**Research Paper**

**On-campus or On-line – best practice learning resources making the difference**

**Abstract**

This paper outlines a whole-of-course pedagogical approach to the design of learning materials for on-campus and on-line delivery that seeks to minimise anxiety and develop efficacy in both academic staff and students. This is achieved through focus on clear guidelines for engagement in learning; comprehensive and consistent pre-recorded lecture materials; virtual tutorial support; and the development of communities of practice for both staff and students engaged in virtual learning and teaching. Over a three-year period, this approach has been taken to the re-design and development of the Bachelor of Communication program at Western Sydney University. In this paper we describe various aspects of this model and reflect on its implementation.

*Keywords:* online pedagogy, andragogic and constructivist learning models, communities of practice, efficacy in teaching and learning, capacity building for online learning

**Introduction**

This degree offers the same content to on-campus and on-line students. The difference is in the offer of either campus-based or virtual tutorials; and the types of community interaction – either on campus or through virtual contact associated with the learning and teaching. Working with a collaborative academic and blended learning team, the learning design approach has been implemented across a diversity of program content. Regular online tutor support meetings for sharing practices have been vital in the development of the project. A key feature of the approach has been the development of ‘lecture pods’ – short 7-12 minute segments that are linked to resources and weekly activities, informing assessment tasks. The work done by academic staff to pre-prepare these materials for uploading has been achieved using best practice information design principles for content display on a range of digital devices.

While individual units and teaching styles across the program may vary in their delivery, the overall approach for the on-line delivery in virtual tutorials is underpinned by in-common clear and accessible rules of engagement for both staff and students, to simulate best practice learning and teaching, supported by structured digital learning materials. As well as the lecture pods, these include e-Workbooks, modularised weekly content on digital learning sites, and closed social media sites. This approach seeks to encourage the development of communities of practice, through shared and group student work in breakout chat rooms and online discussion sites, plus an expectation of pre-class preparation. Learning design features include clear guidelines for taking part in the virtual tutorial; short instructional videos about using the tutorial technology; and in providing recordings of relevant sections of the weekly tutorials for students to view.

As shown by student feedback so far, these resources have helped the online students adapt to the virtual learning context, providing a space for learning that is clearly defined in terms of expectation and process about how the learning will take place, and what is expected from them. For staff, having been through a process of scripting and pre-recording their lectures into the smaller segments as lecture pods, has also significantly reduced their performance anxiety of delivering lectures in real time. Whilst there may be a loss of spontaneity as a result of the pre-recorded nature of the lectures, there has been a significant increase in viewings by both on-campus and on-line students of these online lectures materials. In addition, student presentations online are increasingly being pre-recorded for viewing in the virtual tutorials, to minimize their anxiety around the potential for technology mishaps in online tutorial assessment sessions.

**Background to the project**

The project commenced in 2013 in response to a strategic priority of Western Sydney University to develop flexible learning models. The Bachelor of Communication was the first course at the University to be developed as a hybrid model where students could opt, on a subject-by-subject basis, to study face-to-face or online. In order to achieve the required outcome it was necessary to simultaneously develop a capacity-building program for academic staff while transforming the delivery of learning and teaching for the online environment. To achieve this required resolving the challenges identified by Yang and Cornelius (2005:5) in changing the pedagogical approach to constructivist and andragogic, which changes the dynamic between teacher and student.

The andragogical approach focuses on fostering relationships and reflective engaged learning through real world problems and prompt, formative feedback to support self-directed learning. In addition, instructional design must emphasise clarity and consistency and be delivered in flexible ways. Expectations are clearly defined, facilitating the student’s progress through the materials. This must be supported by appropriate technology including multimedia and online tools. The constructivist approach emphasizes scaffolding of learning and collaboration between students. We use many forms of collaboration to synthesise these two key aspects, across both development of learning materials, and reflection on learning activities. This is important in online learning where learners must be self-directed, self-motivated and peer supported.

The combination of andrgogic and constructivist approaches also encourages students to apply and test learning through “real world” interactions, as part of a broader social learning environmental context of other students and staff. Habib et al (2016) argue that a combined constructivist and andragogy focus in online learning enables the role of the teacher and the role of the student to be understood differently from traditional didactic and Socratic approaches in higher education. Collaborative learning is more likely to be exploratory, dialogical and socially interactive and to capitalize on knowledge networks. This student-centred approach seeks to build experiential learning, through student engagement with an innovative teaching and learning platform that meets the learning outcomes of individual subjects, as well as course-wide graduate attributes.

**Capacity building for faculty**

Johnson et al (2015), Wilson (2007) and Williams et al (2011) stress the importance of building the capacity of academic staff to develop a sense of efficacy in the new environment. In the project at XXX University, the primary influence was the framework developed by Wilson (Figure 1).

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| **Wilson Framework (2007)*** Communicate the academic advantages of innovation in T&L;
* Demonstrate the compatibility of innovation with current practices;
* Assist academic staff to acquire technical mastery and understanding of pedagogy
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*Figure 1.0*

In addition to sharing the outcomes of scholarship into best practice in online delivery, academic staff accustomed to lecture and tutorial modes of delivery, needed time for reflect on and reconsider their pedagogical practices and approaches. As Redmond (2011:1058) pointed out, this requires much more than finding technological means to replicate the approach used in traditional face-to-face delivery.

The provision of teaching relief to allow this reflection to occur emphasized the scholarly nature of this work, which cannot be provided by technical or curriculum advisors not deeply immersed in the discipline. To gain the required skills and understanding, academics needed an opportunity to innovate and fail, which takes time. The learning curve is very steep at the beginning so the work was completed much slower at the start. We asked innovative staff to present their work in School forums, articulate their process and reflect on its success. This “stepping through” process resulted in more staff seeing ways to develop online strategies for their own units. Demonstration and discussion has also proved to be the best way to bring academics to understand the different pedagogy required for online learning rather than blended learning. This aligns with best practice as articulated by Redmond (2011).

**Case Study of Online Learning Design as Collaboration**

What took place in the design development of this B Communication project reveals the importance of collaboration based on a strategic implementation of best practice for online learning and teaching. Drawing on selected literature we commenced our project as a highly collaborative engagement with our own learning, acquiring technical mastery and understanding of the pedagogy. We found that academics are much more engaged when they drive the organisation of content online, with technical support to realise their ideas. We assembled a team of academic and blended learning staff, discussing the various uses of technology and exploring options for the design of effective templates for the online sites. We saw that what was needed was a model for progressive learning activities, as a form of language to discuss the design of content into these virtual sites, that would assist academics in rethinking their approaches to delivering content, particularly content delivered by transmission. While Ellis & Goodyear (2010) focused on students’ responses to online learning and teaching to offer insight into curriculum development, Salmon (2013) presents a taxonomy of learning activities for online delivery with linked learning stages, (Figure 2).

Sending and receiving messages, support for online sessions

**2. Online socialization**

Supporting, responding

Providing external links

Conferencing, lecture pod production

Facilitating process

Technical support

E-moderation

Facilitating tasks and supporting use of learning materials

Increasing amount of interactivity

Welcoming and encouraging

Setting up system and access

Providing external links

Searching, personalizing software, updating online templates

**1. Access and motivation**

**4. Knowledge construction**

**3. Information exchange**

**5. Development**

*Figure 2. Based on Salmon, G. (2013) The five-stage model of teaching and learning online*

Adapting Salmon’s model was a key starting point for our initial collaboration, looking at how unit content could be adapted, developed, structured, and delivered for fully online. Each staff member was asked to draft a series of linked activities that aligned with Salmon’s five stages of online learning. Whilst this sat more or less comfortably with the staff team, it provided a focus for us to conduct our own virtual collaboration, as an online discussion, as a form of simulation of the online teaching experience. In this context, we were able to discuss each unit of study consistently across Salmon’s five learning stages, as a *process* of learning development.

What initially emerged from these discussions around learning as *process,* was a greater understanding about the overall importance of a constructivist approach for the design of student-centred curriculum for both face-to-face *and* online. In our approach, we were developing the same content, to be delivered concurrently in both modes, to campus-based students cohorts, and to a new group of fully online students. As part of the design of this approach, we utilized the same online content portal for both cohorts (Blackboard), requiring similar materials for both, but being able to accommodate the different modes of interaction as learning processes. In order to address this, we developed a new model (Figure 3) that lays out these similarities and differences across the scope of the learning design, to include all aspects of what was involved.

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| Macintosh HD:Users:k.shumack:Desktop:Screen Shot 2016-08-17 at 10.04.21 AM.png |

*Figure 3 Alignment of content platforms for face-to-face and fully online*

Whilst ‘Resources’, ‘Activities’ and ‘Links’ remain the same for both delivery modes, the key differences are located in ‘Interactions’ and ‘Community’. The alignment of the face-to-face/virtual tutorial in ‘Interactions’; and the social activities of campus/ online and social media spaces in ‘Community’ offers a framework for thinking through how to achieve some consistency in both these fields of learning design. This constructing of presence within the overall learning design is a key aspect of the holistic framing needed for self-directed learning.

By separating out these components of the learning design system as in Figure 4, and making a comparison with the face-to-face mode, our staff team were able to focus on the development of holistic approaches to the content as a body of material that could be effectively constructed for both cohorts, to include a variety of spaces for particular types of interaction, and community engagement around the resources, activities and links that were provided in the content portal. This approach is consistent with Lehman’s description of presence, as one that needs to be distributed *across* the spectrum of a learning design context, to encompass a holistic, andragogic experiential approach that engages the learner on multiple levels:

*Presence in the online environment, which also includes the social, psychological, and emotional aspects of our perceptual process, is the result of the dynamic interplay of thought, emotion, and behavior; between the private world and the shared world; and is rooted in the interactive perceptual process … To design an online course with a sense of presence, it is important to consider four types of experience: subjective (a feeling of personal and psychological presence in our mind), objective (a psychological and physical feeling of being in another location), social (a sense of existing with others in the online environment), and environmental ( the capability of having technical access and feeling integral to the online environment). These types of experience affect learning based on the course content and modes of presence. (Lehman 19XX:2)*

As we worked through the design development of our face-to-face and online learning approach as a team, we were addressing both processes of efficacy in learning through linked activities (Salmon’s model), as well as the need for attention to embedded presence across the learning design. This embedded presence needed to be reflected in all aspects of the design, in resources, activities, interactions, links and community. As Lehman describes above, this was to be a ‘dynamic interplay’ of ‘thought, emotion and behaviour’, drawing on the four types of experience. In this way, we understood the importance of designing online resources for both campus-based and online students that would be engaging, that were based on best practice information design, where human connection and knowledge could be transmitted meaningfully within the scaffolding of a learning management system (Blackboard).

On this basis, we began to explore the possibilities of short ‘lecture pods’ as a reworking of the longer form ‘lecture’ into a set of shorter video pieces that were linked thematically or conceptually, that could be produced effectively with limited support from the blended learning team. Our aim was to design inbuilt efficiencies and to streamline ongoing and sustainable production of quality video materials. This meant we devised a system that was accessible for all staff to access, with rules and guidelines around the quality of video capture, and the presentation of the materials into specific audience friendly formats. Staff were able to draw on this approach to creatively and effectively work with the blended learning team, as well as production from their own computers, using the guidelines we had developed.

We assembled a technical support team comprising a Subject Matter Expert (SME), an information designer, a programmer and videographer to assist with the production of these and other learning objects such as interactive maps and games.

The team developed a series of templates and tools to account for production of a full range of lecture pods. This included a step-by-process for academics to put together their work (Figure 3). The small studio, established in an empty academic office, was established to provide a consistent presentation to camera by fixing a camera, lighting, background, autocue and associated software. The use of a green screen approximate in this room allowed for a full range of backgrounds to be added in the editing phase.

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| **Some staff generated tools*** Using ScreenFlow video;
* Making Lecture Pods video;
* Group Manager - iPad app;
* Marking Template Generator;
* PowerPoint templates for lecture pods;
* SUNSET Tool instructional video;
* iPad assessment workflow videos;
* Standardised presentation for BlackBoard sites;
* iPad assessment workflow videos
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*Figure 3.0*

We found that academic staff are experienced presenters and most are able to address a camera confidently using an autocue with limited practice. However, to ensure the correct line of sight to the camera, correct lighting, framing of the image and appropriate background, it is much more time efficient to have a camera operator present. Similarly, post-production is most efficiently completed by a professional editor. The BL technical team developed sustainable and effective, transparent workflows for managing scaled-up lecture pod production, that required academics to attend recording sessions with only scripts and PowerPoint slides prepared. The final lecture pods produced as part of this approach have a design consistency that foregrounds the presenter within the screen space, seeking an engagement with the viewer through direct eye contact.

The information design of these video materials needs to be accessible on a variety of digital devices and contexts, whilst maintaining an element of engagement through an on-screen presence of the presenter, supporting students in feeling connected in a virtual environment. This is consistent with Lehman’s notion of presence as needing to engage with the four types of experience – subjective, objective, social and environmental. The availability of these lecture pods, where various presenters may provide a range of content, but all within a consistent and accessible screen format design with direct eye and voice contact, provides a consistency that encourages a sense of presence in online learning and teaching.

**Communities of Practice**

For the online transition to be effective, academics needed to not only be prepared to implement the new curriculum materials and practices but to also be able to do so with a strong sense of efficacy. Bandura (1997: 3) describes efficacy as an individual’s confidence in their ability to perform a particular activity. Efficacy then is the key factor in human agency, perseverance and resilience. An individual with a strong sense of efficacy does not avoid challenges and recovers quickly from failure.

As a result, the individual’s level of anxiety is reduced and their sense of personal accomplishment is enhanced (Bandura 1997: 2) There is a significant body of research around self-efficacy in online learning and teaching but this tends to focus on technical aspects of online learning (Alqurashi 2016). Just as important to our approach was engagement tools and practices such as interaction, collaboration and peer assisted learning.

Central was the development of a community of practice around the shared experience of making the transition from content delivered by lecture to content delivered online. There were four key factors defining this community:

* Collaborative academic and blended learning team;
* Regular online tutor support meetings for sharing practice;
* In-common clear and accessible rules of engagement for both staff and students;
* Communities of practice, through peer learning and group work in breakout chat rooms

The collaborative meetings provided opportunities for staff to share both successes and failures in their initial delivery of the online materials, and in sharing approaches to management of the online cohorts of students. This reflects a developing efficacy and confidence that came from regular shared experiences and a sense of experimentation that could be critically reviewed in a supportive way. In the lecture pod design, we sought to provide a consistency of design for the student audience; alongside opportunities for staff to customise their content as needed. Data analytics on the viewing of the lecture pods across the units is varied, but overall, we note the significantly high viewing results for these online resources. Students combine viewing lecture pods with online activities and discussion forums as well as weekly meetings like those the staff used whilst developing their content.

An added benefit of the online lecture content is the opportunities it provides for students as a form of remedial support.

*I found that the online only lectures were a very effective resource for my learning. As they were online, I could pause and play as I wished allowing me to copy down the notes and process what I’d just heard and also rewind back to a point I needed to hear again (Student feedback)*

The initial staff team meetings took place whilst we planned the introduction of the fully online course, reflecting on the Salmon model (Figure 3) as learning process, and developing our understanding of needing to work with both on-campus and fully online students to generate presence simultaneously, across the communication channels for learning and teaching, as shown in Figure 4. Each unit of study was being considered as a holistic set of linked resources, where weekly lecture pods informed tutorial themes and learning activities, linked to assessment tasks.

*The online delivery of my first unit has enabled me to transfer my own skills of adaptability; an attribute that I nurture in my students and value as an asset in the dynamic and ever shifting communications environment. I have had to rethink my approach to teaching and literally develop and enhance my skills to match up with the changing learning habits of students. In the process I have questioned the relevance of the hour-long lectures and the two-hour tutorial models that I was using in face-to-face mode (staff feedback)*

Working as a team with the blended learning staff resulted in the development of Blackboard templates that contained consistent features for each unit of study, with some variations – such as weekly or modular content areas. We were able to review these emerging templates and consider their design and effectiveness from the perspective of the student in terms of language used, and the use of cohesive visual design elements to signpost what was required, as different kinds of learning activities– watch, read, write, respond, reflect etc.

*The tutor answered any questions we had from the lecture pods. I was able to engage in a critical conversation with my peers. Assessments were explained in detail, tutor provided extra support where it was required. I am able to broaden my understanding of writing (student feedback).*

The use of appropriate language was another aspect that came out of the collaboration – seeking to engage with the context of social media on screen, whilst maintaining academic literacy standards. Our work has involved rephrasing pedagogical terminology into plain and colloquial English to ensure relevance for students; focusing on the relevance of given tasks, using simple English phrases rather than academic words to describe directly how tasks link to assessments. These work as prompts and encouragements within the narrative of the Blackboard sites, breaking down what may seem as otherwise daunting and overwhelming. These are all aspects of presence that we identified as needing to contribute to the student’s experience of safety and ease with the materials.

The use of pre-class activities as Salmon’s ‘icebreakers’ was another key focus of initial discussions – importantly we noted the need for these to offset the experience of students coming into the virtual tutorial ‘cold’, whereas when they arrive with some prepared material, this facilitates their engagement more readily. Similarly, our discussions have explored the use of ‘break-out’ rooms for small groups – where the tutor sets up these spaces, sends students off to them during the online tutorial, and then has the option to ‘drop in’ on their small group discussion, finally bringing them all back again to the same screen. This is a form of simulation of what can take place in a face-to-face tutorial, however, the dynamics at play in the virtual context are highly complex and technology dependent.

*Another tactic designed to create further engagement online is increasing student’s preparatory work before the class. This is an attempt to allow the students as much time as possible to prepare for the class and prevent them feeling ‘on the spot’ when discussing the topics online. (Staff feedback)*

As the project has developed, more academic staff have become involved in the community of practice. These new entrants are able to draw on the established design templates for the Blackboard sites, and the combined expertise that is now embedded within the online content, that seeks to enhance a sense of presence for students as part of their learning. With the roll out of online content being also available to campus-based students, many staff have noted how this has shift has impacted on the way they now deliver their on-campus face-to-face tutorials, often drawing on these materials in class to motivate and orient students. This in turn has led to valuable discussions about the role of the tutor as ‘facilitator’ and peer learning strategies to engage weaker students who do not stay abreast of weekly content. These discussions have been highly motivating for staff, providing a rich space for discussion about teaching strategies and effective delivery.

**Staff feedback on online and face-to-face delivery**

Recent staff discussions have included the shifting nature of the role of the teacher to more of a facilitator; the importance of quality constructive resources for students who do not attend the virtual tutorials; the experience of the teaching as being one of co-learning; and in providing just-in-time support and encouraging class interactions and discussion. In turn this has led to a discussion around the ‘virtual tutor’ and the identity of the tutor as being increasingly a dispersed virtual and performative role. Staff have been particularly concerned about managing those students who do not attend the online tutorials. Many of these students appear to work in a self directed way, accessing the materials provided, viewing recordings of the online tutorials in some cases, and often with excellent results. Others appear to continue to struggle and would clearly benefit from more regular contact with the tutor. What seems to be taking place in this context, is an anxiety from staff about maintaining a didactic approach – that is, that students need to be educated, not left to their own devices with the materials provided. This is a complex issue that staff need to work through, as their role shifts away from the face-to-face towards facilitation of student online interactions.

*Engaging students in conversation in the online space poses more challenges than the face-to-face context and I have realised that some tried and true techniques in face-to-face contexts, such as group work activities, do not translate as easily to the online context. As a result I have been trying different strategies online, and these include the use of shared documents for student collaboration in real time; allowing small ‘bursts’ of time for students to complete individual research; and more focused individual question and answer sessions. (Staff feedback)*

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| Autumn Delivery | 2015Total cohort  | 2015Total cohort | 2015Total cohort | 2015 Fully Online | 2015 Fully Online | 2015 Fully Online |
| Unit  | D+  | C  | F | D+  | C  | F |
| Unit 1 | 18% | 29% | 25% | 22% | 33% | 20% |
| Unit 2 | 13% | 33% | 19% | 28% | 50% | 20% |
| Unit 3  | 16% | 37% | 15% | 37% | 50% | 20% |
| Unit 4  | 15% | 25% | 21% | 28% | 85% | 35% |

*Figure 4: Unit Grades Results 2013/14/15*

An analysis of the final grades for four of the units offered in both campus-based and fully online mode is shown above in Figure 4. Notably, the Fail grade rate is marginally higher across the four units for the fully online cohort, but there is also a significant difference in higher grades. Students in all four fully online units achieved substantially more Distinction and Credit grades than the campus-based students. At the same time, our attendance figures for these same units show that only around 1/3 of the cohort attend the online tutorials regularly. What this demonstrates is that the materials provided, the recorded lecture pods and the additional forms of online community and shared peer learning are working to assist and enable many students to achieve good results, that may be independently achieved without having to attend the online tutorial.

Further analysis of more recent data is of student access to the Blackboard sites that are offered in campus-based and fully online mode, compared with the standard campus-based offering, where there are few lecture pods or video materials and a variety of blended online resources. Figure 5 shows the substantial increase in student interactions with the units of study that are in the fully online mode. This number of interactions also includes the campus-based students who have access to the same materials.



*Figure 5: Average accesses per student of the online units against all HCA school units*

**Conclusion**

The staff collaboration continues to be highly productive, and provides a space for the academic staff to also explore their own anxieties around their online delivery, and how they are also engaged in a process of lifelong learning. The project continues to develop, with further tutor reflections about the kinds of interactions and issues that are coming forward. Data evaluations of student access of online materials also continues to inform an understanding about what materials work best in specific content areas. For both on-campus and on-line students, feedback demonstrates the importance of connecting through learning, through engagement with both the tutor and well designed and delivered course materials.

The success of the project to date demonstrates the importance of quality planning and consistency in learning design. This, alongside ongoing and long-term collaborations between academic staff and the blended learning team and between students in the virtual classroom, minimises staff and student anxiety in virtual learning contexts.

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