THE UNIVERSITY OF MELBOURNE

LTI

LEARNING & TEACHING INITIATIVE GRANTS

2012 – 2013
A Review

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December 2014

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Cover Image: Poster session showcasing LTI projects, December 2014, Photograph by Lee McRae.

EXECUTIVE SUMMARY

The Learning and Teaching Initiative Grants scheme has funded about 120 projects with an 'eLearning' focus during the past three years. Project leaders from twenty-nine completed 2012/2013 projects were interviewed with an aim of ascertaining innovative ideas that were successful, and unsuccessful, and exploring ways in which ideas could be disseminated and future funding allocated. Eight themes emerged from these interviews: flipped classrooms; use of video; feedback and formative assessment; application development; regular use of the LMS; advanced use of the LMS; simulations; and inquiry -based learning.

There was strong enthusiasm among project leaders for the work they were doing to enhance student learning. This was often in the face of minimal funding and significant workloads. There was often a sense of wanting to do more, but not having either time or resources. There was also almost always a keen preparedness to work with others who might want to take up their ideas in their own discipline areas in the future.

A number of ideas are put forward for consideration in the areas of supporting future projects, disseminating ideas, directing future funding, and promoting in-house support.

Suggestion 1: "Innovation Officers" be employed to support staff in academic divisions to coordinate the technical administration and project management of a project.

Suggestion 2: An annual 'showcase' event be reinstated to allow staff to present and share the outcomes of their LTI project work.

Suggestion 3: A web presence be established to house projects in a manner useful for others to explore and to find ones that might be of value in their own context.

Suggestion 4: Projects be identified that are suitable for repurposing, adoption and appropriation in areas beyond their original context.

Suggestion 5: Funding be allocated to activities that lead to the repurposing, adoption and appropriation of previously funded, successful projects.

Suggestion 6: Top-up funding be allocated for the purpose of refreshing, extending and/or maintaining projects beyond their 18 month project lifespan.

Suggestion 7: The professional development and technical support activities and services offered by the Centre for the Study of Higher Education and Learning Environments be promoted more broadly.

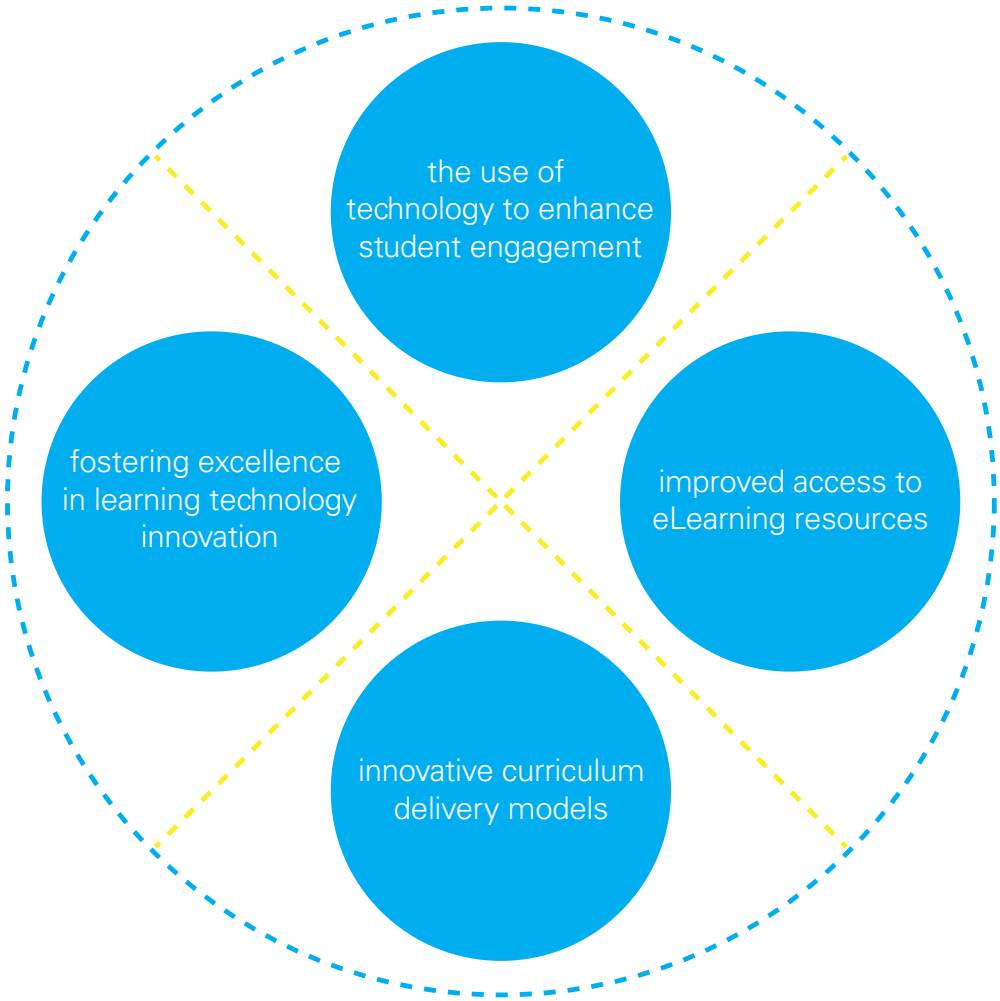
INTRODUCTION

The University's eLearning strategy identifies four strategic priority areas relating to: the use of technology to enhance student engagement; improved access to eLearning resources; innovative curriculum delivery models; and fostering excellence in learning technology innovation. Two enablers for these priorities are to support staff in the use of mainstream and leading edge technologies for teaching and learning and in so doing enhancing the collective skill base of staff in issues associated with technology supported teaching, learning and assessment.

The Learning and Teaching Initiative Grants scheme (LTI) supports these endeavours by providing small amounts of funding to help staff design and implement new initiatives.

The aim of this report is not to document every LTI funded project, but rather to extract some of the 'good' or innovative ideas in the eLearning area that might be of interest and value to others. From the 2012/2013 funding cohort, project applications and reports (where available) were read and thirty-five project leaders were interviewed across twenty-nine projects. Several themes emerged from this work and have been presented here with the intent that they might be suitable for re-using, re-purposing, or re-developing by other staff at the University.

In describing these projects, for simplicity, often the names of only one or two people have been used, but it should be noted that these projects usually have a team of several involved to differing extents. The range of experience and expertise developed within these projects is vast, and these people are a useful 'first port of call' for others wishing to embark on similar activities. A full list of projects and participants is included in the Appendix to this report.



OVERVIEW OF FUNDING PROGRAM

Successful grants 2012 – 2014

From mid 2012 to early 2014 $2.5M has been allocated to innovative eLearning initiatives within six categories (see table below).

These Learning and Teaching Initiative Grants comprised 119 projects across 5 funding rounds. The programme funded about 72% of the amount requested (see table below). About one half of the money (52%) was expended on projects categorised as 'eLearning developments', funding up to $35,000 per project. This was also the most popular category, accounting for 52 out of the 119 projects. Next popular was a category of 'eLearning and related improvements' which were small-scale seeding grants of up to $10,000 each (32 projects). Massive Open Online Courses (MOOCs) were first funded by the LTI scheme in 2013. Information on these can be found in a separate report.

Table below shows the approximate breakdown of grants types and funding – since some projects fall into more than one category just the main category has been listed here.

https://msl.unimelb.edu.au/intranet/documents/learning_and_teaching/UoM_eLearning_strategy.pdf

	Number of grants	Requested funds	Allocated funds	Percentage allocation
A. General learning and teaching initiatives (up to $35,000)	10	$349,735	$267,935	11%
B. Online subject conversions (up to $35,000)	8	$317,561	$261,626	11%
C. eLearning developments (up to $35,000)	52	$1,777,968	$1,283,225	52%
D. MOOC developments (up to $35,000)	11	$374,788	$353,820	14%
E. eLearning and related improvements (up to $10,000)	36	$542,153	$265,948	11%
S. Signature online - 2013 only (up to $50,000)	1	$58,322	$50,000	2%
	TOTAL: **119**	**$3,420,528**	**$2,482,554**	**100%**

THEMES

An examination of the projects undertaken in 2012/2013 clustered the projects into eight themes. These themes show the very different, and quite diverse, ways in which academics are exploring innovation in their teaching. Not surprisingly, about one half (45%) of the projects involve utilising the University's Learning Management System (LMS). This often involved imaginative ways of using 'off the shelf' LMS tools (27%) or more innovative ways of building on the LMS's facilities (18%). Almost one half (41%) of projects involved using video in some way and we give some space here to examining the very different ways in which this has been done. The other growing area of interest is 'flipped classrooms' (14%), where students are given various resources to encourage them to do some preliminary work at home, followed up with a less didactic lecture experience than would usually be presented.

These themes are described and illustrated in more detail in the following sections together with some case studies of individual projects giving further detail.

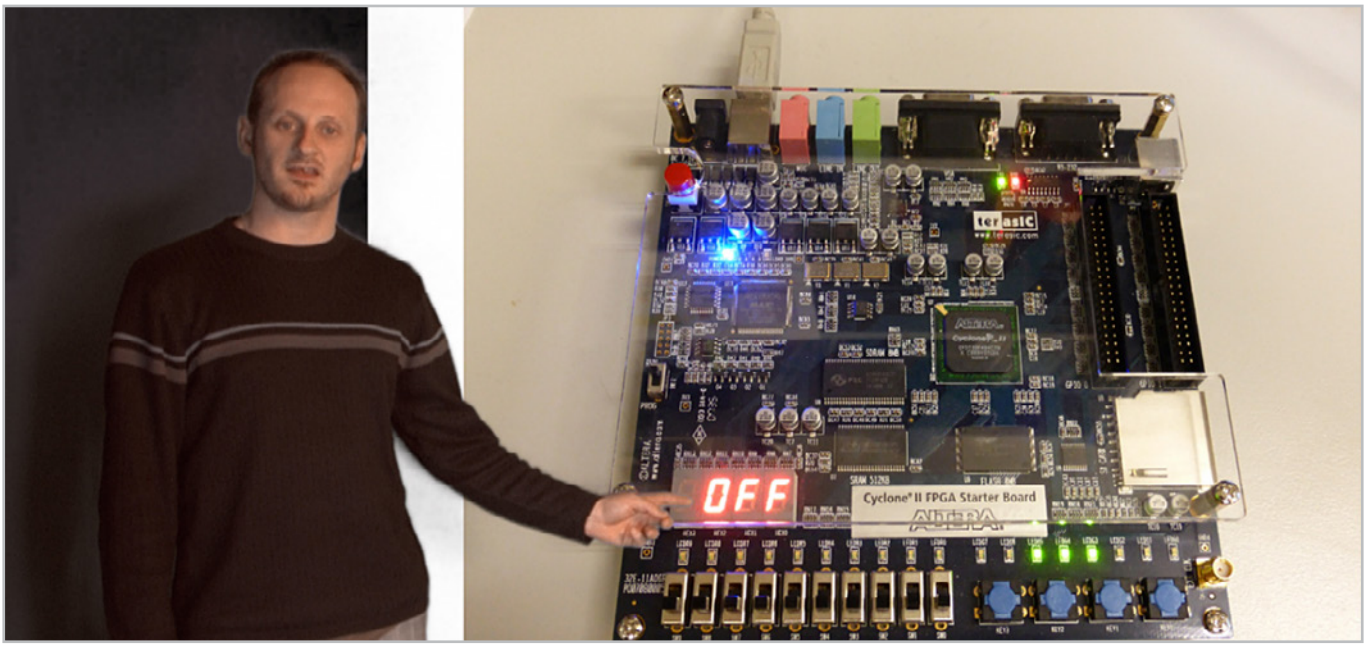
Flipped classroom

In reaction to declining lecture attendance and a desire to engage students more meaningfully, many academics have explored a flipped classroom approach to their teaching. 'Flipping' refers to the idea of giving students preliminary work to do before lecture sessions rather than afterwards. This usually involves producing a number of short video clips (10 to 15 minutes in duration) which students are expected to watch before each lecture session. This then leaves the lecture time open for a different style of activity.

Approaches to flipped classrooms differ slightly. Some have tried taking videos of regular lectures – even from previous years' lecture capture – and chopping them up into small segments (10 to 15 minutes). It quickly becomes apparent that this style of video is not particularly engaging; even a talking head video sitting at a desk leaves much to be desired. The most successful approaches re-think the content that needs to be presented to students, often using 'green screen' technology and a Wacom tablet to craft PowerPoint or Keynote slides that can be projected behind the lecturer and annotated as he or she talks.

This is the approach taken by Gavin Buskes and Brian Krongold (Engineering) for their first and second year engineering subjects. They undertook a complete re-write of lecture content and integrated it into this new mode of delivery, producing three 12-15 minutes videos for each session. These were delivered via the LMS before the regular lecture time slot. Gavin found that the 50 minutes of traditional lecture content would reduce down to about 40 minutes as time is saved by the "topping and tailing" of informal discussions that typically happen at the start and end of each lecture. The LTI grant covered the cost of video production using the facilities available in the Baillieu Library or the Alice Hoy building.

Consideration needs to be given to the sustainability and repurposing of videos produced for this purpose. In order to maximise their lifetime, care needs to be taken with the use of materials that might date prematurely (explicit use of dates, highly contemporary issues, etc.). Kevin Brophy (Arts) was acutely aware of this as he employed a professional videographer to produce short videos for his Short Fiction subject. His videos are a mix of 'talking heads', lecture presentations, and 'on-location' clips carefully edited to produce a professional looking product. Copyright issues sometimes became problematic (and potentially expensive) and Kevin is aware that these resources may well look out of date in a few years, raising the issue of how to fund future updates.



Gavin Buskes presenting in a video for Engineering students.

An important aspect of flipping a classroom is in the follow-up session that happens in the regular lecture time. The intent is to offer engaging activities that can rely on the assumption that students have done some pre-learning. For Gavin's engineering subjects this opens up opportunities for problem -solving, discussions on issues raised in the videos, and other student engagement activities. And of course the videos are also available to be used to stimulate discussion during these sessions.

For Kevin, the lectures have been replaced with additional tutorial time. Students are required to watch the videos at home and write a 250-word response ending with an unanswered question that is used to stimulate discussion in the tutorials.

Clare Newton and Rebecca Cameron (Architecture, Building and Planning) have run flipped classrooms with their large first year classes for several years (see later discussions in the section Feedback and formative assessment). They present resources to students using free software from issuu.com to produce 'flipbooks' that layout work for students in an online double-page spread format: their pre -lecture work displayed on the left and their studio work on the right. These flipbooks are time-released on the LMS week by week and help avoid the 'turn-off' reaction by students to 'yet another LMS page'.

Clare and Rebecca's approach to encouraging student engagement is to require them to submit an online 'log book' each week that documents their learning progress, participation in activities, and the compilation of a glossary. This document is a mix of text, annotated sketches and photographs. They are also sensitive to the requirement to manage students' expectations carefully. First year students, in particular, tend to expect a traditional mode of presentation and need to be given a clear understanding of what to expect.

The unanswered question here is whether students will actually comply and undertake this extra work at home. What is their motivation to do this? If the resources are well-designed and the lecture time used for genuinely relevant and engaging activities, then the assumption is that student will recognise the value and attend the lecture. However, this is a very different style of lecture presentation than many academics are accustomed to, and hence takes some adjustment to become familiar with.

It's too early to comment on the effectiveness of this approach either from a student participation point of view or from a learning outcomes view. However some academics are putting significant effort into the design of their resources (visual as well as pedagogical) and are confident that they are an effective way of presenting their subjects. Ignoring this re-design aspect and simply trying to 're-package' existing lectures into video sessions is an approach with little chance of success.

This software is available from http://www.issuu.com

Kevin Brophy presents videos in his Short Fiction subject from a variety of locations.

FROM THE CHALKFACE: what works for flipping your class?

Design activities for lecture times that build on having engaged with the at-home activities.

Setting up to flip takes time – but rewards can be significant.

Develop a philosophy as to how and why the flipped and non-flipped components will work.

Clearly explain to students the mode of delivery and its rationale.

If videos are used as the 'at home' component:

- *Re-design content and teaching approaches to suit video presentation – avoid re-packaging existing lectures.*
- *Avoid simply using a talking-head in front of a desk.*
- *Use green screen technology (available in Baillieu and Alice Hoy) to enable superimposing of talking head on top of PowerPoint or Keynote slides.*
- *Keep videos short (10 – 15 minutes).*
- *Minimise any content in the videos that will become dated (especially displaying current time and dates).*
- *Plan how you will resource the re-editing or re-creation of videos in a few years time.*

Using videos

The use of short videos to support learning has become very popular. The discussion above relates to their use in flipped classrooms, but they are also being used in five other significant ways.

Using videos to help prepare students for the week's study

A highly effective and popular use of videos by Ruth Nettle (Melbourne School of Land and Environment) has been to use them to introduce the week's learning. Rather than simply present lecture content, Ruth uses one 8-minute video each week to introduce students to the week's study: outlines what the week's lectures are about; what students need to do; how they should approach their learning; etc. This has received an extremely strong positive response from students and is relatively inexpensive to produce using the university's available studio facilities.

Videos as background to a lecture

A different way to use videos is to recognise that not all students have an adequate background for a particular lecture and might need some introductory material. For first year Biology students, Dawn Gleeson (Science) has produced BioBytes, a series of 10 to 15 minute pre-lecture videos that brings those with poor background knowledge up-to-date. This is particularly valuable where the student cohort is diverse and might not all have the prerequisite knowledge. These short videos have also been very popular with students as a revision resource.

Using video to add professional relevance

Like Ruth Nettle, Graham Mackay (Medicine, Dentistry and Health Sciences) also uses videos to introduce and contextualise his lectures. He addresses the question "why are we learning this?" but does so for the diverse needs of a masters class of mixed professions (nursing, physiotherapy and optometry students). He finds this a valuable technique to explain to each profession why the work they are addressing in lectures is relevant to their particular profession.

Students learn clinical skills using videos in a Vet Science lab.

Video as a replacement for lectures

A few see videos as being a way to replace a traditional lecture – to deliver essentially the same content but via video. While these may be easy to create (e.g. use 'lecture-capture' one year for use in the following year) it runs the risk of not meeting students' growing expectations of quality and engagement with these resources. While a talking-head video of a lecture can be chopped into smaller segments, it is generally still a rather uninspiring act to watch.

Videos in flipped classroom contexts

Finally, the video as a resource for flipped classroom use. As mentioned previously, the approaches to this use of video vary considerably. All staff appreciated the importance of chopping these up into bite -sized pieces (10 to 15 minutes). At one end of the spectrum is a 'talking head' lecture repurposed for at-home viewing; at the other end is a carefully crafted package of videos, screencasts, links to online resources, references to text books, etc.

A novel use of video is the approach taken by Katrina McFerran and Grace Thompson (Melbourne Conservatorium of Music) who provided off-campus students with videos of music therapy sessions. This raises issues of ethics and confidentiality. Care had to be taken that the videos were streamed (not downloaded) and that it would not be possible for students to inadvertently save a copy of the video on their device. The resulting videos gave students an experience close to that of the on-campus students.

FROM THE CHALKFACE: what works with videos?

Videos can take on many roles:

- *introducing students to their study requirements;*
- *as background/refresher material to individual lectures;*
- *for revision;*
- *to provide contextual relevance to diverse professional groups within a class;*
- *to teach and assess practical skills;*
- *as a replacement for lectures (in a flipped arrangement).*

Generally keep videos short: 10 to 15 minutes.

Look for more appealing formats to present your videos to students than a simple LMS link (e.g. embedded in flipbooks).

Try to date-proof videos by removing any non-essential time-stamped references.

Use the University's recording studios (Baillieu and Alice Hoy buildings) to record your talking head over a green screen so that you can add and edit PowerPoint or Keynote slides.

A potentially effective way of assessing practical skills is to have students produce their own videos, peer review them, and post them on YouTube.

Be aware of copyright issues with resources used in videos.

Consider getting advice on on-camera presentation skills.

Do one video and check it before creating a whole series.

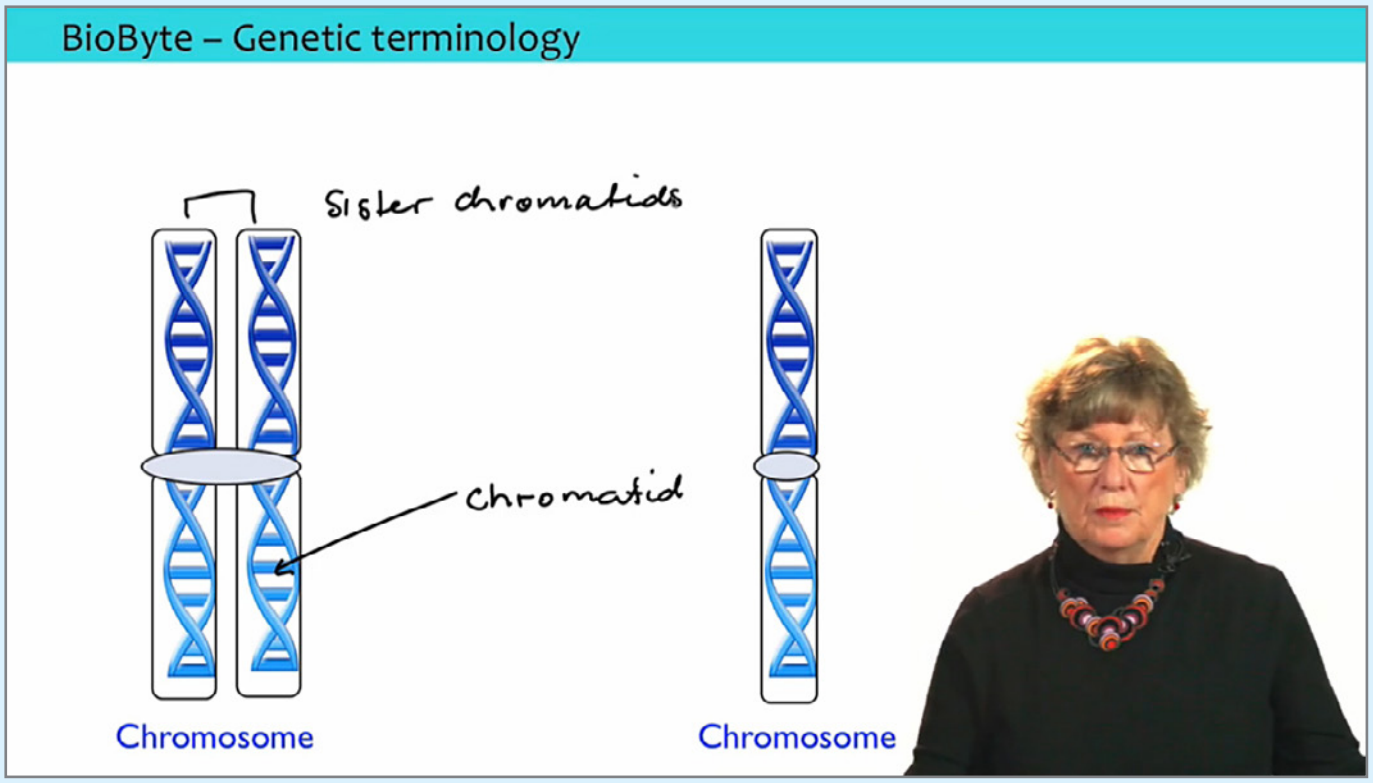
Consider how to motivate students to watch the video and come to class prepared to engage.

CASE STUDY:

Preparing our students for lectures in first year Biology BioBytes

The project

First Year Biology is a very large subject (2000+ students) with a diverse cohort of students attending three lectures per week. There is no prerequisite to study Biology at first year so Dawn Gleeson and Lisa Godhino needed a way to support students who may have no background in biology at Year 12 level or maybe those with English as a second language. Their solution was to produce a suite of short videos, released 'just-in-time' before the lectures. These videos provide an introduction to the biology concepts and terminology underpinning the content in the lecture series ahead. The acceptance of these by students has been stunningly successful.



Dawn Gleeson presents a BioByte video

What they did

Dawn and Lisa have set up a very efficient workflow to generate these short videos and have produced well over a dozen of them. They employ tutors for about 24 hours at demonstrator rates to produce 2 or 3 videos at a time. This involves producing a short set of PowerPoint slides, recording the talk using a green screen and writing tablet in the video recording facilities in the Alice Hoy Building, then editing the result. They employ Learning Environments staff to do the postproduction work. They don't aim to be perfect, correcting errors rather than cosmetic blemishes.

Referring students without a Biology background to view the BioBytes videos before a lecture has two advantages. Firstly it gives these students more confidence with basic concepts and terminology. Secondly it frees up Dawn's time in a lecture to gloss over some of the basic ideas so that those who have completed Biology previously hear about new concepts and are still engaged. Students also find them a great resource for revision.

For more information

Dawn and Lisa are happy to discuss some of the finer points of how they have gone about this production task: Dawn Gleeson (d.gleeson@unimelb.edu.au); Lisa Godhino (lnevans@unimelb.edu.au)

Feedback and formative assessment

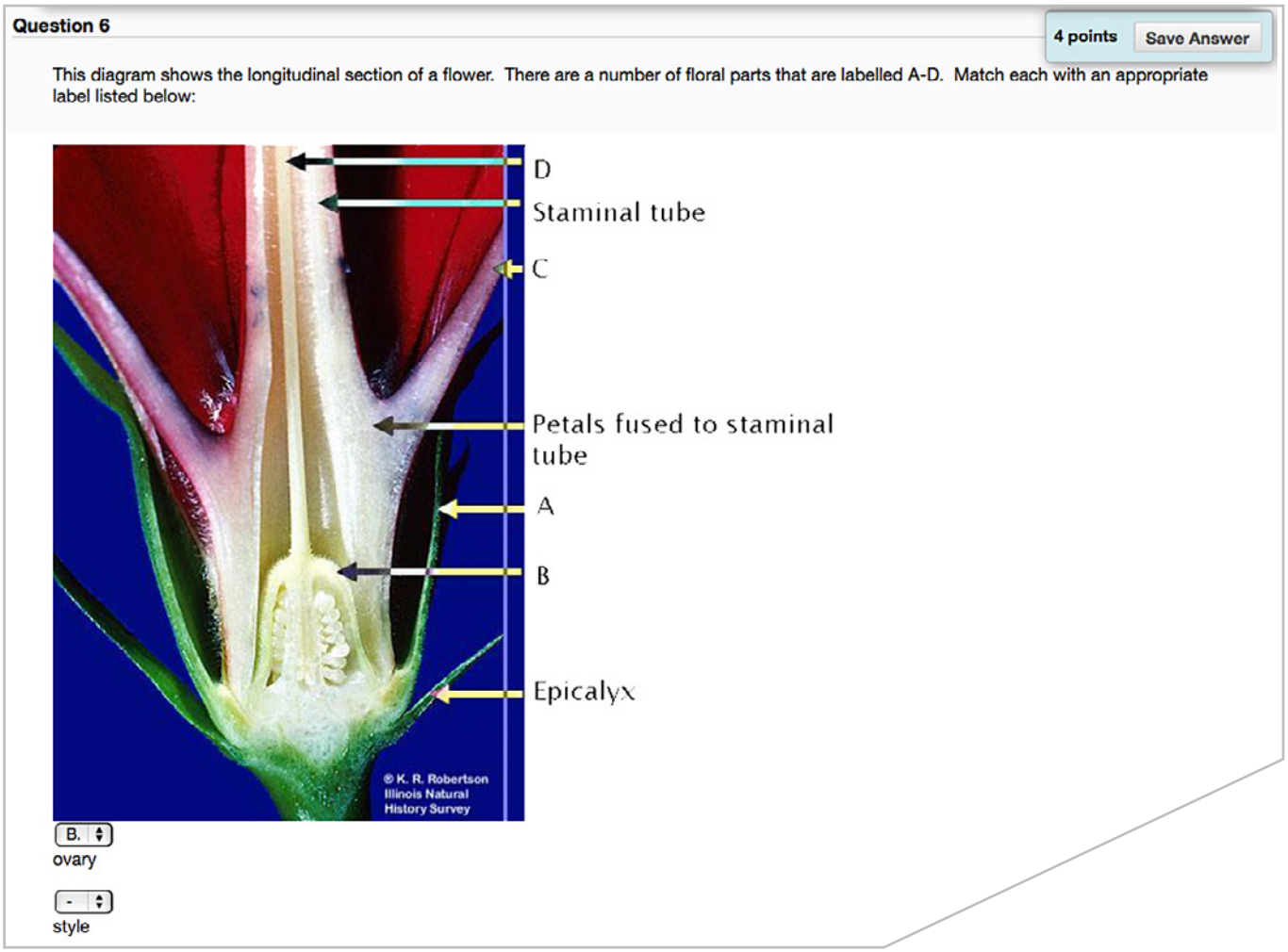
Feedback continues to be an issue of concern among academics, both in regards to students' perceptions (via subject experience surveys) and a desire to improve the quality of learning through richer experiences. These aims are, of course, not mutually exclusive, nor does a strong result in one necessarily affect the other.

The LMS provides various 'off the shelf' tools that can be used to provide students with timely feedback: quizzes, blogs, wikis, Grade Centre, PeerMark, PRAZE. In addition, many staff are producing or using other software that aims to enhance students' learning via feedback. We discuss these two approaches below.

LMS feedback tools

The tight integration of LMS tools with teaching makes the use of these tools attractive. Quizzes can be a powerful way to provide rapid feedback on students' progress. Brian Cook (Resource Management and Geography) requires students to read a paper each week and also provides a quiz each Sunday night before the week's lecture. This gives students a random selection of 10 questions out of a pool of 40. The results go straight into Grade Centre. Students can make three attempts that contribute 20% towards their assessment. Brian gives students statistical feedback on the quiz scores and uses it for discussion at the start of the lecture. This approach of pre-lecture reading together with a quiz has resulted in positive responses from students, including a high feedback SES score.

LMS quizzes have also been used very successfully to replace lab experiences. As part of Ruth Nettle's project (MSLE), some staff designed quizzes to present students with high quality images of plant morphology. They carefully designed questions of sufficient difficulty to challenge students' thinking. Again, students responded very positively to these quizzes and to the high fidelity of the images presented and the carefully crafted quiz questions.



Screenshot from a quiz in the subject Landscape Plants.

The LMS also provides analytics data that are available for feedback to students, yet having this information is not always well received by students. Danny Samson and Sally Lawson (Business and Economics) sent regular SMS's to students informing them of their progress as measured by the LMS statistics. However, students in focus groups showed some degree of dislike to these data – the sense that 'big brother' was watching gave them concern, even though they were well aware that these data were being regularly collected by the system.

Another form of LMS feedback is the use of wikis together with tutor comments. This was implemented very effectively by Katrina McFerran and Grace Thompson in the Master in Music Therapy. Inspired by Harvard case studies and clinical scenario problem-based learning, they require their students to pre -read material and then post summaries on the LMS wiki for all students to view. The feedback comes from weekly feedback on their posts from staff. This is a significant amount to work, but they receive extremely positive comments from students as to the effectiveness of their experience.

Feedback software

While feedback via the LMS is readily available for anyone to use, a surprising number of projects had a primary aim of finding alternative and better ways of providing feedback. Some of these approaches involve the development of new software, while one uses off-the-shelf commercial software.

Angela Paladino (Business and Economics) uses an in-house web-based system to support a case study approach to a third year Project Management subject. A number of different cases are presented to teams of students who are required to complete challenges inherent in the cases and post their solutions online. With a class of 300+ students it is not feasible to have each team allocated an outside organisation as a 'client'. However, the web-based system is used to give students feedback on their responses from both an internal moderator as well from a limited number of external organisations together with tutors. Using this online approach has made it possible to take an experience previously used with a masters level class and make it available to much larger undergraduate groups. This experience builds on students' knowledge in a very practical way and Angela has noted a progressive improvement in student assessment items. The students love the approach, in particular the way in which the feedback is broken down, they are questioned on it, and can make improvements. Some even take it up voluntarily.

An interesting issue arose for Michael McCullough and his colleagues (Medicine, Dentistry and Health Sciences) who explored using an off-the-shelf commercial web app (Mark-Rite) to facilitate the clinical assessment of students in dentistry, nursing, physiotherapy and medicine. The app facilitates the assessment of students under various criteria and sends customised individual emails back to them. While this was very well received by most students (so long as the examiner's attention was not too focussed on the iPad!), the physiotherapy examiners in particular tended to walk around during the examination process and this often caused wi-fi drop out issues. While a web app (essentially a web browser page) has the advantage of requiring no software installation, and runs on any device, it does require a continuous wi-fi connection, which became a problem in this instance.

http://www.mark-rite.com.au

Of relevance here is the work by David Shallcross et al (Melbourne School of Engineering) who has produced an iPad-based "native" app to deliver quick and timely feedback to students giving oral presentations. While not funded by the LTI scheme, this app solves the issue of wi-fi connectivity and addresses many issues to simplify the oral assessment process: scoring using various criteria, weighting the scores, adding customisable comments, and emailing a report to students. Importantly, this app will work offline as well as online.

A similar approach to assessing and giving feedback to oral presentations can be taken using the LMS and Turnitin GradeMark by setting up a regular assignment in Turnitin and attaching a rubric designed for assessing oral presentations.

An interesting use of commercial software for providing feedback is the work of Clare Newton and Rebecca Cameron (Architecture, Building and Planning).

They use Poll Everywhere software to give students weekly quizzes that contribute to their assessment. These were originally delivered in lectures – causing a significant improvement in lecture attendance – but later moved to tutorial sessions as the lecture environment could not handle the large number of students logging in over wi-fi. Another reminder that the performance of computing infrastructure cannot be taken for granted.

http://polleverywhere.com

FROM THE CHALKFACE: what works with feedback

The LMS provides many 'built in' tools for feedback: quizzes, blogs, wikis, Grade Centre, PeerMark, PRAZE.

Use of these tools can provide useful material to promote discussion in follow-up class sessions.

Quizzes needn't be dull: they can include high quality images and videos.

Feeding back LMS 'tracking' data to students might be a double-edged sword.

Check with them about how they might receive this.

Students really appreciate feedback on their work posted online – either through lecturer or tutor comments – or discussion in class. This might be time consuming but very well received by students.

Software exists for giving feedback on 'non-submitted work', i.e. oral presentations (Turnitin GradeMark; PRAZE). Some tools support real-time assessment (Grade Centre, Mark-Rite), but be wary of any continuous wi-fi requirements (Mark-Rite).

There are a number of ways to get quick feedback from students in lectures. Two tools in use are Poll Everywhere and QuickPoll (http://qp.unimelb.edu.au) – but be aware that 300 students trying to access a University wi-fi connection simultaneously might not work!

Application development

Several projects have undertaken the task of developing stand-alone apps to support learning. Some mobile apps are tightly tied to their discipline area. Joel Brennan (Melbourne Conservatorium of Music) has undertaken the challenging task of producing an app to help students develop and practise their intonation skills (perception of pitch and the correct reproduction of 'in-tune' pitch on an instrument). While other apps give feedback to students visually, Joel aims to provide aural support in goa way that students can practise their skill development at home.

Other apps have a more generic appeal. Melissa Russell (Medicine, Dentistry and Health Sciences) and Catherine Howell (in collaboration with many others) have produced an app to teach and assess the underlying core principles of academic integrity (honesty, referencing, academic skills and professional/ workplace conduct and skills). The app, From Academic Integrity to Responsibility (FAIR) runs on Android

and Apple mobile devices as well as a module designed to run within the LMS (see the following Case Study). It can be customised to suit different discipline areas, but has general applicability in its current form. This is a fine example of a development that has application across most areas of the university.

FAIR is available from http://uomfair.info as well as from the Apple and Android app stores.

A series of apps that support students in managing their learning at university has been developed by Terry Judd in the faculty of MDHS. Leveraging off the tight course constraints for students studying the Doctor of Medicine, these apps provide integrated links between timetables, resources and clinical records created by students.

Not all apps are solely software. Sigfredo Fuentes (MSLE) has developed apps to drive 3-D printed robotic sensing devices for students to borrow and take into the field to collect data. This confluence of highly mobile computing, cheap 3-D printing and cheap video sensors opens up an enormous scope for students to collect meaningful data of their own and carry out their own analysis. Sigfredo's devices do such diverse things as pour sparkling wine and measure the rate of foam decay, count bubbles in wine, or scan vines to measure infrared emissions and water content. The cost of these devices is low enough to produce in sufficient numbers for students to borrow; the application of these devices could extend to a number of areas of science and engineering.

App development is a specialised task and one that brings it own complications with cross-platform issues, responsiveness to different devices, data storage in the cloud, and distribution via app stores. This generally necessitates a team with appropriate skills and solid project management to keep the team on track. If you can't provide the skills, then an appropriate starting point is Learning Environments. While developments of this nature are not for the faint hearted, the rewards can be great.

An infrared scanner, moved by two servo motors and controlled by an Arduino® Uno board, sits on top of a Forward Looking Infrared Camera to compare their respective performance (Sigfredo Fuentes).

CASE STUDY:

The FAIR project: promoting academic integrity using mobile learning

The project

FAIR (From Academic Integrity to Responsibility) is an application designed to help university students understand and navigate common academic integrity issues. FAIR walks you through a series of common scenarios that can lead to breaches of academic integrity, like plagiarism, with advice on what to do and why it matters. The FAIR quiz determines your risk profile for academic misconduct and directs you to the tools you need to succeed.

What they did

Catherine Howell (CSHE and Architecture Building and Planning Learning Unit) and Melissa Russell (School of Population Health) led this project to produce an interactive e-learning resource together with guidelines for academic staff. Building on existing University web-based resources, they produced mobile apps running on iOS and Android devices, as well as a FAIR Community on the LMS, and a customisable FAIR LMS module that others can install within their own subjects.

FAIR addresses four areas of academic integrity:

(1) What is Academic Integrity?

Academic integrity is explained. A set of short animations is offered in which animated characters discuss issues relating to this topic. A glossary describes the meaning of common terms.

(2) Help Me Now (scenario-based content)

A number of scenarios are presented (e.g. "I'm working on a group presentation and one of the members isn't working as hard as the rest of us. Help!") with an accompanying document presenting suggestions as to how to handle them.

(3) Tools and Resources

Links to numerous online resources.

(4) Quiz

The quiz presents numerous scenarios that students can respond to. The app version then generates a risk profile of the student that highlights topics that might need future revision. In the LMS version the lecturer can tailor the quiz questions to their own specific subject.

For more information

You can download the FAIR apps from the Apple and Android app stores.
The FAIR web site is at http://uomfair.info
For more information contact Melissa Russell: melissar@unimelb.edu.au

Using the LMS – off the shelf

Many projects have taken the opportunity to build on the facilities provided by the Learning Management System (LMS, incorporating Blackboard). Communication tools (e.g. discussion boards, blogs and wikis) and quizzes are commonly used to support students' learning and provide feedback. The Grade Centre is also used effectively by staff to rapidly provide feedback to students on their assignments marks.

Discussion tools

Several academics use these tools in ways that resonated well with students. However, in each case they took considerable care to design their usage to provide maximum effect. For example, Arianne Dantas and David Williams (MDHS) explored the impact of the use of the LMS blogging tool on students' learning, to find out which students benefitted, and any impact on their feeling of engagement with the class. They found a correlation between the engagement with the blogging process and exam performance both on specific blog topics as well as 'off-topic' questions requiring problem solving and inference. But for this to be successful required the careful design of topics for discussion with questions ranging from soliciting comments to open-ended discussions. Tutors needed to be trained in ways of maintaining the discussion and encouraging students to interact. However, not all students take readily to blogging – it can be time intensive – hence Arianne and David are looking for alternative options for those who have other tastes.

In the Masters Coursework Degree in Music Therapy, Katrina McFerran and Grace Thompson redeveloped their subjects taking a blended learning approach for students in remote parts of Australia. Their aim, inspired by a Harvard Case Method approach, was to enable blended learning students to participate in eLearning versions of problem-based clinical scenario activities, as well as innovative and engaging peer-based activities. This involved the students carrying out reading tasks each week and submitting a weekly blog. The blog was visible to all and received weekly feedback. Students were overwhelmingly supportive of these initiatives, enjoying the regular connection with other students as well as the weekly feedback from the lecturer. Again, it is noted that this approach is time consuming for both staff and students, however it was effective in stimulating the students to do the pre-reading and maintaining their engagement with the subjects.

Quizzes

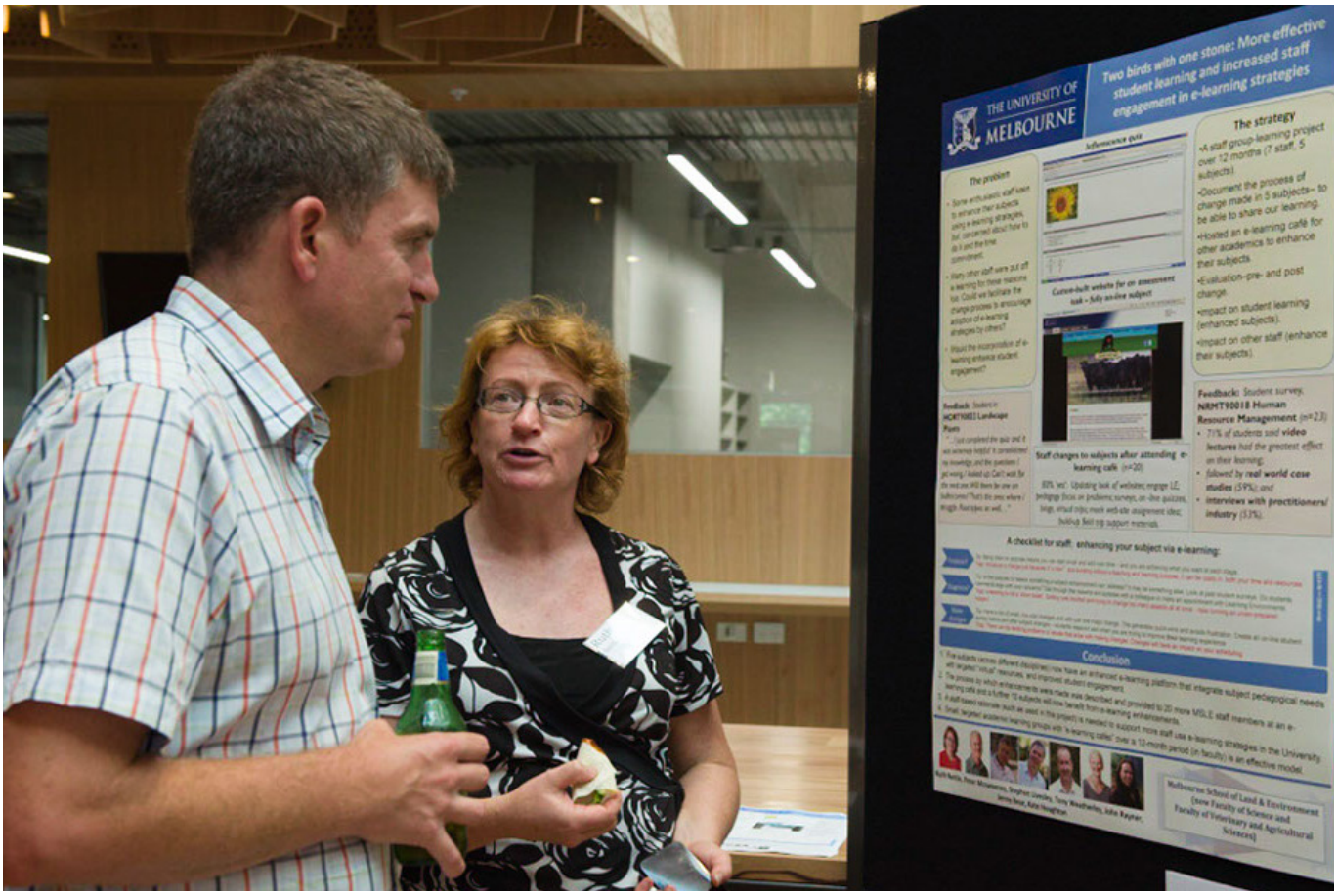
The strategic use of quizzes goes well beyond students checking their knowledge of a subject. Brian Cook (Resource Management and Geography) uses weekly quizzes as a way of encouraging students to read a paper in preparation for the weekly lecture. He uses the LMS quiz tool to randomly assign 10 questions to each student, out of a pool of 40. They can take the quiz up to three times and their marks immediately go into the Grade Centre. At the start of the lecture, Brian gives a summary of the statistics for the quiz and discusses any issues. This has been effective in getting students to read the material, and both students and tutors have noted the benefits. This is a simple measure to improve students' engagement; it requires work to generate the original questions, but after that it more or less runs itself.

Danny Samson and Sally Lawson (Business and Economics) use quizzes as part of an approach in which they 'frontloaded' many resources onto the LMS for students to access in their own time. While they found that not all resources led to greater engagement (some videos required too many clicks via the LMS to access and some students felt overwhelmed with their workload and avoided what they perceived as an extra task) they did present a novel approach to the quizzes. A strategy that helped in engaging students in this process was to require them to identify something from the quizzes that struck a personal chord with them (e.g. relating to motivation focus or communication preferences) and then to use this as a discussion/reflection point in the follow-up tutorials.

A final example of the use of quizzes is the way in which Liz Tudor uses them as part of a project that aims to help Veterinary Science students develop and assess their clinical skills, using a case study approach, in preparation for their final year of clinical rotations. In this programme students can download from the LMS instructional PDFs in which care has been taken with the visual design as well as the pedagogic design. They then take part in group wikis and quizzes that check that they have

the required background knowledge to progress in the case study. Each PDF resource is tagged with information about how it fits into five fundamental learning domains (science, clinical skills, ethics and animal welfare, personal and professional development, and biosecurity and population health). This is an approach that Liz and colleagues have used in several courses that they teach.

The examples here have shown quizzes being used in a targeted way as part of a larger educational intervention – not as a trivial exercise in checking students' knowledge. They illustrate the role quizzes can play in stimulating students' pre-reading, acting as a personal focus for tutorial discussion, and checking students' progress before accessing further learning materials.



Showcasing LTI projects at the CSHE Innovations and Excellence in Learning and Teaching event, December 2014

CASE STUDY:

Developing effective learning experiences for geographically distributed learners in the Master of Music Therapy

The project

The masters Coursework degree in Music Therapy offers a sequence of three subjects for off-campus students that emulate the on-campus experience of a weekly lecture and tutorial. In these subjects theoretical information is combined with workshops of clinical scenarios in problem-based learning activities. In this LTI project, Katrina McFerran and Grace Thompson created clinical scenario problem -based learning tasks, video interviews, blog posts, and online meetings to facilitate this off-campus experience.

What they did

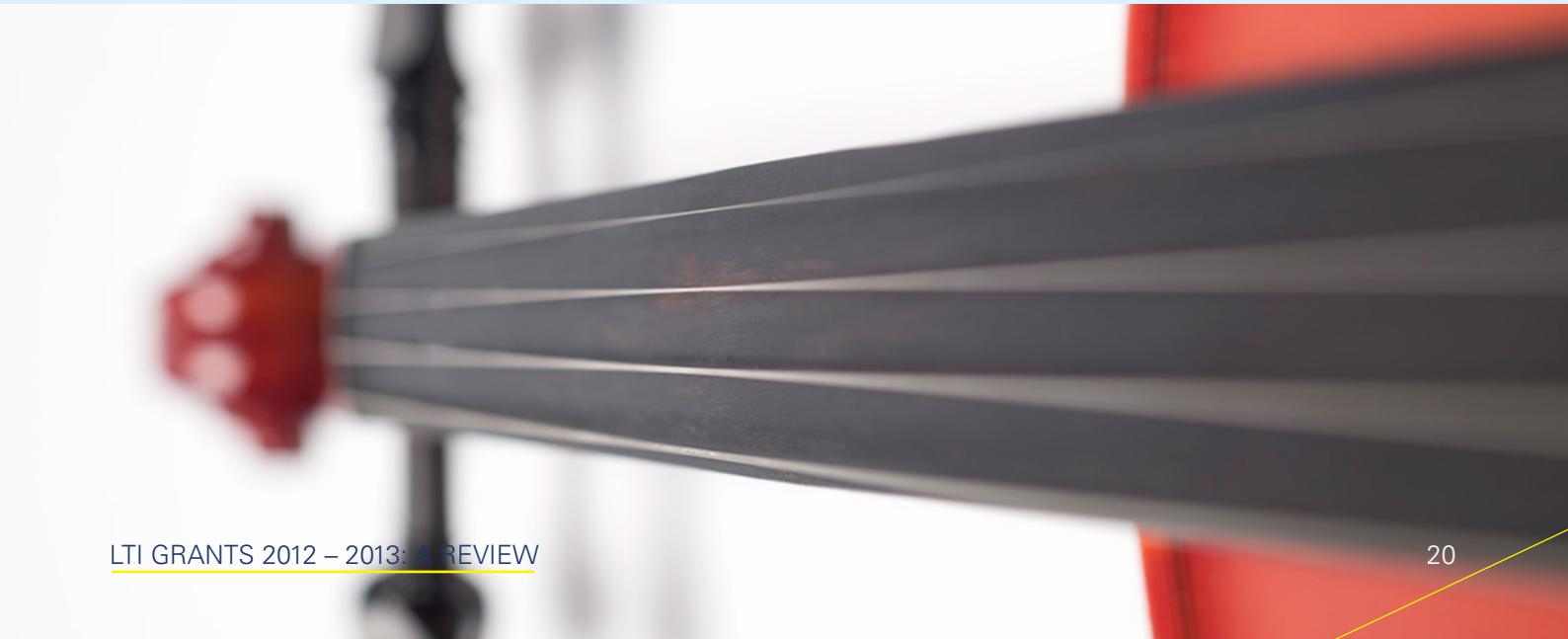
A challenge for online subjects is to give the students a sense of belonging – a feeling of cohort – and to have an experience as close to 'being there' as possible. In this blended version of these three subjects students receive essentially the same resources as the intensive on-campus version, but in a different modality. A significant challenge was how to capture the professional clinical scenario experiences. Inspired by the Harvard Case Study approach, and problem-based learning, students are given online case-study learning tasks. These involve a suite of weekly activities that are designed to give students a rich and engaging experience even though they are not on campus, including:

- pre-readings after which students submit a summary, and give a public response to a discussion question using the LMS wiki (sometimes paired up to promote collaboration);
- responding to case studies based on videos of real music therapy sessions;
- receiving weekly feedback on their posts; and
- online exam revision meeting via Adobe Connect.

The success of this approach is reflected in the students' overwhelming support – comments such as "best online experience we've ever had" – and their feeling of belonging to a cohort.
This model is not inexpensive in terms of staff time – responding to individual wikis is time consuming – but in this professional area this commitment is essential in order to check how students' understandings of concepts are developing and how they pick up the nuances of the clinical case studies. The design of the student experiences is built on solid underlying pedagogies aimed to develop competencies rather than just skills acquisition.

For more information

This work is on-going and further funding is being sought with other universities.
For more information contact: Katrina McFerran (k.mcferran@unimelb.edu.au) or Grace Thompson (graceat@unimelb.edu.au).



Using the LMS – pushing the boundaries

The LMS can offer students much more than the standard web pages of text, links, images, subject tools, etc. Some have gone to considerable effort to give students a highly customised experience. Clare Newton and Rebecca Cameron (ABP) take a 'flipped classroom' approach to a large first year subject. Apart from the creative use of non-LMS quiz software (Poll Everywhere) they were keen for students to access a number of resources each week before the lecture time. However, they were aware that students often find the LMS un-inspiring and too linear. Their solution was to use the web service Issuu that made it easy to produce a 'flipbook' that opened within their LMS subject. The flipbook displays two-page spreads that present time-released links to short videos, online resources, textbooks, etc. sitting alongside resources for students to work with in lectures and studios. More details in the Case Study 'Construction Unwrapped' below.

In a similar vein, Jenny Hayes and Andrew Tan (Anatomy and Neuroscience) have produce self-paced eLearning resources, available on the LMS, to 'fill the gaps' in existing resources and to address topics that are conceptually difficult in human anatomy. The modules they have produced make use of text, video, interactive formative assessment as well as interactive learning materials.

The interesting feature of the above two projects is that they use the LMS to present resources to students in a manner that is refreshingly different. They both require in constructing specialised resources that are not 'off-the-shelf'. However, this need not be a major hurdle. Clare and Rebecca's use of flipbooks provides an elegantly designed and extremely useable way for students to access a range of resources, but without any need to be able to write computer code. Jenny and Andrew's approach is more technical. The skills of a programmer are required, but the result is self-paced learning modules that integrate online tutorials and testing in a manner to enhance learning.

The response by students to each of these approaches is very positive.

Poll Everywhere is available from http://www.polleverywhere.com

Issuu is available at http://www.issuu.com

FROM THE CHALKFACE: effective use of the LMS

The University's learning management System has many learning tools that are probably well known:

- *blogs, journals, wikis and podcasts;*
- *chat and virtual classroom;*
- *discussion board;*
- *Grade Centre;*
- *PRAZE – a rule-based system to support and manage anonymous student peer review;*
- *Respondus - a Windows application that enhances the functionality and usabilty of Blackboard's quiz and survey tools;*
- *Turnitin – for checking student work for plagiarism;*
- *Turnitin Grademark – allows online marking of Turnitin assignments;*
- *Turnitin PeerMark – allows peer review of assignments (with less customisability than PRAZE).*
- *Issuu – web service for the production of flipbooks.*

CASE STUDY:

Construction Unwrapped

The project

The LMS doesn't have to be boring! Among the various ways in which Clare Newton and Rebecca Cameron approach teaching "Constructing Environments" to first year students is a novel and interactive form of 'subject guide'. They run a flipped classroom approach to this subject, but that means that many resources need to be released week by week for students to access before class. Rather than list these as LMS objects in a scrolling page, they employed 'flipbook' software to make the experience engaging and effective.

What they did

The subject comprises a mix of 'theatres' (lectures) and 'studios' (tutorials). Before each theatre students need to access a mix of short videos, links to online resources, references to textbooks, etc.
Two flipbooks contain all this and more. They comprise a Subject Guide: complete information about the subject (information about how the subject is run, staff, organisation, timetables, texts, assessment, plagiarism, exam, drawing standards, etc.); and also a Weekly Guide. This comprises double-page spreads with links to the pre-theatre resources on the left and theatre and studio work on the right (see below).

A double-page spread from a flipbook.

They have chosen to use the free Issuu web service to create the resources. This allows conversion of PDFs into digital editions, viewable from desktops, laptops, tablets or mobile devices. They also provide the same information in PDF format.

For more information

Clare Newton (c.newton@unimelb.edu.au) and Rebecca Newton (rejc@unimelb.edu.au) are happy to talk about what they have done. The flipbook creation service is available at http://www.issuu.com

Simulations

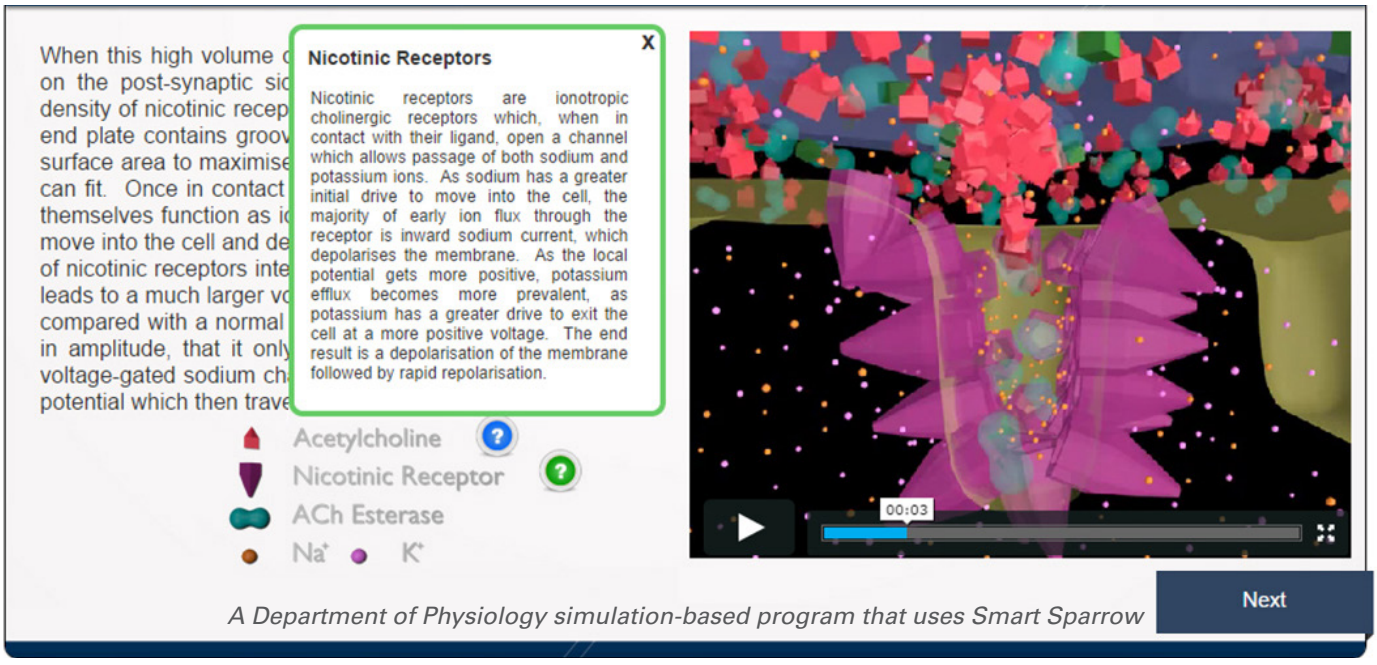
Simulations – in which students can immerse themselves in an interactive environment designed to give them specific learning outcomes – require considerable skills and experience to produce. A distinction can be made between conceptual simulations – simulations whose main purpose is to assist learners understand relationships between facts, concepts and principles – and operational simulations where the focus is on procedural tasks and the knowledge and skills required to perform them. One approach to developing simulations is to use a commercial package designed to produce such courseware. Another approach is to start from scratch, employing a programmer to design and build a customised environment tailored to your requirements. In recent LTI project rounds we have seen both approaches.

David Williams and colleagues (MDHS) use the eLearning platform Smart Sparrow to create highly interactive, content-rich, online learning modules in the areas of cardiovascular physiology and human skeletal muscle function. The Smart Sparrow platform not only allows for the creation of courseware and conceptual simulations such as the case here, but it also gives students individualised feedback, tracks their progress and provides a wealth of learning analytics data for teachers to analyse. These resources are used by students before lectures, as part of a flipped classroom approach, as well as during lectures.

The 'start from scratch' approach is the one that Dawn Gleeson and Alex Andrianopoulos (Science) took for their online lab in genetics. They have created several operational simulations that enable students to carry out laboratory techniques. These simulations are 'hand-crafted' using Macromedia Flash. While their genesis might have been to help cope with the increasing enrolments in their subjects, the simulations add other benefits beyond simple efficiency. They are strong on authenticity and allow students to make mistakes as they carry out the process, while giving appropriate support. Since these simulations aim to teach students how to carry out various lab procedures, it is important that no steps are hidden and that common procedural mistakes are handled gracefully and feedback is constructive.

Some simulation developments have built on prior research-based simulations, strengthening the nexus between research and teaching. Tuan Ngo and colleagues (MSE) have built a plug-in module for MUtopia (a research-driven modelling and visualisation platform used to simulate sustainability variables in metropolitan areas). This module, EDUtopia, allows students to determine various parameters relating to a building within a precinct, giving consideration to water, electricity, roads, and other urban infrastructure. It lets students design and model this urban precinct and then use real-world problem solving skills to make decisions on environmental and economic issues through designing and modifying attributes of the buildings and infrastructure. The model gives students a range of detailed information about the precinct's digital footprint (see the Case Study below). This is a challenging real-world problem -solving environment giving students access to a sophisticated set of data.

Smart Sparrow is available from https://www.smartsparrow.com



A Department of Physiology simulation-based program that uses Smart Sparrow

CASE STUDY:

EDUtopia: a collaborative e-learning platform for design & simulation

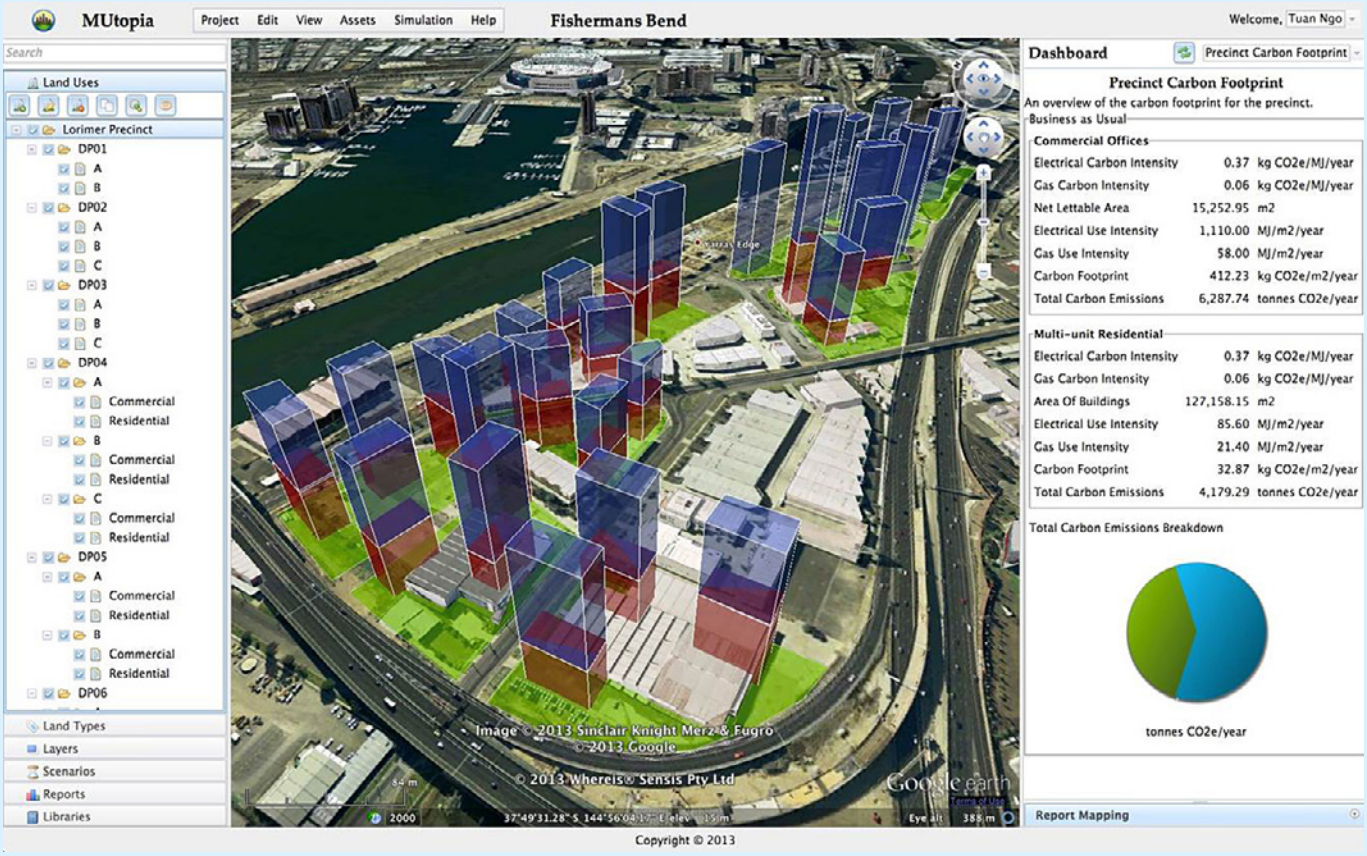
The project

This project has developed an innovative e-learning platform, EDUtopia, that improves learning experiences based on real-world problem solving and increases interaction among students as well as between staff and students. Based on the research platform MUtopia, it engages students in a series of scenario-driven building and infrastructure design projects. Their aim is to explore parameters to minimize material use, fuel and energy consumptions, amount of waste generated and greenhouse gas emissions.

What they did

EDUtopia provides students with a case study based on the context of the Fisherman's Bend urban development site. Students work in teams to produce an integrated solution to a real-world engineering problem: the design of a Sustainable Zero Emission Precinct. They are able to design the development using various editing tools; add buildings, modifying their attributes; and test their designs using the precinct assessment tools developed in the project taking into consideration energy, water and transport calculations.

The project is being trialled in the capstone subject for degrees in Civil Engineering and Environmental Engineering. It also has potential application in the areas of horticulture and architecture. The image below shows the interface of the platform.



A screen shot from EDUtopia showing an urban development and associated data.

For more information

Tuan Ngo (Infrastructure Engineering) is the contact for this project: dtngo@unimelb.edu.au

Inquiry-Based Learning

A common approach to online curriculum and learning design is to make activities inquiry- or discovery -based. In this mode of study, students are provided with problems, scenarios or cases that can be investigated over time. There is a range of online tools that can support this style of peer-based collaboration including wikis, blogs, discussion lists and of course social media and email.

A number of LTI projects have taken an inquiry-based learning approach often using case studies as a learning method. The meaning of 'case study' varies quite significantly across disciplines – from clinical cases in the medical sciences to business cases in the economics and finance areas – but the approaches to supporting them online can work across different disciplines.

Several projects have involved building interactive experiences into web pages that are delivered within the LMS. These usually require a programmer or developer to construct interactive modules that respond to students' inputs. Algis Vingris and Julie Martin (Science) take this approach for their final year Bachelor of Optometry students. Using a constructivist approach, they have produced a series of modules that use 'decision trees' to direct students through their learning. These are used to provide a representative range of choices so that the student has the opportunity to progress down different clinical work and management paths. Intentional misinformation and incorrect paths are introduced so students have to consider a range of possibilities available and use their analytic skills and knowledge to guide them down the correct path. The students have access to these resources off-campus during their clinical placements and they see these as being valuable to practicing clinicians as refresher or catch-up resources.

Angela Paladino (Business and Economics) addresses the problem of how to support relatively large numbers of students (200+) in engaging with community organisations in a case study mode. By producing an online tool she presents scenarios to students online, has them complete challenges, and then post their solutions. By working with appropriate scenarios, and receiving feedback from a real organisation, students begin to recognise the complex issues faced by organisations and the consequence of their recommendations. The resource they have developed to achieve this opens up the ability for a large class to interact with a 'real' client in a way not possible using more traditional methods.

Many of our professional courses involve the development of clinical skills, including clinical reasoning abilities and clinical decision-making. Developing these skills requires a different approach from content -focussed teaching. For Doctor of Veterinary Medicine students, Liz Tudor (Veterinary and Agricultural Sciences) is developing an approach called Case Conversations in which a week of structured learning concludes with a two-hour session that builds on studies of the previous week. This suite of highly interactive conversations, involving many different presenters over the year, have been carefully designed with higher order thinking skills in mind. The team working on this has been exploring different approaches in order to settle on a standardized presentation mode for all conversations and are working towards a new delivery framework through which to present these conversations in the future.

CASE STUDY:

Two birds with one stone: student learning and staff engagement

The project

How do you encourage and support staff to embed eLearning strategies into a postgraduate curriculum in a manner that supports meaningful and effective learning? This dual problem to engage both staff and students was tackled by academics Ruth Nettle, Peter McSweeney, Tony Weatherley, Stephen Livesley, John Raynor, Jenny Bear & Kate Houghton from MSLE, in a project that brought together staff from five subjects across different disciplines.

What they did

The initial aim here was to take a strategic approach to enhancing five subjects by employing a staff -based rationale in the planning and development of online resources to enhance student engagement and learning. Pedagogical issues were first identified for each subject (e.g. limited interactivity, resources lacking appropriate context, requirement for better interaction with landscapes in the real world) and, guided by monthly meetings and help from LE, these were used to determine e-learning technology concepts that might be suitable to employ. These changes were implemented and evaluated. Through this process, Ruth and her colleagues developed a checklist for other academic staff wishing to enhance their subjects. It defines four steps:

1. What is the driving reason for enhancing the subject?
   (Is there a clear pedagogy being proposed?)
2. Can a subject enhancement address this? (Talk this through with others)
3. What will be the key indicators of success? (Consult with students here)
4. Evaluate what students thought. (Focus groups or pre-post subject surveys)

What is novel here is the way in which they subsequently went about sharing their developments and 'bringing staff on board' to encourage further change. They ran a two-hour eLearning café for other MSLE staff. This session (including lunch!) brought staff together who had a particular aim in mind to improve their teaching. The project team each sat at a 'station' and talked one-on-one to other staff about what they had done and how this might help them. Staff from Learning Environments were also present. This was a highly effective way of engaging a variety of staff in reflecting on their teaching. Fifteen attended and almost all went away with intentions to change and improve their subjects through actions such as: updating the look of websites; engaging Learning Environments; changing approaches from topic focused to problem-solving; surveys, online quizzes, blogs, virtual field trips; mock web-site for student assessment; assignment ideas; build-up field trip support materials.

A particular outcome from this project was to recognise the value of a staff-based rationale for planning and developing change, and of small group discussions across subjects and disciplines. A recommendation was to run small academic learning groups over a 12 month period as a way of stimulating engagement in eLearning more broadly.

This approach to change was strongly guided by good pedagogy and a clear 'purpose for change'. But the café idea added more – it provided an outlet for those undertaking the project to 'show off' their work and enthuse others to consider change as well.

For more information

A copy of "A checklist for enhancing your subject via e-learning", as well as reports on their student surveys and pre-post eLearning café questionnaire, are available from
Ruth Nettle (ranettle@unimelb.edu.au).

SUGGESTIONS FOR PROJECT SUPPORT, MAINSTREAMING & SUSTAINABILITY

Talking to grant holders about their project successes and challenges has prompted several suggestions about how to effectively use LTI grant funding in the near future. The issues arising relate to supporting project development, encouraging the mainstreaming of successful projects through disseminating their outcomes to the broader university community, and ensuring that innovative projects are viable and sustainable into the future. We discuss these three areas below.

The diversity and creativity of work being done by staff in the area of eLearning is truly impressive. This work is often hard to implement and, naturally, tends to be localised to the individual projects' homes. The LTI project funding has been very effective in seeding new ideas and implementing new approaches to teaching and learning – particularly in departments where teaching is not well resourced. However academics are often not well qualified to be the driver behind an eLearning and teaching project, particularly if it involves coordination across several departments (as many do) and managing people, pedagogies and technical development. The issue here is that of project management. Successful projects require someone who is skilful in bringing a team together, organising and motivating them, and ensuring that they deliver. Specialised support for managing projects is highly desirable.
Hence the following suggestions:

> Suggestion 1: "Innovation Officers" be employed to support staff in academic divisions to coordinate the technical administration and project management of a project.

Project-based funding runs the risk of valuable ideas being generated but not disseminated to others who might benefit. It is desirable to find ways to achieve stronger mainstreaming benefits from these innovative ideas. There are two main reasons why LTI funded projects might fail to be more widely adopted:

a) staff are usually underfunded to get the job done in the first place, let alone put resources towards telling others what they have done;

b) many ideas have generic appeal and value outside of the original discipline area, yet there is no mechanism to encourage the sharing or re-development of such ideas.

In past years the University has run a "VC's Colloquium" which was the primary general outlet for staff at the University to share and discuss their teaching and learning activities. An approach to this problem in one of the LTI projects was to run an "eLearning café". This was a very successful way of engaging staff within one broad discipline to discuss their ideas with others who were undertaking project work in that general area. This is an idea that could be replicated at a larger scale.

> Suggestion 2: An annual 'showcase' event be reinstated to allow staff to present and share the outcomes of their LTI project work.

> Suggestion 3: A web presence be established to house projects in a manner useful for others to explore and to find ones that might be of value in their own context.

Many completed or on-going projects are ripe for others to take ideas from and re-purpose for their own use. Staff interviewed were almost always happy to work with others should there be a possibility of implementing their project elsewhere. There is potential here to establish a mentoring scheme that would support such collaboration.

Suggestion 4: Projects be identified that are suitable for repurposing, adoption and appropriation in areas beyond their original context.

Suggestion 5: Funding be allocated to activities that lead to the repurposing, adoption and appropriation of previously funded, successful projects.

Some projects lack sustainability in that, a few years down the track when the funding has run out and resources need updating, there might be no support to revitalise or update the project, or to debug or refine the developments. For some who have implemented alternative ways of teaching (e.g. flipped classrooms) this might mean reverting to old methodologies.

Suggestion 6: Top-up funding be allocated for the purpose of refreshing, extending and/or maintaining projects beyond their 18 month project lifespan.

Many LTI project leaders aim to adopt learning approaches and development techniques requiring a skillset beyond their own expertise or comfort zone. While not 'high tech', these activities still require support. For example: working with video; the creative use of the LMS; developing and distributing mobile apps. Included here is the need to support the development of new approaches to teaching, learning and assessment. Despite support for such activities being available to staff, many staff indicated they were unclear or unaware of where to obtain support.

Suggestion 7: The professional development and technical support activities and services offered by the Centre for the Study of Higher Education and Learning Environments be promoted more broadly.

APPENDIX

List of 2012 & 2013 projects & people

2012 Round 1 Grant Recipients

Coordinator Name/s	Department/School	Project Title
Catherine Howell & Melissa Russell	CSHE / ABP T&L Unit & Population Health	FAIR: From Academic Integrity to Responsibility
Paul Gruba	Languages	New Media and Technologies in the AusAID Intensive Academic Program
Ute Knoch & Cathie Elder	Languages & Linguistics	Preparing the Academic English Screening Test (AEST) for Computer Delivery
Angela Paladino	Management & Marketing	Diving Into the Experience: Examining the Effects of Experiential Learning on the Student Experience and Graduate Outcomes
Janet Clinton & John Hattie	Program Evaluation MERI	An Up-Scalable and Innovative eLearning Platform for an Intensive Quantitative Methods Subject, Applicable for Applied Researchers and Evaluators in Diverse Educational Settings
Clare Delany & Shaun Ewen	Physiotherapy & Population Health	Raising the standards: Meeting level 9 AQF criteria in Indigenous Health Curricula
Genevieve Morris, Arianne Dantas, Charles Sevigny & David Williams	Physiology	Utilizing Asynchronous Online Discussion Tools to Enhance Student Understanding and Engagement
Algis Vingrys & Julie Martin	Optometry & Vision Sciences	Innovative Design of Interactive Web-Based Case Scenarios to Supplement OD Student's Capstone Off-Campus Clinical Learning Experiences
Michelle Livett & Dawn Gleeson	Science & Genetics	A Coordinated Approach to Developing Science Communication Skills
Dawn Gleeson & Alex Andrianopoulos	Genetics	Online Lab in Genetics for Biomedicine
Evelyn Portek & Georgina Binns	Music Library & VCA & MCM Library	Music Streaming Service

2012 Round 2 Grant Recipients

Coordinator Name/s	Department/School	Project Title
Jacqueline Dutton & Tammy Kohn	School of Languages and Linguistics & School of Social and Political Sciences	Travel training program for international and exchange students
Ute Knoch & Sally O'Hagan	Language Testing Research Centre, School of Languages and Linguistics	Pilot administration of the Academic English Screening Test (AEST) at the University of Melbourne
Yasuhisa Watanabe	Asia Institute	Learning Japanese vocabulary through mobile phone: Pilot study
Chi Baik & Wendy Larcombe	Centre for the Study of Higher Education (CSHE) Melbourne Law School	Achieving positive graduate outcomes: Developing curriculum initiatives to support student wellbeing and resilience
Gavin Buskes & Brian Krongold	Electrical Engineering	Enhancing engineering learning outcomes with a flipped-classroom approach
Chantal Morton & Elise Bant	Melbourne Law School	Refreshing the capstone subject and other professional skills development strategies in the Melbourne JD to assure course level learning outcomes
Michael McCullough, Agnes Dodds & Clare Delany	Melbourne Dental School, Medical Education Unit, Melbourne Medical School & Health Sciences	The development of a novel, eLearning, inter-disciplinary, tool for the assessment and provision of effective student feedback in clinical assessment tasks
David Williams & Stephen Harrap	Physiology/Biomedicine & Physiology	Adaptive eLearning for students and teachers: Practical simulations and learning analytics for physiology
Brian Cook	Resource Management and Geography	Online assessments, learning objectives, and core materials: using existing technologies to support increased student involvement
Ruth Nettle & Di Cardinal	Agriculture and Food Systems	Two birds with one stone: Enhancing student learning and staff engagement by integrating pedagogy with eLearning resources in MSLE
Alex Jaworski & Kwang Cham	Optometry and Vision Sciences	A web-based movie library of optometric clinical procedures
Elizabeth Tudor & Ted Whittem	Veterinary Science	Specification and assurance of core clinical competencies in the Doctor of Veterinary Medicine program

2013 Round 1 Grant Recipients

Coordinator Name/s	Department/School	Project Title
Clare Newton & Rebecca Cameron	Architecture, Building and Planning	Construction Unwrapped
Kevin Brophy & Elizabeth MacFarlane	Culture and Communications	Bringing humanities and the arts online: Short fiction as a test case
Anne McLaren	Asia Institute	eLearning initiative in Chinese Literacy
Greg Restall & Lesley Stirling	Historical and Philosophical Studies, Languages and Linguistics	Online Logic Teaching for on-campus and off-campus students
Cynthia Hardy	Management and Marketing	Developing a virtual classroom for Organisational Behaviour
Danny Samson, Marie Maragos, Mark King & Jenny Pesina	Management and Marketing; CELT	Enhancing Learning, Teaching and Assessment in Managing People and Organizations: Instructional Design, Interactivity and Applications of Technology
Collette Tayler, Jane Page & Jan Deans	Education	The early childhood teaching and learning resource
Gavin Buskes, Graham Moore, Kaya Prpic, Peter Schachte & Linda Stern	Infrastructure Engineering; Electrical Engineering; Engineering Learning Unit; Computing and Information Systems	Rapid Feedback and Objective Assessment of Student Learning/ Tasks Developing frameworks to improve quality of feedback in Melbourne School of Engineering subjects (projects to be combined)
Timothy Baldwin & Paul Cook	Computing and Information Systems	SES Topic Modelling and Reporting
Tuan Ngo, Lu Aye & Graham Moore	Infrastructure Engineering	EDUtopia, a collaborative eLearning platform for design and simulation-based subjects
Adrian Pearce & Tim Miller	Computing and Information Systems	Apps@Melbourne: Software development laboratory for natural user interfaces
Jenny Hayes & Andrew Tan	Anatomy and Neuroscience	Enhancing online learning of human anatomy
Terry Judd & Kristine Elliott	Medical Education Unit	Improving access to learning resources and activities with smart phone apps
Jeremy Moss	Nossal Institute for Global Health	Philosophy, Politics and Economics
Graham Mackay, Bang Bui & Linda Denehy	Pharmacology; Optometry and Vision Sciences; Physiotherapy	Enhanced learning in Pharmacology for future 'Non-Medical' drug prescribers

2013 Round 1 Grant Recipients continued

Coordinator Name/s	Department/School	Project Title
Cook Nicole	Resource Management and Geography	Integrating current web-based socio-spatial data with existing LMS, lecture capture, tutorials and assessment to develop immersive learning experiences in the social sciences
David Kennedy	Resource Management and Geography	Developing eField Trips and ePracticals in Physical Geography: A new paradigm of field science learning
Andrew Drinnan	Science	'Thinking Scientifically' – a wholly online undergraduate subject for introducing students to the scientific method and its diversity of application across the different scientific disciplines
Dawn Gleeson & Lisa Godhino	Genetics	Preparing our students for lectures in first year Biology
Katrina McFerran & Grace Thompson	Music	Developing more effective learning experiences and outcomes for geographically distributed learners for the Masters in Music Therapy
Elizabeth Tudor, Dez Hughes & Wayne Kimpton	Veterinary Science	Development of Interactive Clinical Reasoning Activities ("Case Conversations") for DVM students in large group settings

2013 Round 2 Grant Recipients

Coordinator Name/s	Department/School	Project Title
Chris Pettit & John Barton	Australian Urban Research Infrastructure Network	Utilising the Australian Urban Research Infrastructure Network to support online teaching and learning in the built environment
Sophie Sturup	Architecture, Building and Planning	Adapting urban environments fieldwork guide for use on LMS mobile app
Peter Raisbeck	Architecture, Building and Planning	An introduction to the Architectural Design Studio
Amitabh Mattoo	Australia India Institute	Development of online subject on contemporary India through Coursera
John Fitzgerald	Social and Political Sciences	Enhancing the crime policy experience: Using social media monitoring datasets to find the digital public
Jeanette Hoorn	Culture and Communications	Sexing the Canvas
Andrea Rizzi	Languages and Linguistics	L@C@M: eLearning language and culture at the University of Melbourne
Mohsen Kalantari & Abbas Rajabifard	Infrastructure Engineering	Saving the Earth, Organising Mars
Steven Bird	Computing and Information Systems	VCE Computer Science: Developing an Extension Study
Paul Andonov, Tim Baldwin & Mike Pottenger	Centre for Excellence in Learning and Teaching; Computing and Information Systems; Business and Economics	Implementation of the online Peer Tutor application – apeer-moderated Q&A forum – in the Faculty of Business and Economics and Department of Computing and Information Systems
Mark Joshi & Mark King	Economics; Centre for Excellence in Learning and Teaching	Enhancing student learning of financial mathematics
Susan Sawyer, George Patton & Samantha Van Staalduinen	Paediatrics	Development of a Coursera subject on global adolescent health
Bronwyn Tarrant, Thomas Mathew & Snezana Kusjlic	Nursing	In theory: In practice – A trial with iiNurse
Sandra Uren, Roy Robins-Browne & Kristine Elliott	Microbiology and Immunology; Medical Education Unit	Interactive case studies in medical microbiology and immunology
Patrick Griffin, Sandra Milligan & Esther Care	Melbourne Graduate School of Education	Enhancing the quality of teaching and learning: Developing an online induction course for sessional teachers

2013 Round 2 Grant Recipients continued

Coordinator Name/s	Department/School	Project Title
Alvin Vista	Melbourne Graduate School of Education	Development and validation of an automatically scaffolding and rubric-targeted interface for a distributed-resource large scale marking system for complex assessments
Ruth Beilin	Resource Management & Geography	Integration of the LMS with the Blackboard Learning Mobile Learning Application for Reshaping Environments
Sigfredo Fuentes & Kate Howell	Agriculture & Food Systems	Do-your-own-experiment kits (DYOExpK) to improve teaching and learning experience in Science
Deborah King & Liz Bailey	Mathematics & Statistics	Calculus and Probability: An online bridging subject
Stephen Best, Colette Boskovic & Michelle Gee	Chemistry	ChemBytes Back – LabDots: Empowering students in the Lab
Joel Brennan	Melbourne Conservatorium of Music	Musicians' Drones: Fine tuning your intonation (A pitch perception and tuning application for mobile computing platforms)
Mark Davis, Dayle Tyrrell, Elise Boller, Elizabeth Tudor, & Adrian Whitham	Veterinary Science	Delivering Communication Teaching in the Faculty of Veterinary Science's Doctor of Veterinary Medicine (DVM) degree programme
Peter Mansell, David Beggs & Sarah Frankland	Veterinary Science	Crook Moo
Peter McPhee	Centre for the Study of Higher Education	MOOC development: The French Revolution

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