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Adelaide, Nov 27-30, 2016

Proudly Pragmatic: Steps to Online Curriculum Transformation

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Students of today 'live' in a world shaped by the World Wide Web with its instant access to information and resources and range of technologies and social media. Following the University's digital strategy, this case study explores the choice of online learning tools that transformed its previously face to face class teacher focused layout to an engaging digital format. This case study outlines how the online tools and processes were chosen to meet the needs of the mature adult learners who are completing subjects in the Masters of Project Management (MPM). The curriculum transformation work required the development of digital learning resources, information communication technologies and new teaching strategies, to provide a more digital and responsive learning environment for students enrolled in the online course. The focus was on not only retaining students, but also ensuring that we were using technology to creating value and relevancy to our users.

Keywords: Adult learners, asynchronistic learners; curriculum transformation, online learning

Introduction

Students of today 'live' in a world shaped by the World Wide Web with its instant access to information and resources and range of technologies and social media. With the advent of the internet and advances in technology, *'traditional approaches to learning are no longer capable of coping with this constantly changing world'* (Thomas and Brown 2011, cited in O'Connell 2014, p201). They are creating a new culture of learning with an active and participatory learning environment, which as Moulton et al. (2016) outline, is being reshaped in terms of content and 'location' and by the participation of both the lecturers and students. This new learning environment means universities need to review their current curriculum and that lecturers/tutors need a set of professional competencies to deliver this curriculum via new pedagogy.

UniSA, like most higher education institutions, needs to be competitive and the UniSA's Strategic Plan, 'Horizon 2020' (UniSA 2010), and accompanying five year (2013-2018) Strategic Action Plan 'Crossing the Horizon 2013-2018' (UniSA 2013), were developed to respond to the need to design and deliver a curriculum for this new learning environment, one which repositions the students as active within their education, thus addressing the needs identified above. UniSA's adoption of technology and the digital learning opportunities it offers students, is enacted in its 'Digital Learning Strategy 2015-2020', which is shaping the direction of curriculum design, innovation and staff renewal in digital learning. It is a responsive document which aims to address the needs of current students who are increasingly mobile, both in terms of programs of study and location, who have access to information and technologies and who want flexible learning opportunities (Dawson 2015). These are the very students that are enrolled in the MPM program. The leadership of this program has embarked on its curriculum transformation over the last 3 years, primarily in response to their desire to provide students with a relevant quality curriculum that will enable them to apply it to their work as Project Managers. Consideration of the potential of falling enrolments as more higher education institutions began to offer these programs online, was an added consideration for our curriculum transformation process. The course offerings had been taught as face to face classes or online, both with pedagogy that was very facilitator centered, rather than student centered. The early online courses were 'static', with limited reproduction of on-campus course videoed lectures and PowerPoint slides. They were used as information repositories (Merrill 2003) with little or no interaction, and a traditional one-way lecture focused delivery. The new definition of 'digital learning' guiding this curriculum work is very different in that it sees courses as a pedagogical practice which incorporates the use of technology to support the learning process and with delivery being online, blended, a hybrid of both and also incorporating the use of mobile devices (Dawson 2015).

The curriculum transformation work required the development of digital learning resources, information communication technologies and new teaching methodologies, in order for us to provide a more digital and responsive learning environment for students enrolled in the online courses. These courses are located and accessed via the *learnonline* learning management system of UniSA, which provides an integrated suite of tools, management and support systems that encapsulates the teaching and learning environment at UniSA. Work on this curriculum transformation program is addressing the requirements of the 'Digital Learning Strategy 2015-2020' with its focus on digital learning innovation, specifically Strategic Priority #1 'Delivering an engaging and digitally enriched curriculum' (University SA 2010) and reflects O'Connell's (2014, p.209) conclusion:

> Learning in a digital age requires practitioners who understand education imperatives in local and global settings, and who can demonstrate an agile response to novel technologies that may catalyze learning. Both technical and pedagogical innovation should be hallmarks of the best learning environments we can create, and which incorporate a wide variety of pedagogical approaches, learning tools, methods and practices to support students' diverse learning modes.

Lessons Learnt from the Literature

Learning from other developers of online courses and the researchers provides a good insight into what makes a successful online higher education. The success of an online course can be measured in many ways. Retention rates were originally considered a key indicator of the success of an online course, while other researchers have investigated the depth of learning or its quality, or they have focused on the need for online courses to be relevant to the needs of participants and the level of learning required. Below is some of the learning we have gathered:

Retaining Students
A higher number of students participating in online courses dropout than those studying in a face to face situation (Dietz-Uhler 2007). Research into why adult learners drop out of online courses has been a common theme over several decades starting with Bean and Metzner's student attrition model (1985) stressed external environmental factors as the reasons for nontraditional students drop out). Tinto's student integration model (1993) identifying the interactions of the student and his/her educational environment, that is, both social and academic integration, as key factors affecting the decision to drop out. Rovai's (2003) persistence model was informed by a review of previous frameworks and identified prior-to-admission factors and after-admission variables. Park (2007) revised Rovai's model and suggested that, '*factors such as course design strategies and learners' motivation should be prioritised at the course development stage in order to make the course participatory and interesting and keep learners engaged*" (Park and Choi 2009, p215), and the application of technology is a key part of this.The more recent studies such as Khalil & Ebner (2013) highlight the high dropout rates in the Massive Open Online Courses (MOOCs) and through their literature review of contemporary articles, suggested: providing students with more flexible timetables; promoting the student completions; enhancing "student to student "and "student to instructor" interaction; and increasing student online learning skills, would improve retention rates. These support strategies to assist students in their study were also identified by Anderson *et al.* (2011) in their study of identifying dissonance in distance learners.

Not Technology for Technology Sake
'*The evidence is that technologies and social media platforms are driving an unprecedented reorganisation of the learning environment in and beyond schools and tertiary environments'* (O'Connell 2014, p202). Billings (2005) examined the differences in student perceptions of the use of technology, educational practices, and outcomes between undergraduate and graduate students enrolled in Web-based courses. This study provided five recommendations: a need for better understanding of the differences between generations- the Gen-Xers, Millennials, and the next generation to come; understanding of students' expectations of eLearning; that developers need to accommodate a variety of instructional strategies in order to meet the different needs; there is a continual search for best practice and need to identify factors that facilitate the development of asynchronous learning communities. Recent studies have shown that students involved in asynchronous learning, supported by a familiar tool, resulted in greater engagement and academic outcomes (Northey 2015) while Gaumer et. al. (2010) found that adult learners potentially need additional technical support initially and structure in their digital interaction.

It is educational purposes and pedagogy, not technologies, that must guide the students understanding (Kirkwood 2005). The application of technologies to face to face teaching or static web-based teaching, should not be an 'additive approach' because the technology is available (Simpson 2008), rather the application of technologies should change the teaching experience for the better. Knowing about students' use of media, as well as their attitudes and experiences, can help teachers and instructional designers develop better courses and ensure students are provided a high quality and digitally rich learning environment. The use of the technology needs to meet the needs of the students in terms of their forthcoming professional needs, their profile as learners, their accessibility to the technology/internet, rather than the technological tool being the determinant of use.

Quality Matters

Design quality is increasing the focus of determining the success of a program using sound principles of instruction (Waugh 2011). Design strategies are considered important at the course development stage, with the making of the course participatory and interesting in order to keep the learner engaged (Merrill 2003; Park & Choi 2009). Dietz-Uhler (2007) took a different focus in their 2007 study looking at quality provided by rich interactive and engaging online learning experiences. This study nominated the following as essential for a quality course: Course overview and introduction; Clear learning Objectives and Competencies; Relevant assessment and measurement including self-assessment; Comprehensive material using video tutorials, slides etc.; Frequent learner interaction formally and informally; Sophisticated learning management systems; Effective learner support which is also accessible to students with disabilities, who are often overlooked by instructional designers (Merrill 2003).

Relevance

Some students adapt better to online learning than others, the success appears to differ depending on the subject areas and the type of student (Xu 2013). Wallace (2016) found that gender related factors impacted on the relevance of online course material to participants. 'Relevance' as a key variable for the online mature student, this includes the internal motivation encouraging the individual to remain in the course and '*can be achieved by designing a course that contains learning materials and cases closely related to learners' interests, experiences, goals'* (Park & Choi 2009, p215). This point demonstrated more recently and locally, by the University of New South Wales, 6th Guideline on Learning, which states: '*Relevance-: Students become more engaged in the learning process if they can see the relevance of their studies to professional, disciplinary and/or personal contexts, for example through linking learning experiences to the workplace or wider community'* (University of New South Wales 2015). Relevance also includes the mode of delivery, which should match the needs and learning requirements of the students. Students are increasingly time poor (Stafford 2011), with mature-age students often sandwiching their studies between work and family commitments. To balance these demands, they tend to make deliberate choices that consciously reduce their involvement and engagement to critical assessment-relevant activities, even if these decisions reduce their learning opportunities. The like to fit their learning between their other work/life and so prefer asynchronistic learning, but online learning is more than a means to just accessing information (Garrison 2003).

Learning Community

We are social animals and we often learn best from and with others. Course development aimed at an asynchronous online learning cohort, needs to also provide a collaborative learning experience, at the convenience of the individual. That is, the student wants to be both interactive and independent. Definitions of 'engagement' have evolved over time, the authors of this paper use the definition provided by Northey (2015) as a 'personal-level, behavioural engagement'. A sense of community, where students work collaboratively to solve problems and gain an understanding of course concepts, this is important for online learners and assists a rewarding learning experience. Prior research has indicated community interactions reduce feelings of isolation in online courses and promote positive student outcomes (Schwiebert 2008; Thomas & Mengel 2008). The use of group work and open discussion forums are considered a critical feature of any online course. Figure 1 provides a visual representation of our thinking on which we based our transformational approach.

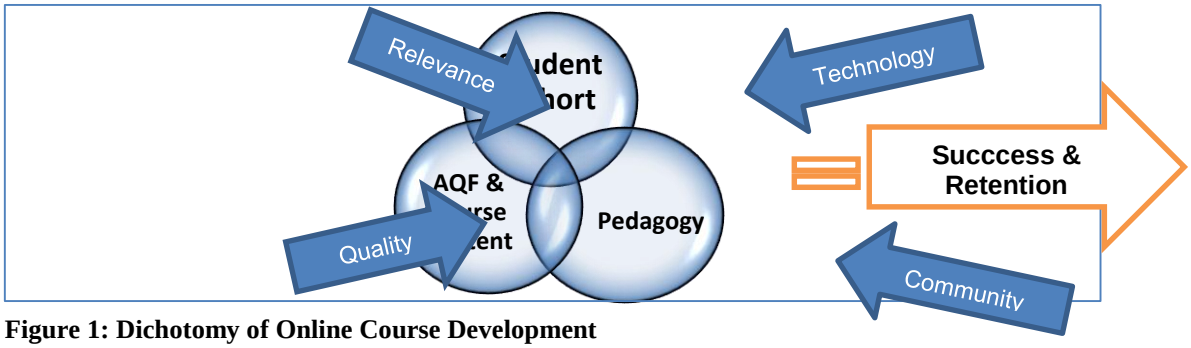

Figure 1: Dichotomy of Online Course Development

Our Students

Given the lessons learnt above, our aim was to provide a quality education experience with careful attention to course design and delivery so as to achieve the desired high level learning outcomes and meet the needs of adult learners in the online learning environment. In summary the MPM curriculum redevelopment process therefore was to engage students in their learning, increase their success and minimise withdrawal by:

1. Designing a *quality* MPM course incorporating the essential elements nominated by Dietz-Uhler (2007) and which develops their academic and research skills.
2. Ensuring the curriculum meets the AQF Level 8 & 9 standards and is more *relevant* and applicable to contemporary Project Management (PM) adult online students through both content and assessment which recognizes the characteristics of the learners: asynchronistic, mature/experienced adult learners, time poor and familiar technology.
3. Developing and using a range of *digital learning technologies and strategies* to enrich the curriculum and enhance relevance and to engage the learner (Hendel-Giller 2001)
4. *Developing a learning community* by providing opportunities for them to express their experience and relate it to the curriculum material, their peer group experience and knowledge.

The intention was to shift learning from the locus of responsibility of the course coordinator/lecturer towards the student. The student then takes on more of the responsibility for their own learning while the course coordinator/lecturer provides the boundaries of knowledge from which they can draw. Recognising the importance of course design and student motivation, we endeavoured to create an effective online learning course and platform for our students using a range of digital learning resources and organisational (including technical) support, in order to '*make the course participatory, interesting and keep learners engaged'* (Park & Choi 2009, p215). To do this we needed to include in the picture a good understanding of our student cohort and what made them unique, what was relevant and what level of academic content was required.

Australian Qualification Framework (AQF) and Course Content

Our courses and their content have also to meet academic requirements of the AQF and the industry professional associations and employers. PM education is criticised on two fronts: firstly, quality of education provided and secondly a lack of appropriate education to meet the complexity faced by project managers. Berggren (2008) suggested that better experimental learning was required by PM students and could be done by the use of more reflective reports, more exposure to research findings and by improving integration of actual practice into courses. Graduates at the masters level of study are required to 'have specialised knowledge and skills for research and/or professional practice and/for further learning.' (AQF 2ed. January 2013, p9). These courses are at AQF level 8 & 9 and graduates are expected to develop; specialised knowledge and skills; advanced and integrated understanding and expert, specialised cognitive and technical skills in a body of knowledge or practice; demonstrate autonomy, expert judgment, adaptability and responsibility. In terms of Bloom's Taxonomy, these higher level case studies will be used to 'Analyse', 'Synthesis' and 'Evaluate' real PM scenarios (Krathwohl 2002).

Characteristics of MPM Student Cohort

The students come from a diverse range of industries bringing with them extensive professional experience and skills in a specific area. PM at the post graduate level attracts students with an existing professional undergraduate qualification, including, but not limited to, construction, health, defense, facilities management, resources, humanitarian or event management. PM also attracts students who have extensive PM experience but who have no formal qualifications in the area and are now seeking to gain their credentials through online learning. This makes it difficult to engage both spectrums of students without patronizing either group. There is a greater diversity in the online student body of today than ever before with universal access to the internet and the development of on-line material. This diversity includes when work is done (Fly in Fly out; shift work, open business hours etc.), the location of that work and the time zone occupied. Of the 2015 UniSA MPM program student cohort, only 5% were from overseas; the remaining students were from different states of Australia. A large proportion of the students worked remotely or overseas. This means different time zones as well as different work schedules, different band widths and internet access. Asynchronous online learning offers a unique environment in which students differing learning styles need to be considered and managed (Clark 2012) and any learning tools used for synchronistic learning cannot be used, so learning tools need to meet the needs of asynchronous learning.

Pedagogy for MPM Students

The group of students targeted for this redevelopment of online MPM courses are typically over 40, therefore falling clearly into the category of adult learners and 'non-traditional' (Park & Choi 2009; Milman 2016). It is this demographic that the post- graduate studies attract as indicated in the Figure 2.

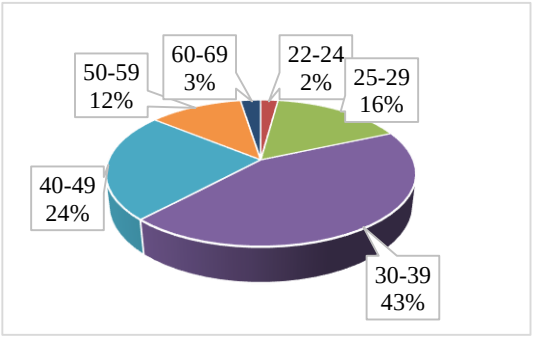

Figure 2: MPM Enrolment data 2015

Knowles (1980) developed the term 'Andragogy' to identify adult education and pedagogy. Providing direction on how to teach adults effectively, Knowles (1984) suggested the following:

- Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life
- Adult learning is problem centered, rather than content orientated
- There is a need to explain the reasons specific things are being taught (e.g. certain commands, functions, operations)
- Instruction should not be about memorization but instead task-oriented. Learning activities ought to be in the context of common tasks to be performed by the others.
- Instruction should take into account the different backgrounds of learners. Learning materials and activities should allow for different types/levels of previous experience with computers.
- Since adults are self-directed, they obtain knowledge without depending on people thus instruction should allow learners to discover things. Adult learners should be provided guidance and additional help when mistakes are made.

To these adult learning premises, the team undertaking the curriculum redevelopment drew on the following learning theories:

- *Constructivist learning* theory, which places the learner as an active agent in the construction of their own learning/knowledge (Kelly, 2012; SACSA, 2001). Learning is seen as an active process, so students need learning activities that ask them to apply the theory/concepts/knowledge, that encourage problem solving, exploration, the use of higher order thinking skills, as well as structures/ opportunities to develop reflection/ awareness of their own learning/progress (Atherton,2013). In addition, cooperative learning, problem-based learning and the use of case methods and simulations are approaches that promote active learning (Reidsema & Kavanagh, 2014).
- Neuroscience learning theories, which encompass, cognitive science and psychology have provided insights into how the brain works. These learning principles and strategies provide educators with the knowledge and skills to engage and motivate students and assist in their learning and retention (Hendel-Giller et al. 2010).

Application to our Case Study

The developers therefore wanted to develop new technological approaches, learning materials and activities related to the learners' interests and experiences including the use of visuals, stories, novelty and humour, with a view to creating the emotional pull that Hendel-Giller (2001) identify as an effective strategy to engage the learner with the content. *O'Connell asserts that the 'digital information environment demands a new knowledge flow between content and digital connections … (and) educators (need) to understand information seeking and engagement within connected multimedia contexts' (O'Connell 2014, p202).* Our approach to curriculum design also acknowledged that our students are from industry in technical and operational areas, learn best through applied learning and are resistant to heavily text-based learning methods and academic research.

Student engagement is a focus for educators as there is a well-documented association with deep learning and educational outcomes. Each course presents its own challenges and issues but it is hoped that the course design we have adopted across the program in our redevelopment with will meet the diversity of the MPM student cohort, their technological learning needs and skills of the range of generations, while the asynchronous delivery and flexible timetables will result in greater student engagement and academic outcomes as identified by Billings (2005); Northey (2015); Garrison (2003) and Khalil and Ebner (2013). The 'organizational support' seen by Park and Choi (2009) and Merrill (2003) as a significant factor in the retention of their mature online learners' is provided in each course with clear learning Objectives and Competencies; relevant assessment; comprehensive material using videos tutorials, slides; frequent learner interaction formally and informally via weekly Discussion Forums promoting a sense of student community; sophisticated learning management systems, the Learnonline system which can be accessed by the student as required and ebooks which allow for regular updates and posting of new links and provide structure to the learning experience and the students' digital interaction (Gaumer et al. 2010). These elements have been designed and included in order to provide effective learner support and address what Dietz-Uhler (2007) identified earlier as essential for a quality, interactive and engaging online course.

The MPM courses are being transformed by extending the suite of tools that currently support teaching and learning at UniSA in learnonline in the existing MPM courses with the aim of increasing students' motivation. In addition, new digital learning resources and material, other interactive tools and techniques (Ispring, Videoscribe, Articulate Storyline, interactive surveys etc), are being used to develop to present contemporary project events and situations, through the development of scenario case studies and demonstrations, often using 'gamification' elements. This is a process of continual improvement, with new digital resources being developed as the curriculum transformation process continues. New tools are constantly being created, old interviews will be superseded, and topics of interest will change as we keep up to date with the academic developments in the area. The process of enhancing digital material requires a collaborate approach. The course coordinators as subject experts are vital in ensuring the courses are relevant meet the level of the academic quality required, but they also have to radically alter their skill mix and practice. This has required them to adapt to the new formats and approaches, and they have s willingly committed their time to work with educationalists and a range technical people to develop these digital learning tools and develop their teaching skills for their delivery.

1. ***Structured and visually appealing format with a consistent structure across all subjects including: Course overview and introduction; Clear learning Objectives and Competencies***
   The first step of the digital transformation was to enhance the appearance and professionalism of the course websites. There were several stages of this process. Firstly, we employed a graphic designer and educational designer to develop a visually appealing and professional appearance for the course. This template was developed across all courses and was varied slightly to signify that a course was at what level in the program: Graduate Certificate, Graduate Diploma or Masters. Not only was this template better structured, more visually appealing and engaging, it also enabled students to become familiar with the program structure, so that as they moved from one course to the next there was less uncertainty and confusion. The second stage involved working with course coordinators on developing appropriate academic objectives for each week to ensure that there was appropriate scaffolding of the learning throughout the course and that the appropriate level of learning was achieved as per the AQF. Short 5 minute video clips were developed for each week to inform the students of the learning outcomes and activities for the week. This also enabled students to put a face to their lecturer, thus making the course less impersonal.

2. ***Scenario Video Case Study and Discussion***
   It was decided to develop a new digital learning resource for this important foundation course in the Master's degree, 'Principles of Project Management'. This consisted of a 13 episode case study comprising a series of videos, along with supportive learning materials, based on the relocation of a fictitious zoo (Mawson Zoo). This course provided a learning environment where the project could evolve over each video episode, demonstrating the application of PM methodology with reference to the PMBOK Manual, which was then tied into the learning outcomes for the course and the assessment tasks. Accompanying each episode is a set of discussion questions based around the scenario and exemplifying the material covered for that session. To support the episodes, forum questions and authentic learning materials have been developed so that the student can interpret and apply their learning. These materials include: scoping documents, standardised PM templates, and a strategic plan. Online discussion forums provide a way for students to converse and demonstrate their own understanding of content and how PM methodology can be applied. A key element of the development of these learning resources, was the involvement of a diverse team of academic, professional and technical staff who each provided important contributions to the project's success. These included academic staff with content expertise, professional staff with teaching and learning pedagogy expertise, technical staff with extensive video production experience and a team of volunteers that comprised academics, adjunct staff, PhD students and researchers. The project was exceptionally collaborative and generated significant "buy in".

3. ***Interviews with Industry Experts***
   The intention here was to provide relevant examples and topical issues that would create interest and assist learning. A number of video interviews were developed; including those of experienced project manages on different topics such as: executives making explanations of their decision making and leadership style, project managers on project sites explaining work experience and recent graduate reflections. Most of these were short vinaigrettes with students being asked to either reflect on some aspect of the video as it related to their course work, or respond to a question. These provide contemporary examples of what is happening in industry and why the course material is relevant to their future as project managers.

4. ***Demonstrations with Gamification Elements***

The UK Association for Project Managers (APM, 2014) describes gamification as, "…*the use of game design element, game thinking and game mechanics to enhance non-game contexts*" (APM 2014, p 9). Davis (2014) describes it as "*applying typical elements of game playing (e.g., point scoring, competition with others, rules of play) to other areas of activity*, to engage and motivate learners to help them achieve their goals. Research undertaken by eLearninginfographics.com (2014) identified the most effective uses of gamification in Learning as: illustrating progress; increasing engagement; creating challenges and instilling a sense of accomplishment. Games have the capacity to be a learning strategy which enact experiential, constructivist and social learning theories, as well as supporting what we know about learning from neuroscience, especially creating engagement and heightened emotion (APM, 2014; Pandey 2015). They use the same mechanics that bring out people's natural desires for competition, achievement, status, self-expression, altruism and closure when faced with a real-life situation in the form of a game (wired.com, 2014). Games provide opportunities for experiential learning and Pandey (2015) believes gamification aids learning and retention through repetition of content, engagement and the opportunity to learn the content and skills required for the job within a safe environment through real-life situations and challenge. However, the UK APM Guide suggests that when designing the use of gamification in an educational course, that consideration is needed as to which elements are transferable and appropriate.

The second course in the foundation level of the MPM, is 'Project Control Methods'. Online game development can be very expensive, so due to funding availability and the skill level of the course developers, we chose to incorporate gamification elements into the demonstration of the key concept of "The Critical Path Method', a topic within this course, rather than develop a full on game. The existing set of PowerPoint slides were transformed into an interactive learning demonstration using Articulate Storyline software and elements of gamification, with the 'commentary' as a voice over. The developer opted for Pandey's Approach 2 (2015) as we integrated game mechanics into the content of the demonstration session with students being required to undertake in-session activities using 'drop and drag' technology to solve the problems and discover how to construct a Critical Path for a project and accompanying timeframes. It was hoped that these gamification elements would encourage students to continue through the content because it motivated them (Pandey, 2015). This learning was then applied to a real-life project and problem (relevance), the building of a velodrome, thus meeting the needs of both PM students and adult learners (Knowles 1984) and is an application of constructivist learning theory (Kelly, 2012; SACSA 2001). The course was delivered for the first time in the current Study Period, so evaluation data is limited at this present time. Plans are also underway to develop further serious game activities.

5. ***YouTube clips and other online examples***

In addition, access to publically available videos/demonstrations/simulations were sourced from either the WWW or via commercial academic sources. Speeches by leading thinkers in their field such as Michael Porter, or topical cases that appeared in the media, such as News Reports Census 2016 (in Project Risk management) were added appropriately to provide contemporary and topical interest. These resources were added to all courses to create interest and again to demonstrate application of course content to the 'real world'.

6. ***Quiz***

Quizzes are often used to test student understanding of content, and if used extensively, are appropriate to also assess understanding of specific content and skills, thereby providing information to the course coordinator of how effective the course is. In this post graduate course quizzes were used more as a tool of revision or as a mechanism to reinforce key learning. They also created some variation and interest to the course.

7. ***Open Discussions Forums***

Mature aged students like to give their opinions, this was encouraged in all courses. In true academic fashion, these courses sought to make students substantiate their opinions and validate their interpretations with references and supporting documents via the discussion forums. The forums in our courses were often based on topical questions or examples of contemporary issues in the field of PM that created conflict and argument, and lead students to make their comments based on the literature/ readings within their topic/course. This resulted in large amounts of forum postings from the students and quality discussions which had previously been missing from these courses.

8. ***Weekly/topic Ebooks / s***

Electronic books were developed to provide a student study guide, as well as to provide the boundary for learning for each week. These books were well presented and desktop published and were available for printing. In addition, notes linking to topical and interesting sites were provided to demonstrate contemporary issues and provide a context for the weekly content.

9. ***Supporting Systems: Library and On Line help***
   As many of these adult students have entered this program after a long gap working in industry or have minimal formal academic skills, the support services provided by the university have proved critical to student success. Writing skill support was particularly relevant to student s who has not undertaken tertiary study before, for those from technical backgrounds. The course websites were designed to connect to the university support systems for students, with resources and courses to assist students in learning to undertake academic writing, referencing, IT help or their wellbeing. These online services are being used extensively in the initial stages of the students' academic career.

Evaluation

Evaluation of the success can be measures in a number of ways. Data on rates of retention and the number of students who decide to continue their studies to a higher award are still being collected but initial findings indicate that both of these are moving in the right direction. Typically, in 10% more students to withdraw this rate appears to be dropping to less than 5% and lectures report better student engagement. It is difficult to assess the success of the application of the new digital learning tools and strategies via student response to surveys as student opinions of the course is influenced by a large number of things including their interaction with the lecturer and other factors relating to the student themselves (e.g. their abilities, time pressures, expectations). However, the following question was asked of students in the university student evaluation survey MyCourseExperience '*Overall, I was satisfied with the quality of this course'* which provided the following:

Table 1: MyCourseExperience Ratings

Course	Mean Value Before	Mean Value After	Typical Comments
MPM 418	-8.33	62.5	This unit was awesome.... Weekly lecture information, particularly links to TED talks, were very useful for me. Very interesting topics and utilised current world events Overall the intensity in which the content was delivery. It was fast paced, the workload was intense and kept you highly engaged at all times. This was a course that was well researched and delivered.
MPM 417	28.12	50	Variety of course material - videos etc. Lots of good notes and scope to make assessment submissions own. I think this course has been excellent in my development as I was able to relate it to real life situations and to the behaviours of management at the workplace.
MPM 411	48.33	63.64%	The course structure was designed well and intuitive. I found the weekly tasks challenging and useful.
MPM 414	7.14	33.33	Fantastic variety of questions with emphasis on demonstrating ability to apply the theory, not necessarily regurgitating the theory itself. Variety of content (videos, reading, application) available Very good, good solid learning material.
MPM 413	48.15	73.08	Well-presented and excellent content. I totally enjoyed the course. The content clearly reflected the required outcomes and deliverables of the course. The tools and techniques will be very helpful in the future and I look forward to implementing the learned processes into future projects.

Qualitative comments by students have also provided some good insight into the success of the transformation. The 'Scenario Video Case Study and Discussion', was introduced in 2016. The success can be assessed via improvements in the now familiar comments of student statements in MyCourseExperience such as:

- 'The Principles' subject with the Mawson Zoo videos is a fantastic introductory subject. The forum exercises were practical and helped to contextualise the coursework in a project context that was very relatable. The effort put into this production was well worth it.
- The Mawson Zoo videos were fantastic. The forum questions were relevant and practical and assisted with learning.
- Using the "Zoo" as a live example with the video clips made the course very real. I thought the actors were brilliant. Stepping through the various stages of the project and working through exercises as we went helped to consolidate the concepts
- I really enjoyed this course and I thought that the format of online delivery was really effective and made it so flexible and easy to learn at my own pace and timetable. I thought that the weekly activities were really good, but I would have preferred if they weren't all assessable every week.
- The weekly film clips were very, very helpful, very professional and helped an enormous amount to put the weekly readings into context.

- I believe the weekly units covering a project from a real world perspective were of great assistance when comparing them to my own experiences professionally. It made it simple to relate the process to my current role.
- The weekly video scenarios helped very much to provide context to what would otherwise have been very academic material.

Further evaluation is continuing in successive deliveries of the course and plans are being developed to extend these foundation course digital learning resources to subsequent courses in the program.

Conclusion

The course developers firmly believe that the use of online technology cannot ensure that effective and appropriate learning outcomes are achieved and that the students engaged as a *community of learners.* Rather, the use of the technology needs to meet the needs of the students in terms of their forthcoming professional needs, their profile as learners, their accessibility to the technology/internet, rather than the technological tool being the determinant of use. In our attempt to design quality courses these we followed Waugh's (2011) 'principles of instruction' and incorporated many of the elements Dietz-Uhler (2007) determined as essential for a *quality digitally enriched*, interactive and engaging online course, thereby supporting Kirkwood's (2005) belief that educational purposes and pedagogy, not technologies, must guide the students' understanding (Kirkwood 2005). These redeveloped courses make '*relevance*' and '*application*' key features of the online learning activities and assessment tasks, with the focus on experimental learning through the integration of actual practice into courses, thus improving existing MPM courses, as suggested by Berggren (2008), encouraging learner motivation and hopefully reducing their dropping out (Park & Choi, 2009; UNSW 2015) and meeting the standards of Level 8 and 9 AQF courses of study. The students enrolled in this MPM program are mature-aged, problem-based learners, professionals who are time poor due to work and family commitments and require learning to be asynchronistic, thought-provoking and relevant. The application of *digital tools and software* can work well with this unique group as recent developments in digital technology impact on the work and personal lives of students today. We will continue to focus on what suits our students, their learning needs and the industry and best practice (Billings 2005), as we redevelop the remaining suite of courses within the MPM program of study. As our own knowledge, skills, confidence and professional competencies with digital technology grow, so too will the range of digital learning strategies we may consider and use in our courses, in order to meet the needs of our learners and the curriculum within program.

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Please cite as: Jepson, J. & Moulton, D. (2016). Proudly Pragmatic: Steps to Online Curriculum Transformation. In S. Barker, S. Dawson, A. Pardo, & C. Colvin (Eds.), *Show Me The Learning*. *Proceedings ASCILITE 2016 Adelaide* (pp. 283-293).

Note: All published papers are refereed, having undergone a double-blind peer-review process.