe but often assertions of effectiveness are not accompanied by evidence.

A qualitative action research method originally developed by Salmon (2002) and adapted by Reushle (2005) is being used to frame the design and conduct of the trial of the TELL. This method (Figure 5) provides an iterative, cyclical process to develop, implement, evaluate, and modify the trial process and make recommendations for future action.

At this point in time, Phase 1 is underway and no formal evaluative data have been collected. Anecdotal comments through discussions held with several groups of stakeholders in informal focus groups (USQ teachers, ICT support personnel and managers) have indicated that the acceptance and successful uptake of the TELL will be influenced by:

- Institutional buy-in;
- Ease of use;
- Sustainable support structures (including ICT and pedagogical); and
- Evidence of pedagogical enhancement.

Powell, Single, and Lloyd (1996, p. 499) define a focus group as “a group of individuals selected and assembled...to discuss and comment on, from personal experience, the topic that is the subject of the research”. The main purpose of conducting these informal focus groups at this stage was to offer an open forum to draw upon participants’ attitudes, feelings, beliefs, experiences, and reactions to the TELL concept and space design.

The need to collect both qualitative and quantitative data to demonstrate that this kind of investment can pay off in improved learning

outcomes is an important institutional requirement. As part of the Learning and Teaching Fellowships previously mentioned, formal evaluation plans are required but are not yet available.

What were the main lessons learned?

Despite the relative newness of this project, a number of recommendations have emerged from an initial, informal evaluation of the TELL initiative conducted through focus groups. These include:

1. The space should be an enabler of change and not perpetuate the traditional classroom model.
2. Teachers must drive the space – they need to see a reason for its “being” – a motivation to use and continue to re-use the space is essential to ensure its sustainability. This learning space should not just be regarded as a group of technologies. Learning should be at the centre of learning space design and this space should assist in showing off what USQ can do in terms of learning and teaching.
3. Who owns the space? For a successful, sustainable project such as the TELL, a formal project management process needs to be in place and implemented. This includes allocating a project “champion” as well as a Manager of an operational unit within the university who assumes operational responsibility for scheduling, managing of resources, maintenance, promotion of the concept, etc.
4. The sponsor must be responsive to proposals for updated technologies and new technologies. Teachers will need support as they think of new ways to use the facilities.
5. A formal scheduling/timetabling process needs to be in place and efficiently managed.
6. The mix of interfaces should be user-friendly and simple to understand. Planning for and using the space should not be an onerous task with innovative pedagogy supported by technology, not hindered by it.
7. Effective promotion of the learning space

is essential as well as opportunities for showcasing innovation. A promotional video of the learning space has been produced.

8. Responsive technical support is essential as well as advice on how to use the technologies effectively.

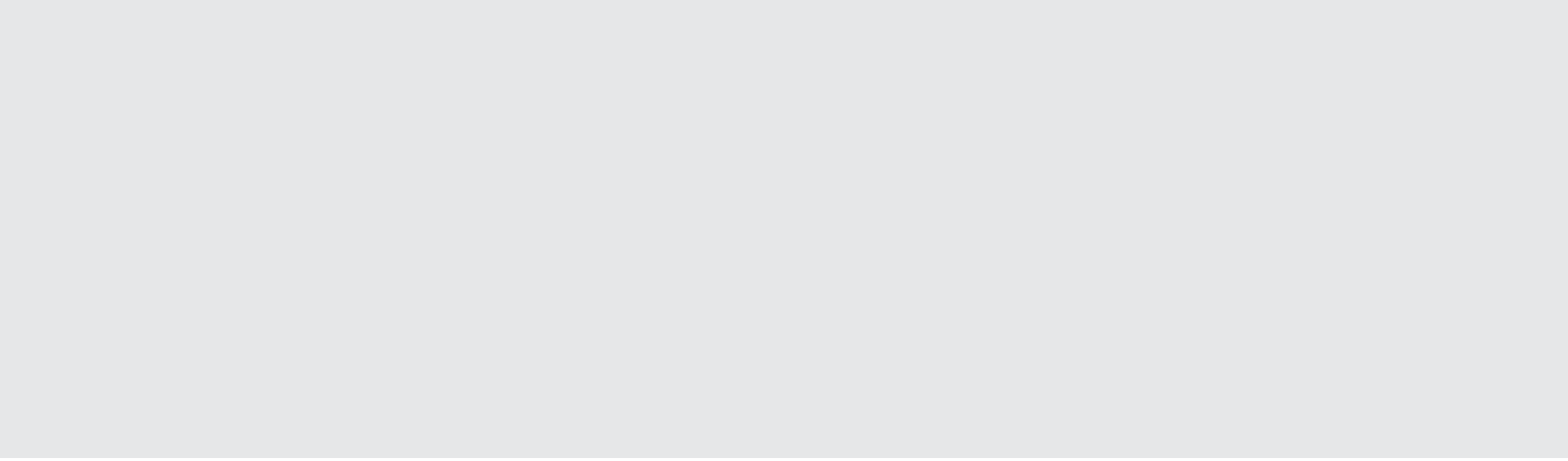
As mentioned at the beginning of this paper, the term “laboratory” has been chosen because it conveys a sense of innovation, adventure and supporting new ways of thinking and doing. These are high expectations of a single room renovation but our hope is that the efforts of the University community with turn this room into an effective and innovative learning space.

Acknowledgements

The creation of the TELL has involved a range of stakeholders. The concept of the TELL emerged from an initial proposal prepared by Dr Shirley Reushle and Associate Professor Peter Albion from the Faculty of Education. Mr Brian Kissell, Chief Technology Officer, Division of ICT Services progressed the concept through Division of ICT staff including David King, Stuart Cornford, Colin Glasby, Michael Beveridge, Stuart Gibbs, James Page, Ray Smythe and Chris de Byl.

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