MAKING CHANGES

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Abstract

In this paper I will present a case study of one Australian university where, over the last eight years we have tried a variety of strategies to increase the use of technology in teaching and improve student learning outcomes. Throughout the paper I will report on the results of institutional research, targeting staff and students that focussed on their perceptions of these innovations and outline our plans and responses in the light of the research outcomes.

Introduction

The structure and methods of teaching and learning in universities have never been under greater scrutiny by staff, students, university leaders and graduate employers. Data regarding student attendance, research into the success of conventional teaching strategies, student feedback and criticism from business and industry point to the need for change. At the same time the world is being changed by burgeoning developments in digital technologies. These new developments provide instantaneous access to information and research and to each other. It is possible now to work on projects with colleagues around the world without leaving our office and to have access to almost any information through relatively cheap mobile devices.

At the same time our students are changing the way that they undertake their university courses. They no longer find it useful to sit in a lecture theatre and listen to someone read information that they can read for themselves. Domestic, fulltime students are often employed full or part time; growing numbers of mature age students have family responsibilities as well as work.

Demands on academic staff have never been greater. With more administrative responsibilities, demands that they are research active, the time to consider their teaching and work closely with their students in the ways that they have done in the past, is diminishing.

The digital age in which we are living offers many possibilities to address these issues. Not simply possibilities to save money and time but fantastic opportunities to give all our students the best information and high quality, well designed learning experiences that support the development of necessary graduate qualities as well as up to date and well researched knowledge of the discipline.

What follows in this paper is a brief case study of one Australian university, Flinders University in South Australia, where, over the last eight years, we have tried a variety of strategies to increase the use of technology in teaching while at the same time improving student learning outcomes.

Background

Flinders University in South Australia was established in the 1960's. It has 13 campuses across three states of Australia and is one of three major universities in Adelaide. It is a relatively small university with approximately 24,000 students and 2,178 staff. Most undergraduate students are enrolled as internal students but only a small number live on campus. Flinders University has a large number of mature age students and many of our students are involved in part-time employment. Our student demographic and our spread of campuses have made online and flexible delivery an imperative. The current developments in online learning have also meant that possibilities for a quality learning experience in multiple learning modes is possible.

At Flinders University we developed an online teaching and learning strategy eight years ago. The focus of this strategy was directed towards greater flexibility in on-campus undergraduate courses in regard to access, efficiency, and the development of a greater online presence in all courses. A further strategy has been to provide a small number of new niche post-graduate courses that are offered fully on-line.

As a result of this strategy, for the last seven years, we have had an online presence in every topic taught at the university through *Flinders Learning Online* (FLO) which is the Flinders University's Learning Management System. Flinders was among the first universities in Australia reach such a goal. Our university has built its strong online presence by supporting students, meeting changing student expectations, and providing more flexible options for study that increase our pool of potential students. Informal benchmarking against other universities indicates that both our student online activity and student satisfaction are high in comparison.

For on campus students, their topic online presence through FLO complements or supplements student contact hours with staff by providing:

- A communication channel for students and staff to communicate including enabling students to communicate with each other

- Information and content--such as topic information, lecture notes, lecture videos, and readings

- Learning and assessment activities---such as quizzes, content creation, and online assignment submission.

This initiative has resulted in a blurring between on-campus and external students and the places where learning activities happen. Some parts of the university combine external and internal students in the one topic, and some teach with less on-campus time, preferring to deliver some materials and activities online, and consequently reshaping their face-to-face time. In some areas this has resulted in *flipped classrooms* where they focus of face-to-face contact is quality interaction, problem solving or activity-based sessions.

However, our increased flexible delivery provides opportunities and challenges. We know that many students take the opportunity to re-listen to

lectures after attending the lectures and consider that this helps them with their learning. On the other hand, some students use the fact that lectures are recorded and made available online to enrol in topics, knowing that they can't attend most/all classes but with the intention that they will view the lectures online. This is a problem because the face-to-face lectures are not primarily developed for online delivery and in many cases the quality of recording is poor.

Also over the last few years we have realised that providing our online presence requires greater technical infrastructure than we currently have available. Research into the use of mobile devices and upgrading of current infrastructure is now a priority. The Flinders University's Learning Management System currently provides:

1. A learning management system, LMS.
2. Real-time communication--*FLO live – Adobe Connect*. This provides synchronous communication and a virtual classroom package including voice over and video over IP technology.
3. Student ePortfolios and ePortfolio software.
4. Lecture Capture and Delivery – internally developed ISD, *Digital Media Services* system.
5. Text Matching Software. This is integral to our academic integrity policy.
6. A content management system. This is a new initiative that is in the process of being funded for a 2-year period. It will provide a capability to share resources with other universities.

These key elements of *Flinders Learning Online* are not solely used to support learning and teaching. They are also used as a cost-effective and efficient way to provide this functionality to the university more broadly.

Teaching staff also link to teaching and learning materials freely available through the web such as on *YouTube, MIT Open Courseware, MERLOT*, and *Connexions*. While all lectures in designated lecture theatres are digitally captured, not all are delivered online through FLO because teaching staff does not choose to do so. We do not currently contribute to open courseware initiatives such as *iTunesU* or the *Open Universities Courseware Consortium*.

Until the end of 2012, the mandated minimum specifications for topics were a set of FLO webpages for each topic containing at least the following elements:

• A link to Topic Information (including teaching staff, approved topic aims and learning outcomes, timetable information)

• A link to the Library

• A link to the FLO Student Help Desk

• Tools for communication including the Discussion tool, the Mail tool, Calendar, Announcements and Who's Online

Many topics progressed beyond this minima by incorporating a number of online capabilities such as FAQs, collaborative learning, online quizzes, online links, simulations, wikis, file sharing, use of mobile devices and use of social media.

University–Wide Audits

To assess progress and impact of the strategy, the Deputy Vice Chancellor (Academic) commissioned a *Flexible Delivery Audit Report* in late 2011 that was completed in April 2012. The intent was to identify progress towards the university's teaching and learning goal of increasing our proportion of topics offered in "flexible" mode. The *Flexible Delivery Audit Project* reported that 37% of our courses in 2012 and 30% of our topics are available in this manner. Approximately 15% of our total student enrolment in 2011 was attributable to external enrolments, which corresponded to 10% of the total of the university's domestic topic load. The vast majority of these courses are post-graduate coursework program with small enrolments and with significant numbers of part time students. However, the report also demonstrated that many of our internal topics also embraced flexibility through FLO and through other means.

In terms of quality, there is no general overarching quality framework specifically for our distance courses. There is a strong suggestion this should change. That said, analysis of the students' satisfaction and engagement measures indicate that external students are in general satisfied with our distance offerings, and in many areas, indicate greater satisfaction than our on campus students (Flinders University of South Australia, 2012). Interestingly also, but not surprising, external students indicate differences in their perception of their development of the Flinders' graduate qualities than internal students.

Somewhat reassuringly, the *Flexible Delivery Audit Project (*Flinders University, 2012) reported the apparent connection between student satisfaction and levels of resourcing and support.

Issues for Students

The December 2009 *Report of the Review of Information and Communication Technology Services* (RICTS) observed that "the students … were very satisfied with … FLO [Flinders Learning Online] in the Schools where it is used effectively". (Flinders University, 2009, p. 5), but that they also "expressed a need for … more widespread and consistent use by staff of technologies such as FLO that support online learning" and that "staff use of [FLO] … is not consistent across the university" (Flinders University 2009) p.11).

In 2013 a further study involving focus groups of students was undertaken (Centre for Educational ICT, 2013). This study was broader ranging and addressed undergraduate topics and the flexibility offered in these programs. The report, *Student Perceptions of Blended Learning at Flinders: Qualitative Insights from Focus Groups* detailed student opinion in the executive summary in the following way:

> In relation to **general experiences with e-learning at Flinders,** these students were evidently quite accustomed to, and accepted almost as routine, a blend of online and face-to-face learning and teaching.

In relation to **lecture capture, n**early all students had considerable experience of lectures being captured and uploaded on to topic FLO sites. There was a strong and consistent positive consensus about making lecture recordings available in this way. There were two main overall concerns – regarding an apparent lack of consistency or reliability in some topics about whether a lecture would actually be available on FLO, and about the technical quality of the recorded lectures.

On the future of 'live' lectures, student opinion was clear: they do not want the 'live' lectures to cease. The uploaded recordings are a welcome back up to, but not an adequate substitute for, the timetabled live lectures.

Students were asked to discuss the concept of **the 'flipped classroom'** that would see the demise of the traditional lecture primarily devoted to information provision, and instead reserve classroom time for interactive learning processes. While several students were interested in this approach, a greater proportion was sceptical, and restated attachment to aspects of the traditional lecture. A number of students recognised that the issue should not be viewed as an 'either/or' choice, but rather as a way of rebalancing different modes of delivery and perhaps drawing on what academic staff were best able to deliver.

 In relation to the perceived value to students of **online discussion groups**, the students who had experienced these reported variable comments. Some students were positive; others were more discouraged by negative experiences that seemed to reflect in all cases on the adequacy of participation, moderation and monitoring by teaching staff.

Students apparently have mixed views about the provision of **e-readings** via the Library's e-Reserve system. They like the convenience of online access but are concerned about the cost of printing hardcopies (at their own expense) and about the inconvenience of losing the University-compiled hardcopy sets in topics where this has been standard practice.

In relation to the **e-submission and e-return of student assignments**, (which is about to be established as standard practice for the University), students who have already experienced it are generally positive. Others need to be convinced about what they perceive might be technical issues such as file conversion, while several commented on the ambiguity and implicit flexibility about hardcopy submission deadlines compared with the timed certainty of electronically-enforced deadlines. The issue provoked many students to similarly express their disquiet over the loss of a free printing allowance that previously applied in some Schools.

Most of the student participants were not particularly familiar with the advent of Massive Open Online Course (MOOC) options, and were not necessarily convinced (on the basis of the brief portrayal in the focus-

group conversations) that they would find them attractive alternatives to standard University delivery.

The students were in broad agreement on two concluding matters: that the University's planned developments in e-learning and blended learning and face-to-face learning should be approached on their intrinsic merits in relation to student participation and quality learning rather than as a cost-saving exercise, and that ongoing consultation with students was highly desirable. (CEdICT, 2013, p.ii),

Overall these students seem welcoming of the university's continuing exploration of e-learning and blended learning options. This was, however, tempered by some potential concerns. First, continuing innovations should be adding extra delivery and learning options, not reducing them. Second, there is a perception that the university has perhaps not been sufficiently clear about minimum standards of online teaching and learning delivery expected of academic programs and staff. Third, students seem worried that the university might have a hidden cost-cutting agenda for exploring e-learning innovations.

Issues for Staff
This veiled suspicion regarding the motivation for the university exploring and promoting online methods of teaching and learning is also reflected in staff comments. There are many academic staff that would prefer to continue to teach face to face, many who argue for the continuation of the lecture or for the continuation of face-to-face tutorials and lectures. There are also many staff who are concerned about the impact of moving 'too far' with online technology and losing the important contact with students, the ability to answer questions, support and assist students to learn.

Alongside their colleagues around the world many Flinders' staff question the place of the university in 2013 and the role of the university teacher in this new world of technology. Of course, there are many early adopters as well who are leading the way, experimenting with all the technology they can discover and working alongside their students to investigate what methods are the most useful and manageable for them.

At Flinders we have the usual range of adopters of new teaching technology from the experimenters to the reluctant to those whose head is well embedded in the sand and including throughout that spectrum staff who are truly convinced that face-to-face teaching will always be the best. In spite of our 2005 mandate for online teaching, the 2012 *Report of the Flexible Delivery Audit Project* suggested that there might be compliance issues in relation to many topics failing to meet the specified minimum standards, and there has certainly been considerable variation between topics in utilisation of various e-learning elements available through FLO.

Academic staff have indicated concern about time to do the necessary curriculum development, lack of resources to assist in putting courses online, lack of technology infrastructure and low levels of technical expertise.

We believe that one way to address these concerns might be professional development. In 2006 Kim and Bonk claimed that Higher Education was facing a "perfect storm, linking pedagogy, technology and learner needs " (p.22). Their research indicated that the three most significant needs for the success of online learning were monetary support, pedagogical competency of online instructors and technical competency of online instructors.

Our institutional research has certainly indicated a lack of confidence in some staff regarding the use of technology and their capacity to design appropriate online curriculum. However the biggest stumbling block has been assisting academic staff to reconceptualise their role. For many years academics have been the people who hold and distribute the information that students need to pass courses. Many more established staff worry about how students will acquire necessary information and skills if they are not the ones to give the information or support the skill development. It is difficult to come to terms with the fact that a lecturer skilled in a topic area is longer the major font of information. Information is everywhere. Students can access good lectures, written and oral information and open discussions all over the world. The role of a university teacher should now be more focussed on helping students to make sense of all the information that is available. Lecturers can improve learning effectiveness through providing greater learner control and responsibility through problem based and inquiry based learning (Desharnais & Limson, 2007). Of course, this approach to teaching and learning also requires a change in perspective from some students who still want to be passive learners and be regularly supplied with the necessary information to pass an exam.

Planning for Improvement

In order to address the concerns identified by staff and solve some of the issues I have identified, it is important to begin with an Elearning quality framework that will be developed through consultation across the university. Some of the issues we hope to address include: ways we might establish evaluation and reporting cycles for online learning, coordination of design services across the institution, establishing cross faculty interest groups, trialling implementation of new approaches, providing incentives for staff to experiment and trial new methods, ways we might connect to the student voice and research into appropriate external collaborations.

A key element in curriculum change is resourcing what is needed to make the change. Staff need time to discuss with colleagues, they need the technical capability and capacity and they need support. However,

> The use of technology won't increase by simply supplying hardware and software, except if these tools are infused into the daily activities for teaching and learning. To enable this to occur there is a need to support, motivate and equip faculty with the necessary skills. (Hagenson & Castle, 2003, p. 950)

Therefore we need to work at all levels of the university to ensure that policy is developed that provides strong support that enables a strong digital future

for teaching and learning. We also need to develop a strong professional development program in both pedagogy and technology to support staff in their endeavours.

At Flinders we have adopted and developed the Chickering and Gamson (1987) definition of quality teaching that includes:

- Encouraging good communication between teachers and learners
- Encouraging interaction among learners
- Providing opportunities for active participation
- Timely and appropriate response and feedback
- Emphasising time on task
- Motivating learning by communicating expectations
- Respecting diverse talents and ways of learning

One future strategy will be to link these principles with our on line teaching practice through exemplars, peer observation of good practice, modelling good practice in workshops, special interest groups, collaboration among and across faculty and practice based discussions. We will also need virtual conferencing to communicate and disseminate information across geographically dispersed faculty who all have different learning styles and technology skills.

While the basis of good teaching practice is relevant in both face-to-face and online teaching when it comes to technical skills, staff need to develop their pedagogical practices and gain the necessary skills to enable them to develop, manage and evaluate in the online environment. Again this requires time and support across the university. Educational designers and developers will be located in each faculty to assist in this area.

As with all good change models the university needs to have support from a broad range of staff across the university. We need to find ways of engaging and empowering as many staff as possible while supporting the early adopters and leaders. Our research with students identified a range of scepticism that needs to be addressed through targeted information sessions and good teaching outcomes. We have a long way to go but we have commenced on a path that will lead us into the future.

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