The University wishes to acknowledge the Kaurna people, the original custodians of the Adelaide Plains and the land on which the University of Adelaide’s campuses at North Terrace, Waite, Thebarton and Roseworthy are built.

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![Technical and Further Education South Australia Logo]

![ICHM Logo]
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Teaching in troubled times

Professor Simon Barrie is the Pro Vice-Chancellor Learning Transformations at Western Sydney University. He is responsible for leadership of strategic educational innovation and collaboration to shape the University’s commitment to ensuring its students fulfill their potential to become influential global citizen-scholars in a new technology-enabled world. His expertise is in innovatively engaging university communities to deliver new ways to enact the ‘idea of the university’ in a rapidly changing world. Professor Barrie has worked in the field of Higher Education for 25 years and is an award-winning teacher with an international reputation for his research on the transformative potential of higher education. He has led major national research and development projects to support Australian universities in the renewal of their educational programs to meet the needs of a new generation of learners and the demands of an uncertain future in today’s radically disrupted world of work. His work links the learning demands of the new knowledge economy with educational innovation in new learning ecosystems, using the mechanisms of academic development and collaborative institutional leadership of transformative educational change.

ABSTRACT

The conference title From Research and Policy into Practice implies a sense of alignment and logical flow that feels somewhat at odds with the lived experience of today’s turbulent and chaotic university environments. Most of us have worked for many years with the expectation that university teaching and learning (practice), and perhaps policy, should be ‘research-led’, and that policy should inform and direct ‘practice’. However in today’s volatile university environment, and the increasingly unstable institutional teaching and learning structures we work within – one can’t help but wonder if this is still the case?

This talk will begin to explore some of the challenges and opportunities within our current institutional environments, our teaching and learning research, and our practice as teachers, curriculum designers and policy-makers – in turbulent times. As knowledge proliferates and fragments and as new technologies both disrupt and enable some of our assumptions about higher education, it is perhaps useful to consider what sort of ‘curriculum’ and teaching might now be needed, and if in that environment it is still reasonable, or even possible, that teaching and policy should be research-led?

If it is, then perhaps we might reasonably ask what sort of research could most usefully lead us, and perhaps consider how existing teaching and learning research speaks to desire for ‘agility’ and the ‘nimble’ university in the big business of higher education? If we are to ride the disruption wave, how can ‘policy’ keep up, let alone inform, our changing ‘innovative’ practices and how might we usefully trouble and disrupt policy and practice? Importantly, amidst this disruption and volatility, what sort of institutional teaching learning structures, spaces and identities might induct, nurture and sustain future university teachers and teaching?
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Personal, academic and social outcomes of inclusive higher education for students with intellectual disability.
Higher education is one of the most highly casualised sectors of the Australian economy (Percy et al 2008). More than half of teaching in Australian universities is delivered by sessional staff (Rothengatter and Hill, 2013). However, many academics employed to teach on a sessional basis receive little professional development to support the acquisition and development of skills in teaching and providing feedback (AUTC, 2013). Even when they are teaching discipline-specific and highly complex skills, sessional staff are likely to receive little or no professional development to allow them to hone their discipline-specific pedagogical approach (Heath et al, 2015). Many institutions and disciplines struggle to find the resources needed to support the creation and delivery of discipline-specific professional development for sessional staff. The low availability of professional development leaves a significant proportion of the tertiary teaching workforce marginalised in their own workplaces. They are often unable to access support that better paid staff take for granted and are correspondingly limited in their capacity to develop their teaching skills, future work prospects and job satisfaction (Davis et al, 2014). This situation places at risk the capacity of sessional staff to deliver the high-quality learning experiences all of us seek for our students.

We present an innovative online response, designed to meet the needs of sessional staff through the utilisation of a peer-to-peer, time-efficient approach to resources that are constantly available and self-paced. These resources include a variety of instructional materials, tips and links as well as videos of sessional teachers speaking about their own high-quality teaching approaches. The resources have been created through a rigorous process of engagement with the discipline through Associate Deans of Teaching and Learning, discipline experts and sessional staff. This has taken place in a context of change in the curriculum of the discipline, which means that many academics will not have experienced a curriculum of the kind they are expected to deliver. This presentation showcases resources that have been peer reviewed and tested by focus groups of sessional staff from a variety of institution types and locations (regional, outer suburban, inner city), offering a model of professional development provision that we argue could provide a model for other disciplines.

This project has been funded by the Australian Government’s Office for Learning and Teaching. The resources it has created are available freely online at https://smartlawteacher.org/. The project team are keen to engage with staff from other disciplines who share the challenges described above and would like to consider adapting this model to their own disciplinary context.

Keywords
Sessional staff; sessional teachers; professional development; pedagogy; casualisation

REFERENCES
Training, Support and Management of Sessional Teaching Staff Final Report (Australian Universities’ Teaching Committee, 2013).
Pedagogy GO: Integrating Location-Based Mobile Learning Games Across Disciplines

Roger Edmonds, Kallia Choustoulaki & Simon Smith University of South Australia

**Background**

Location-based mobile learning games (LBMLG) embrace the characteristics of mobile learning, location-based learning and game-based learning. Delivered as a mobile app they integrate storytelling, augmented reality and rich media with GPS, maps and gamification methodologies. The engagement benefits of LBMLG’s as discussed by Wijers, Jonker & Drijvers (2010) include their potential to enhance and extend the way students interact with locations, mobile content and communicate with each other. Slussareff & Boháčková (2016) observed a positive effect on acquisition of knowledge in the active (designing) of a LBMLG. Our study reports on the integration of LBMLG’s across different disciplines whilst maintaining the above mentioned benefits.

**Objectives**

- To identify the impact that LBMLG design has on student engagement and learning
- To identify the pedagogical benefits of both playing and designing LBMLG’s
- To identify issues of integrating LBMLG’s in different courses across different disciplines

**Method**

The same action research methodology undertaken by Cochrane (2014) was used to create, play, manage and share the location-based mobile games in four undergraduate courses across four disciplines (Business, Education, Arts, Science). This included integrating the LBMLG’s into tutorials, a lecture and as a student initiated activity (pre, during and post a field excursion). In a second study the project team worked with postgraduate students in an International Tourism course in designing a LBMLG for tourists to play at an international destination. Observations were made as students played or designed games and online surveys, focus groups and game analytics were used to help understand player behavior and determine satisfaction rates, engagement and in learning outcomes.

**Results**

In the undergraduate study, 538 students played four games and 112 completed an online survey. Over 75% highly rated the games in terms of suitability, easiness and quality. Over 80% agreed that their experience of playing was engaging, team building and students enjoyed the authenticity of learning in the real world. The impact of LBMLG’s on engagement and motivation did not vary significantly among the four games or in the four disciplines indicating generalization of the results. Overall, only 49% of the students reported that playing the games helped them learn about the topic. This result however did vary significantly across games and indicates that design factors (eg. duration, level of difficulty, the location, tasks, competitiveness) and implementation strategies may both influence the impact of LBMLG’s on learning. Research is required to investigate these factors further.

In the postgraduate study, 10 students (60%) in an International Tourism course completed an online survey. Most students either strongly agreed or agreed that designing and developing a LBMLG was an engaging (80%), cooperative and team building activity (90%) and a fun way to learn (90%). Most strongly agreed or agreed, that the activity gave them an opportunity to practice different skills (90%) and implement their own ideas (80%). Significantly, 60% reported that designing a LBMLG helped them understand more about this topic in their course.

**Conclusion**

This study has concluded that LBMLG’s provide an active, engaging educational experience for students playing LBMLG’s and additional pedagogical benefits depending on the games design factors and implementation strategies. Their impact on learning is increased further if students design the LBMLG’s. The approach taken indicates that there exists generalizability in the adoption of LBMLG’s, and that we can have confidence in the ability to develop institution wide deployment frameworks. Further research however, is required to investigate the factors that may moderate / mediate the impact of the LBMLG’s on learning.

**Keywords**

location-based mobile learning; mobile learning; location-based learning; game-based learning

**REFERENCES**


Slussareff M and Boháčková P (2016) Students as Game Designers vs. ‘Just’ Players: Comparison of Two Different Approaches to Location-Based Games Implementation into School Curricula. In: Digital Education Review, 29, 284-297

The Power of Things: Teaching Indigenous history in the art museum

Catherine Kevin, Fiona Salmon & Jackie Wurm Flinders Adelaide

Equipping graduates for the 21st century workplace is firmly entrenched in the strategic agenda of Australia’s Higher Education sector. However research has shown patchy success in translating high level policy into teaching practice (Oliver, 2011). This can be explained, at least in part, by academic workload pressures and a perception that skills-training involves a shallow and technical pedagogy that is at odds with the university’s role in fostering the pursuit of higher knowledge and the capacity to critique dominant paradigms (e.g. Star and Hammer, 2008; de la Harpe & David, 2012).

‘The power of things: Enhancing employability in higher education through object-based learning’, a national Office of Learning and Teaching-funded pilot project based at the Flinders University Art Museum, employs a deliberate skills-based-strategy that takes into account academic workloads and seeks to break down this perception. Using the techniques of Object-Based Learning (OBL), an emerging approach to curriculum development in the tertiary sector (Chatterjee, 2016), it facilitates academics to consciously and explicitly address the development of graduate attributes while achieving the more conventional aims of their discipline. ‘The power of things’ is developing, trialling and evaluating History, Psychiatry and Visual Arts subjects by incorporating works from the Art Museum’s collection into curriculum and, in turn, generating tools so that academics can confidently and efficiently adapt approaches used within the project to their own needs.

In this presentation we focus on curriculum for teaching the history of colonisation in Australia and its ongoing impact. We outline the OBL activities designed for the second-level undergraduate History topic Maps and Dreams: Indigenous-settler relations in Australian history. To illustrate, we unpack the nexus of these pedagogical aims at the point of students’ encounters with selected works of Indigenous art. Across the range of assessment tasks in which students engage with the artworks, they hone their observation, teamwork and communication skills while practise narrative building and reading representations of the past in their treatment of the artworks as historical evidence. In particular, the topic is developing literacy in Australian Indigenous cultures, recognising calls for the graduate skills agenda to drive the education of non-Indigenous professionals on Aboriginal and Torres Strait Islander issues (Behrendt, Larkin, Griew, & Kelly, 2012).

New curriculum has been developed collaboratively by academic and Art Museum staff. This is currently being rolled out in Semester Two topics. One of the key benefits to date has been the rich, iterative interdisciplinary discussion between project team members and informed by the project Reference Group and focus groups with colleagues. In addition to developing an adaptable pedagogical model, our open-access online resources will be applicable across disciplines dispelling the perception that that the university’s collection of art is the preserve of art historical discourse.

The primary objective of this project is the integration of skills development into the teaching of the history of Indigenous-settler relations using Object-Based Learning methods. The Indigenous Art Collection at the Flinders University Art Museum has been an invaluable resource for achieving this aim. ‘The power of things’ offers a pathway to new pedagogical practices that utilise museum resources to enable academics to address graduate skills while enhancing student engagement in discipline based learning.

Keywords
employability; graduate attributes; Indigenous; interdisciplinary; object-based learning

REFERENCES


Many disciplines require a curriculum that encompasses sensitive content. Teachers’ capacity to respond to this content appropriately is crucial to student attainment of discipline specific professional competencies and to students’ future work with clients and communities. Appropriate preparation for future professional lives which will involve sensitive issues is critical for students’ resilience now and in the future.

In this paper, seven tertiary educators from a range of disciplines consider learning and teaching sensitive issues. We adapt Lee’s definition of sensitive research which proposes a sensitive issue is any topic ‘laden with emotion or which inspires feelings of awe or dread’. (Lee 1993, p.6). Our teaching addresses issues such as, rape, domestic violence, child abuse, mental illness, serious physical injury and harm, pregnancy loss, animal cruelty, euthanasia, drug abuse, suicide and culturally sensitive issues.

This paper draws on our teaching experiences and the research literature to argue that teaching sensitive subject matter can present risks to students. However, both the research literature and teaching experience show that teaching sensitive content also has profound benefits for students’ development and future professional work. High quality learning experiences in relation to sensitive topics are crucial to developing student resilience in classroom and workplace settings where these topics will inevitably arise. Educators therefore have a responsibility to graduate students who are trauma-informed. (Carello & Butler 2014, p 264)

We argue there is considerable consensus in published research, as well as amongst ourselves about strategies for supporting student learning and minimising risk. We begin from the premise that learning must be central and that a learning environment for teaching sensitive material should be designed to minimise harm. Careful planning of the explicit and implicit curriculum is required in reducing barriers to learning by reducing the risk of traumatisation. (Carello & Butler 2015).

We choose to adopt a “strength-based, person-centered and solution focused” practice (Carello & Butler 2015, p265) and discuss concrete strategies for teaching and student support including students have advance notice of the general nature of the sensitive content using pre-briefings about the subject material so student can emotionally prepare and setting clear boundaries and agreements with students to a mutually respectful environment. Disclosure of traumatic experience should never be required by students in the classroom. (Carello & Butler 2014).

The authors share the concern that teaching important sensitive material carries risk to students and impacts on ourselves yet it is important to prepare students for situations that they will face as professionals and equip them to engage appropriately with the challenging issues in their workplaces and communities. We contend that addressing sensitive issues is a professional responsibility for teachers, disciplines and universities.

Keywords
- teaching about trauma; managing risks classroom; strategies emotional response; accessible learning opportunities; building student resiliency; professional responsibility

REFERENCES

Branch, K, Hayes-Smith, R & Richards, T 2011, “Professors’ Experiences with Student Disclosures of Sexual assault and Intimate Partner Violence: How “Helping students can inform teaching practices’, Feminist Criminology, vol 6, no. 1 pp. 54-57.


Lee, RM 1993, Doing research on sensitive topics, Sage, London.
In recent times academics have experienced changes from face-to-face delivery of tertiary student content to the recording or videoing of lectures, flipped classrooms, blended, distance, and online learning (e.g. Massive Open Online Courses). The literature suggests students learning styles can be different, some can learn faster when taught using certain methods (Rogers 2011; Stephen 2015). Also, due to students’ preferences or location, they may choose one delivery means over another. Rogers (2011) posits that an instructor needs to understand these various learning styles of students and accommodate their needs.

The Australian Institute of Business (AIB), in Adelaide, is currently the largest private educator of MBAs in Australia, and is experiencing some of these changes. Most AIB MBA students are adults, working full-time and studying part-time qualifications. Their learning style and needs are different to most other tertiary students. Most AIB students study by distance learning and some are taught face-to-face. Many of these students are managers or executives and are expected to be structured, organised and prefer working independently (see Rogers 2011). An online support environment is more helpful for students as this provides them flexibility for self-paced study (Rogers 2011).

Research also has found some students taking business subjects often find finance subjects more difficult than other subjects (Stephen 2015). One reason identified is that many adults possess limited mathematical abilities in today’s technologically oriented society. This research investigates whether information and communications technology (ICT) tools enhance Finance subjects (i.e. compulsory and electives) student success rates compared to other business subjects delivered at the AIB for MBAs from January 2015 to June 2016. The ICT tool interventions introduced included: more use of Moodle to engage students with discussion forums, key concept videos, mathematical skills webinar, assignment and exam preparation webinars, recorded learning materials and online quizzes. To promote higher quality tertiary learning, ICT interventions began in January 2015 with AIB’s Moodle online learning portal together with other tools. This was followed by support webinars on a subjects’ relevant area from July 2015.

The methodology used to undertake this investigation is a mixed methods case study of AIB MBA students with researchers utilising an action research approach in a work-applied learning (WAL) context (Abraham 2015) over a period of time. Primary and secondary data collection techniques are used in this study. Primary data are collected from interviews and survey(s) of students and academics. Secondary data are collected from AIB databases and reports.

In conclusion, there is some evidence that performance as measured by success rate of distance learning students of Finance subjects, improves when ICT tools were used. It was identified that ICT tools provides the flexibility to view at delivery time or from repositories many times and this enhances students learning style. Face-to-face AIB MBA students not accessing all available online tools are not improving at the same rate as those who are. Care must be taken in generalising results due to the short study period.

**Keywords**

distance learning; ICT tools; learning style; MBA finance students; work-applied learning

**REFERENCES**

Abraham, S 2015, Work-applied learning for change, GOWAL Publications.


Accounting students need team-based learning

Paul Kenny Flinders University

Background
With the rising use of teams in organisations there is a demand by employers for employees that can effectively work in teams.1 Previously, accountants’ career success may have been centred on their proficiency at technical skills.2 Today generic skills have increased in importance, and now rank ahead of technical skills to the importance of career success.3 These generic skills would also include graduates being work ready.4 When accounting students are prepared for the workplace, quickly secure employment upon graduation and are successful as technicians and ‘all-rounders’, this is a reflection of the quality of teaching and it impacts on reputation in the market place of the relevant university. Team based learning (TBL) is defined as ‘extensive classroom use of permanent, heterogeneous, six or seven member student work teams to accomplish learning objectives’5. TBL has enjoyed success in a number of disciplines such as medicine, nursing, health sciences, general embryology6 but there is only one known Australian study of the use of TBL for undergraduate accounting students studying taxation law.7 Traditionally, in Australia, law tutorials for accounting students are conducted by way of a class discussion lead by the tutor as was the case of the author’s students in the 2009 undergraduate taxation law class.

Method
This paper compares the impact on student performance in: tax research assignments and final exams, as well as feedback from individual reflections surveys of using two different team learning approaches in the teaching of tutorials to undergraduate accounting students studying taxation law that were introduced in 2010, 2013 and 2014.

Results
Whilst research indicates that team learning aids students’ ability to understand and apply content, the unstructured team teaching experiment in 2010 was unable to provide clear evidence for this finding.

When a TBL approach8 was taken in 2013-14, though, using individual tests and team assignments with peer reviews, the benefits of TBL were evident. TBL was associated with significantly higher levels of student preparation, engagement, participation and attendance. Student satisfaction was high. TBL also encouraged student group development, generic skills and this assists employers. Substantial benefits were also found for university law teachers in accounting schools.

Conclusion
It is submitted that the key benefit for accounting students from TBL stems from the demand by the accounting profession and other employers for employees with soft skills and that can effectively work in teams. For universities the strategic benefit from TBL is the improvement in the quality of university courses so as to better satisfy the requirements of the Tertiary Education Quality and Standards Agency.

Keywords
team based learning; accounting; law

REFERENCES
SESSION ABSTRACT


8 L K Michaelsen, W Watson, J P Cragin and L D Fink, ‘Team Learning: A potential solution to the problems of large classes’ (1982) 7(1) Exchange: The Organizational Behaviour Teaching Journal 13: defined TBL as ‘extensive classroom use of permanent, heterogeneous, six or seven member student work teams to accomplish learning objectives’
Research- and discovery-based learning becoming a spine through programs of study

John Willison University Adelaide
Nayana Parange University of South Australia

With the shift in Australia and Internationally to more undergraduate and Coursework Masters programs requiring rich Research- and discovery-Based Learning (RBL for short) across the degree, there is a commensurate increased need for educators to scaffold student learning in these contexts. The demanding task of scaffolding student learning across programs may be made more realisable and effective if there is a coherent conceptual spine across the program. While the design of courses and programs using RBL presents a challenge, there may also be a ‘silver lining’ because, for example, the University of Adelaide’s Small Group Discovery Experience (SDGE) is required in every year of every students’ program of undergraduate study, and these experiences could provide the bony vertebrae for coherence across students’ programs.

This presentation argues that, in addition to allocation of the time and resources for RBL, explicit use of the facets of the Research Skill Development framework (Willison & O’Regan, 2007) across a program of study helps students make the connections within and between their RBL experiences so that the individual vertebra may join functionally into a living spine. The focus of this presentation will be on the RSD pentagon- a configuration developed by students for students (Missingham, et al. 2014) as a thinking routine (Ritchhard and Perkins, 2008), where increasing sophistication and rigour is contingent on the RSD’s ongoing use in many different contexts. As a thinking routine the RSD pentagon may cultivate students’ cognitive skills and dispositions, as well as deepen their content learning. The RSD pentagon is easy to learn and can readily support students to engage in discipline-specific and interdisciplinary research-based thinking routines.

The RSD pentagon is flexible and can be adopted to support the cyclical nature of research/inquiry/discovery. It can be readily adapted for clinical scenarios as well, to enable students to employ research-minded thinking on a day to day basis professionally, both in online and face to face clinical environments. This presentation will demonstrate use of RSD pentagon in teaching, assessment and clinical practice, and showcase use of RSD across a program to develop a scaffolded clinical learning environment. We invite those teaching in RBL experiences to adapt and use the RSD pentagon to provide a coherent conceptual spine across students programs of study, starting one vertebrae at a time.

Keywords
research based learning; small group discovery experience; program-level thinking; clinical assessment; online learning

REFERENCES
Using Technology to Achieve Assessment Goals in a Health Care Management Subject

Mark Mackay, Don Houston, Ian Walton Flinders University
Peter Balan University of South Australia

Background
Health care management is taught at numerous Australian Universities often at a postgraduate level as part of a master of health care management degree, master of public health degree or as specialisation in a master of business administration degree.

Assessment of subjects in such courses is often reliant upon written work and presentations, and there is usually less reliance upon exam type assessment. This approach is intended to achieve the development of higher-level written and presentation skills required in the workplace, as well as ensuring that students have met the level of academic achievement required to pass the subject.

Financial management is taught as part of typical postgraduate degree in health care management. Many students have had limited exposure to financial management either in the workplace or in prior studies. Additionally, the level of numerical skills and spreadsheet skills is often lacking.

Our experience in teaching financial management to such students has indicated that there is a likelihood that some students are submitting work that may have been aided or even prepared by the input of others, such as accountants in their workplace, and this cannot be detected by text-matching tools.

As all of our students now possess some form of electronic device that enables filming (e.g., a laptop, iPad or smartphone) and based on the work of Greene and Crespi (2012), and Talbert (2015), we have experimented with the introduction of video assignments to overcome some of the limitations of traditional written assignments.

Research
The introduction of a video assignment was trialed in the postgraduate health care management financial management topic. The use of the video assignment was accompanied with a survey to seek student feedback regarding the use of video assignments. The survey included closed-ended and open-ended questions. Concept- mapping (Balan, 2015) was used to evaluate the open-ended responses.

Findings
The academics involved in the teaching of the subject believe that the use of the video assignment not only reduces the likelihood of students “cheating”, but also improves learning outcomes and provides an opportunity to align the assessment with real life scenarios.

Students reported that the adoption of video assignments required deeper learning and reduced the opportunity for plagiarism.

Implications
The introduction of video based assignments has a number of potential benefits including:

- The cost of implementation and assessment is low
- The development of additional skills by students is facilitated
- It improves the use of time in when face-to-face teaching sessions occur
- It achieves the assessment goals of deeper learning and reduces the likelihood of plagiarism.

Wider Applicability While such technology has been applied in undergraduate degrees elsewhere, we believe that this represents a new approach to assessment in health care management. The method should have general applicability across all health care management subjects, and indeed, more generally in other disciplines, particularly where assessment involves spreadsheets or mathematics.

Keywords
Video assessment; technology

REFERENCES


Undergraduate psychology students’ attitudes towards the teaching of Indigenous and cross-cultural content.

Matthew Dry, Clemence Due, Peter Strelan, Yvonne Clark, Shelini Hillier & Deborah Turnbull  University of Adelaide

Background
Many universities across Australia now incorporate Indigenous Australian or cross-cultural content in health related degrees, such as psychology, health science, midwifery, nursing and medicine (Universities Australia, 2011). Assessments of these programs generally indicate that they lead to positive shifts in attitudes and understandings, however a common theme emerging from the literature is that there is often resistance or negativity expressed by sections of the student cohort (e.g., Clark et al, 2013; Pederson & Barlow, 2008; Thackrah & Thompson, 2013).

This research builds on a qualitative study conducted by Clark et al (2013) investigating student attitudes towards the Indigenous content taught in the cross-cultural module of the first-year Psychology curriculum at an Australian tertiary institution. Themes emerging from focus-group data in Clark et al indicated that different attitudes (both positive and negative) were associated with specific demographic groups within the cohort. The present study aimed to quantify these patterns in a large sample of the current student body.

Method
We asked the students to complete a short (10 item) questionnaire measuring their attitudes towards, and understandings of, the Indigenous content in the cross-cultural module. Example items included: “This is the first time I have studied a course like cross-cultural psychology”, and “Psychologists and other professionals play an important role in addressing inequality in Indigenous health and psychological wellbeing.” In each case the participants responded on a 7-point scale ranging from “Entirely Disagree” to “Entirely Agree”.

Results
We received responses from 367 (66%) of the students enrolled in the course. Interestingly, all of the questions received responses along the entire range of potential values (i.e., highly negative to highly positive), but there was broad positive agreement in regards to questions relating to the necessity and importance of teaching related to Indigenous issues, and the majority of respondents indicated that this was the first time they had studied material such as this.

As suggested by the qualitative data in Clark et al (2013) there were differences between the attitudes and understandings of international and domestic students. Further, there was evidence of effects related to age and gender.

Discussion
The results of this study have important implications for the way in which Indigenous and cross-cultural content is taught in health courses within undergraduate curriculum. In particular, an important issue that needs attention is the difference between the attitudes of international and domestic students. This issue is particularly salient since an increasing number of international students are choosing to study in Australia, and to remain and practice as professionals within the Australian health-care system.

Keywords
Indigenous Psychology; Cultural Competency; Tertiary Education; Health Professions

REFERENCES
Inquiry-based learning improves student outcomes in a large first year topic

Masha Smallhorn, Narelle Hunter, Jeanne Young-Kirby & Karen Burke da Silva Flinders University

Inquiry has been described as a teaching method which combines student-centred, hands-on activities with discovery (Uno 1990). The educator acts as a facilitator of the learning activity, promoting student discussion and providing guidance rather than directing the activity (Herron 2009; Wood 2009). Based on the principles of the scientific method, in inquiry-based learning students observe a phenomenon, synthesise research questions, test these questions in a repeatable manner and finally analyse and communicate their findings (Uno 1990; Weaver et al. 2008). The learning is directed by the student with the educator providing a supportive role. The level of input from the educator depends on the level of inquiry. In open-inquiry students independently formulate a question to research while in guided-inquiry the educator provides guidance with the construction of a question (Weaver et al. 2008). Although based on the scientific method, inquiry-based learning is a teaching method which can be considered in other disciplines as it supports the development of students who are responsible for their own learning.

The laboratory is a critical part of an undergraduate science degree. In this space, students apply knowledge gained through the lecture series by participating in laboratory activities designed to test concepts. Traditionally the activities require the application of prescribed step-by-step protocols which often result in a predicted outcome. The nature of this traditional laboratory experience limits the opportunity for students to develop critical thinking and analysis skills both fundamental to research science (Alozie et al. 2012; Gormally et al. 2011; Herron 2009; Wood 2009). Inquiry-based laboratories have been shown to result in a deeper understanding of scientific content and improve students’ attitudes towards science (Brownell et al. 2012; Myers & Burgess 2003; Smallhorn et al. 2015; Weaver et al. 2008).

The laboratories of our first year biology topic were redeveloped into guided-inquiry based laboratories to improve both the engagement and learning outcomes of our large student cohort. The guided-inquiry laboratories were run weekly in large classes of a 100 students to increase student contact and facilitate teaching efficiency. Teams of students were guided by an educator to design and carry out an experiment. The impact of the move to inquiry-based learning on student satisfaction and learning outcomes was evaluated by surveying students and comparing exam data before (2013) and after the redevelopment (2014-2016). An analysis of the survey data following the redevelopment indicated high levels of student satisfaction. Students thought the laboratories improved the quality of their university experience, helped them to understand the major concepts of the topics, challenged them intellectually and helped to develop data analysis skills. Overall, there was a significant improvement in student answers to exam questions following the redevelopment [paired t-test 2014 (p=.001), 2015 (p=.005), 2016 (p=.000)]. There was also a significant improvement in exam questions identified as content-related before the redevelopment and laboratory-related after the redevelopment [paired t-test 2014 (p=.001), 2015 (p=.000), 2016 (p=.001)]. These findings suggest that inquiry-based learning can improve both the student experience and learning outcomes for a large student cohort.

Keywords
First Year; Science; Inquiry-based learning

REFERENCES
Investigating undergraduate nursing student academic outcomes using learning analytics: The impact of using a tool to monitor online engagement.

Wendy Abigail, Mitchell Fitzgerald, Richard Price & Chris McLeod Flinders University

Background
Learning analytics is an emerging area in academia with early indications of how this knowledge might improve student’s learning experience and outcomes1. However, learning analytics measuring the impact of student engagement on academic outcomes is divided2. Only a few studies have reported a positive correlation, with most reporting many problems when trying to analyse the data2. Further studies are required in this area to contribute to this emerging field.

An ethically approved study commenced in 2015 that aimed to evaluate undergraduate nursing student’s engagement with online learning activities and the influence this may have on their academic outcome. The study purpose was to inform curriculum development.

Method
Two second year undergraduate nursing topics were offered each having two separate randomly allocated availabilities, one without an intervention (Topic A [TA1, N=133], and Topic B [TB1, N=90] availability 1) and the second with the intervention (TA2, N= 135 and TB2, N=200 availability 2). The intervention, visual progress bars (VPBs) provided students with cumulative icons that changed colour once an online activity had been accessed. Visual progress bars allowed monitoring of topic engagement. T-tests were performed to test the null hypothesis that there was no significant difference between the mean GPAs of students in the two availabilities for each of the topics. Upon completion of the topics t-tests were performed to compare the grades of the control and treatment groups.

Results
Based upon first year GPAs, t-tests were performed to confirm that there was no significant difference between the academic abilities of the two availability groups for either of the two second year topics and therefore any significant differences in student performance should be able to be attributed to the effect of the VPBs. Results showed that there is no significant difference between the mean final grades of the control group (TA1, TB1) and the treatment group (TA2, TB2).

The mean final grades for TA2 and TB2 were lower than those for TA1 and TB1, however a two sample t-test demonstrated that this effect was not statistically significant at the 95% confidence level.

An analysis of the number of students that recorded a final grade of zero, shows that for TA1 and TA2 there were no students in this category, however for TB1 there were two students who had a score of zero and 19 in the treatment group TB2. Historically the academics responsible for the running of topics TA and TB are aware that students typically find TB more difficult than TA, which is also evidenced by the fact that the mean final grade in TA (70.92) was substantially higher than the mean grade in TB (61.98). Consequently, as there were no withdrawals from either group in TA and only 2 from the control group TB1 and 19 withdrawals from the treatment group TB2, it can be deduced that the VPBs appeared to induce students to withdraw from the more challenging topic. This may be due to the VPBs being a daily reminder to the student that they were falling behind causing them to conclude more quickly than their non-intervention group colleagues that they were unlikely to catch up and consequently withdrew.

Conclusion
The Bradley Report3 stated that Australia was lagging behind in student experience indicators where improving student engagement and ways to measure and monitor student engagement needs to be addressed. Research utilizing learning analytics may provide a way forward in achieving this.

Keywords
learning analytics; academic outcomes; undergraduate nursing students;

REFERENCES
Fostering Resilience and Wellbeing in Peer Mentors

Samantha Kontra & Tania Leiman Flinders University

University peer mentoring programs have long been recognised as highly beneficial to commencing students. There is, however, less literature on the effects of such programs on the mentors themselves, particularly in terms of fostering resilience and wellbeing. Mentors become involved in peer mentoring programs for various reasons, including ‘giving back’ to the community, and helping commencing students to either have the same positive experience the mentor did, or to avoid the mentor’s negative experience. This gives mentees access to those ‘who have gone before them’ (Lizzio and Wilson, 5) and develops their sense of purpose (Lizzio and Wilson).

Mentor training is an imperative part of peer mentoring: if a peer mentor is inadequately trained or otherwise unprepared for mentoring, this could negatively impact the mentor and their perception of their role in the program (Menzies, Tredinnick and Van Ryt, 2015). This presentation will explore how the Flinders Law School peer mentoring program has been developed since 2009 to more explicitly build resilience and support wellbeing in student mentors. It will explore practical strategies undertaken to enhance the training for mentors and to provide them with just in time support throughout the semester. A panel of presenters, including the Director of First Year Studies/Peer Mentoring Coordinator and three current senior mentors, will share the insights they have gained from participation in multiple iterations of the program.

At Flinders Law School, rigorous immersion training has been designed to prepare mentors thoroughly, guiding them through potential scenarios they may encounter with their first year student mentees, and identifying potential pitfalls of mentoring, such as depleted numbers later in the semester and around assessment time. This training also explicitly incorporates a positive mental health and wellbeing approach to mentoring (Rodrigo, C Khamis, P Lead, Z Sahukar N McDonagh and M Nguyen, 2014), leading mentors through several mindfulness exercises and exploring ways of safeguarding their own mental health through the program, drawing on senior mentors and staff presenters to guide this process.

In response to feedback obtained from mentors since 2011, the support provided to mentors has been continuously reviewed, revised and improved, increasing the program’s integrity and value to mentors, commencing students, and staff (Menzies, Tredinnick and Van Ryt, 2015). The introduction of weekly emails from the coordinator, outlining some key points that could be discussed that week including just in time information and highlighting first year student anxieties, allows mentors to tailor their weekly catch-ups with mentees to best suit their needs. Mentors also meet with the program coordinator mid-semester to facilitate thorough debriefing and evaluation of progress. This allows for early identification of any issues and promotes individual resilience and reassurance. It also enables coordinator evaluation and adjustment of the program. Additional opportunities for mentors to meet informally as a group have recently been built in, allowing additional peer debriefing as they share stories and mentoring strategies. Mentors’ self reports have indicated that they found the training incredibly beneficial, assisting them in carrying out their roles as mentors as part of the program and in building life and leadership skills more generally. Their enhanced sense of resilience and wellbeing has led many mentors to volunteer for additional semesters, and to be involved in multiple iterations of the mentoring program.

Keywords
Mentoring; Mentor Training; Mentor Support; Perspectives of Peer Mentors

REFERENCES
Study, work, and life: How are first year students spending their time?

Amanda Richardson, Sharron King, Timothy Olds, Gaynor Parfitt & Belinda Chiera University of South Australia

Background
For many first year students, managing their time during the transition into university is a struggle. Adjusting to the self-directed environment at university is challenging, especially given most students are coming from highly structured time use environments (e.g. school or work). While activities such as sleep and quality study time have known associations with positive student outcomes; exactly how students fit these in around existing commitments is less clear. Simply telling students to ‘sleep more’ or ‘study more’ isn’t enough. Students must increasingly schedule in time to work, travel and socialise, as well as time for eating and exercise to maintain their health. How they are currently managing these many, and often competing, commitments is unclear.

Method
This study measured the time use of 448 first year Health Science students across their first year at university. Time use was measured using a computer based recall tool, the Multimedia Activity Recall for Children and Adults (MARCA). This enabled the full range of daily activities to be recorded in a fine grained manner (5-minute time slices). All participants recalled between 24-48 hours of time use early in both semester 1 and 2 of 2014. Activities were grouped into 10 domains (e.g. study, travel, self-care) with daily averages calculated for each participant. In addition to average time use for all participants in these domains, differences in time use between groups (gender and age) were also explored (Mann-Whitney U tests). Individual participants’ time use scores for sleep, physical activity (PA), and study time were also compared to recommended ranges.

Results
Overall, the majority of students were meeting the recommended levels of both sleep and PA at these time points, however less than half were meeting commonly recommended levels of study time. Sleep onset times were also typically late for the majority of the students. When student groups were compared, males spent significantly more time in front of a screen (+67 min/day; p < .001), as well as engaging in PA (+21 min/day; p < .001). Females on the other hand spent significantly more time doing chores (+41 min/day; p < .001) and engaging in self-care (+26 min/day; p < .001), while a trend toward more study time was also observed (+26 min/day; n/s). Younger students (<21 years old) slept significantly more than their older peers (+38 min/day; p < .001).

Conclusion
not all students have the same commitments outside of university. If we want them to change the way they are using their time, they will need to take that time from somewhere else. Trading time on chores or in paid work to increase study or sleep is often more difficult, and sometimes not possible. Conversely, trading some TV time is far less complicated. With only 24 hours in a day, awareness of what activities may have to give is important.

Keywords
first year students; time use; time management

REFERENCES
Navigating the problem space of educational design in a massively open learning environment

Katy McDevitt & Kahiwa Sebire University of Adelaide

Many universities are now making MOOCs, placing Australian universities in a global context where open courses are designed alongside many other courses from universities with a variety of educational strengths and capabilities. There is also a rich array of design activity emerging across multiple levels in MOOC-active universities, from whole-institution strategic design through to design at programmatic and course/unit levels. The result is that MOOCs can be seen to exist within an ecosystem of design practices including macro (systemic, environmental), meso (organisation, unit, program) and micro (course, team) levels, which ideally align (Goodyear, 2000). However, in the MOOC environment, design decisions at multiple levels are commonly made on different timeframes which are specific to the constraints and requirements of each particular level, which raises challenges when we seek to align a specific course-level design with other levels of decision-making. Change in the MOOC environment, design decisions may also come from external and internal sources, some of which are readily influenced and others not, which raises the risk of ‘task uncertainty’ (Trentin et al., 2012)—that is, the uncertainty associated with making decisions under conditions where other elements of the design system are unknown or in flux. At the same time, adapting a MOOC learning design in response to changing requirements is a difficult proposition, due to the size of the task, the cost of remediation, and the difficulty of revisiting decisions with time-poor educators. Consideration of adaptive approaches which may help respond to these issues is much needed.

In this paper, we offer conceptual analysis of the MOOC environment as a multi-layered design system, and we show how explicitly addressing adaptive requirements within learning design practices may help respond to challenges of misalignment, task uncertainty, and change. Key to our analysis will be learning design theory, particularly ideas of design as ‘architecture’ (Gibbons & Rogers, 2007) and views on design as a distributed network with multiple levels from philosophical/strategic to tactical (Goodyear, 2005; Goodyear, de Laat & Lally, 2006). We will also consider complementary models from organisational design (DeSanctis & Poole, 1994; Burton et al., 2006, 2008; Foss et al., 2013) and from adaptive design thinking (e.g. De Guerre et al., 2012; Baumann, 2015), to illuminate our multi-layered view of MOOC design. We will draw on the concept of the ‘problem space’ for educational design (Goodyear, 2005) to outline methods for introducing greater agility to the design process for MOOCs. These perspectives will be fleshed out with practical examples of emerging iterative design work we are doing through the AdelaideX initiative.

Keywords
MOOCs; education design; pedagogy

REFERENCES
Educating nursing and midwifery students about HIV/AIDS: an international cross-disciplinary program

Wendy Abigail & Pauline Hill Flinders University,

Background
The importance of educating undergraduate nurses and midwives about HIV/AIDS within the nursing and midwifery curriculum is vital to promote knowledge and understanding of this communicable disease which, in 2015, affected approximately 27,000 people in Australia and 36.7 million worldwide (HIV infection rates). A cross-disciplinary international education program has the potential to contribute to providing comprehensive holistic care and assisting in reducing stigma associated with communicable diseases.

Methods
Undergraduate nursing and midwifery students at Flinders University, Adelaide were provided with the opportunity to apply for a study abroad HIV/AIDS focussed program based in Surabaya, Indonesia in 2015. All applicants were interviewed for suitability for the limited 10 places. The successful applicants were involved in pre-departure education sessions which included Bahasa language lessons and cultural education. The program was organised in conjunction with Universitas Airlangga in Surabaya and ran for approximately two weeks. A staff member from Flinders University accompanied the students.

Results
Students were provided with a broad array of experiences which ranged from visits to hospital wards, community settings such as HIV/AIDS clinics, rural community settings, Infectious Diseases Hospital, private midwifery clinics, a trans-gender clinic, ante-natal community settings and other cultural events. Media attention included headline articles in the major Indonesian newspapers and online news reports in Indonesia and Australia. A debriefing session was conducted with students on their return which highlighted the benefits of the program and suggestions on improvements for future programs.

Conclusion
Overall, the experiences gained by the students was valued. The combining of nursing and midwifery students was appreciated by the students with each discipline learning from the other. Programs such as these promote leadership qualities and provide students with a range of strategies that can be adapted to their future careers. Lessons have been learnt by the organisers in both countries on how to improve the program for future similar programs. This presentation focuses on the program, learning outcomes and related future research projects.

Keywords
study abroad programs; cross-disciplinary education; undergraduate nursing education

REFERENCES
Why I am an Education Specialist

Joy McEntee, Rebecca Tooher, Simon Pyke, Catherine Snelling & Ian Johnson  University of Adelaide

This will not be a formal paper, but a structured conversation. Internationally and in Australia, universities are increasingly employing teaching specialists. In 2016, this has happened at the University of Adelaide, with the establishment of the Adelaide Education Academy. This comprises staff who have relinquished the role of the “balanced academic” and made the decision to become Education Specialists. In this session, members of the Executive of the Adelaide Education Academy discuss how they envisage working with their colleagues within the Academy and more widely -- in the University of Adelaide and beyond. Topics will include:

- Creating an experienced and supportive community
- Conducting research into the scholarship of teaching
- Sharing good practice locally, nationally and internationally
- Mentoring colleagues
- Supporting/providing leadership to the University of Adelaide community

Given the increasing focus on teaching excellence worldwide and its strengthening links to University funding, the creation of the Education Specialist role and the Adelaide Education Academy are strategically significant developments for the University of Adelaide and important career development options for those seeking recognition for teaching excellence.

Keywords
Teaching specialists

REFERENCES
Virtual reality (VR) is a technology capable of providing realistic immersion into simulated environments. By seamlessly integrating the physical attributes of users including their height, arm length, and walk speed, users are able to feel as if they’ve entered another world. With the release of affordable VR technologies such as ‘Samsung Gear VR’ and ‘HTC Vive’, the experimental application of VR is seeing a resurgence in popularity (Dutta 2016). Research spans numerous topics, but some examples are: spatial cognition, reflection, embodiment for disaster training and medicine, and engagement (Agrawal 2016, Falconer 2016, Farra 2015, Hardless 2015, Herron 2016).

In light of the evidence provided above, a VR project was initiated to immerse students in their work and the work of their peers. By facilitating a beneficial sense of presence and spatial awareness (Tüzün 2016) the goal was to engage students in peer and self-assessment, specifically about work placements of student teachers in remote locations. This was accomplished by first digitising the reflections of those students on their placements, as these reflections were previously in poster form and not readily or easily shared. Next, a virtual gallery of student reflections was created using the ‘Unity3D Game Engine’ and then implemented in VR using the ‘HTC Vive’. This virtual world will be available during the conference to allow delegates to explore the concept.

Although in preliminary stages, feedback has been encouraging with users reporting that the feeling of spatial awareness benefits them with engagement and self-assessment. In addition, being that users were able to interact in a very human way with the virtual environment using their own locomotion and motor-skills, the need for complex abstraction techniques were minimised. Too many levels of abstraction is seen as a hurdle in regards to the immersiveness of virtual environments and games (Juul 2007).

Future work will look at the benefit of using other technologies to not only share externalisations of students, but in addition, have them share the actual placement environments themselves. One possibility is using photogrammetry and modelling techniques to rebuild actual real-world locations in the virtual environment.

Keywords
virtual reality; spatial awareness; self-assessment; reflection

REFERENCES


Evaluation of an inter-professional education intervention created with physiotherapy students for medical radiation sciences students

Debbie Howson & Rose Boucaut University of South Australia

Background
Attention to health and safety is imperative for health sciences students as health professionals work in a high risk industry in terms of work injury and illness (NIOSH, 2014). Manual Handling of people can be a source of risk (Safe Work Australia, 2011) for both healthcare professionals and students, so training students about safe ways to do this is essential. Von Der Lancken and Levenhagen (2014) reported successful health and safety outcomes on a project where physiotherapy students taught nursing students manual handling skills. We undertook a similar project to promote safe manual handling within the Medical Radiation Science (MRS) undergraduate program and to develop occupational health and safety educator skills in physiotherapy (PT) students.

Method
Manual handling (MH) tasks that MRS students were likely to participate in during their first clinical placement were identified. With assistance from the physiotherapy and medical radiation science lecturers, a pro-active interdisciplinary intervention was developed. Fourth year PT students (n=21) devised two teaching sessions which formed the educational intervention. The first session of one hour consisted of theory and demonstration of the manual handling techniques for each task. The second session of two hours consisted of eight small group stations where each MRS student (n=73) had the opportunity to practice each task under instruction and supervision from PT students. All sessions were supervised by teaching staff from each discipline.

Ethics approval was obtained to email all students in the cohorts inviting them to complete an on-line survey. MRS students recorded their experience of receiving MH training from the PT students and which, if any, MH tasks they had performed during their first clinical placement. PT students recorded their experience of conducting the MH training.

Results
The response rate to the MRS survey was 47% (34 students) and to the PT survey was 33% (7 students).

Of the 7 PT student respondents, 58% did not recommend this activity for future student cohorts. Their reasons included lack of perceived personal benefit and additional workload.

Conclusion
Inter-professional student teaching and learning of MH skills at the early stage of MRS clinical training was a positive experience for this cohort of students, giving them confidence to gain hands on experience during a short first clinical placement. The learning experience for the MRS students was a successful course component that warranted inclusion for future cohorts.

The PT students experience was less enthusiastic and the role of PT students as MH educators requires further consideration to improve student engagement. The reasons for this have been explored and changes incorporated for subsequent cohorts.

Keywords
Curriculum design; Interdisciplinary Studies; Physiotherapy; Medical Radiation Sciences; Risk Management

REFERENCES
Von Der Lancken S and Levenhagen K 2014, Interprofessional teaching project with nursing and physical therapy students to promote caregiver and patient safety. The Journal of Nursing Education. vol. 53. pp. 704.
Inquiry-Based Learning in Law: Three Years of a Small Group Discovery Experience in the First-Year Curriculum

Matthew Stubbs & Cornelia Koch University of Adelaide

The Small Group Discovery Experience (SGDE) was introduced as a ‘signature pedagogy’ at the University of Adelaide in the Beacon of Enlightenment Strategic Plan. According to the Beacon ‘a small group of students, meeting to work at the discovery of new knowledge under expert guidance’ used to be ‘the centrepiece of the university experience’. In an attempt to recapture this ideal, the SGDE was made available to every first-year student at the University from 2014, and to students at all levels of their undergraduate studies from 2016.

We were at the ‘frontline’ of this development, implementing an SGDE in the Principles of Public Law course in 2014 and running it each year since then. Principles of Public Law is a large (enrolment of around 400 students) compulsory course in the first year of the law curriculum. The SGDE runs over a number of weeks and constitutes a significant part of students’ assessment. The assessment is tailored to involve students in inquiry-based learning and co-creation of knowledge.

With ‘our’ SGDE now in its third iteration, our research is evaluating how this inquiry-based learning approach has worked in our course. This is done by considering and reflecting on our law students’ responses to targeted surveys on their SGDE experience in Principles of Public Law, and in their SELT responses. We also compare our insights with those gained by the University of Adelaide’s Community of Practice on the Small Group Discovery Experience, soon to be published in their Report Evaluation of the Small Group Discovery Experience (SGDE) in Large First-Year Classes 2014/15.

In this paper, we explain the way in which the SGDE operates in our course, how it is perceived by students and teachers, and how it compares with SGDEs conducted in other large first year courses within the University of Adelaide. We then reflect on lessons learned from this research, how we have made use of them in an effort to improve this year’s student cohort’s experience, and what changes may be made for 2017, to intensify student and staff engagement in the co-creation of knowledge.

Keywords
inquiry-based learning; small group discovery; large first-year courses

REFERENCES
Problem based learning (PBL) approaches have long demonstrated the value that can be gained from applying student reasoning to relevant discipline specific dilemmas (Wood 2015). The student-centric teaching approach became well established within clinical and health courses which sought to embrace active learning classrooms (Barrows 1996). Central to the PBL methodology are the features of student-led enquiry and personal recognition of learning opportunities, before returning to report on the self-directed learning within the group of peers. Problem based learning critics, however, question the compatibility of the comparatively small optimal class sizes required to deliver PBL, with the resource constraints often seen in courses with large student numbers (Kilroy 2004). We reconsidered the place of student reporting within the classroom, given the availability of alternate technologies that potentially enable effective peer interaction without the requirement for a common physical location. We explored other mechanisms to allow for an increased focus on the student-led problem solving process and to accommodate greater class numbers. The addition of a group wiki as an alternative method for reporting of student learning serves to expand the collaborative student activities beyond the classroom (Sampaio-Maia, Maia et al. 2014). Self-identified learning topics were able to be reported to the group owned wiki platform, with transparent links to relevant evidence and a broad variety of supporting multimedia linkages now included (Park, Parwani et al. 2012). Student perceptions of the approach were evaluated within a capstone paramedic subject in a South Australian university.

Methods: Participants were recruited from 2015 students within the paramedic capstone topic and were invited to complete a questionnaire evaluating their perceptions and experiences as part of a broad study of the subject's effectiveness for graduate preparation. The responses specific to the combined PBL plus wiki approach are presented. Results: 1. Improved knowledge and understanding from PBL (n=92 78.9% Broad Agreement, 2. Collaborating PBL on wiki was effective 65.6% Broad Agreement, 3. Helped to extend learning beyond the classroom 80% Broad Agreement, 4. Value of student opinion and inclusion 81.1% Broad Agreement. Discussion: PBL class sizes were expanded to a maximum of 25 students each, more than twice the size than commonly seen in medical schools (Preeti, Ashish et al. 2013). The wiki inclusion was embraced by the students. Conclusion: Wiki's can provide an effective alternative to classroom based student reporting step of PBL teaching, while also enabling accommodating an increase in class sizes.

Keywords
Problem Based Learning; Wikis; Assessment

REFERENCES


Simulating the Refereed Publication Process to Guide Postgraduate Student Co-creation of Content

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Background
Disruptive change enabled by technology is predicted to challenge the traditional role of universities in the near future (Glenn & D’Agostino, 2008). Benner, Sutphen, Leonard, & Day (2010) explain the need for education to keep pace with rapid changes in practice driven by research and new technology. Similarly, Markauskaite & Goodyear (2014) have highlighted the need for strong connections between the production of knowledge and its use in professional work, driven by scientific excellence. In response, an approach of co-creation has been implemented in a postgraduate subject/topic/course to promote professional knowledge development. The consequence has been a research informed subject that targets the teaching-research-practice nexus, not only capturing professional and research knowledge but also helping busy clinicians publish. Such activities may strengthen the future of universities through facilitated professional knowledge construction at a time when disruptive web technologies may challenge the university role.

Method
The development of the postgraduate nursing subject was informed by survey data from clinicians, educators and students about barriers and facilitators for publication. This feedback was used to design a structured process, guiding postgraduate students who were also experienced clinicians. Students selected their own topic of investigation based on professional priorities and were linked with an academic mentor to develop a critical review of research evidence. Students then engaged with each other and academics on several levels: offering commentary and suggestions on each other’s initial ideas on review question and design and later undertaking a peer review process that mirrored the refereed publication process. Students combined web sourced research evidence with their professional knowledge to co-develop content, guided by their mentors. In addition, students critically analysed the structured process in the subject thereby extending co-development to include curriculum renewal. Consequently both academic staff and students collaboratively contributed to both assessment outputs and subject content.

Student work was published online, in a password protected area accessible to other students. Where possible the students’ manuscripts were then linked to online case studies to provide research evidence to underpin clinically focused education.

Results
Survey data identified confidence, time and effective mentoring as key factors facilitating publication. Students benefitted from extensive feedback and the opportunity to review their work. The teaching-research-practice nexus was directly targeted with students co-creating valuable content able to be used to support future undergraduate and postgraduate teaching. While there were some constraints to the simulated review process, such as short timelines, students reported high levels of satisfaction, reflecting a valuable learning experience. Clinicians found time to write as they were facilitated effectively during their study time. While co-development was an important outcome the most important finding from the first implementation of this subject was the learning reported by students as a result of their focusing on developing an article for publication.

Conclusion
Co-development by postgraduate students can provide an engaging learning experience while developing content that adds to the research informed knowledge base of a given profession.

Keywords
Evidence Based Practice; Content Co-Creation; Peer Review; Research Informed Education; Barriers to Publication

REFERENCES
Students’ Use of Facebook and Educational Heterotopia

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Facebook use in higher education has grown exponentially in recent years, with both academics and students seeking to use it to support learning processes. As Leaver and Kent (2014; p.61) note ‘Facebook is not a singular tool, but a wide-ranging set of tools and practices tied together in an online platform. Different uses of this platform will inevitably lead to different outcomes, including different outcomes in terms of informal and formal education’. Reflecting this consideration, as well as noting that research into educational cyberspace has generally ignored spatial elements, this paper uses Foucault’s (1986) discussion of heterotopia as different spaces to examine Facebook use. Although the term heterotopia has its origins in medicine, where it refers to the presence of tissue in an abnormal body location, Foucault uses it to suggest new ways of thinking about novel and unorthodox spaces. Thus he suggests that heterotopias are counter-sites; different spaces, which mirror aspects of everyday life whilst simultaneously distorting, contesting or inverting (Foucault, 1986). Key to understanding Foucault’s notion of heterotopia are six governing principles, which he argues feature to varying degrees in these different spaces (Johnson, 2013).

Drawing upon semi-structured interviews with 10 first year undergraduate students, key issues relating to these six heterotopian principles of deviance, divergence, conflicts, connections, time and thresholds are explored to critically engage with the notion of Facebook as ‘learning space’. Whilst attention is drawn to problems such as the use of Facebook to escape seminars, the conflict between work/study space and the transitory, distracting nature of time online, it is also noted that new learning possibilities exist. Thus it is maintained that social networking sites can offer possibilities for creative deviations, foster learning communities and help to develop broader social skills. Yet such outcomes may only be achieved if educational social networking sites (SNS) use engages with difference, rather than simply seeking to replicate traditional learning and teaching approaches. Ultimately the concept of educational heterotopia can provide a useful, critical tool in this process.

Keywords
Social Media, University, Space, Heterotopia, Learning

REFERENCES
The student learning contract in a team-based integrated marketing simulation course

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Mark Mackay Flinders University

Background
the modern teaching and learning environment requires students to take increased responsibility for their learning by engaging in pre-learning before interactive classroom sessions. Examples include Flipped Learning and Team-Based Learning (Balan, Clark, and Restall, 2015). These teaching methods rely on team-based activities during classroom sessions (Bishop and Verleger, 2013; Michaelsen and Sweet, 2008). It is therefore necessary to consider the responsibilities attached to the behaviour of students in teams. Some educators recommend that students be given a written learning contract as a “set of principles for how to work in teams” (Mahler 2012, p.118) as an approach for clarifying and codifying individual and team-learning and working commitments.

Method
In the first session of the course, students were asked to reflect on what was required for them to be successful in terms of the course assessments (Selim 2007; Sun et al. 2008). Using a “minute paper” evaluation (Stead, 2005), each student was asked to provide responses to the following open-ended questions:
• “Write two or three things you need to do to be successful in the course”;
• “Write two or three things your team members need to do for your team to work effectively and successfully”;
• “Write two or three things the educator needs to do for you to be successful in the course”.
Each of the three sets of qualitative data were analysed separately using the concept mapping method (Balan et al. 2015) to identify key themes for each set.

Results
Analysis revealed between six and eight major themes for each of the three stakeholders. For example:
• For students, major themes included “communicate well”, “good time management” and “work hard”.
• For teams, major themes included “communicate effectively”, “work hard together”, and “be team players”.
• For the educator, major themes included “give information and support”, “communicate and engage”, and “make everything clear”.
Results were presented to students as a two-page summary showing the concept maps and PowerPoint presentation in a manner that highlighted the mutual obligations in the class.

Conclusions
This process allowed a comprehensive learning contract to emerge using students’ own words, thus making student learning commitments clear and unambiguous. The results help students identify learning behaviours that develop the capacity for self-direction (Dunlap and Grabinger, 2003). In addition, results can be seen to support findings by Mashaw (2010) and Eom et al. (2006) that key factors influencing student satisfaction are self-motivation and interaction, and educator knowledge and facilitation.

Students understood that this exercise forms the basis of a transactional learning contract of personal student commitment, the responsibility of peers to the collective learning process, and the expert input of the educator as required (Burton and Dowling, 2005). This research contributes to the literature by describing a grounded approach for identifying the nature of the mutual learning obligations between students and their teams, and including the educator. This has important practical applications in helping to create a positive, productive and collaborative learning culture.

Keywords
Learning contract; team-based learning; student teams; mutual expectations

REFERENCES


Redesigning curricula in first year law: an approach to identifying threshold concepts

Heidi Savilla & Samantha Kontra Flinders University

From the moment they commence their time at law school, legal research becomes one of the most important skills for a student to develop. This is a fundamental skill that, if taught and learned correctly, will be pervasive to a student’s entire time at law school and beyond, as they enter the legal profession.

This presentation draws on the idea of threshold concepts (Meyer and Land, 2003), an idea which has been relied upon in the Framework for Information Literacy for Higher Education (adopted by the Association of College and Research Libraries in January 2016). This framework identifies a number of threshold concepts which are pivotal to a student’s understanding of information research skills, however there is little literature on how these concepts relate to the teaching of legal research.

Threshold concepts can be difficult to define, and to embed into curricula. This presentation will discuss a unique approach to identifying threshold concepts. Instead of relying on the experiences and opinions of those teaching research skills (Hofer, Townsend and Brunetti, 2012), this approach will draw from the experiences and opinions of later year students who have previously undergone research training. New teaching materials will be developed for a first year topic, Legal Research and Writing, and piloted on students who have already completed this topic. Their feedback will help identify troublesome concepts and inform how these concepts can be embedded into a redesigned curricula for first year students.

The methodology used for this project is to develop a one hour Legal Research Information Session which will be delivered in early September to students who have completed, at a minimum, their first semester of law school (and have thus completed the introductory course on legal research). After the Information Session, participants will be asked to complete a questionnaire exploring their thoughts on the Session content and delivery. Participants will be invited to take part in Focus Groups to further explore themes of teaching legal research skills, and to provide feedback which will be used to assist in developing a best practice guide in this area.

This presentation will talk through the process used to develop materials for the Information Session, and will discuss the role this plays in redesigning the teaching of legal research to first year, first semester law students. Comments will be made about the structure and questions to be used in the focus groups, and potential challenges will be raised for discussion with the audience.

Keywords
legal research; training legal research; threshold concepts; information literacy

REFERENCES
Issues for Assessment of Integrated ePortfolios: Confidence, Innovation and the problem of Benchmarking

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Professional portfolios present graduate academic knowledge and career-readiness to potential employers. In the past they have been in the form of a hardcopy set of documents and, later, a power point in which skills, personal attributes and content knowledge were demonstrated. These have been supplanted by ePortfolios, online platforms for gathering and ordering personal and professional information.

ePortfolios have been labelled a ‘shoebox of stuff’, suggesting that they act only as a disorganized archive of ‘evidence’, mostly digitized documents. However, provided students include reflective practice and carefully considered links to broader professional attributes, the School of Education’s iteration of the ePortfolio cannot be a ‘shoebox of stuff’, or it will simply fail assessment criteria.

This paper brings together the Technological Acceptance Model (Davis 1989; Davis, Bogozzi and Warsaw 1989) which explores the confidence levels of Digital Technology (DT) users and the SAMR (Substitution; Augmentation; Modification; Redefinition) model (Puentedura 2015) which considers the degree to which use of DTs changes and/or transforms a given task.

The authors’ preliminary evidence suggests that those students who have experience and confidence using DTs are the first to embrace innovation, have higher levels of SAMR integration, and higher expectations of their lecturers’ technology use. Equally, students who have not been exposed to DTs are amazed by even the simplest ICT Integration and tend to produce a poorer product as a result. A student with a low confidence level use of DT will think that their ePortfolio is high on the SAMR scale. An assessing lecturer with a high level of DT confidence will consider that it is not.

Benchmarking for reliability of assessment of ePortfolios is an ongoing issue, one which cannot be easily addressed. In addition, as students develop their confidence in the use of technology and as ePortfolios become more widespread across the tertiary sector, the problem is likely to further progress and exacerbate.

Both students and lecturers need to be encouraged to explore and use a rich variety of digital media in their offerings, recognize the evolving landscape of technology and be open to the innovative possibilities that DTs could contribute to academic assessment submissions, such as the ePortfolio.

Keywords
ePortfolio; technology; confidence; benchmarking

REFERENCES


Drawing on the NAPLAN: Giving voice to students in the middle years of schooling about the impact of NAPLAN through drawings

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In Australia, the introduction of the National Assessment Program for Literacy and Numeracy (NAPLAN) in 2008 marked the nationalisation of Australia’s accountability-driven education agenda (Swain & Pendergast, 2013). Since its introduction NAPLAN has been a source of debate and argument (Polesel, Dulfer & Turnbull, 2012). Critics of NAPLAN note the potential of the test regime to impact on teaching and learning practices, especially as schools and systems strive to reach benchmarks. Conducted in Years 3, 5, 7 and 9 NAPLAN is a significant feature in the educational landscape that stretches across the middle years; typically Years 5-10. High-stakes assessment practices such as NAPLAN have an impact on middle years students.

This paper presents perceptions and reactions of middle years students through student drawings collected in a study that privileges middle years students’ ‘voice’. The collection of student drawings offered an opportunity to explore students’ insights and perspectives and to privilege ‘student voice’. Explored in this paper is the impact of two different approaches to the implementation of NAPLAN and the physical and emotional impact of NAPLAN on middle years students. The discussion includes issues to be considered for assessment practices to be effective in the context of young adolescent education. Interestingly, the effects are disparate in the two Queensland schools investigated in this case study approach, despite the testing regime being identical in all regards apart from the way the individual school contexts conduct their response to the processes and procedures. This study is important because it contributes to filling a void in the literature in relation to NAPLAN testing, by giving voice to middle years students.

The presentation of this research data and findings is beneficial to all NAPLAN stakeholders, parents; students; educators and/or tax payers as NAPLAN impacts all. Findings and recommendations from this study will assist those in higher education by way of research based information to enlighten preservice teachers to the dangers of narrowing the curriculum to accommodate NAPLAN.

Keywords
NAPLAN; Middle Years of Schooling; Student Voice; Assessment

REFERENCES
Swain, K., & Pendergast, D. (2013). Competing interests: An investigation of National Assessment Program Literacy and Numeracy (NAPLAN) and middle schooling assessment practices. Australia Journal of Middle Schooling, 13(1), 4-17
Communication: a key Graduate Attribute?

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‘Communication skills’ are typically listed among the ‘graduate attributes’ of that are expected to be attained by Australian university students as part of their undergraduate studies (Barrie 2004).

Graduate attributes are recognised as foundational for graduates’ employability (Australian Government 2002; Barrie et al 2009), and research is producing an increasing awareness of a need for their ‘explicit embedding’ in the teaching and assessment of discipline content (Hughes & Barrie 2010). There is also a growing understanding of the role of language in learning (Rose & Martin 2012); and while there is ‘still much debate about where responsibilities lie for developing and assessing students’ communication skills’ (Arkoudis 2012) there is also a growing acceptance that discipline-specific scholarly writing is best developed and supported within the curriculum cycle.

The widening of socio-economic participation (Australian Government, 2008) and the internationalisation of higher education have combined to greatly increase tertiary student diversity. It therefore cannot be assumed that the majority of students in Australian universities will intuitively develop their competence in scholarly writing which is crucial for them to perform with academic integrity in their assignments (Bretag et al 2014; McGowan 2005).

Numerous examples are reported in the literature of projects where the development of research-writing is embedded into a course, or fully integrated into the discipline content of a curriculum (Arkoudis, 2005; Dunworth and Briguglio 2010; Hunter 2007; Willison & O’Regan 2007; Wingate 2012). However, despite the successes of such attempts, the prevailing perception among academic teaching staff remains widespread, viz, that students’ language development is not a task for the discipline lecturer, but rather that it is each student’s own responsibility.

In this presentation I outline the basics of a ‘self-help tool’ with which students can learn to accelerate their own academic literacy development. The approach is based on genre pedagogy (see Rose and Martin 2012), translated for tertiary learning ‘by discovery’. The tool was designed to be simple enough for students to apply without having to divert their time and attention away from their content learning. It consists of a series of steps by which students can identify the structure and language of academic texts, and to use these as models for their own writing, while also increasing their range of discipline knowledge.

A 2011 pilot project (Amos & McGowan 2012) demonstrates how the approach could also be adopted and taught independently by a discipline lecturer, following a relatively short period of collaborative design and co-teaching with a language adviser. I will outline my current research project which investigates the advantages and difficulties experienced in the integration of an assessable academic literacy program; and discussion will be invited on reasons for and against extending the approach more widely across a course, a program, a discipline or a faculty.

Keywords
Graduate attributes; communication; academic literacy; academic integrity curriculum-integration

REFERENCES


SESSION ABSTRACT


They liked it, but did they learn anything: Challenges of measuring student outcomes associated with 5 years of innovation in anatomy teaching.

Ian Johnson The University of Adelaide

Abstract
teaching innovations are usually well-received by students, but whether they improve learning outcomes is often unclear. This study compares student feedback with learning outcomes associated for four learning innovations in anatomy teaching delivered between 2010 and 2015. Unanimously positive free comments and focus group comments were obtained for (1) and 76-91% broad agreement on usefulness obtained for (2-4). None of the innovations improved mean learning outcomes significantly. Closer evaluation of the elements taught compared to those assessed and the timescales required may be required to accurately determine if the students learnt anything.

Paper
the extent to innovations in teaching promote student learning outcomes is often unclear or simply unreported. In this study, 5 collaborative studies of innovation in anatomy teaching over the past 5 years at the University of Adelaide are reviewed in an attempt to draw common themes that might allow a better understanding of the relationship between student satisfaction and learning outcomes.

In response to student feedback, learning interventions involving new technology were delivered between 2010 and 2015 after obtaining local human research ethics approval. These were: (1) an interactive, in-house, clinically-relevant on-line anatomy tool for 195 year 3 medical students(Johnson, Palmer et al. 2013), (2a & b) use of an online ‘Prezi’ presentation to integrate cranial nerve structure and function for 50 year 3 Health Science students, either (a) as a bolt-on to the existing course (Collins-Praino 2015), or (b) as a tool that was integrated into the course (Collins-Praino 2016) (3) a change in anatomy delivery for 136-148 year 1-3 medical students to include elements of the flipped classroom(Johnson, 2016), and (4) use of ultrasound simulators to assist with learning cross sectional anatomy for 59 year 1 medical students(Massey-Westropp 2015). Learning outcomes were compared with previous year’s marks (studies 1-3), or before- and after- the deployment of the educational intervention in a single learning session (study 4). Student feedback was obtained near the end of the course.

The response rate for interventions 1, 2a, 2b, 3 and 4 was 40%, 89%, 23% 47-60% and 72%, respectively. Student feedback was very good for all 4 interventions, as evidenced by unanimously positive free comments and focus group comments for (1) and 76-91% broad agreement on usefulness for (2-4). However, none of the interventions had a significant effect on mean learning outcomes, except for (4) where the mean marks for year 3 students decreased from 80% to 63%.

At face value, the present learning interventions appear to have improved student satisfaction but not learning outcomes, at least the learning outcomes measured. A number of factors have been associated with increased student satisfaction with courses. These include, career preparation and course offerings, as well as the teacher’s concern for students (Tevan 1997, Tessema 2012). It is likely that students will recognise the time and effort involved in innovation in teaching and see this as evidence of concern for students, which could explain the general finding in the literature that innovation in teaching is well-received by students. It has been reported that students’ learning style, course design and teaching approaches all affect learning effectiveness (Centra 1979, Lynch, Woelfl et al. 1998). The effect of teaching innovation on learning effectiveness is reported rarely, perhaps because innovation is mainly introduced in the context of action research, and general course structures and existing evaluations may be insufficient to adequately assess it. These factors have affected the present studies. For example the present study designs do not address the possibility of differences in the timescales for detecting changes in student opinion and detecting changes in learning outcomes. Intervention 3 is therefore running for a second year. There may also have been mismatches between the traditional assessment strategies employed and the more modern approaches used for teaching delivery. Changing the assessment to better match the delivery of teaching is possible for formative assessments such as intervention 4, but impossible to do retrospectively for the summative assessments of the remaining three. The findings of this study have been echoed in other disciplines. In a survey-based study with factor analysis of vocational and technical courses (Lee 2011) where teaching innovation was found to improve student satisfaction, but had an insignificant effect on learning outcomes. Overall, the review of the present studies in anatomy point towards a significant general problem affecting teaching innovation and it’s link with learning outcomes: the presence of multiple uncontrolled variables in most studies will make it very difficult to answer the question ‘did they learn anything’?
REFERENCES


The Virtual Toolkit - Preparing students for large scale university teaching

Narelle Hunter, Masha Smallhorn & Jeanne Young Flinders University

Undergraduate students come to University with a variety of learning experiences which influence their level of preparedness for an undergraduate laboratory environment. This is particularly relevant in areas which commonly have no pre-requisites for enrolment such as the Biological Sciences. It has previously been reported that almost half of students enrolled in first year biology have no biology experience (Burke da Silva & Hunter 2009). This means that for many biology students their first laboratory will be in an unfamiliar environment and they will have little or no previous experience to draw upon. Research suggests that students who are less prepared for life at university are less likely to adjust to the tertiary learning environment than their peers who are well prepared and whose expectations align with reality (Jackson et al. 2000, Scutter et al. 2011).

Among the various issues faced by students’ transitioning to university, and recognised as one of the most common problems emerging in higher education, students are increasingly reporting feelings of anxiety and overwhelm impacting their university studies (Conley et al. 2015). Evidence suggests that a variety of aspects of students’ self-esteem contribute towards academic success and that positive self-perceptions can reduce the impact of this stress (Conley et al 2015). Anecdotally students have reported to teaching staff feelings of anxiety relating to attending large laboratories and a lack of understanding of what is expected. Anxiety levels in students have been shown to significantly decrease following a video simulation experience prior to the start of learning (Megel et al 2011). With these factors in mind, The Virtual Toolkit comprised of a series of videos designed to assist students to prepare for attending their laboratories and included information such as clear maps and directions, preview of the teaching space, resource and equipment requirements. Additionally, students from previous years described their experiences and tips on how to succeed. The Virtual Toolkit was made available one week prior to classes starting in both 2015 and 2016 via the University online learning system. In 2015 and 2016 an end of semester anonymous survey was used to ascertain student perceptions of the usefulness of the Virtual Toolkit. Out of 734 respondents 71% of the cohort reported watching the online videos and half indicated improvements in their confidence to attend laboratories.

Open responses highlighted the perceptions of improved confidence:

- “It helped my confidence increase and I felt more relaxed before I started lab class”.
- “I learnt that I am not the only one that is confused about my first year of biology and that if I need help there is support”.

Thus, commencing students have benefited from the virtual experience of the real learning space as it allowed them to align their expectations of their new learning environment with the real experience of participating in the first year biology laboratories.

Keywords
student preparation; student confidence; large classes; transition; virtual simulation

REFERENCES
Personal, academic and social outcomes of inclusive higher education for students with intellectual disability.

Fiona Rillotta & Lorraine Lindsay Flinders University

Background
Despite policies such as the Disability Discrimination Act, in Australia, people with intellectual disability (ID) are less likely to move into post-secondary education than their same age peers without ID. Inclusive higher education for people with ID aims to overcome marginalisation and create educational opportunities that are the norm for other young people without ID. Relatively few supported opportunities are provided for adults with ID to attend university in Australia; however, several colleges (universities) in the US, Canada and Europe have been including people with ID since the 1980s. Outcomes of inclusive higher education for students with ID reported in the literature include personal, academic and social development such as improved communication skills, self-confidence, growing independence, topic knowledge, and developing skills for employment. The Up the Hill Project (UTHP), a program at a South Australian University, has been facilitating inclusion of people with ID at university for over 16 years. Students with ID audit topics supported by peer mentors.

Method
This qualitative study investigated expectations and experiences of students with ID (n=4) participating in an inclusive university program (UTHP), as well as the perceptions of their peer mentors’ (n=6). A pilot case study of a student with ID undertaking a practicum placement was also explored. Participants provided insight to their experiences of: skill development, inclusive practices, mentoring relationships, and self-determination. The research also investigated characteristics of participating students since the program’s inception. Semi-structured interviews, thematic analysis, and descriptive analysis were used to collect and analyse data.

Results
More than 30 students (aged 19-66) have participated in the program, and have chosen various topics including history, visual arts, computer science, and disability. Four major themes and several subthemes were identified by students with ID and mentors including: Self Determination (e.g. increased self-confidence/independence); Social Development (e.g. enhanced social networks); Intellectual Development (e.g. knowledge of chosen subject); and Inclusive Practices (e.g. amongst peers and university staff). Further knowledge and understanding of the capabilities of people with ID, and about inclusive practices is required for the broader university community. Future research needs to explore: how students with ID transition to university like their peers; what students do after graduating from the program; and the facilitators and barriers for students with ID to undertake formal university qualifications/degrees.

Conclusion
People with ID can develop personally, academically, and socially through meaningful involvement in an inclusive university. Higher education facilitates more than just academic qualifications, it also provides opportunity for personal and social growth and development.

Keywords
intellectual disability; inclusive higher education; social inclusion; mentoring; auditing

REFERENCES