

See you in class: Promoting a quality program for pre-service educators in regional locations through a virtual classroom

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Abstract

The quality of an online university degree is paramount to the student, the reputation of the university and most importantly, the profession that will be entered. At the School of Education within Curtin University, we aim to ensure that students within rural and remote areas are provided with high quality degrees equal to their city counterparts who access face-to-face classes on campus.

In 2010, the School of Education moved to flexible delivery of a fully online Bachelor of Education degree for their rural students. In previous years, the degree had been delivered in physical locations around the state. Although this served the purpose for the time, it restricted the degree to only those rural students who were able to access the physical campus. The new model in 2010 allows access for students in any rural area who have a computer and an internet connection, regardless of their geographical location. As a result enrolments have seen a positive increase in new students.

Academic staff had previously used an asynchronous environment to deliver learning modules housed within a learning management system (LMS). To enhance the learning environment and to provide high quality learning experiences to students learning at a distance, the adoption of synchronous software was introduced. This software is a real-time virtual classroom environment that allows for communication through Voice over Internet Protocol (VoIP) and videoconferencing, along with a large number of collaboration tools to engage learners.

This research paper reports on the professional development of academic staff to integrate a live e-learning solution into their current LMS environment. It involved professional development, including technical orientation for teaching staff and course participants simultaneously. Further, pedagogical innovations were offered to engage the students in a collaborative learning environment. Data were collected from academic staff through semi-structured interviews and participant observation. The findings discuss the perceived value of the technology, problems encountered and solutions sought.

Introduction

Traditionally, people living in regional and remote areas of Western Australia have found access to higher education challenging. Prior to the evolution of paper-based distance learning and more recently e-learning, the choice was limited. In order to access their preferred course, students were required to move to a larger regional centre with a university campus or to the city. Halsey (2009) discusses the *real* choice for young rural people as "moving out or leaving home" and exemplifies the negative impact of this exodus on the rural community: For many people wanting to follow their dream of a higher education degree, existing support structures embedded within their regional area are highly necessary for successful completion and the upheaval of relocating to the bright city lights is not an option.

In December 2008, Professor Denise Bradley AC delivered the Final Report into the Review of Australian Higher Education (Commonwealth of Australia, 2008). This report highlighted the importance of targeting under-represented groups currently accessing higher education including: those from low-socio economic backgrounds, regional and remote areas and Indigenous students. In order to increase participation the report states "an additional allocation of \$80 million per year to develop innovative, collaborative, local solutions to provision of higher education in regional and remote areas is recommended. As well, serious consideration should be given to the development of a university with special expertise in provision of higher education across regional and remote

Australia" (Commonwealth of Australia, 2008). Further investigation was undertaken in 2009, as the Senate conducted a national Inquiry into Rural and Regional access to Secondary and Tertiary Education Opportunities. A large number of submissions from organisations and community members cemented the foundation of the need for equity and access to quality education programs.

The importance of sustaining rural communities has been well documented (Bartholomaeus, 2009; Halsey, 2009; Wallace & Boylan, 2009). In order to provide access to potential rural students without an exodus from their communities, the information superhighway is certainly presenting a valuable alternative. As learners are not limited by time and location, the flexibility offered through e-learning is advantageous to all learners but largely convenient for those students living geographically disparate from a university (O'Neill, Singh & O'Donoghue, 2005). Students can access learning resources on the Blackboard learning management system from any place, at any time through the internet. The flexibility of e-learning allows a self-paced, self-directed, autonomous learner who engages in a 'virtual' environment that simulates the experiences of those enrolled in face to face programs. The move to a flexible delivery of course materials may assist in sustaining rural communities as students are not required to leave their regional location. A critical factor that resonates from designing and delivering course materials in this manner, is the importance of, and need for, continuing professional development.

History of Regional Program

Prior to 2010, the Centre for Regional Education at Curtin University delivered undergraduate education degrees in physical campus locations around the state including Albany, Esperance, Geraldton, Kalgoorlie, Karratha/South Hedland, Margaret River and Midland. Although this served the purpose for the time, it restricted the degree to only those rural students who were able to access the physical campus. In 2010, the Centre for Regional Education was resolved and the School of Education moved to flexible delivery of a fully online Bachelor of Education degree to cater for the rural students. The new model allowed access for students in any rural area who have a computer and an internet connection, regardless of their geographical location. As a result enrolments have seen a positive increase in new students for rural areas.

At the beginning of 2009, a number of academic staff had been involved in the creation and delivery of the Bachelor of Education (Primary) units for the OUA program. At this point, first year primary units were developed with the view to roll out subsequent years over the next four years. Offering the online delivery to rural students meant ensuring those students enrolled in existing Early Childhood and Primary degrees were able to enroll in units from first to fourth year. This presented a challenge to ensure a large amount of units were developed in the online mode in time for Semester 1, 2010 delivery.

To enhance the asynchronous learning environment and to provide high quality learning experiences to rural students learning at a distance, the adoption of synchronous software was introduced. In the past, the Centre for Regional Education had offered some units through a multipoint videoconferencing solution between regional campuses. The software used in the new model is a real-time virtual classroom environment that allows for communication through Voice over Internet Protocol (VoIP) and videoconferencing, along with a large number of collaboration tools to engage learners. Students can access it from any location that has a computer and an internet connection.

Aims of the Project

This research project aimed to identify effective online teacher presence in an e-learning environment (including both asynchronous and synchronous communication) and develop guidelines for further professional development. To achieve this aim, the project investigated the perceptions of academic staff in terms of professional development, including technology capacity and pedagogy. The project also considered whether the students perceived the e-learning solution to enhance the quality of their online experience.

Management System Officer to support all academic teaching staff and supporting those using Elluminate Live was one of her roles. She was located on site and easily accessible to where the Elluminate sessions were being held.

At the end of the semester, Stage Five of the professional development involved a reflective session where academic staff were invited to review their teaching practices within the e-learning environment; consider the impact on student learning outcomes for their unit and consolidate ideas for implementation in Semester 2.

Results and Findings

A total of ten academic teaching staff were interviewed, including three full time staff and seven sessional staff. The interview data revealed that their experience with teaching within the tertiary sector varied greatly. The less experienced staff had just completed their first semester of teaching in the tertiary sector, however more experienced staff reported up to 30 years of tertiary teaching. The data showed their teaching in an asynchronous and synchronous learning environment was very similar. Table 1 provides a summary of these differences and similarities between the sample.

Table 1: Sample Profile

Staff ID	Tertiary Teaching Experience	Taught in an Online Environment	Experience with Asynchronous	Experience with Synchronous
1	15 years	No	Yes	No
2	6 months	No	No	No
3	18 months	No	Yes	No
4	12 months	No	Yes	No
5	30 years	Yes	Yes	Yes
6	6 months	No	Yes	No
7	2 years	Yes	Yes	No
8	4 years	Yes	Yes	No
9	18 month	Yes	Yes	No
10	7 years	No	Yes	Very Little

When examining the Elluminate functions being used by this particular group of participants, the following were identified: voice, whiteboard, chat, file sharing, web touring, emoticons, chat and the webcam. Figures 2, 3, 4 and 5 are screenshots of some of these functions in use.

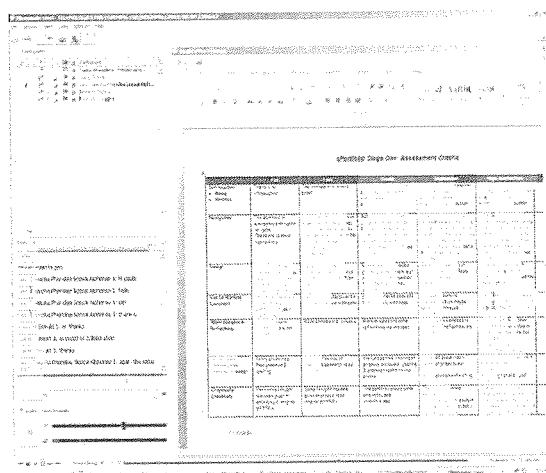


Figure 2: Voice, chat room and application sharing.

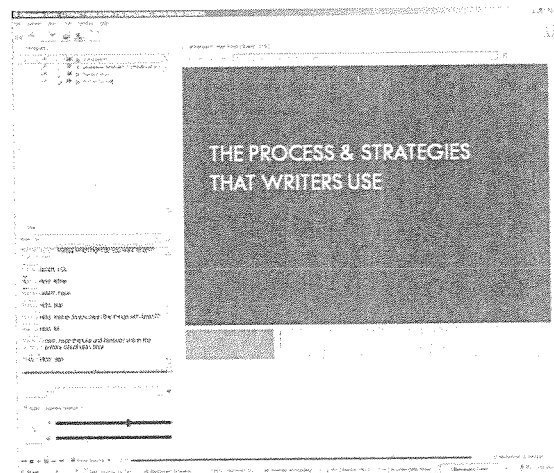


Figure 3: Voice, chat room and powerpoint presentation.

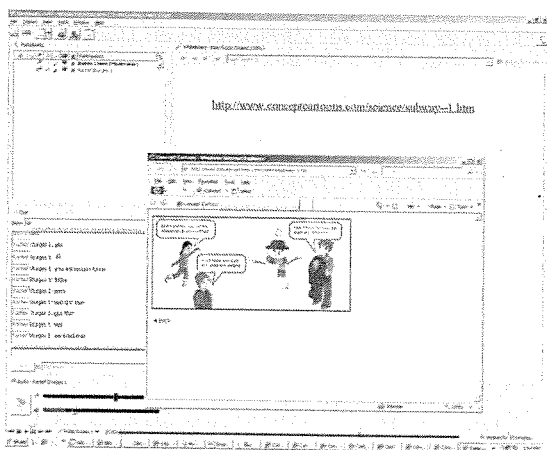


Figure 4: Voice, chat room and webtouring.

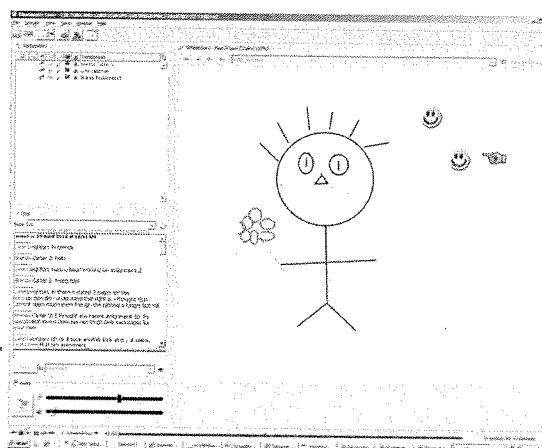


Figure 5: Chatroom and whiteboard 'play' by students within an unmoderated session.

A number of lecturers discussed their use of the webcam and the inhibition of students to do so. Lecturer 7 noted:

"We used the video a few times but the students were not really keen to do that so I don't know if I scared them or if they liked to be anonymous behind the microphone. I did try to use the whiteboard a few times especially when we were talking about assignment rubrics. I didn't really use any other functions probably didn't use it to its full potential really."
(Lecturer 7)

The findings for this paper will be reported in terms of successes and challenges as identified by the participants described in Table 1 through the semi-structured interviews.

Successes of Elluminate

A Supportive Environment Through Building Relationships

Developing a mutually respectful student-teacher relationship is integral within any sector of education. From the interview data it was evident that six lecturers identified developing a relationship and 'getting to know' their regional students was enhanced through using Elluminate.

I think it was a good way to develop relationships. (Lecturer 2)

The first thing is you developed a relationship with the students, they felt more comfortable asking questions, so that you got to know the students. (Lecturer 3)

Just getting to know students better and being able to offer support in terms of reassurance that they were on the right track. It was great having the opportunity to talk with some of my regional students and to get to know them better. (Lecturer 10)

Additionally, the supportive relationship between learners and the concept of a community of learners was discussed:

There was definitely a relationship that was built by those who came online. There was instant feedback amongst themselves they would answer each other's questions. (Lecturer 3)

It helped establish a sense of community as I have a student in Dubai in that group and I think she appreciated just having that connection really. (Lecturer 5)

Not only were the students supported by their lecturers, but in some cases the lecturers felt supported by their students:

I did use the whiteboard, in fact one of the students had used Elluminate the year before, so she put something up on the whiteboard. I actually got her to teach me as she happened to be the only one in the session at the time, so I said ok can you show me how

to do that and she actually put up half of her assignment and wanted me to have a look at it so we did use that. I didn't use the camera as I found it really intimidating. (Lecturer 6)

The real time environment of Elluminate allowed for a level of personal engagement that the asynchronous environment of Blackboard does not always achieve. This was reinforced by Lecturer 8, who stated:

My group were really lovely – a bunch of lovely people. I really got to know my students through Elluminate more than I would through Blackboard as we had those regular sessions. Because we actually spoke to each other. (Lecturer 8)

The researchers believe that using Elluminate has allowed students learning at a distance to feel supported, by both their lecturer and their peers, in a mode of study that can sometimes be considered as isolating.

Enhancing Learning Experiences

During the interviews the lecturers were asked what they believed were some successes of Elluminate in relation to the students' learning experiences. The data revealed that many sessions were used for questions about the unit content and clarification of assessment items. The following statements represent this:

Being there to answer questions straight off, you were there to answer the problems immediately. (Lecturer 1)

Came to clarify assignments, mostly wanted to discuss assignments more than topics. (Lecturer 2)

So we ended up talking about mainly assignment requirements. (Lecturer 7)

I guess having the opportunity of being able to clarify any questions they had about any aspects of the course and most usually it was to do with assessment. (Lecturer 8)

As with all groups of students, the regional students were diverse groups with different backgrounds and learning styles. This was acknowledged by Lecturer 5, with over 30 years of tertiary teaching experience, as she believed Elluminate was successful in catering for varying learning styles:

Sometimes just having those verbal explanations means that if they are the type of people who understand things that are given orally more so than written it supports that, different learning styles but I don't think that is a direct evidence of that. The people that appreciate being able to ask face to face questions got on. (Lecturer 5)

Implementing a high level of pedagogy, where lecturers used the synchronous software for engaging students in peer review and group presentations:

Towards the end when we were doing our presentations the learning curve got very steep, as I was uploading powerpoint presentations and as they presented they would say next slide please and I would move it on. But it actually had to be set up - so that all the slides were in the right order and we actually had a gap and we gave feedback over the message as that is what they preferred. One student said that she didn't want to do a presentation as she found it really daunting and she would prefer to do an essay. Some of them had shown great presentation skills in that they showed the slide and talked to the slide, others needed a bit of work on their presentation skills. (Lecturer 9)

We did the peer review on the final assessment. We actually had groups of three and had one person presenting and two peer reviewers marking with the rubric in front of them so they were giving them feedback on all the elements that the person was being marked upon. We had visitors so the other people were actually listening in and putting their two cents worth in when the reviewers were not picking it up. If nobody else picked anything that I thought was important I would chime in, but I kind of stood back from that process and I wasn't the sort of main feedback giver. (Lecturer 8)

The importance of providing a medium for online learning to present to peers is highly relevant to a course such as teacher education. The Elluminate environment was highly appropriate to engage the regional students in this way. This was supported by Lecturer 9 who stated:

This is something that I say to the first year students. If you are not able to get up and present to the group how the hell are you going to be able to get up and present to 35 sets of eyes. (Lecturer 9)

Access to Recorded Sessions

The role of asynchronous communication in online learning is clearly understood in terms of its flexibility for access at anytime. The risk of implementing synchronous types of communication, such as Elluminate, is that the flexibility can sometimes be lost as people are required to access the session at a certain time. Within Elluminate the ability to record the session means those unable to attend at a certain time can still benefit from the content of such a session. This was strongly indicated by a number of lecturers whose students had expressed their gratitude for the access to the recordings.

Even those who didn't come on actually listened. (Lecturer 1)

Elluminate has enhanced this because even when they don't come on in real time a lot of them tell me they listen. (Lecturer 3)

Even though they weren't coming to the session, they were still listening. (Lecturer 4)

Impact on Assessment

From the interview data, it was noted that a number of lecturers had commented on the impact that the Elluminate sessions had on the overall assessment submissions in their units. As some of these lecturers have worked across a number of delivery modes in the school, including internal and Open Universities Australia programs, the following comparison was noted:

The standard of work has been exceptional, just being able to guide them. (Lecturer 1)

There was a confidence building and just being able to explain things to them informally, I do an OUA course and I think the regional students have been advantaged. In fact their results are going to be much better. (Lecturer 3)

Lecturer 9 reflected on the gradual improvement over the unit, as those who had failed Assessment 1 were engaged in a peer review process through Elluminate in order to improve Assessment 2. The results from Assessment 2 showed this had a very positive impact:

I think it worked quite well, the assessments came through really well. I realized that with the first assessment. It improved and in the end no one failed where as in the first assessment I had about four people fail the assignment out right. (Lecturer 8)

From the interview data the researchers are confident that the synchronous communication has made a positive impact on the learning outcomes for our regional students and contributed to the provision of a quality teacher education program.

Challenges of Elluminate

Unpredictable Attendance

A common theme throughout the data were the challenges in attracting large numbers of the student cohort to the live session. Although the data also indicated that recordings were beneficial, a small number of participants could sometimes limit the planned delivery.

The numbers were a problem. There were less and less students. There were 33 in the class and there was a max of 12. In the last two sessions it was me talking to myself. (Lecturer 4)

At the most, six students got on. When you look at the class group of about 28-30 students, it was the same six every time. (Lecturer 5)

It was suggested by some lecturers that the sessions needed to be changed to maximize the number of students who attended. They acknowledged that many students in this modern society are required to work in some capacity and this limits the times that they can attend such a session:

Only a small number of students engaged with it. We need to look at the time we run them, a lot of the students work fulltime or part time so maybe 7 or 8pm or a weekend session. (Lecturer 3)

We have late classes face to face, so why don't we have late Elluminate classes and I am happy to do that. (Lecturer 9)

Novice Users Impact on Pedagogy

Of the ten teaching staff that were interviewed, only two identified their own inexperience with the technology had impacted on their ability to use it for teaching and learning. This was reflected in the following comments:

My frustrations with inadequate knowledge were a limitation (Lecturer 10).

Maybe when I get to be a more experienced user I would say I wish it had this, and this and this. But at the moment given where I am with my learning of it – I think it's pretty reasonable (Lecturer 8).

Interestingly, Lecturer 6, discussed her frustration with the etiquette of her sessions. She explained that one person speaking at a time and people raising their hand to speak is not inline with how a face to face conversation would be. She stated “*because it's a one person at a time thing so I think that is a big limitation. I think that if you are having a proper tute group that people butt in and people stop talking and you don't really have to put your hand up. Whereas in Elluminate you have to and its very stilted*” (Lecturer 6). This statement clearly indicates that the lecturer's limited experience with Elluminate has meant she has not experimented with different styles of etiquette to suit her teaching and learning needs. The researchers have since explained the different options that she may want to implement that will allow for a more natural conversation environment.

Conclusion

The findings for this paper have reported the successes identified by the teaching staff and bring forth the challenges that have provided learning opportunities to improve the use of synchronous software in teaching and learning within the School of Education.

Successes of the use of synchronous software were identified as providing a supportive environment through peer and lecturer relationships; enhanced learning experiences in the online environment; the convenience of accessing recorded sessions; and improved outcomes for student assessment.

The challenges associated with using synchronous software were the unpredicted number of participants that might access the live session and the lecturer's inexperience with using the technology. This study has exemplified that the successes of using synchronous software, to enhance a quality program for pre-service educators in regional areas, far outweigh the perceived challenges.

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