VIRTUAL CLASSROOM: REFLECTIONS OF ONLINE LEARNING

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Abstract

In order to promote a more dynamic and flexible channel of communication for students, a new interactive online e-learning system (Elluminate Live!) was piloted. This software represents a virtual learning environment and accommodates multiple learning styles through the use of collaborated communication. This comprises the use of web, audio, video, instant messaging, shared interactive whiteboard, and social networking. This paper adopts a qualitative approach, focusing on the reflections of participants (student and teacher) collated over a 12-month period of piloting online classes. This structured reflection process is seen as an appropriate learning guide for developing educational practice.

Introduction

As society becomes increasingly technology orientated, pressures have emerged within the education sector from policymakers and other stakeholders to embed e-technology into higher education courses. As Prensky (2001) clearly identified, today's students are not the people the traditional educational system was designed to teach as they are dependent on communications technologies for accessing information and for interacting with others (Oblinger & Oblinger, 2005). As the investigation into online learning in higher education continues to expand (Hill et al., 2003; Hofmann, 2002; Kim & Bonk, 2006) more questions are raised than answered. In an attempt to meet the challenges of the online learning environment, the School of Accounting and Finance at Victoria University (VU), Melbourne Australia, embarked on a pilot study of online classes using Elluminate Live!

The pilot study had two main areas of focus: 1.) the achievements of the teaching and learning outcomes arising from the adoption of online classes; and 2.) student and staff reflections on the strengths and weaknesses of the pilot project. Consequently, the objective of the study was to identify student and staff experiences with online learning and to examine feedback as a means in which to improve future curricula.

Information in the form of observations, readings, meetings, emails and conversation reflections with students and staff were documented in a professional journal to give insights of the online experience. This paper adopts a self-study methodological manner (reflective journal) to document personal thoughts and draw upon experiences, as well as observations and scheduled ad hoc discussions with students and staff. The significance of this study is to share the important knowledge garnered through reflective insights (via feedback and journal writing). This can act as a guide to other higher education universities looking at undertaking online learning.

The paper is structured as follows: Firstly, the reasoning behind the School of Accounting and Finance decision to explore the use of an online tool in its tutorials are identified. Secondly, the study design is explained where a description of the online class atmosphere is given to help simulate the environment being discussed. Thirdly, a number of themes arising from the online class pilot are identified. The paper concludes with a summary of the results and an identification of areas in which the School can improve online teaching.

Why Go Online?

In reviewing its curriculum, the School of Accounting and Finance at VU identified its main style of teaching to be the traditional face-to-face method, supported by the use of some online components such as Blackboard and Lectopia. The increasing popularity of online learning (Jenkins, 2010; Nagel, 2009) resulted in an expansion of the School's online facilities to complement their traditional curriculum. As Volery and Lord (2000) asserted, embracing e-learning technology is no longer an option for universities but a requirement in the pursuit of globalisation.

Having decided to explore the concept of online classes, a committee comprising five staff was established to oversee the project. The aim was not to replace face-to-face classes but to provide students with a mix of study modes to help facilitate and enhance their learning experience.

Prior to the project implementation, extensive work was undertaken in planning and advertising the online tutorials, e.g., posters were placed around the university grounds, flyers were handed out at enrolments, and announcements were made on the student learning management system (Blackboard). Since the concept of online classes was new to the School, a number of software training sessions were also held for staff involved with the project.

Study Design

The analytical approach adopted in this study is structured reflection. Reflective thinking has a well-established tradition in both facilitating informed and logical decisions about educational matters, and in assessing the consequences of those decisions. Dewey (1933) is acknowledged as one of the key originators of the reflection concept within education. His seminal work continues to inspire scholars (see Greener, 2009; Moon, 2000; Schon, 1987) to share their reflective insights on their teaching and learning experience. In this study, a reflective journal was used as a means for self-assessment, self-reflection, goal setting, and collaborative critique in order to assist in the learning and progression of online classes in the School of Accounting and Finance.

Elluminate Live! at Victoria University

As a pilot project, this was the first time that Elluminate Live! had been applied in the School. This project was an important way to demonstrate to staff that new e-learning tools could allow them to connect with students in new ways. The project arose from the need to provide students with flexible learning opportunities, in particular time-poor students with work and family commitments, an opportunity to study and work while still enjoying somewhat of a balanced lifestyle. Elluminate Live! was chosen as it could accommodate a myriad of student learning styles as well as enhance student engagement with its activities.

Currently, Australian scholarly papers focussing on the use of Elluminate Live! as a teaching tool to help develop curriculum at tertiary level are scarce. However, as evidenced via the Elluminate Live! website, a number of case studies performed by American universities examine this (http://www.elluminate.com/Resources/Case_Studies/id=96/).

As previously mentioned, the Elluminate Live! software was implemented on a pilot basis to provide online tutorials in the School of Accounting and Finance for semesters one and two in 2010. Five staff volunteered to pilot one class from their unit of discipline. Online classes were offered to first, second and third year undergraduate and post graduate students. Approximately 80 students volunteered to participate in the pilot across the five units. The units are listed below:

- BAO1101 - Accounting for Decision Making
- BAO1107 - Accounting Information Systems
- BAO2204 - Management Accounting
- BAO3307 - Corporate Finance
- BAO6714 - Computerised Accounting in an ERP System

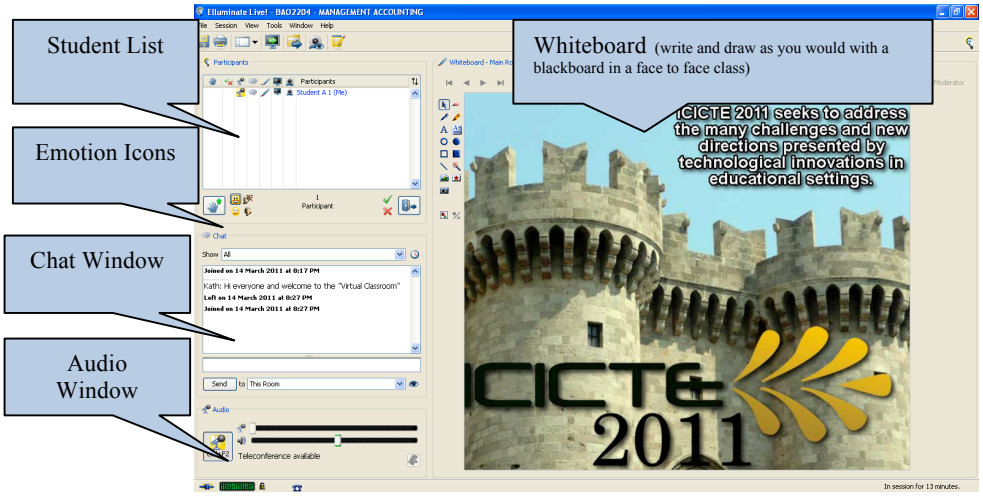
The respondents in the pilot test were given the option to complete a pre and post online survey of their experience. The survey consisted of closed and open ended questions. Results from the surveys were used to improve the application of the software to better develop the school curriculum.

Virtual Classroom Atmosphere

The virtual classroom tutorials were conducted in a very similar manner as the face-to-face classes. Some differences were present because of the technology involved with delivering the material. Prior to the commencement of the semester, students were provided with a booklet of protocols for using the online classroom. A virtual classroom link was created within the learning management system (Blackboard) and students were advised to join the session 10–15 minutes prior to the commencement of the tutorial. This was to allow time to download and install required software. The virtual classroom link automatically downloaded and installed the Elluminate Live! virtual classroom software on the student's computer. Once in the site, the Java application (by Java Web Start) automatically began running. On the completion of the download students were required to configure their microphone and speakers through the audio set up wizard. Once all technical issues were addressed the class commenced. The teacher maintained control of the microphone as a means to effectively manage who spoke and when they spoke. Student names appeared on the left side of the screen giving the teacher a readable class list at all times.

Prior to class interaction, students were reminded that the sessions were being recorded and that the recordings would be made available to all students in the unit as a resource. This served a dual purpose: it ensured respect was maintained between students; and it fulfilled legal requirements. Teaching tools available within this virtual environment included, verbal discussions, text chat, write, draw and paste images on a shared whiteboard, and the ability to view and share documents presented in PowerPoint or MS Word. Students could also use emotion icons ☺ during the session to provide instant feedback to the tutor. Similiar to face-to-face classes, students could raise their hand if they had a question by clicking the hand raise icon and then waiting until the teacher addressed them. Figure 1 below provides a view of the students' interface.

Figure1: Elluminate Live! Student Interface



Themes

The importance of teacher reflection is identified by its status as an established practice to improve teaching. However, it cannot be achieved without the teacher converting their teaching experience into knowledge through the process of reflection (McAlpine & Weston, 2004). Reflective journals are used extensively in the university context as a means to deepen personal understanding and stimulate critical thinking (Ballantyne & Packer, 1995). Hence, a reflective journal was used to assist the development of professional reflective practice with the Elluminate Live! online pilot program.

A number of insightful themes and issues emerged from the data collected from the journal reflections as well as other source documents such as meeting and emails. These themes are considered below.

Increased Flexibility and Cost Reductions

Victoria University has teaching partnerships with many universities around the world (China, Malaysia, India, and Germany). These affiliations require approximately 80 teaching visits a year. The flexibility of the online classes allows staff to maintain their teaching duties in Australia whilst meeting their overseas teaching responsibilities. As staff were able to conduct their Australian classes from their international location, the administrative inconvenience of finding replacement staff for the classes in Australia was done away with.

Online classes further contributed to the reduction of travel costs (i.e., petrol, parking, airfares) for students and staff, as well as omitting the need for staff replacement costs to ensure classes in Australia were covered. In addition, depending on the number of enrolments with our affiliated offshore campuses, at times it was more cost effective to have staff teach from our home campus in Australia (using Elluminate Live!) than have them travel overseas.

In conjunction to reducing costs there was also an indirect, and less obvious, benefit to online learning. Online classes can significantly reduce a student's carbon footprint, through the reduction in waste, pollution and energy consumption as reported by Roy et al. (2005). Internet-based classes eliminate the paper trail often connected with traditional classrooms. While many documents may be exchanged from student to teacher and vice versa, each party can print these documents as they see necessary, eliminating needless paper waste and copying.

One of the greatest strengths of online learning is the flexibility it provides to the learner and educator (Petrides, 2002; Schrum, 2002). Since students were able to attend this online class at anytime from anywhere, it offered great flexibility with respect to location, time and study environment. For instance, students participated in their classes from a range of geographical locations that included home, work and holiday destinations. Online classes not only free up time for

students to pursue other interests, they also teach them valuable time-management skills (Roper, 2007).

The benefits of the online classes for the instructors were similar. The greater flexibility with both time and location enabled staff to work either from home or overseas locations as they were travelling. This supports Poole's (2000) assertion that the other evolving strength of online classes is convenience, with online classes allowing students to logon at times that were convenient to them. This result is in contrast to regular face-to-face classes where a number of students withdraw due to work, family or other obligations. The convenience and flexibility of such classes provided students with a more balanced lifestyle and more control over their schedules.

The key to any virtual classroom is the ability to record and playback sessions, creating reusable learning material(s) to maximise student access and leverage teaching resources. By recording the tutorials and posting them on Blackboard, students were able to learn at their own pace therefore accommodating multiple learning skills.

The flexibility and convenience provided by the online classes further facilitated overseas relationships with students and staff. The online facilities (revision classes, online consultation) allowed offshore students to participate in class activities. It also reinforces the work of Kandlbinder (2001) who indicated that online classes provided greater opportunities for staff separated geographically to work collaboratively across the institution. For instance, in one of my teaching assignments to Malaysia in early 2010 I trained local staff on the use of Elluminate Live! in order to make communication more frequent.

Further to the continuing benefits of flexibility, issues with class times (tutorial times) reduced dramatically. In consultation with students during the pilot, it was highlighted that the tutorial time of the classes would be a factor in assessing the success or failure of the project. The scheduled tutorial times in semester one varied from day to evening sessions. Feedback from students after semester one showed they preferred later tutorial time sessions. Taking this feedback on board, all online tutorials in semester two were scheduled for evening times. This change saw an increase in student numbers.

Technical Challenges

When implementing new online learning tools, the technical challenges of using these tools should not be overlooked (Song et al., 2004). According to Pickett (2009), one of the foremost challenges to the implementation of technology is the experience levels of the teacher. Despite the majority of participants in the pilot indicating that: (a) their IT skills were quite good; and (b) the Elluminate Live! *s*oftware was user friendly, some interruptions to the online classes still existed. The initial five weeks of the pilot witnessed continuous audio difficulties which caused frustration for both the learner and the educator. These initial teething

problems discouraged some students from continuing. With the assistance of the Elluminate Live! software developers, the problem was identified to be caused by students using the inbuilt computer speakers in preference to using headsets. In supporting the resolution the school offered to loan students headsets. Strengthening the provision of technical guidance and support, and reminding students to prepare and test systems before class, enhanced their experience and facilitated the smooth operation of the online tutorials.

Some students wishing to participate in the online class from their work place faced corporate technical challenges with corporate fire walls and other internal control restrictions preventing the download of Java. This meant that they were unable to download the software on to their work computers. Some corporations were prepared to decrease computer security levels but others were unable to. In the event where students were unable to undertake the class from work they selected an alternative user friendly location.

Resistance to Online Learning

Once the project was operational, efforts were made to encourage additional staff members to offer classes online. Unfortunately very few staff showed interest, and those that did commenced with online consultations as an initial stepping stone. I was able to provide training sessions for a couple of staff members and assisted them with the initial setup, further contributing to my professional development.

While recognising the desirability of reaching out to new students and engaging in innovative pedagogical approaches, from my observations I discovered that many academic staff continue to prefer traditional teaching methods and, more importantly, are quite sceptical about the potential for student learning in online environments. Apart from this apparent bias, other factors which reduced staff motivation to adopt an online learning environment were: lack of time, fears of loss of academic control, and fear of change (MacKeogh & Fox, 2008). Given that academic staff attitudes are a key factor in the successful implementation of the virtual classroom (Cummings et al., 2005) it is imperative that for the uptake of online technologies to occur in a broad range of discipline areas within the school, a substantial program of staff development will need to be provided.

Resistance was also reflected in student attitudes. Some students perceived that they would be disadvantaged if face to face contact was eliminated. It was found that once demonstrations took place to illustrate the usefulness of the Elluminate Live! software and the benefits it could provide students, more students came on board. This showed that demonstration and instilling the purpose of online learning encouraged acceptance.

Extension of Online Facilities and Student Engagement

Whilst there is no universally accepted definition of what constitutes student engagement it can represent numerous things, from student retention to academic

success. As the project progressed, students began to request more online facilities to assist their studies, an aspect which was also identified by Song et al. (2004). Consequently, student online consultations were developed. Traditionally, student consultation refers to time set aside by staff so students can seek face-to-face contact on issues specifically related to study issues. Based on the same principles, consultation time was offered to students in an online format.

It is common practice for students, in particular before examinations, to form study groups where they meet at a designated location to discuss their studies. Students piloting the online tutorial in second semester requested an "online study room." Study rooms are online areas which allow students to study together, send messages to each other, and share files. The main benefit of an online study room meant that students could stay home and still meet up with a group to study. The online study room was set up on Blackboard. This online tool was offered to all 358 students studying in the designated unit, but only 3 students already involved with online tutorials took an interest. Although other online study groups independent from VU exist (see http://www.rcampus.com/helpstudygroupsc.cfm) I believe the best and most secure place to create such rooms is within Blackboard.

As Douglas and Alemanne (2007) indicated, as the number of online classes increase in universities worldwide, the traditional measures of student engagement such as class attendance will be impossible to gauge. However in contrast to this finding, the pilot test undertook by the School using the Elluminate Live! software was able to measure at least one aspect of student engagement that being the class attendance (refer to Figure 1).

International students, who traditionally engage less with the university compared to domestic students, present new challenges to the world of online learning at higher education (Strang, 2007). Interestingly, while it has been identified that international students are not favorable to interacting in large groups, they still seem to prefer traditional learning methods. However, online international students participating in Elluminate Live! reported feeling safe behind a computer and were more prepared to engage in the online classes compared to face to face classes.

Summary and Conclusion

The online pilot project undertaken by the school is important since it serves as a basis from which develop future successful pedagogical approaches where the aim is to improve online curriculum development and teaching practices.

Through my observations the school's virtual classroom strategies need to address staff concerns. In particular the scepticism staff have for the potential for student learning in online environments as well as their continued preference for

traditional teaching. Hence, staff training and the establishment of effective support structures for embedding safe, secure, and rewarding virtual classrooms are required to make it a success.

The journal kept during the pilot reflected upon my perceptions of how the online class was progressing. These reflections led to the identification of obstacles to achieving online learning success. It is hoped that the reflections mentioned here can shape the evolution of the online class concept within the School of Accounting and Finance at VU. More specifically, that the school is willing to introduce policies and procedures aimed at addressing the concerns raised in this paper to ensure improved outcomes and the active promotion of the virtual classroom. The importance of dedicating sufficient time, reflecting on practice, and learning through research is strongly recommended.

References

Ballantyne, R., & Packer, J. (1995). *Making connections: Using student journals as a teaching/learning aid. HERDSA Gold Guide No. 2.* ACT Higher Education Research and Development Society of Australasia.

Cummings, R., Phillips, R., Tilbrook, T., & Lowe, K. (2005). Middle-out approaches to the reform of university teaching and learning: Champions striding between the 'top-down' and 'bottom-up' approaches. *The International Review of Research on Open and Distance Learning, 6*(1), 1–18.

Dewey, J. (1933). *How we think.* New York: Prometheus Books.

Douglas, I., & Alemanne, N. (2007). *Measuring student participation and effort.* Paper presented at the International Conference on Cognition and Exploratory Learning in Digital Age, Algarve, Portugal.

Elluminate. (2010). *Case studies.* Retrieved January 15, 2011, from http://www.elluminate.com/Resources/Case_Studies/id=96/

Greener, S. (2009). Talking online: Reflecting on online communication tools. *Campus-Wide Information Systems*, *26*(3), 178–190.

Hill, J., Wiley, D., Nelson, L., & Han, S. (2003). Exploring research on Internet-based learning: From infrastructure to interactions. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 433–460). Mahwah, NJ: Lawrence Erlbaum.

Hofmann, D. W. (2002). Internet-based distance learning in higher education. *Tech Directions*, *62*(1), 28–32.

Jenkins, F. (2010). *Online learning continues to gain popularity in 2010.* Retrieved December 12, 2010, from http://ezinearticles.com/?Online-Learning- Continues-to-Gain-Popularity-in-2010&id=4805978

Kim, K., & Bonk, C. (2006). The future of online teaching and learning in higher education: The survey says . . . *EDUCAUSE Quarterly Magazine*, *29*(4), 22–30.

Kandlbinder. P. (2001). Peeking under the covers: Understanding the foundations of online academic staff development. In L. Richardson & J. Lidstone (Eds.), *Flexible learning for a flexible society* (pp. 372–378). Proceedings of ASET-

HERDSA 2000 Conference, Toowoomba, Qld. ASET and HERDSA. http://www.aset.org.au/confs/aset-herdsa2000/procs/ kandlbinder2.html

MacKeogh, K., & Fox, S. (2008). Strategies for embedding elearning in traditional universities: Drivers and barriers. *Electronic Journal of e-Learning, 7*(2), 147–154.

McAlpine, L., & Weston, C. (2004). Reflection: Issues related to improving professors' teaching and students' learning. *Instructional Science, 28*(5), 363–385

Moon, J. (2000). *Reflection in learning and professional development: Theory and practice.* London: Kogan Page.

Nagel, D. (2009). Most college students to take classes online by 2014. Retrieved January 5, 2011, from http://campustechnology.com/articles /2009/10/28/most-college-students-to-take-classes-online-by-2014.aspx

Oblinger, D., & Oblinger, J. (2005). Is it age or IT: First steps towards understanding the Net generation. In D. Oblinger and J. Oblinger (Eds.), *Educating the Net generation* (pp. 2.1–2.20). Boulder, CO: Educause.

Petrides, L. (2002). Web-based technologies for distributed (or distance) learning: Creating learning-centered educational experiences in the higher education classroom. *International Journal of Instructional Media, 29*(1), 69–77.

Pickett, M. (2009). Overcoming technology barriers in adult online learning environments with modular instructional design. *Proceedings of ASBBS, 16*(1), 1–7.

Poole, D. (2000). Student participation in a discussion-oriented online course: A case study. *Journal of Research on Computing in Education, 33*(2), 162–177.

Prensky, M. (2001). Digital natives digital immigrants. *On the Horizon*, *9*(5), 1–6.

Roper, A. (2007). How students develop online learning skills. *EDUCAUSE Quarterly*, *30*(1), 62–65.

Roy, R., Potter, S., Yarrow, K., & Smith, M. (2005). *Towards sustainable higher education: Environmental impacts of campus-based and distance higher education systems*. Milton Keynes: The Design Innovation Group.

Schrum, L. (2002). Online education: A study of emerging pedagogy. *New Directions for Adult and Continuing Education, 78*, 53–61.

Schon, D. (1987). *Teaching artistry through reflection-in-action: Educating the reflective practitioner*. San Francisco, CA: Jossey-Bass.

Song, L., Singleton, E., Hill, J., & Koh, M. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *Internet and Higher Education, 7*(1), 59–70.

Strang, S. (2009). Measuring online learning approach and mentoring preferences of international doctorate students. *International Journal of Educational Research*, *48*(4), 245–257.

Volery, T., & Lord, D. (2000). Critical success factors in online education. *The International Journal of Educational Management, 14*(5), 216–223.