Teaching and Learning Week 2017
THE INNOVATION SHOWCASE
Showcasing Innovative Teaching and Learning Technologies, Tools and Pedagogy
Thursday 2 November 2017
2.00pm - 5.00pm

PROGRAM

2:00pm - 2.05pm Dr Deanne Gannaway
Welcome

PechaKucha presentations

2.05pm - 2.12pm Assoc. Professor Paul Henman, School of Social Science
Using online tools to enhance learning and employability

2.13pm - 2.20pm Assoc. Professor Gwen Lawrie, School of Chemistry and Molecular Biosciences
Developing multimodal external representations to support development of visuospatial skills for online learning

2.21pm - 2.28pm Ms Ailsa Dickie, UQ eLearning team
UQ Active Learning tools + Mirroring 360

2.29pm - 2.36pm Mr Hoon Siang Gn, School of Chemistry and Molecular Biosciences
Digital literacy and self-efficacy of undergraduates in Science Technology Engineering and Mathematics (STEM) courses

2.37pm - 2.50pm Questions + Discussion

Short presentations

2.50pm - 3.10pm Dr Patrick Ward, School of Biological Sciences
Showcasing an interactive prac manual for biostatistics

3.10pm - 3.30pm Ms Inge Matt, Faculty of Humanities and Social Science
Strengthening the First-Year Gateways Project (SFYG): Aligned, Literate and Flipped

3.30pm - 3.50pm Discussion + Enjoy afternoon tea

Pecha Kucha presentations

3.50pm - 3.57pm Dr Carol Bond and Associate Professor Bernard McKenna, School of Business
Embodied Learning

3.58pm - 4.05pm Dr Mohit Shahi, Biomedical Sciences
Utilising Smart Sparrow for interactive online lessons

4.06pm - 4.13pm Dr Frances Shapter, School of Veterinary Science
Adaptive eLearning for the clinical sciences – Students as Partners

4.14pm - 4.21pm Ms Roma Forbes, School of Health and Rehabilitation Sciences
Putting the efficacy into self-efficacy; creating confident professionals

4.22pm - 4.29pm Dr Barbara Hanna and Dr Joe Hardwick, School of Languages and Cultures
Lost in Transition? The case of University French

4.30pm - 5.00pm Discussion
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Pecha Kucha presentations

**Associate Professor Paul Henman, School of Social Science**
Using online tools to enhance learning and employability

This presentation reports on the innovative use of online media tools for assessment in a course on social media. Students were required to summarise a single course reading using one of a range of online digital media creation tools (such as Moovly, Animoto and TickiTocki). Students then peer assessed each others productions using 5-star ratings. The project was devised to enhance deep learning, employability and knowledge about online production, and stimulate reflection about the nature of knowledge in an online world. The project and its evaluation was funded by a HASS Teaching and learning grant.

**Learning:** Understand how you could use this approach of utilising social media in your course.

**Associate Professor Gwen Lawrie, School of Chemistry and Molecular Biosciences**
Developing multimodal external representations to support development of visuospatial skills for online learning

A recently completed research project has enabled the characterisation of multiple external representations (MERs) that were used in a single semester in a chemistry course that blends online and face-to-face learning environments. The objective of this research was to widening participation of students in learning chemistry through their development of visuospatial skills. Several combinations of representations have been identified as critical for construction of understanding, as opposed to being complementary, and additional modalities of these representations are currently in development for students who possess visual impairments or poor visuospatial abilities. A summary of this work will be presented to provide insight into new approaches to supporting student learning through new approaches 3D visualisation resources. We aim to expand this work into engaging students as partners in the creation of resources.

**Learning:** Acquire a deeper insight into your choice of representations in teaching resources, and understand the barriers that students face when translating between different representations in different modalities. This is particularly relevant for instructional design of blended learning courses in science and engineering.

**Ms Ailsa Dickie, UQ eLearning team**
UQ Active Learning tools + Mirroring 360

UQ Active Learn is a suite comprising of three applications: UQpoll, UQwordcloud, UQwordstream. These applications are used to collect student responses to a question or a series of questions posed during a lecture/tutorial. Students can respond using a web enabled device. Mirroring360 allows student to mirror the display of their smart device screen to a computer. The tool can be used by students in lectures/tutorials to compose their responses to questions in any software and share them with the rest of the class. These tools allow teachers to ask questions, gain immediate feedback from students and adjust their lectures/tutorials accordingly. Questions can be posed to check students’ understanding of lecture content, identify student misconceptions and facilitate discussions.

**Learning:** Learn how to use these centrally supported tools to engage students and promote deeper understanding in lectures and tutorials. Click [here](#) and [here](#) for resources.
STEM courses at UQ rely on technological tools and online learning to support the delivery of concepts. Digital literacy, the ability to utilize and effectively engage with information technologies, is an essential skill to access and comprehend the information delivered. Studies have also identified self-efficacy as an important learning behavior for successful online learning. This project aims to investigate if more experienced students are perceived to have higher levels of digital literacy and self-efficacy than those less experienced to effectively engage with these resources by conducting online surveys and face-to-face interviews. UQ STEM course coordinators were also targeted to obtain their perceptions of their students’ technology skills. Analyses of survey responses revealed that students who completed more semesters in university showed higher levels of digital literacy than new first year STEM undergraduates at UQ. Moreover, students who completed more semesters were exposed to a wider range of specialized online tools for their learning. Interviews revealed a general student preference for troubleshooting technology problems by themselves, along with a wide range of attitudes towards seeking support from instructors, ITS, or the UQ library.

**Learning:** This generation of students should not be assumed to be sufficiently digitally literate to engage with online resources and technology provided at UQ. This talk will outline recommendations and potential support mechanisms to facilitate the development of students’ self-efficacy and digital literacy skills in STEM courses.

**Short presentations**

**Dr Patrick Ward, School of Biological Sciences**

Showcasing an interactive prac manual for biostatistics

The Unity gaming engine was used to recast a static practical manual into an interactive resource. Gaming techniques were employed to improve students engagement. Outcomes included the deployment of interactive formative assessment tasks, a more automated connection to the R statistical package, and incorporation of other online interactive resources. An outline of future directions for development is also presented.

**Learning:** Learn how to promote engagement through gamification.

**Ms Inge Matt, Faculty of Humanities and Social Science**

Strengthening the First-Year Gateways Project (SFYG): Aligned, Literate and Flipped

This large UQ TEL grant project explored a systematic approach within the HASS Faculty to enhance the student experience and learning across eight diverse first-year ‘gateway’ courses. The project used a constructively-aligned curriculum and active learning approaches including flipped classrooms, and a focus on academic literacy skills via the Faculty-wide ‘Knowledge-Making’ academic literacy community site. A comprehensive set of academic design guides was developed to assist teaching teams adopt a rigorous action learning plan approach for the design, implementation, evaluation, redesign and creation of a sustainable T&L Plan for each of their gateway courses. Guiding resources were provided within a community-based project website, in addition to a video and media production kit and hands-on workshops to assist the teaching teams to design and adopt their innovations and to create sustainable T&L Plans.

**Learning:** Get an insight into aligned, action learning approach to curriculum & pedagogical change, as well as cross-faculty collaborative approaches.
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Pecha Kucha presentations

Dr Carol Bond and Associate Professor Bernard McKenna, School of Business
Embodied Learning

Students enrolling in an innovative leadership course at UQ Business School are being urged to pack their gym gear along with their books. Running or another physical activity is an integral part of the new Leadership program within the Master of Business degree, along with singing in a choir. The program, which draws on wisdom principles and Aristotelian philosophy, has received a positive reception from students and is starting to attract global attention. Book study alone trains just one-third of the person - the brain's cognitive processes. However, wise leadership requires balancing the cognitive with the affective and the reflective. One can only begin to understand their emotional capability in real life situations. Furthermore, honest self-reflection requires an audit of capabilities. Contemporary leadership theory rejects the charismatic grandiosity and transactional carrot-and-stick methods. Instead, leaders must enact their virtues by 'walking the talk'. We assist students in uncovering and implementing their core values, and reflecting on the virtues needed to enact them. By fusing ancient philosophy with contemporary psychological theories of wisdom, we identify five core principles of wise leadership. The essential core principle, however, is a commitment to the social good. Wisdom must also be enacted in practice because if you can't enact a decision you've made then you are not acting wisely. To enact decisions requires firstly the willpower to choose to do the action and secondly to go into a zone that may intellectually, physically or emotionally hurt. We provide a safe space for people to push their personal boundaries, in order to be able to look at their leadership capacity reflectively rather than just regurgitating accumulated leadership knowledge.

Learning: learn new ways to conceptualise pedagogical methods that engage students' mind – body – emotion to encourage integrated learning. Click here and here for resources.

Dr Mohit Shahi, Biomedical Sciences
Utilising Smart Sparrow for interactive online lessons

Medical education is evolving every day and there is a constant need to refine the learning tools to fit specific student needs. The quality of the teaching material and the methodologies are improved, but changes are too small to be noticed. The role of students, in the evaluation of courses and learning material, has always been compelling and convincing. However, their role is often to evaluate and score the strengths, weaknesses, opportunities identified by the lecturers. A more direct involvement of the students brings a potential to design lessons particularly desired and enjoyed by the students. With this in mind, we provided some senior medical students with the opportunity to design and develop pathology 'pot of the week' online lessons in collaboration with a pathology academic. These interactive lessons were developed using the Smart Sparrow platform and helped students learn through their active participation by solving clinical questions related to the pathological abnormalities in a displayed specimen pot. Feedback was built into the interactive session and so students learnt about complex pathological processes underlying a specific disease process in a time efficient manner.

Learning: Understand how you could use SmartSparrow to add interactivity to your course.
The School of Veterinary Science has created a vertically and horizontally integrated, program-wide online adaptive eLearning tutorial suite. Each adaptive eLearning lesson was structured as a full veterinary consultation, from client arrival to patient discharge. The focus of each consultation was determined by the student’s progression through the Bachelor of Veterinary Science (BVSc) and the content was drawn from multiple courses. Academics developed a ‘Storyboard’ document, detailing the content of each step of the consultation, indicating question styles and the targeted feedback given for a variety of responses on each screen of the tutorial. These Storyboards then underwent student and academic review and modification and were then passed on to the ‘Lesson Designers’ (BVSc students) to transfer the storyboard into the Smart Sparrow adaptive eLearning platform. Once designed the interactive lessons were then tested for functionality and reviewed again by students and academics prior to deployment to the student cohorts. Having the involvement of both clinical and teaching staff and students was integral to the success of this project. Student involvement underpinned the pedagogical philosophy of this project in that they were part of the creation and review of interactive content, analysis and continuous improvement of the lessons created.

Learning: Understand the methodology of developing a vertically and horizontally integrated, program-wide online adaptive eLearning tutorial suite and the benefits of involving students in the development, production and review of these lessons. Click here to have a go at completing a lesson.

Self-efficacy is an important concept in teaching and learning and it is important that as educators, we consider it in the design, planning and implementation of our teaching activities. This presentation will briefly discuss the four sources of self-efficacy and outline teaching and learning approaches including simulation and experiential approaches, as well as peer modelling and how this can foster confidence in the classroom.

Learning: Gain knowledge of pedagogical approaches where self-efficacy can be enabled and the importance of fostering self-efficacy of students in enacting their professional roles.

Faced with continuing lacklustre evaluations in our post-matriculation French course despite continued attention to content, we asked ourselves if the problem – and therefore the solution – lay less in the specific course and more in the experience of the transition to university itself and how this then plays out in the language class. Supported by HASS seed funding, we trialled a number of support mechanisms (website; drop in sessions; additional online support) but have found the most fruitful outcome of the project to be the reflection on student identity and how that reflection can be built into a course, in French, on cultural difference. Are first years more like migrants, tourists or country mice? And (how) can we help them retain their self-declared passion for all things French while at the same time building critical thinkers who can be agents of their own learning?

Learning: Explore ideas about how understanding of students’ identity, their own and ours, impact on the success with which they can engage with the transition through university.