Charles Sturt University

Build.

WORK OF THE MLEARN PROJECT

Build

DEVICE TRIALS

Large-scale adoption of mobile technology is still very new and has no precedent, particularly in the education sector, so the aim of the project has been t**o gain knowledge, understanding and real world experience**. This has been achieved by conducting real device trials with CSU students, staff and within current infrastructure. The pilot programs have been structured to be small and have a limited scope, so that multiple programs can be run at the same time. The small size makes it much easier to provide focused support to staff and students, affording the ability to change and adapt to resolve issues on the fly. The aim of this approach is to make it easier to manage risks and reduce failure rates. Shorter timelines (based around sessional dates) dictate that less time is spent planning and more time doing, and with all the pilots there is a sense of exploration of the possibilities rather than limitations because of the risks involved.

The initial student trials of Phase One were set up through consultation with the Learning & Teaching sub-deans who allocated specific subjects and academics. The academics involved and school Educational Designers then set up the parameters for the project, in consultation with the Project's core team. The trials for Phase Two were set up through an Expression of Interest, where academics suggested the trials to conduct in their teaching and learning. These were then screened to align with the objectives of the Project and a number of diverse projects went ahead. Throughout the trials, the core project team provided technical support and equipment, and was heavily involved in the initial setup and training. A Project Interact site was developed allowing access to ongoing support, contact with the team, knowledge base materials, how to guides and video tutorials.

Surveys were run at the start and end of each session to measure results. The initial survey was to gauge participant access to technology and familiarity with mobile technology. The second survey conducted at the conclusion of the trials asked participants about:

- experiences with the iPad
- experiences with support received in the Project
- activities performed with the device
- time spent on the device
- perceived effect it had on them and their study
- confidence in using the technology
- attitudes towards mobile
- technology preferences
- voicing their views and opinions openly

Focus groups and interviews with specific staff and students are planned for 2013.

CSU LIBRARY

Twelve iPads and seven Sony Reader devices were purchased for the Library to explore opportunities for lending to students. Initial plans for device lending included supporting students on work placements, lending to remote and distance education students, pre-loading devices with learning resources, eBooks, journal articles etc., and purchasing apps or other mobile friendly resources.

Deliverables

- iPad lending made available to students on work placements
- Service Level Agreement between DLS and DLTS signed
- Lending terms and conditions developed
- Mobile device status created in Aleph (Library Management System)
- Lending and iPad resetting procedures developed
- Training for Access Services staff provided
- Post lending survey produced
- Faculty Liaison Librarians provided mobile device support and training for academics

Related resources
Mobile interface for Primo Search launched.
http://primo.unilinc.edu.au/primo_library/libweb/action/search.do?&vid=CSUi
My Mobile information page launched
http://www.csu.edu.au/division/library/how-to/csu-library-mobile

Issues

A number of issues were identified during the pilot that have prevented some of the initial objectives of the Project from being implemented. It was not possible to preload devices with content, or make the devices available to remote students. Unanticipated issues with the Sony Readers remain unresolved, and these have not yet been made available for lending.

Sony Readers

There are obstacles to using the Sony Readers on the CSU networks. CSUConnect's encryption method (EAP) is not supported by the Sony Reader, and a personal WiFi point must be used with security of type Open, WEP or WPA. Similarly, transferring resources to the Reader requires custom software (Reader for PC) that is not available on CSU computers.

Sony Readers can be lent to students, but it is not possible to pre-load them or support them while on campus. Alternatively, some Library PCs could be loaded with Reader for PC, for preloading and demonstration purposes. Competing operational priorities have prevented either of these solutions from being explored further.

Postage for distance education students

Lithium batteries used in mobile devices are considered to be dangerous goods, and cannot be transported by air. Sending iPads by road transport would lengthen the postage time to many students, and make processing the postage difficult. It was decided for the pilot, that iPads would only be lent to students able to pick up and return the devices to the Library loans desk. This required giving them an item status similar to Reserve items, and meant they could not be requested or booked by students through Primo Search.

Apple licensing limitations

Some of the licensing terms and conditions for Apple devices and software caused concern for lending iPads to students. The Apple iTunes & App Store terms and conditions state a device can be associated with only one Apple ID account at any given time, and you may switch a device to a different account only once every 90 days.

When contacted regarding this, Apple advised that iPads were designed for personal use, and that CSU had to interpret the terms and conditions. Other university libraries were also contacted; however they had not been aware of the conditions and immediately began their own review of their iPad lending schemes.

PHASE 1: STUDENT TRIALS

The first set of trials conducted in the 201230 session were focussed on the students. iPads were deployed to subjects across the faculties, and represented quite different discipline areas and student cohorts. The subjects involved were ITC594, EML302 and MRS222.

ITC594 – E-COMMERCE TECHNOLOGIES

Faculty of Business
Subject Coordinator: Ken Eustace
Additional Staff: Study Centre Staff
Class Size: 20+ students across multiple cohorts – (Internal, Distance, Melbourne & Sydney Study Centres)
Equipment: iPad WiFi + 3G

Aims:

- To use the devices to inform and enhance a research project into mobile technology and e-commerce
- To provide students with the tools to explore mobile technology uses
- To allow students to create and develop content for assessment directly on the device
- To assess the processes required for delivery and return of devices to non-internal students

Academic Observations

Mobile Learning has many value-added advantages, e.g., choice of device desktop/smart phone/tablet and location to make a video presentation. Although all students are not equipped with their own iPads or Android devices, most will switch to smart devices that have enhanced functionality and connections, as their phone upgrades occur. The trial was a good call to action and tested the CSU systems, backend and others in the supply chain. Many components of the CSU experience are not mobile friendly, such as in the use of Interact tools, especially with Online Meeting, or Wimba, with its slow Java applet controls and lack of Java support on iPhone or iPad. It is important to note that this does not improve on an Android device.

mLearning can still be viewed as eLearning in nature, but with interface constraints, such as screen size and many tools requiring a 'wired connection' over wireless connections for speed and consistency.

The students were happy to get an iPad, but some did ask for an Android device. This reflected the tech savvy nature of those enrolled in an IT masters course.

To enhance the quality of mobile learning at CSU, academics could challenge students to undertake an assessment task with mobile technology. This could examine the unique functionality that only a mobile learning experience can deliver; otherwise the dependency on the screen size and familiarity of the desktop will remain. The inclusion of a broader spectrum of devices would assist in understanding the student perspective, in particular the choices they face between devices and platforms.

The trial was a great initiative and a worthwhile experience for all students and the participating staff at the Study Centres in Sydney and Melbourne.

EML302 INVESTIGATION: LITERACY

Faculty of Education
Subject Coordinator: Jae Major
Class Size: One tutorial group with 1:1 iPads, 22 with iPads from the project + 4 students with their own.
Equipment: iPad WiFi

Aims:

- Students to use the capabilities of the device to create multimodal text
- Students to participate in weekly tutorial sessions with the iPad
- Students to develop writing tasks using the iPad
- Students to post writing tasks to a class blog
- Assess the efficacy of the iPad

Academic Observations

Mobile learning is quite challenging to incorporate in a pedagogically sound way. It takes careful thinking and planning to design activities utilising mobile devices in meaningful ways to enhance student learning. Quite a lot of assistance to find and explore suitable apps to achieve the outcome was needed. There was a gap in the required skills or knowledge required to use the iPad confidently and help students when they experienced difficulties. Mobile devices for learning purposes are not well understood, and there needs to be much more work done in considering how they can best be used to enhance learning and teaching.

Not everything is necessarily better with new technology; some tasks are more easily and quickly done using 'old' technology. As a result of working in an app environment for the main tasks and purpose, everything took much longer, and could have been achieved more efficiently with paper and pen or on a Netbook.

The main benefits of the mobile device were easy connection to the Internet in class, so web quests and quick research could be done, and the ability to share material and work.

Not all students were confident in using the iPad, and it took quite a long time to get past the need to focus on how to use the technology and the apps, so that students could then concentrate on the skills and concepts related to subject content. Surprisingly, not all students were wildly enthusiastic about using the iPad and some preferred other technologies, including paper and pen! Using a mobile device to connect with friends via Facebook is not the same as using it for learning purposes, and few students are skilled in recognising its potential or understanding how to use their devices for educational purposes.

The mobile device did become a distraction at times, which I thought might happen.

The students suggested that they would like to have textbooks available to read on the iPad. More time to explore and plan how to embed the mobile device into the teaching program would have been more helpful, and more assistance to identify apps and strategies for use. Several orientation sessions for students would be required, so that they had some basic skills with the apps and the device generally, prior to using it in a subject. It would be useful if some research could be identified investigating best practice, or at least things that have worked for others in the use of mobile devices for teaching and learning.

I think we make too many assumptions about the skills that students have with mobile devices and technologies. Many use their devices for fairly low-level tasks and in basic ways, and are not

as sophisticated as we suppose. A lot more thought is needed about how these devices can best be used before large amounts of money are invested. In my opinion as well, the wider university infrastructure needs some serious upgrading and improvement in order to successfully support the use of mobile devices. While we are still working with clumsy platforms such as Interact and Pebblepad (not accessible on iPad), then there will be problems with effectively embedding mobile devices into teaching and learning programs. Alignment and compatibility of the different platforms and elements of IT is absolutely critical to success.

MRS222 NUCLEAR MEDICINE SCIENCE 1

Faculty of Science
Subject Coordinator: Geoff Currie
Additional Staff: A casual member is co-teaching
Class Ratio: 1:1 access for all 15 students
Equipment: iPad WiFi + 3G

Aims:

- introduce interactive elements to the classroom using responseware (Clicker app)
- increase the flexibility of students through improved access
- provide an information access point and communication tool for students on placement
- use discipline specific applications as a learning resource
- develop learning resources for mobile devices
- use multimedia capabilities to record learning practice in a video diary
- leverage 3G technology to provide ubiquitous access to subject materials
- provide support to students on placement through video chat (Skype)

This subject would form a longitudinal study, as it is a yearlong subject.

Academic Observations

The success of that program rests with careful application of the value added opportunities the iPad offers, that is, recognising the strengths of the iPad in enhancing what we currently do, while maintaining the strengths of other media. The iPad is a powerful tool, offering unique capabilities, which do not replace current valuable media like Interact.

I have used the iPad to actively engage students in the classroom, and to extend the classroom beyond the walls and timetable. An unexpected benefit has been the use of social media to enhance learning, communicate, reflect and strengthen the hidden curriculum. It should be noted that my cohort has provided international leadership in mobile learning for our discipline. This has culminated in two enormous milestones. Firstly, the invitation to write a guest editorial in our discipline's most prominent and widely circulated journal on mLearning. Secondly, recognition by international universities of what we are achieving, and requests for collaboration (Wheeling Jesuit University and the University of Alabama Birmingham).

PHASE 2: STAFF & STUDENT TRIALS

The second set of trials conducted in the 201260 session, were suggested by academics as an Expression of Interest. The project team and steering committee ensured that the trials chosen aligned with the aims of the Project. A range of devices – iPads, iPod Touch &

Google Nexus tablets were deployed across the faculties and included a range of unique and discipline-specific applications of mobile technology.

APPS IN NURSING: SIMULATION & RESOURCES

Faculty of Science
Bachelor of Nursing
Academics: Amy Vaccaro and Jessica Biles
Equipment: iPad WiFi

Aims: The iPad was deployed with the patient monitor app SimMon to enhance the simulation environment in the skills ward at Albury campus in conjunction with simulation manikins that were already in situ. To use this app, one device becomes a patient monitor, displaying patient heart rate, blood pressure and SpO2. A second device is used by the facilitator to change patient vital signs on the first device (the monitor) in order to simulate a deteriorating or improving patient. The iPads are also used to access resources such as e-MIMS for students to look up different drugs and acquire the most up to date information. This also extends to a range of other resources available through CSU Library's extensive digital catalogues.

Academic Observations

Overall, the iPads were used initially in session 201260 for two second year practical classes of approximately 18 nursing students. The app SimMon, was used for the duration of the session. This app is designed to simulate a simple patient monitor. E-Mims was also available for students to use. Students engaged with both resources, however the use of SimMon has shown to have had limited success within the subject design. This primarily came down to staffing. Simulation requires a greater capacity of staff to ensure scenarios run successfully. E-Mims has shown to be a great resource enhancing student engagement with pharmacology and medication administration. Limited student feedback was received on OES evaluations, however, anecdotal conversation suggests that students enjoyed the experience and links with contemporary technology. One excerpt from the 201260 OES evaluation stated that "*the iPads were useful*".

The technology was at times difficult to set up, due to the capacity of nursing staff to access passwords and account details for app purchases. A handbook including passwords etc for Schools to use, or further links with information technology staff would decrease these limitations.

The iPads have been offered again for practical lab classes in the Bachelor of Nursing in 201330, and we hope to gain further feedback from students and teaching staff at that time.

IPADS FOR ACCESSIBILITY

Division of Student Services
Disability Service
Academics: Wendy Toupas
Equipment: iPad WiFi & 3G

Aims: The disability service evaluated the mobile learning environment and accessibility aspects of iPads. Students assessed how the devices cope with vision impairment, utilising on-screen enlargement and text to speech software. The assessment extends to how learning resources may be delivered in a variety of accessible formats.

Overall the use of the iPads for students with a disability returned mixed results. The blind student had issues with access to her textbooks as well as the voice over function and found that deleting apps and re-installing them was a complicated and needed to be completed on a computer. The vision impaired student found the zoom feature enhanced their learning and provided access to materials in a lightweight package that was easier to use and carry around than a laptop, and this student has gone on to purchase an iPad for their honours program. The students with learning disabilities had mixed results, with one using theirs all the time and the other not using theirs at all. The Disability Service also utilised an iPad for a Deaf student and found that using Skype for translation offered more access to translation services, as availability in regional towns is very limited. Overall, the use of mobile devices for students with a disability can enhance learning and with continual improvements in accessibility, it is expected that this will continue to improve.

Student Observations

- The voice over setting in accessibility where it speaks to you was really hard to use. It was really hard to get used to. It took a while for me to get into my textbooks online and it was a bit time consuming trying to make it read them. Maybe if the actual text aloud program could be put on an iPad it would be great. (NOTE: Software developer Textaloud have recently introduced an app although it seems there are some introductory issues.)

- I used the camera a lot as it was handy and really good. I took photos of notes and images so I could then zoom in.

- It made it easier to see small details on lecture slides as you can zoom in a lot. This was handy especially when studying anatomy lectures.

- Using the iPad was really good as it was portable and easy to transport. This helped when I wanted to go home, to class or away.

- I downloaded classical music to study with. It was easy and cheap. I'm not sure if I imagined it but I definitely felt like I learnt more and was more relaxed. It was good that I could just have it playing all the time in the background and the battery didn't go flat at all. The sound was also really good.

- I really love the iPad now. I have been studying in the library in town and it's so much easier to carry with me and to get a fast Internet wireless connection. It takes up less space. I didn't even need to have it plugged in or go to the effort of finding a power point as the battery lasted all day! I have only needed to charge the iPad about 10 times through out the whole experience, and I generally used it most days of the week.

- Studying anatomy with the iPad was the best. It was easy to go from textbook to notes to iPad easily and quickly.

- The sound through the speakers and earphones was really good.

- Throughout the trial I used notes to write this and to continually add things to this report. I think it will be hard when I can't use it anymore as I have gotten so used to it and it has made study and life so much easier.

- Having to always update apps got annoying.

- Using the reminders list app was good as I could write things I had to do down without wasting paper.

- The iPad added another element to my study that I felt aided in my memory and comprehension.

DEMONSTRATING MATHEMATICS USING AN IPAD

Academic Support & Faculty of Science
Learning Skills & School of Dentistry and Health Sciences
Staff: Colin Glanville, Matthew Prescott, Allan Ernest and Matthew Collins
Equipment: iPad WiFi & 3G

Aims: This group are investigating the use of iPads in mathematically based subjects to improve the student experience and performance. One area they are investigating is how to reduce or break down the barrier for distance students having difficulty with problem solving. Direct interaction with distance students would enable improved problem solving, concept development and retention in highly mathematical subjects. The final area of investigation is the use of apps to record drawing and handwriting with voice to create resources that can be stored and sent to students to explain difficult concepts and problem solving instruction.

Academic Observations

- As I had never used an iPad before, I did have to spend a little time getting familiar with it. Knowing what apps are there and how they will help you can be difficult, because the only way to really know how useful they will be, is to troll through the app store, find potential candidates, download them and try them out, and this consumes time. What would be useful is an 'instant advice service' that you could ask "I want to do this, this and this, and I have this, this and this restriction. What's currently the best app to do that?" Some of the things you want to do are often a bit specialised, so it isn't always obvious what to use. Also sometimes you download one thing to do a certain job and then find another that does it a lot better or does a lot more, but you didn't realise before that it was available, so that can be a bit of a time waster also, as you have to learn a new program each time. Of course this was a trial so I was expecting this to be the case. Generally I think it is a great device, although I guess Android and Microsoft products would be similar.

- One major thing that would be useful would be to be able to take notes in meetings with a pen and store them or convert them to text for reference. I have my own Windows machine that does that, but I forever need to be conscious of the battery life with that and also it is a bit heavy. If the iPad or Android devices could do that well, and have easy (automatic?) communication and file transfer to other devices such as my PC or laptop, that would be a big help.

- The greatest asset of this type of device is the 'instant on' access to emails and quick file or internet access when you just want to look something up in a few seconds. I found it great for that and much quicker and easier than my laptop.

- A bit heavy to hold sometimes but a lot better than my write on laptop! Since I am used to having to take a laptop with me wherever I go, the 'chore' of carrying the iPad instead was no chore at all. It was a great asset because of its speed and 'instant' access to email and net, particularly the 3G aspect when you aren't near home or work. (Although reception is a problem – not only country driving but surprisingly in Sydney, where the access speed was quite slow in some places – maybe too many users at once there???)

- Matt and I trialled some whiteboard communication using apps such as 'Show me' and 'Pagesend', which are good for individual communication with students. With Pagesend particularly, you can share common 'whitepage', and explain to students how to do a problem exactly as you would do if they were in the room. They can also annotate the same page, and for example draw arrows to parts of the derivation/explanation etc they didn't understand.

- It needs additional phone/verbal communication at the same time to make it great for physics/maths communication. Maybe they will release something like that in future versions.

If there was any criticism I'd say it would be better to have a bigger piece of screen to write on but this is only a small point. There may also be some bandwidth issues – Matt and I used it across a common WiFi network with great success, but when we turned off the WiFi on one of the devices to force it to go across the 3G/NextG network, it was definitely a lot slower and jerky, but in my opinion I think still useable.

- I found it most useful for research but I think it has a lot of potential for teaching if the students all had one also.

- Another really important issue is that any software available for iPad should have an equivalent communicating version for Android and vice versa. Pagesend, for example, is not available for Android at the moment, but if I want to explain some maths or physics concept to a student, then they may not have the same device as me. They all need to interact seamlessly like the same companies made them. The companies should have regular meetings to share all their research and development, so that these can be implemented across all makes and models at the same time, rather than one company bringing it out before another."

- That there is potential here for great communication. More apps than I realised – e.g. used it during a teacher's astronomy workshop with great success.

- It needs Wacom technology or similar!!!! so you can write more accurately and in more detail. It also needs handwriting recognition – better still voice recognition would be great, but I think it would need permanent internet connection as the internal processor doesn't seem powerful enough for this task. Of course in the country…

- Internet in regions where there is no signal – This is the biggest limitation – so many places you just don't have 3G or NextG connection.

IPADS FOR TEACHING

Faculty of Science
School of Community Health & School of Environmental Sciences
Equipment: iPad 3G & Nexus 7s

Aims: This cohort of participants will assess the utility of the iPad for a range of tasks in academic roles. This includes the use of the iPad to facilitate paperless marking, social media engagement with students, investigation of learning resources, implementation of paperless strategies and the integration of mobile technology into a range of teaching contexts across a range of discipline areas.

Academic Observations

Having used the device over the previous few months I can see the applicability to the following learning/teaching objectives:

- provides a paperless means of conveying information to students
- provides a portable method of note taking within groups of students within workshops, particularly those using a PBL framework, that can then be edited/shared with the larger group online
- provides/demonstrates research applications and online resources to students relevant to occupational therapy (Skitch©, Goal setting apps, QR Code Generator).

How mobile learning was used – what did we do?

Within the School of Community Health (SCH) a small group of users met regularly to discuss what they were using on the iPad. Initially the focus was on paperless marking using Notability© and Good Reader©, however various members of the group were exploring other areas particular to their professional interest area.

This was presented at CSUed in the form of a group Pecha Kucha on 5th November, 2012.

I was particularly interested in exploring QR code technology for subject resources for students. This technology has been utilised in universities, primarily by libraries and learning resource areas. I have created codes to a draft Subject Outline and other web-based resources that could provide an option for students to download the site, rather than go through multiple web pages to access a document (i.e. special consideration form).

I am also exploring the use of various apps with a Master's student in her research on goal-setting for clients as part of their rehabilitation. The Japanese tool 'Aid for Decision Making in Occupational Choice (ADOC) (Tomori, et al., 2012), has not been adapted for Western use. The Master's candidate is looking at adapting this tool for Australian clients, and researching the use of this with iPads in relation to standard pen-to-paper goal setting.

In terms of applicability to the CSU Degree Initiative and the CSU Vision (2013-2017) the use of the iPad in teaching and learning could be useful in the following ways;

Teaching

Portability is the major advantage of the iPad. It is ideal for small group work within tutorials/ workshops with a PBL or case-based learning approach. Students are attracted to the tool, and it adds an extra element of engagement to a standard teaching session. It is essential for students heading into practice to know about specific apps. Not providing opportunities to learn about the apps means students could be disadvantaged on practicum.

Learning

Our group created a Wordle to explain some preliminary reactions/benefits/limitations to the iPad use. This was presented in our Pecha Kucha and is demonstrated here **http://vimeo.com/53918768**

Student Responses

- In 2011, I used a SCH iPad in a fourth year PBL subject. As I was not experienced in using it, I got the students to use it to make notes about the particular aspect of the client case they were exploring. These were then able to be placed as a forum posting with a summary of each group's responsibilities for researching and presenting at subsequent use. Unfortunately, the iPad was not available for the rest of the subject that year. In 2013 within the same subject, iPads, smart phones etc have been used extensively within class for research, note taking and information sharing purposes.

Suitability for the discipline

iPad technology and applications are being used increasingly in a variety of practice areas in occupational therapy. These include facilitating client involvement in home modifications (taking pictures of bathrooms prior to home visits, use in goal setting articles and Masters projects, industry etc.) There are many apps suitable to a range of client groups that lend themselves to practice settings. The OT team are exploring ways to include these apps in the undergraduate curriculum, so students are familiar with them (Cramm, Seguen & Adler 2011; Windman, 2012).

Lessons learned

There was some confusion between existing apps on the iPad and previous users. Although a separate iTunes account was set up for myself, the previous account holders (I believe there were at least two) kept appearing as iTunes account holders for the iPad, as did their documents/resources. This meant that updating apps could not occur, as I did not possess the password of the previous users.

There is a need for a thorough staff orientation to iPad use, particularly for novice users who have predominantly used Windows previously. Using the iPad is not intuitive and spending time watching/reading instructions for various applications and their usefulness is time consuming. It would be fair to say that I have not had the opportunity to become familiar with many of the apps existing on the iPad.

Final views and summary

The iPad could be a powerful tool to use in the face-to-face learning setting for on campus subjects. Its use as a resource, summary, note taking, annotating tool has broad applications across professional areas. Specific applications have discipline-specific relevance to maintain student currency of knowledge, and to reflect the use of technology being adopted into occupational therapy. Not using this, and other forms of smart technology, will ultimately disadvantage students in an increasingly competitive university marketplace.

My final view is that I have not had significant enough time to learn about the apps and utilise them in teaching and learning. I would welcome the opportunity to retain the iPad for an additional session, so that I could research the use of QR codes and code readers in the provision of student resources.

IPADS FOR WRITING

Faculty of Arts
WRT210 Writing for Publication
Academics: Lachlan Brown
Equipment: iPad WiFi & 3G

Aim: Students enrolled in the subject, Writing for Publishing, will assess the capabilities of the iPad for writing extensively and capitalise on its portability and extra functionalities. This trial will also investigate paperless marking and the use of social media.

Academic Observations

Personal

- I've been able to familiarise myself with a number of different apps to gauge how they might be used by classes (e.g., Popplet, Lino, Evernote etc) and used the mobile learning experience to help develop activities for subjects as they undergo major revision, thinking about how to provide options for students accessing material on mobile devices.

- The iPad was also helpful for emailing when compared with my iPhone. When I just had my iPhone, I would try to reply to students and colleagues fairly quickly, but the small screen and small keyboard

meant my responses were often short and sharp. The iPad gave me the mobility of something like a smart phone but gave me a bigger screen and somehow more 'space' to write longer and more comprehensive emails.

- The device freed me up to work in environments that were more conducive to creative activity. It also allowed me to show my students these places. For example, we held one writing class at the botanical gardens using Evernote to capture pictures, sound etc. After a time, we came back together to share poems about a particular section of this space. One of the most effective things we did, involved moving creative writing classes to new locations, but with the ability to take writing apps with us. For example, we attended the old church section of Wagga during the 'Writing the Gods' week and spent time in this location, taking photos and writing.

- I think there is an interesting dynamic at work in classrooms where everyone has a tablet and creativity is taught and expected. This is because tablets can so easily take the focus away from the teacher and away from relationships with other students in the class. At the worst, each screen comes between the teacher and the student or the student and other students. I think this is something that university teachers need to be aware of anyway (students are looking at their phones a lot), but a class full of iPads can possibly exacerbate the problem.

Issues

- I did have a problem with the trial because it is difficult to set things up knowing that I would not have the ability to recreate them in the near future. I loved the freedom of the trial. It allowed me to try various teaching techniques and apps, so I think that this freedom should be kept. A trial that integrates subjects with mobile devices (e.g. iPads) with subject review that involves educational design input/advice would be awesome. For example, imagine if you could get time to create a 'stream' of your DE subject, which was designed for tablets.

- I don't think that academics should be forced to teach with certain technologies. The iPad was really helpful for me, but the best teachers at the University aren't chasing the latest technological fads. Integration of iPad or mobile tech with existing CSU systems was an issue. For example, advice on how to control powerpoints using the iPad, leaving me free to walk around the room (not tied to a desk). Integrating Apple mobile technology with other things (e.g. Windows desktops) can be problematic. Sometimes it's hard to know what files are where. Being able to speak with the ed designers about how to design tasks for various apps on tablets (e.g. Lino, Popplet, photo editing) would have been helpful. The next step for my lectures would be to control things from the iPad itself, rather than from the in room computers. But seeing as though all my lectures were on P drive, this was a problem that I never got around to sorting out. The dream would be instant access to my CSU P drive. I haven't yet set up Dropbox with all my university work files, so there was a bit of emailing to myself going on. Interact didn't seem suited to the iPad (small size, forums were clunky) and so a new LMS which has proper iPad compatibility would be wonderful.

Students

- The main pedagogical benefit was increased student engagement, which was huge and worth it! I had the usual problems with students skipping class and not showing up on occasions when the University calendar was full of assessments. This is not a fault of the trial, but the lack of motivation from some of the students made it difficult to use the tablets in the ways I had prepared.

- Most of the time the students were fine with using the iPad. On a few occasions the WiFi issues were annoying, so quick help for students when their mobile device isn't working or alternative desktop access to whatever activity/resource is planned, would be helpful. There may be problems if you solely rely on one piece of technology for everything. For example, the week we had planned to share creative pieces via iPad, complete the readings via iPad, and collaborate on pieces in class using

the iPad, one student couldn't log into WiFi. This was crippling for her participation in the class, so flexibility and a backup are needed.

- Students sometimes found it hard to use the iPad to be creative. A couple reverted to pen and paper quite early on in session and used the iPad for other supportive functions. This illustrated how people use technology differently and for different purposes, and that technological innovation isn't a magic fix for teaching creativity, even if it may allow more choices and avenues for creative practice. Students thought nothing of going 'off task' on their iPad even when I was sitting next to them. This shows the age in which we live – **http://en.wikipedia.org/wiki/Continuous_partial_attention**.

Peripherals

- The keyboard was really helpful, because it allowed certain shortcuts, and the physical feel made typing easier. When typing for extended periods with the Logitech keyboard, the small size of the device could have been a problem. However I took quite a few breaks and used my desktop for extended pieces.

Apps

- The best apps for class included Evernote (creative writing and note taking), Dictionary (collecting word lists), generic free photo editors (for writing text over photos), Dropbox (for sharing weekly creative work so that the whole class could see the work of others)

MOBILE DEVICES FOR DIGITAL MEDIA

Faculty of Arts
School of Communication and Creative Industries
Academics: David Reid
Equipment: iPod Touch

Aims: Students in the subject, Understanding Digital Media, will assess the suitability of mobile technology as a means of production of digital media. Students are exposed to a range of technology from consumer grade gear through to professional production equipment. The large cohort of students will be able to loan the devices through the existing equipment lab in the school.

Academic Observations

- It was hoped that learning would improve with the use of devices, but this was not proven owing to students embracing the use of their own technology, and specific requirements of the subject. It was noted however that competence in the use of some applications did increase confidence. Limited enthusiasm and uptake was shown by the students with the subject, but the subject requires some time to sink in, and the nature of the learning and teaching needs to be modified to better suit both Internal and Distance students, and re-structured to embrace the use of the technology more. Students also demonstrated limited technical knowledge despite being indoctrinated with the technology to this point.

- Access to a greater number of devices would be beneficial as would the use of other brands in the market.

- This is as much a learning process for us as educators as it is for the students receiving the wisdom. Time is needed to embed the technology, and more experimentation needs to take place. I was able to explore a number of digital media tools: Wavepad, Audioboo, PS Express, Revel, 500px, Splice, Videolicious, Socialcam and used some of them.

- An iPad should become a mandatory tool for work because of the versatility of the device, for teaching, research and personal use.

SUBJECT OUTLINES

The Project has been consistently working on mobilising Subject Outlines on the web for use by students. The aim of this work is to deliver access to a high volume student site and provide significant benefit to the student experience. The key to this work is to provide students with tangible utility for accessing the system, and simply put, the Subject Outlines is the primary source for information on assessment tasks.

The Subject Outlines provided a unique challenge for mobile devices due to the substantial amount of information contained, in many cases exceeding 40+ printed A4 pages. Therefore, the solution needed *has* to be more significant than changing text styles. The Project's design skills and experience with user interface development, played an important part in transforming this information into an application that is intuitive, easy to navigate, accessible and cross platform. This work required design of a unique visual style for mobile devices, primarily Smartphones, that embraces their unique affordances and significant constraints. The Project also set up a device lab consisting of a range of mobile devices and operating systems vital for real world testing. The Project has fed the completed work back into the conversation at CSU around mobile, through the Web Management Committee Operations Subcommittee (WMC-OSC) and the Mobile Coordination Committee (MCC). We have made recommendations for additions to the web style guide and developed a supported proposal for a new font that can be specifically used for mobile.

Process

The Subject Outlines are a vital component of CSU's interface between students. In essence, the Subject Outlines, outline the learning contract between the university and the enrolled students. They contain all the mandatory information, and are a compulsory component of all CSU subjects, and so require all students to access them. At present, access to the Subject Outlines is tied to CSU Interact, so the aim of the project was to remove steps in the process and make access to this important information, both faster and easier. The goal of the system is to improve access and usability on a mobile device, and consequently increase student usage.

Mobilising the Subject Outlines was CSU's first foray into the development of a web application. A web application is slightly different from a mobile website, and is far more complex. This is because it requires a more substantial logic layer and interactions with various databases to achieve more complex actions and input from users. The team's aim was to build upon the work started by the Current Student Web Experience Project (CSWE) in the development of m.csu, and to move the design and interface forward. The team aimed to create impact and to forge a new visual style, while at the same time developing critical skills and knowledge in the mobile development space.

Unlike most projects at CSU there was no need to start from scratch and build a new system. Instead, the project has aimed at merging and mashing-up existing content and systems. The application has capitalised on existing APIs to deliver content via a text file. The application then parses that file to generate menus and navigation elements. The presentation and styling is then applied, and has been designed specifically to improve the usability and readability on the small screen.

The project has built this application using available web technologies with the aim of creating a truly cross platform solution. During the course of this development the team has also investigated the use of Phone Gap, which allows applications built, using web technologies to be packaged and deployed to a variety of mobile platforms as a native application. While delivering a native application is not within the scope of this work, the team felt that it was prudent to investigate this area to ensure that all avenues and possibilities had been properly explored.

LEARNING RESOURCES

CSU has a long history of developing its own learning resources and content. The emergence of mobile technology brings with it a unique challenge for our traditional publishing points – print and online. Print files are developed specifically for the page. They have particular break points for paragraphs and chapters, and are styled with fonts of various types and sizes around the known constraints of the A4 page. Online also has the privilege of some degree of standardisation – browser types, capabilities and screen sizes. However, there is no such thing as a typical mobile. In terms of screens they tend to be significantly smaller than a desktop PC but come in a variety of sizes, and often at much higher resolution than a desktop. Mobile devices come with a range of operating systems and versions of operating system, that provide unique software challenges. These are fundamentally different circumstances to our typical publishing techniques and introduce a new array of challenges.

The Project undertook an extensive exploration of the available learning resources and available techniques, file types, development processes and software available to deliver content to mobile.

Process

The plan was to develop a number of resources for the following areas based on existing resources:

- Academic Support
- Faculty of Business
- School of Policing

Each area would produce at least one of each of the following formats to provide a proof of concept to shape future development and explore the issues surrounding production.

- Create a Lo-fi ePub file – (APA Referencing Guide) which consisted of text and images only that was designed for eReaders with a black and white display, but can be accessed on tablets and Smartphones
- Create a Hi-Fi ePub file – (Policing subjects in Pages) including text, images, video & audio designed for tablets and Smartphones.
- Create an Apple iBook – (Policing subjects) which included text, images, video, audio and interactive components specifically designed for iPad

Investigation

Throughout this time we investigated various learning resource conversions taken from existing learning modules including:

- IMS, SCORM to ePub
- PDF, Word, RTF to ePub
- Pages (Apple Software) to ePub
- Pages (Apple Software) to iBook

The learning resources we acquired provided various media, including text, images, video, audio and links, so would present unique challenges in delivering content. The team tested out these transformations using two methods – an automated conversion process and manual authoring. The main automated process was done through Calibre, which is an open source software used to modify, manage and configure eBooks. Due to the inconsistencies in authoring and the differences in media types, there was no way to fully automate the process. Each conversion requires a manual process to update document styles, format and ensure correct rendering of images and video.

The manual process involved taking existing text content and re-creating it in software called Pages, essentially Apple's version of Word. Text would be stripped of all styling and then copied into a new

document and restyled and formatted. This would then export to an ePub file, requiring manual editing of style documents to ensure a match between what was presented on screen and what was represented on the iPad.

The next step was to take existing content, text and rich media to create an enhanced eBook, showcasing the ability to embed and contain both text and rich media to demonstrate clear possibilities. This was tested originally with InDesign and a plugin called Mag+. However the decision was made to use Pages, as the margin of error was too large and time-consuming re-developing resources from InDesign.

The final stage was to take mainly existing content and augment it with new assets – rich media and interactivity. This eBook will showcase the possibilities of developing enhanced texts and show how interactivity and media can be imbedded in a purely digital resource. This involved the creation of an Apple iBook with text, images, video, audio and interactive components specifically designed for the iPad.