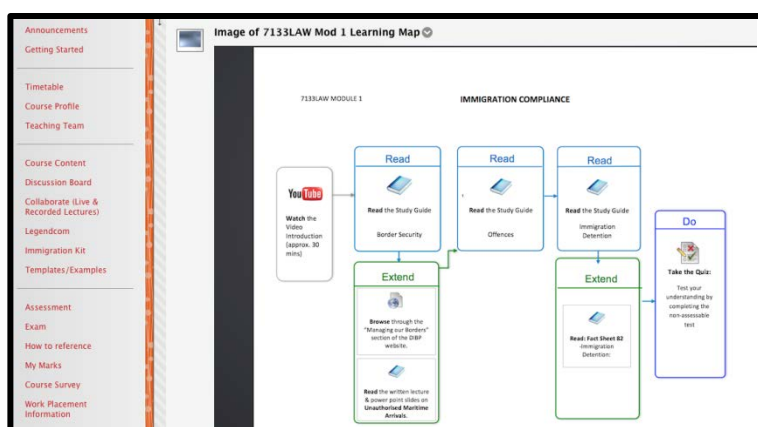


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Case study 9.

Enhancing courses: online technologies for managing, collaborating, reviewing and assessing student learning



Summary

This case study describes an undergraduate course and a postgraduate course that were redesigned from a traditional face-to-face model of teaching to become two online learning courses.

- Online learning is delivered through the learning management system (LMS) but incorporates social media and embedded links to other resources available through the Internet.
- Student feedback from both models has indicated that the move to an online model of delivery has improved student learning.
- Evidence from both courses has highlighted how the online learning model has been adapted for each cohort of students.

Keywords

Online learning; blended learning; hybrid learning; distance learning; learning management system; higher education



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What worked?

This case study outlines the successful use of online learning to enhance the educational experience of both undergraduate and postgraduate law students. The case focuses on two law courses that have used different models of online learning to enhance course delivery. The thought around teaching and learning with technology has changed with the introduction of purpose-built technology for education. This change has allowed an alternative view on how teaching and learning is delivered. This means that face-to-face learning can move to more flexible virtual models where students and lecturers are not restricted by time and place. In this case, the online learning model is possible due to technology affordances including learning management systems, such as *BlackBoard* and *Moodle*. Online learning offers students the opportunity to engage when and where they want, rather than attending a prescribed place at an allocated time. This new virtual approach has enhanced the types of teaching and learning opportunities available to educators.

In this technology enhanced learning (TEL) case, the use of online learning has improved student experiences, (reflected in their feedback), and outcomes, (reflected in their results), and also demonstrated more efficient teaching and course management practices. The case study discusses a mixture of delivery modes, teaching approaches and learning styles used in these two courses. Advances in technology have provided new opportunities for law lecturers to design and deliver their courses in ways that support and enhance their role, the students' cognitive experiences and the learning environment. The focus of this TEL case study is how the technology has been used in two different scenarios; namely, one course offers on-campus study and one course offers off-campus study.

Differing modes of online teaching and learning in Law

In this case the on-campus online model evolved as a consequence of professional reflection, feedback from students, and the changing nature of the LMS. The off-campus online model evolved because of a need to remain competitive in a small, postgraduate market. This process of change has enabled these lecturers to move from primarily face-to-face teaching and learning approach and (through the use of the LMS) to deliver online models. The two courses described here are recognised as leading the move towards online learning within the law school and both courses have repeatedly received a high-level of student evaluation results and feedback.

To understand the important features of an online course we used the *Quality Matters Rubric Standards 5th edition* (Quality Matters, 2014), framework to assess the quality on learning programs in higher education. Both courses were reviewed according to 43 standards, across eight key areas (See Appendix 1). Both courses have included many of the elements that likely result in a quality outcome for students. As the two courses are using the standard university-wide approved course profile system and LMS, many of the quality features prescribed by the rubric are standard inclusions in both courses. Both are missing 1.7, where there was no mention of the minimum technical skills required by the learner. A

search of the university website made no mention of the minimum technical skills for study at the university. For 1.3, the on-campus online course included details about equity, diversity and tolerance in operating in an online environment, which was not found in the off-campus online course.

Case 1: Model 1 – On campus/Online - 300 undergraduate students on two campuses

This course has evolved from face-to-face to a blended or hybrid design of face-to-face and online. Students attend weekly lectures and a scheduled workshop; they also access the LMS for all learning content and to extend their face-to-face work. Lectures and workshops are repeated on two campuses but the content for both is available through the one course available on the LMS.

The course includes a variety of learning resources and activities, including: YouTube and media clips; audio-visual aids; informal and formal group work- including worksheets, surveys, quizzes, games and competitions; and discussions that invite students to connect with the course content in different ways and to actively apply their knowledge in class. The students enjoyed how the course was presented because it engaged them with the material,

I find it to be quite interactive, it's really engaging. She has mini quizzes and things that embeds everything into my mind. (Undergraduate Student)

The students noted an appreciation for the way the course had been structured and they explained how it helped with learning,

I find with everything, just out of all the courses, this is the most broken up into different types of media, format, and stuff like that. Just because it is quite a content-based course, it makes it a bit easier to absorb. (Undergraduate Student)

The face-to-face lectures are recorded and can be accessed online through the LMS. For the benefits of students who listen via the recording, the lecturer repeats student questions before answering them, provides online versions of all materials, and invites students to contact via email/phone with any queries. Students who used the recorded lecture as a substitute for attendance, commented that they felt that the lecturer had used the lecture recording effectively to reflect what had happened in the lecture, something that many lecturers had not done in their experience,

I am in the final semester of my degree and this is the ONLY course I have had where the lecturer consistently and diligently ensured those listening at home did not miss out. (SET 2013)

Students that could not attend face-to-face were not disadvantaged,

I like the fact that there are lots of different back ups with technology. If you can't make it along to a workshop, you can get the recap from listening to that. It provides flexibility, if you can't make it on the scene. (Undergraduate Student)

For some students it was a way for them to improve their learning,

I've been doing it now weekly. I find, I've been trying to be a better student, catch up somewhat. Yeah, going back weekly and listening to it again, especially, when she explains cases, it sticks more and I remember it. (Undergraduate Student)

The LMS system captures all relevant information for learning and this enables the students to learn anywhere at any time with the opportunity to revisit their learning. A lecturer commented,

I'm looking at the analytics and how they're using the lecture capture and how they're using the recorded versions. Looking at that together what I can see is that there is a very significant group of students who are not using it as some substitute for coming to class. They're using it as a backup so they might listen to a lecture again. They certainly listen to the workshop captures again. (Lecturer)

The move to online learning was explained for two reasons; firstly, because of what the LMS offered and secondly to better prepare students for learning. The LMS enables lecturers to continually review, seek support and enhance the learning materials. To prepare students for learning, quizzes are set up in the LMS to prepare students for the lectures and workshops. A student commented,

This is good and bad. I like how the assessments split up, so that it's not 70% exam and then something else, something small. I like that you've got a lot of chances to make marks. But, at the same time, it's kind of bad. Because every week you're, "oh my god, do I have something due? It's both good and bad". (Undergraduate Student)

A lecturer interviewed for this case study explained how student results have improved because of the move to online course delivery. Over a five-year period the class average has moved from 61 percent in 2009 to 75 percent in 2013. Student evaluation scores have moved as well, from 6.3/7 (90 percent) in 2009 to 4.9/5 (98 percent) in 2013. The pattern of student evaluation of course data from 2011 to 2013 indicated positive student ratings for both assessment related items, ranging from 4.2 to 4.6/5 and from 4.1 to 4.6/5, with response rates of 32–51 percent.

Case 2: Model 2 – Off Campus, Online - 70 post graduate students

The students complete this graduate certificate program to enable them to work as immigration consultants. There are only four universities around Australia that are accredited to offer this program and of these, only two offer the course fully online. This

course was first offered face-to-face with a move to off-campus, online in the last two years. With this change, there has been an increase in the number of the students enrolled in the course with students located anywhere in Australia,

These guys aren't lawyers. They're coming from all different disciplines, so, we've essentially got to train them to be able to find law, read law, interpret law, apply law ... all in the space of the first four weeks, so then they can act like a migration lawyer would act and represent their migration clients. (Lecturer)

The program was redesigned in the following ways:

- Online course designed in modules, which are released on a weekly basis.
- The students have a timetable that they follow with a participation task due at the start of each week.
- They have a range of different sorts of activities; sometimes a *WebQuest*, sometimes an extra video that they need to watch prior to virtual lectures.
- They complete automatically marked quizzes, which they can complete over and over again until they are confident with their learning.
- Each week a checklist is posted indicating what is to be completed by the end of the week.
- Virtual lectures are run when there is need. Sessions are recorded and available on the learning management system.

The path for learning is shown in a 'Learning map' (an example is shown in the image on the first page). A lecturer, interviewed for this case, explained the purpose of the learning map,

[It] essentially tells them what activities they've got to get through that week. So they've got to watch the video, read the study guide on this, browse this particular website, read this, read this study guide, read this, take the quiz. It's just a very basic ... we don't check this, so they can mark off what they've done (using a checklist in the learning management system), and they can click on that and it takes them directly to it. (Lecturer)

The course is run over a six-week period with multiple units in each course and concludes with a registration exam.

The drivers for the changes were twofold: to maintain a competitive advantage by being one of two universities offering this course fully online; and the desire by lecturers to keep students engaged in the course (the course is very content heavy with hundreds of pages to read each week). The LMS was used to support course management activities including:

announcements; general communication; assessment submission; assessment marking; assessment feedback; results feedback; and group management.

Apart from scheduled virtual lectures, learning could occur at a time convenient to the students. In the fully online course, a cohort of students wanted more online real-time lectures. With the introduction to online learning, lecturers were concerned that students would not attend lectures when running a combined online model. One student commented on the flexible nature of the course,

It provides a flexible way for students, no matter full-time or part-time, to study at home and interaction between the lecturer and students. Time can be flexible too since the lectures are recorded. Students can watch and listen to the lecture later if they cannot arrange to attend the live lecture. (Student)

Another student reflected on the availability of the learning materials,

The flexible way it was delivered such that you have access to all the materials you would need, the way one could communicate with other students, lecturers, and the way you could participate in live lectures and listen to them later on if you miss them. I could feel like I am physically present in the lecture theatre. (Student)

The student experience was reflected in the student feedback and student evaluation of the course. A student explained what they liked about the course highlighting that they did not have any technological problems,

I like the way different features like the Collaborate sessions, discussion boards, etc work in simulating an actual classroom kind of atmosphere. I also like the fact that most of the information that we need for each area is available at a mouse click, and the lecturers are also just an email away. (Postgraduate student)

Table 1 presents information for the question “Overall I am satisfied with the quality of this course”. Students were required to select an option on a 5-part Likert scale from “Strongly disagree” to “Strongly agree”.

Table 1: Student evaluation scores 2010 and 2014

Student evaluation - Course Q1 Student satisfaction	2010			2014		
	SCORE	RESPONSE RATE	NUMBER ENROLLED	SCORE	RESPONSE RATE	NUMBER ENROLLED
Course 1	3.5	22%	18	4.4	61%	61
Course 2	3.5	24%	17	4.0	65%	63
Course 3	3.6	25%	20	4.4	66%	59
Course 4	3.3	40%	20	4.4	64%	56

In the score, “Response Rate” and “Number Enrolled” clearly show the improvement in student satisfaction from 2010 to 2014. The number of students enrolled in the course has increased significantly with triple the number of enrolments in 2014.

Why it worked

Enablers

There were a variety of factors that enabled learning in these two courses. This section attempts to highlight important factors that have emerged from the data, or have been observed by the researchers in compiling this case. The following factors provide guidance for other higher education institutions in enabling TEL.

On campus infrastructure and use of the LMS: The university wireless infrastructure has proved robust enough to cope with an increasing number of students accessing and using the learning management system on and off campus. The university has implemented an LMS with a variety of functionality designed to aid in teaching and learning; they have also incorporated blended learning online and in-person support for lecturers and students in using the LMS functionality.

Student confidence in using the LMS and their own devices: Students are confident in the use of the LMS. They are also using their own devices to access the LMS.

Lecturer use of the LMS and online learning: The teaching team is motivated to use the LMS for teaching and learning. Feedback obtained from students has led to changes in how the course is delivered.

Challenges

There are several challenges that can be discussed in relation to online course delivery.

This section aims to highlight specific challenges that were reported by participants or observed by the researchers to have a direct implication for the enactment of the TEL and which may be relevant for other institutions to consider in deciding to use differing models of online course delivery.

Capabilities and use of technologies by lecturers: Students discussed how online learning was inconsistent across schools; in that some lecturers use the LMS functionality and other lecturers use minimal functionality. Lecturers highlighted the time required to create and manage online resources in the LMS, and also mentioned that there was limited experience of using the LMS within the school. The lecturers explained that there was limited support to help in preparing to use the LMS or communicating new functionalities in the LMS, additionally, the internal cost for support in developing resources was too high. A lecturer voiced concern that well-developed online learning course design and implementation was not respected in the promotion process.

Interoperability of technologies: Some students highlighted problems with the compatibility and capability of the LMS when used on different devices.

Lecture recording quality issues: Students raised concerns on the quality of the lecture recording system where:

- Lecturers pause the recording during lecture (to present material they don't want recorded, discuss sensitive issues or benefit students that are able to attend in person);
- Lecturers use other devices in the lecture theatre is not captured on the recording (e.g. whiteboard);
- Lecturers are not confident in using technology; and
- Lecturers do not use the microphone effectively to ensure their voices are heard on the recording.

What the research literature says

Online learning is not new and has been described by a variety of terms including blended learning, e-learning, virtual learning and distance learning (Torrissi-Steele, 2011). The common element in their definition is that teaching and learning can occur online. With roots often located in distance learning, there has been a surge of education technologies designed to be able to create virtual learning environments that teachers and students can access over the Internet.

Roblyer and Doering (2014) include a list of the 'top ten ways to support distance learning' in their chapter on distance teaching and learning and the role of the internet. They list ten sources where the characteristics revolve around: access; communication; interaction and

multiplicity. Online learning can enable greater communication between lecturers and students both on an individual level and across the student population. An online model can also enable increased interaction between students, and between students and the teaching team, with less interaction occurring face-to-face. Online learning also allows teaching and learning from multiple sources where lectures can be recorded and displayed online; links to online videos can be added; and access to websites can be provided that include valuable learning materials, games or discussion.

Roblyer and Doering (2014) provide a summary of the research on distance learning where they have elaborated on five themes that influence the effectiveness of distance learning. The first theme questions the effectiveness of online learning as opposed to face-to-face learning. The United States Department of Education (2010) completed a meta-analysis review of online learning that provided evidence that online students performed better than face-to-face students. They don't "attribute this gain in learning outcomes to technology alone...to a combination and variety of contextual, pedagogical and technological interventions" (Roblyer & Doering, 2014, p. 229). Larson and Sung (2009) found that students perceived blended and online learning as more motivating in comparing the three modes (blended, online and face-to-face) with asynchronous style of distance learning showing the greatest gains (Bernard et al., 2009; Offir, Lev & Bezaled, 2008). This is possible because students were able to access their learning materials from anywhere at anytime that suited them, though Pittenger and Doering (2010) found that this type of students had the highest dropout rate. By contrast, in this TEL, the lecturers explained that there was not a significant dropout rate in Law as the undergraduate course was compulsory and the postgraduate course was only offered online at two universities so the majority of students were highly motivated to complete the program.

The second theme highlighted the importance of course quality. Roblyer and Doering (2014) suggest that the most successful courses have: high interaction; instructor and other support throughout the course; and minimal technical problems. DiPerro (2010) conducted research with K-12 virtual school teachers and found that increased interaction had a direct effect on student engagement and a more positive learning experience for them. This appears to resonate with the students in these courses who were required to engage in the content because of the topic (law requires reading of large volumes of text) and the change in assessment practices utilising the technological affordances of online quizzes (whether for assessment or not) and participation tasks to prepare students for learning. One lecturer commented on student engagement in class,

Then I also moved in the last two years to having an online quiz because it became apparent that they weren't preparing ... keeping up with work. When we got to the workshops and I'm sitting there with a mute group in front of me. (Lecturer)

To support students, the lecturers interviewed for this case study noted that they use announcements delivered via email to advise of important information and to keep students on task. For the on-campus course, students are able to interact and seek support at lectures and workshops and the lecturers provide workshop summaries via video accessible

from the LMS. For off-campus students, the lecturers implement participation tasks as part of the assessment,

We had to find a way to keep them really engaged for that 20 hours a week, and get them not to just open the materials... So we tried to put in all of these other activities that would force them to participate, thus the participation tasks. (Lecturer)

Both lecturers use interactive weekly hyperlinked tables that show the work that should be completed by students and when assessment is required. The off-campus course uses *Learning Maps* to guide students through the modules/learning units.

To minimise technology issues, both courses include significant help materials and links to university support for students to understand how to use the LMS, submit assessments and access the online materials (either to attend virtual live lectures or view recorded lectures). Students commented that they are able to use their own technology for accessing the learning materials. Some students commented that they have not experienced any technology problems while completing their studies.

The third theme focuses on the learner and their preparedness for learning. Roblyer and Doering (2014) suggest that there is mixed evidence on learner effectiveness to predict success but say it may be a combination of factors including beliefs, responsibility, self-organisation, technological skills and access. The literature focuses on the success in P-12 and there is little literature concerning undergraduate and postgraduate students; however, we suspect that the K-12 literature holds true in this context as well.

The fourth theme focuses on the instructor. Roblyer and Doering (2014, p. 230) suggest there are six characteristics that a good distance (online) educator must have:

- Course planning and organisational skills specific to distance environments
- Verbal and nonverbal presentation skills specific to distance learning situations
- Ability to involve and coordinate student activities among several sites
- Communication and classroom organisational skills
- Collaborative work with others to produce effective courses
- Ability to use questioning strategies

Fish and Wickersham (2009) warn that this skillset is more advanced than what is normally required in face-to-face teaching. Both lecturers in this TEL have used their planning and organisation skills to understand the pace and amount of work that students can complete online either on-campus or off-campus. The lecturers are experienced in using the LMS for recording lectures and presenting virtual online lectures/presentation, they are also able to engage the students in the online materials to prepare them for face-to-face workshops (on-campus) and assessment (on and off campus). The lecturers are able to link to other

websites and solve technological problems of accessing these secure websites, they also have excellent communication skills to be able to deliver face-to-face lectures, virtual lectures, recorded workshops, and make regular announcement to engage the students. The lecturers work with teaching team peers to develop their courses and are able to mentor members of their teaching team to participate in the online learning experience to ensure they are consistent in approaches to teaching and learning.

The final theme discussed the cost effectiveness of distance learning. Roblyer and Doering (2014) explain cost in terms of technology, transmission, maintenance, infrastructure, production, support and personnel and cost more effective when used more and across more courses. Most universities have moved to using an LMS and a search of the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE) annual conference proceedings and the Australasian Journal of Educational Technology (AJET) indicates ample evidence of completed research concerning Australian universities using a variety of LMS. The implementation of LMS and associated technologies to support teaching and learning have come at significant cost to universities. These large systems are maintained and supported by professional, but non-teaching information technology staff. They have developed learning materials to aid lecturers and students in using them and follow a dedicated process of continually upgrading them but are not always best placed to know current teaching best practice.

There remains a lack of literature on higher education online learning for both on and off campus contexts. A significant amount of the literature has focused on K-12 education with a distance education focus. Although the messages communicated in this research are relevant in understanding the implication of online learning, a significant difference occurs in relation to the student (their age, motivation; and access to technological tools) to aid in their learning. More research is needed to understand online teaching and learning in higher education.

Moving forwards

Participant advice

The students advocated several key 'methods of success' that could be considered when thinking of online course offering.

Use the LMS for teaching - use the LMS to make announcements (shared via email) to advise of important information. Add resources to the LMS, but keep file sizes small and simple in design so that students can access from any device. Review content and resources each year to ensure they remain current. Make resources 'year generic' so that they can be used over multiple years. Use assessment tools in the LMS to display details of all assessment, capture assessment and to provide grades when completed.

Use the LMS for learning - students are familiar with the LMS as a tool offered by the university. Lecturers need to add resources that enable students to better learn important concepts, including the provision of detailed assessment feedback through the LMS, it is also beneficial to consider lecture recording tools that enable visual presentation for learning (e.g. workshop summaries, video recordings of difficult concepts). Lecturers should also consider the use of collaboration tools to encourage students to participate in group work and pose questions on discussion boards. Students should be encouraged to use the learning management system to seek answers to questions or post questions to be answered, teachers could also consider creating a “Frequently Asked Question” available on the LMS. Students should also be encouraged to submit their assessments via the LMS.

For on-campus use an incremental approach in moving to online - transition overtime to an online teaching and learning model.

For off-campus redesign the course to be fully online - the course must be designed to be fully online and depending on student need, virtual lectures/workshops can be run to support students.

Encourage the teaching team to participate - ensure all members of the teaching team can access the LMS. Encourage participation in answering questions via the FAQ or discussion boards. Use the online grading tools to assess student work, enter grades and feedback and moderate assessment results.

Seek and respond to student feedback - seek feedback from students and implement changes in response to feedback.

Seek and give support - seek help when implementing new LMS functionality. Provide support to peers by sharing experience.

Review use of lecture recording - review how the lecture recording is captured, and modify teaching behaviour to ensure all relevant information is captured for students that will need to review or can't attend.

Institutions moving forward

- To encourage the move to online teaching and learning, the university needs to develop a policy that explains the online teaching and learning approach that is to be adopted by the university. This policy must support an incremental approach for the move to online or redesigning courses to be fully online. The policy needs to include statements that explain the minimum LMS functionality required at varying stages for the incremental approach. The goal of this policy is to move the university to an online teaching and learning approach that is delivered either on-

campus or off-campus, and acknowledges that students want a greater level of flexibility in their learning.

- There needs to be a development of consistent practices for the use of the LMS within schools and across the university. Students need access to the LMS on campus using their own devices, therefore universities need to cater for large numbers of students accessing the LMS on campus. The university needs to provide support for lecturers in the use of the LMS; support needs to be within school to help in developing discipline specific approaches and a generic 'whole-of' university approach.
- The university needs to implement a professional development approach where lecturers have the opportunity to share their LMS teaching and learning experiences with other staff within their school and across the university. That sharing needs to be captured and presented in multiple forms of knowledge from simple documents to video explanations that can be easily found and viewed on multiple devices. This material needs to be designed in a way that caters for multiple types of users and those with differing impairments. The university needs to raise the importance of teaching and learning by recognising and rewarding staff that are realising the full potential of online learning.

Resources for exploring

The following list includes a range of available LMS. The list is not comprehensive and does not mean to suggest endorsement. Each of the systems needs to be evaluated for the particular needs of the university:

- Blackboard
- Moodle
- Desire2Learn
- Instructure
- Edmodo
- SumTotal Systems
- Skillsoft
- Cornerstone
- Schoology (Dunn, 2012)

Guides, Cases and Readings

The following resources from the *NMC Horizon Report 2014 Higher Education Edition* (Johnson, Adams-Becker, Estrada and Freeman, 2014) are recommended to further online learning in higher education.

- *After setback, Online courses are rethought* – Tamar Lewin, The New York Times, 11 December 2013.
URL: go.nmc.org/setb
- *Blended learning: College classrooms of the future* – The Huffington Post, 16 July 2013.
URL: go.nmc.org/colcla
- *Is blended learning the best of both worlds?* – Online Learning Insights, 17 January 2013.
URL: go.nmc.org/blen
- *A new way of learning: The impact of hybrid distance education on student performance* – Rosa Vivanco, George Mason University, accessed 18 December 2014)
URL: go.nmc.org/newww

References

- Bernard, R.M., Abrami, P.C., Borokhovski, E., Wade, C.A., Tamim, R.M., Surkes, M.A., et al. (2009). A meta-analysis of three types of interaction treatments in distance education. *Review of Educational Research*, 79(3), 1243-1279.
- DiPierro, M. (2010). Virtual school pedagogy: The instructional practices of K-12 virtual school teachers. *Journal of Educational Computing Research*, 42(3), 327-354.
- Dunn, J. (2012) The 20 best Learning Management Systems. Edudemic. Retrieved from <http://www.edudemic.com/the-20-best-learning-management-systems/>
- Fish, W., & Wickersham, L. (2009). Best practices for online instructors. *Quarterly Review of Distance Education*, 10(3), 279-284.
- Offir, B., Lev, Y., & Bezalel, R. (2008). Surface and deep learning processes in distance education: Synchronous versus asynchronous systems. *Computers & Education*, 51(3), 1172-1183.
- Pittenger, A., & Doering, A. (2010). Influence of motivational design on completion rates in online self-study pharmacy courses. *Distance Education*, 31(3), 275-293.
- Quality Matters. (2014). *Quality Matters Rubric Standards Fifth Edition*. 2014 with Assigned Points Values. Retrieved 2/12/2014, from <https://www.qualitymatters.org/rubric>
- Roblyer, M.D., & Doering, A.H. (2014). *Pearson New International Edition - Integrating Educational Technology into Teaching* (6th ed), Pearson, Essex, England.

Torrissi-Steele, Geraldine (2011). This Thing Called Blended Learning — A Definition and Planning Approach. In Krause, K., Buckridge, M., Grimmer, C. and Purbrick-Illek, S. (Eds.) *Research and Development in Higher Education: Reshaping Higher Education*, 34 (pp. 360 – 371). Gold Coast, Australia, 4 – 7 July 2011.

United States Department of Education, Institute of Education Sciences. (2010) *Accelerated Reader: What works Clearinghouse intervention report*. Retrieved from <http://www.eric.ed.gov/PDFS/ED511267.pdf>

Appendix 1 - Comparisons between the two online courses included in this case study.

Component	Model 1 – On campus/Online	Model 2 – Off campus/Online
1. Course overview and introduction		
1.1 Instructions to get started	Getting started guide	Getting started guide
1.2 Learners introduced to purpose of course	Course profile	Course profile
1.3 Etiquette expectations clearly stated	Law school equity, diversity and tolerance Powerpoint in Week 1	
1.4 University policy links	Course profile	Course profile
1.5 Minimum technology requirements stated		Course profile – “Students are required to have reliable internet access with bandwidth sufficient to support online Classroom. Students will also require webcam and microphone.”
1.6 Prerequisite knowledge clearly stated	Course profile	Course profile
1.7 Minimum technical skills of the learner clearly stated		
1.8 Self-introduction of instructor appropriate and online	Staff information webpage	Staff information webpage
1.9 Learners are asked to introduce themselves		Learners asked to post on discussion board
2. Learning objectives		
2.1 The course objectives establish the foundation	Course profile	Course profile
2.2 Outcomes that are measurable and consistent	Course profile	Course profile
2.3 All learning objectives are stated clearly	Course profile	Course profile
2.4 Relationship between learning objectives and activities clearly stated	Course profile	Course profile
2.5 Suit the level of the course	Course profile	Course profile
3. Assessment and measurement		
3.1 Assessment measure objectives	Course profile	Course profile
3.2 Grading policy clearly stated	Course profile	Course profile
3.3 Criteria for grading	Attached document explaining assessment requirements with criteria matrix	Attached document explaining assessment requirements with criteria listed

3.4 Assessment sequenced, varied and suited	Course profile/LMS Presentation – in any format (in person or digital) Online Quiz Exam	Course profile/LMS Quizzes (not included in grade) Participation tasks (Upload documents) Short response assignment Exam (Online)
3.5 Learners can track progress	Mark centre	Mark centre
4. Resources and materials		
4.1 Instructional materials contribute to objectives	Course profile	Course profile
4.2 Purpose and how to be used are explained	Hyperlinked table	Welcome and introduction document Hyperlinked table Learning map for each module
4.3 Appropriately cited	In various attachments for the week	Modules
4.4 Current	2014	2014
4.5 Variety	Examples: PowerPoint, Word documents, pdf readings, lecture recordings, media clips, poll, quiz Multiple items for each week (1-13)	Examples: PowerPoint, Word documents, pdf readings, YouTube, recorded lectures
4.6 Distinction between required and optional	All required	Extra material marked as Extend and highlighted in green on learning map
5. Learner engagement		
5.1 Activities promote achievement of objectives	Online poll, online quizzes Weekly media clip	Quizzes for each module Participation tasks for each module
5.2 Opportunities for interaction	Group presentation Groups formed using group functionality in the LMS	Discussion board
5.3 Instructor expectation in class and for assessment feedback are stated	Announcements LMS page for each assessment with doc attachment	Announcements Learning map for each module Expectation for the amount of work and assessment are clearly stated
5.4 Requirements for learner interaction are clearly stated	Group presentation	Participation tasks are submitted for assessment Students asked to post questions on LMS

		discussion board
6. Course technology		
6.1 Tools support objectives	Course profile	Course profile
6.2 Promote learner engagement and active learning	Announcements Online poll and quizzes Twitter feed Hyperlinked weekly course content webpage Discussion board used to advertise for group members	Announcements Quizzes Instruction on how to join Facebook group Hyperlinked weekly plan
6.3 Course readily available	University semester timetable Course offered in LMS	University semester timetable Course offered in LMS
6.4 Current	2014	2014
6.5 Privacy policy links	Course profile	Course profile
7. Learner support		
7.1 Technical support details	Course profile/LMS FAQ question/answer	FAQ question/answer
7.2 Accessibility policy and services	Course profile	Course profile
7.3 University support services	Course profile	Course profile
7.4 University student services	Course profile	Course profile
8. Accessibility		
8.1 Course navigation ease of use	Welcome/Getting started/How to page/Hyperlinked weekly table/ LMS Tools webpage	Welcome and introduction document/Hyperlinked weekly plan/ Links to LMS help
8.2 Information about accessibility of technologies	University LMS Help webpage	University LMS Help webpage
8.3 Alternative means of access for diverse learners	Course profile	Course profile
8.4 Readability	Internet tools to access LMS	Internet tools to access LMS
8.5 Multimedia ease of use	Lecture recordings and workshop recaps (Echo360) PowerPoint presentations	YouTube video Lecture recordings (Collaborate) PowerPoint presentations