SUPPORTING ONLINE TEACHING AND LEARNING IN EARLY CHILDHOOD COURSES

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Abstract
The phasing out of print based materials for external students in the Faculty of Education at QUT has led to greater reliance on online teaching and learning. Both staff and students in the School of Early Childhood were surveyed to identify the features of online delivery that were positive contributors to the quality of teaching and learning as well as those features that might present difficulties or barriers to the quality of teaching and learning. As a whole, results of this exploratory inquiry indicated that both students and staff were positive about online delivery, and suggested that it is a contributing factor to the quality of teaching and learning. This paper reports on the results of the student surveys and raises questions about different ways of conceptualising effective online learning environments and practices in higher education.

Keywords
online learning and teaching, student perceptions

Introduction
The School of Early Childhood, within the Faculty of Education at Queensland University of Technology (QUT), offers courses at undergraduate and post-graduate levels, and in internal, external and mixed mode delivery. Online learning is becoming more common as external programs move away from the provision of print based materials, and internal programs supplement traditional face-to-face programs with online delivery of teaching and learning support materials. Increased demand for online teaching makes it imperative that educators understand how to develop effective online teaching and learning strategies. The current study was designed as an exploratory inquiry into how staff and students within the School of Early Childhood perceived features of online course delivery and to what degree online learning and teaching promoted learning. Anecdotal evidence suggested that both staff and students felt the need for support during the transition to online delivery and it was expected that results from the current study could inform professional development efforts around online teaching activities in the School of Early Childhood.

Students and Online Teaching
There is a growing body of literature on the effectiveness of online teaching and learning. Much of this literature focuses on online delivery of external courses with “online” referring to additional support in the form of communication (Anderson, 2004; Fung, 2004; Harasim, 1987, 1995 in Anderson, 2004). That is, print material is provided for distance learning, and the online environment provides additional support to the print materials (Anderson, 2004; Fung, 2004), with the focus on student participation in online communication (Anderson, 2004). Swan, Shea,
Fredericksen, Pickett, Pelz, and Maher (2000) suggest that the development of online communities overcomes feelings of isolation for students and that development of knowledge-building communities is important for student success and satisfaction. However, these authors observe that students need to feel comfortable with the online learning interface before community building can take place. Kurubacak and Prentice (2002) note that lack of online learning experiences and computing skills affect students’ perceptions of online learning. Further, they suggest that students need to learn new strategies or restructure their learning styles to accommodate this new learning. Kelly and Schorger (2002) suggest that students need to adapt to this paradigm shift to benefit from online learning.

While a great deal of the literature supports constructivist models with the development of online communities of learners, how to achieve this is not so clear. Rovai (2002, cited Anderson, 2004) maintains that online communities should be bi-dimensional in nature. Both construction of understanding and developing feelings of cohesion and connectedness are significant. Arbaugh and Benbunan-Fich (2005) summarised a variety of research that investigated the roles of instructors/students in developing online communities. Some studies report that the instructor’s role in student interactions online is the most significant predictor of student learning and/or satisfaction. In contrast, other studies suggest that student interactions are the best predictor. Yet again, another set of studies reports that they are of equal importance. However, it is not clear whether interactions should be between students or between instructor and students (Arbaugh & Benbunan-Fich, 2005).

Studies focusing on successful online learning have identified aspects that enhance student learning. These include: consistency of course design (well structured courses that are easy to use); contact with course instructors (online environment takes advantage of increased access to tutors); and active discussion (where online forums provide the advantage of increased access to tutors). In contrast, Fung (2004) found that participation in online environments was low, the reasons being lack of time on the part of the students and the fact that students prefer to spend time reading. Fung suggested that this phenomenon was a direct result of the nature of distance/part-time students – they need to balance outside lives with learning demands. Gorsky, Caspi and Trumper (2004) also found that students wanted help right away; asynchronous communication was not popular because it lacked immediacy. These issues are significant. Many students choose to study online for the perceived benefits of flexibility and convenience (Kelly & Schorger, 2002), particularly for women with family and work commitments (Abrahamson, 1998; Kramarae, 2001). However, the requirement to interact with the instructor and other students might not meet the perceived needs of the students (Kelly & Schorger, 2002).

Additionally, inquiries into effective online delivery have also focused on the needs of staff, given the important follow-on effects to students. Arbaugh and Benbunan-Fich (2005), Dziuban, Shea, and Arbaugh (2005) and Reushle and McDonald (2004) reviewed research in this area and identified issues for staff involved in online course delivery. Web-based learning requires staff to have new skills; consequently, staff require training and support, including administrative support. Staff need to resolve issues of new and conflicting demands associated with web-based learning development; for instance, presentation of material, student assessment, maintaining office hours, and increased workload. They note that institutions underestimate the need to provide training and support in order to transition staff to online teaching, as well as time for staff to discuss concerns and share experiences. They also suggest that staff need to be aware of pedagogical transformations in online courses. Some of these pedagogical issues include how to create engagement (Hagner & Schneebeck, 2001, cited in Dziuban et al., 2005) and facilitate learning (Mason, 2001, cited in Dziuban et al., 2005). Dziuban et al. (2005) believe that an effective teacher is a facilitator, rather than a dispenser or transmitter of information. If staff are to be successful facilitators of an effective online teaching experience for students, it is essential that they appreciate online provision from the students’ perspective. The current study was designed to elicit from both staff and students the factors that enabled positive online teaching and learning and the perceived barriers or features of online delivery that do not provide a quality online learning experience. This paper focuses only on student perceptions.
This Study

Online learning and teaching (OLT) sites have been used in the School of Early Childhood (SEC) for several years with gradual development of the functionality of these sites and changing emphasis on their purpose. OLT sites contain material for both internal and external students, and some OLT sites do not distinguish between the two modes of study. Now, all new units developed for external study are delivered totally online. External students must access the OLT sites for all unit material such as, study guides and assessment tasks, communication with staff and other students, and links to websites. No print materials are provided. Internal students must also access OLT for unit information and assessment tasks and for additional support materials (e.g., lecture and tutorial notes), although they are still expected to attend lectures and tutorials.

Students enrol in a variety of courses – undergraduate (internal and external), graduate entry (internal, external and mixed mode), and postgraduate (internal, external and mixed mode). While some courses are only offered in external mode, some courses are offered in both modes. Therefore, some students study externally as a result of the course only being offered externally; while other students choose to study externally because of family and/or work commitments, or because they live too far from university. Interestingly, the majority of external students live within the greater Brisbane metropolitan area.

OLT sites offer a variety of features. Teaching staff use these features as they deem necessary for the delivery of their particular units, and/or they feel comfortable or skilled in using. Features include both content- and communication-orientated functions:

- **Content delivery:** contact details of staff, unit information and assessment tasks, study guides and associated activities (for external students), audiostreamed/videostreamed lectures, lecture powerpoint presentations, course materials database (CMD – repository for unit readings), further guidance for assignments, links to relevant websites.
- **Communication:** notices from lecturers, notices also copied as emails to students, discussion forums, chat rooms, group work areas, email contact with other students, frequently asked questions, quizzes, media files or other features that encourage reflection and discussion.

Design

This study used two similar online surveys, completed by students and staff. Likert scales (1-5) were developed to identify participants’ use of OLT features. The surveys also invited qualitative descriptive responses. Items on the student survey addressed: access to computers and the internet; perceptions of effectiveness of OLT features; identification of the best and worst features of working with OLT; and comments about overall communication with staff. Here we present some findings from the initial qualitative analysis of the student respondents’ written responses to survey questions because, as previously stated, this paper focuses on reporting the student data.

Participants

The participants were currently enrolled students – internal and external, full-time and part-time, domestic and international, and undergraduate and postgraduate – across all year levels, in all SEC teacher preparation programs. The response rate was 29.1% of the entire student cohort, providing 335 completed surveys. Most respondents were internal students (66.3%), with 61.5% studying full-time. The majority of respondents lived in the Brisbane metropolitan area (74.6%), followed by those resident in regional towns and cities in Queensland (21.8%). Most student respondents used telephone access to the internet (40.9%), followed by ADSL (30.1%), then cable (22.1%).

Data Analysis

Student qualitative survey responses were collated and reviewed by members of the research team. An interpretive-descriptive approach using the constant comparative method (Strauss & Corbin, 1998) of data analysis was employed. Maykut and Moorehouse (1994) describe interpretive-descriptive research as exploratory and reliant on people’s words and meanings. This was an iterative process in which transcripts were read and reread to determine meanings embedded in the
recurring issues for students. The research team negotiated categories and meanings as a group until agreement was reached.

**Some Findings**

At this initial stage of analysis, the students’ responses have been organised around two main categories: (i) features of OLT which are positive contributors to the teaching and learning experience; and (ii) features of OLT which constrain the teaching and learning experience.

**(i) Features of OLT which enhance the Teaching and Learning Experience**

Students were asked to nominate five of the best features of OLT. Responses were not hierarchical and were combined for analysis. Generally, OLT was perceived as a positive contributor to students’ teaching and learning experiences. Results clustered around three themes: information; communication; and assessment support.

The structure and availability of **information** was important. Students appreciated well-structured sites which were easy to navigate via dynamic menus. They liked 24/7 access to clearly organised information which was updated regularly. The most helpful features identified were:

- Lecture notes, extended lecture notes or study guide, and tutorial guides. For example:
  
  *It is very useful to be able to look at the notes both before and after the lecture, and also to have a guide to what the lecturer will be talking about*

- CMD for essential unit readings and additional readings for extension and assessment. Students perceived it as a tool to ensure equitable access to the unit readings. For example:
  
  *Finding resources for assignments can be very difficult as there are a limited selection of books in the library and many students needing to use them. Database searching is sometimes quite difficult and time consuming and to have the relevant journals on the CMD helps greatly*

- Links to important websites, especially organisations, resources for practical activities, and information literacy skills. For example:
  
  *Generally provides relevant and credible information on websites that are useful for assignment and exams*

**Communication** was highly valued (although in the form of one-way messages rather than sustained dialogue). Preferred forms were:

- Notices copied as emails to the unit group. They were useful for revision, a way to keep up to date, providing hints to help with understanding the unit material or assessment, and for providing encouragement. For example:
  
  *Keeps you up to date and you feel like you’re not missing out as much being an external student.*

- Online discussion forums or, less frequently, chat rooms and email contacts for groups of students. For example:
  
  *Because you are able to see how other students in your position are going and to get ideas and examples from them*

- Information about and contact details for the unit coordinator and teaching staff was considered to personalise the unit and the website. External students considered that personal information about the unit coordinator helped them to feel supported if they had access to this information and could make immediate contact.

**Assessment support** rated as a significant element in students’ online experiences. Features that they felt contributed to success were:

- Details including extended information on how to complete assignments, hints for assignment completion, assessment guidelines, examples of previous assignments and exams, frequently asked questions pertaining to assessment, availability of an assignment cover sheet on every OLT site, and general feedback about assessment. For example:
Any additional information and examples of assignments are always helpful.

**Important to stop rumours spreading about certain assignment expectations**

- Audio- and video-streamed lectures assist when unable to attend university, help external students feel connected, and are useful for exam revision/study. For example:
  
  They are really helpful when preparing for exams or assignments to be able to listen to them again. Or if for some reason you are unable to go to the lecture you can still listen to it at home.

- Quizzes provided formative assessment and were used as an exam preparation tool. For example:
  
  Fun and enjoyable way to ensure that you’ve covered the right content for exams – good practice, too!

When students were asked to what extent OLT had improved the quality of their learning, the majority of students’ comments were positive. Students believed that the quality of their learning had improved. Further key themes identified were convenience, connection, and growing confidence with their own ICT skills.

**Convenience** was highly rated. Students considered they had ready access to many sources of information and this helped them to use time more effectively. The words of one respondent – “it saves a lot of stuffing around” – reflected the tenor of many comments. For example:

OLT provides students with resources 24hrs a day/7 days a week and is a great tool for learning as it can be accessed at any time, to fit around work commitments etc. It is a great idea. I can’t imagine learning without it .... The convenience of being able to read and print out materials from home allows me to be more organised and prepared for lectures, tutorials, assignments and exams.

It appeared that OLT has helped enhanced connection among students, between staff and students. In many instances this has reduced feelings of isolation, especially for external students. For example:

I feel more connected to the university and to other students studying the same subjects. I have studying externally previously with XXXX Uni but didn't have this kind of electronic access. I am finding it very beneficial.

Being external distance education it has been useful to me to be able to communicate with students and lecturers. Lecturers have always responded very quickly to my questions and at times placed me in the right direction or given me information on where to find out information.

The expectation that students will use OLT has led to some students improving their computer skills and learning new ones. This is significant as graduating teachers will need to demonstrate competencies with a range of technologies. For example:

I feel it has forced me to embrace modern technologies when under different circumstances I would simply avoid it.

Developed my computer skills and enabled me to access information much faster than searching through shelves.

**(ii) Features of OLT which constrain the Teaching and Learning Experience**

Students were asked about the barriers they faced when using OLT, and to provide any examples of how OLT may have hindered their studies. Broadly, the barriers appear to cluster around the issues of cost, time, and access.

**The cost of printing materials** was identified by the majority of students as a significant barrier. A number of students stressed that the cost of printing materials was prohibitive for students. For example:

I earn $270/fortnight and spend at least $70 a semester printing out articles from the CMD, databases, unit information and assignments etc.
Flexiprint, by which students can order printing online for delivery by post or personal collection, was not perceived as a cheaper option with students commenting that they felt the costs of flexiprint were too high and that they should be subsidised by the university. For example:

*There are a lot of things that we need to print out and it does cost quite a bit after a while -- I know that there is flexiprint but that's still a large amount to pay straight up.*

Several students commented that they felt they should pay reduced fees now that they were no longer receiving printed notes from uni. For example:

*I really wonder what my HECS fee is paying for: someone to mark my assignment and exam paper each semester and reply to the occasional email? I certainly expect very comprehensive feedback! One wonders whether external students provide a cash cow for universities impoverished under Howard's regime.*

The cost of internet access was identified as a barrier by over three quarters of respondents. For example:

*In order to get the access to the internet at home rather than in uni it really cost me a great deal to buy the internet equipment. I am going to be broke soon. Internet access at home is very expensive, especially for transient Uni students -- the cost of set up and installation is very high.*

**Download time** was frustrating for many students. Nearly half of respondents identified this as an issue. For example:

*Sometimes it takes a long, long time for my lecture notes and CMD readings to download. I find this frustrating as I only have limited time.*

Nearly all students indicated that finding essential unit material was a problem. For example:

*I spent more time finding and downloading and printing materials in the beginning of the semester than I did actually reading the information*

**Access to computers** both at home and in university labs was identified as an issue by nearly a third of students. At home, students who had to share computers spoke about their difficulty gaining access. For example:

*I share the computer at home with four other people so sometimes having the time to access it can be difficult.*

For students using the QUT computer labs access was also sometimes a problem. For example:

*I have internet at home but we cannot afford unlimited access. This limits my ability to download at home. When I am at uni there are not always enough computers to use.*

A few students identified a slow internet connection either due to dial-up access or an old computer as a barrier. For example:

*Older computers take ages to get the site up.....sometimes my computer would freeze and I would be back at the start again.*

**Concluding comments**

At this early stage of analysis, it would appear that OLT is perceived as a positive contributor to the teaching and learning experience, but it also presents some barriers to the experience. Issues for students encompassed the important consideration of them being both time and money poor. Students appealed to the university to consider the costs involved in their use of OLT. Overall, it would appear that OLT is currently perceived as a useful component for enhancing pedagogy, with some important ongoing issues which need to be addressed. The positive features of OLT, for students, appear to be its capacity to distribute information, enable communication (mainly between lecturer and student), and assist with their concerns around assessment. At this stage of the analysis, it would appear that students see OLT as enhancing the learning experience through
enabling the distribution of information to them, from the lecturer – a one-dimensional notion, which may be conceptualised within a view of teaching as transmissive and learning as passive. Of note, students did not appear to place great importance on communicating with each other (c.f., Fung, 2004; Kelly & Schoger, 2002).

In order to truly make the most of online learning and teaching, more needs to be done to create knowledge building communities as identified by Anderson (2004); Dziuban et al (2005) and Swan, Shea, Fredericksen, Pickett, Pelz, and Maher (2000). Integral to this is the need to improve students’ comfort when using OLT and to be explicit about the use of particular strategies for their engagement with OLT. To this end, the School of Early Childhood is considering implementing additional support strategies; for example, a study school for external students, focusing on an introduction to OLT; and the development of a website specifically for external students that will collect, in one place, a wide range of already existing web-based support services. For staff, further local-level school-based opportunities to collaborate and critique their OLT developments will be essential to better meet student needs, so that OLT continues to be developed as a tool that deepens learning, rather than being used mainly as a tool for transmission of information and knowledge. As well, the university will need to consider addressing the issue of time and support required for staff to engage in professional development for the use of OLT as an effective pedagogical tool.

References


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