

QUT Digital Repository:
<http://eprints.qut.edu.au/>



Heirdsfield, Ann M. and Davis, Julie M. and Lennox, Sandra P. and Walker, Sue and Zhang, Weihong (2007) *Online learning environments: What early childhood teacher education students say*. *Journal of Early Childhood Teacher Education*, 28(2). pp. 115-126.

© Copyright 2007 Taylor & Francis

This is an electronic version of an article published in [Heirdsfield, Ann, Davis, Julie, Lennox, Sandra, Walker, Sue & Zhang, Weihong (2007). *Online Learning Environments: What Early Childhood Teacher Education Students Say*. *Journal of Early Childhood Teacher Education*, 28 (2), 115-126.]. [Journal of Early Childhood Teacher Education] is available online at informaworldTM with <http://www.informaworld.com/10.1080/10901020701366699>

Online Learning Environments: What Early Childhood Teacher Education Students Say

Ann Heirdsfield, Julie Davis, Sandra Lennox, Sue Walker and Weihong Zhang

Queensland University of Technology

Author note

Ann Heirdsfield, Julie Davis, Sandra Lennox, Sue Walker and Weihong Zhang

Centre for Learning Innovation, Queensland University of Technology.

This research was supported by a grant through the Queensland University of Technology, Faculty of Education. The authors would like to thank the students who participated in the study.

Correspondence concerning this article should be addressed to Ann Heirdsfield, School of Early Childhood, Queensland University of Technology, Kelvin Grove, Queensland, 4059, e-mail: a.heirdsfield@qut.edu.au

Abstract

As online environments gain an increasing presence in higher education for both on-campus students and distance learners, there is a need to examine how effective these environments are for student learning. Online environments require essentially different teaching and learning strategies from those used in the traditional face-to-face contexts (for on-campus students) or with print-based material (for distance learners). This paper identifies early childhood teacher education students' perceptions of their learning experiences with the advent of an online learning environment. Perceptions of on-campus and distance learners are compared, and implications for teacher education staff interested in providing high quality learning environments within an online space are discussed.

Online instruction: teaching and learning mediated by educators, using information and communication technologies as the vehicle for connecting, sharing and collaborating, is gaining an increasing presence in higher education due to its perceived benefits. These benefits include speedy and effective delivery of courses across geographical and time constraints, opportunities for improved pedagogical support, increased access for non-traditional students, and claims of cost savings (Bigum & Rowan, 2004; Natriello, 2005; Oblinger, Barone & Hawkins, 2001). For more than a century many universities have made provision for students and teachers separated by time and place. For these “distance education” students, technology (i.e., voice, video, data or print) is used as a bridge for communication (French, Olrech, Hale & Johnson, 2003, p 220). Traditionally, print resources were mailed to students and communication was slow and cumbersome, however,

in recent years more sophisticated technologies and delivery methods have been adopted (Finger, McGlasson & Finger, 2007). Universities have enhanced both their on-campus and distance-learning courses with online learning-management systems. “The traditional distinctions between distance education and campus-based institutions are blurring, with hybrid modes or ‘distributed learning’ where technology-mediated instruction provides greater flexibility for students and teaching staff, emerging as the new standard” (Masi & Winer, 2005, p. 149). Distance learning has become a subset of distributed learning which relies on a range of computing and communications technologies to provide extended opportunities for interaction and learning for *all* students; it can occur both on campus and off campus – anywhere, at any time (Oblinger, Barone & Hawkins, 2001). With institutional commitment to online instruction comes the need for evaluation and quality control to determine best practices in online learning communities. Furthermore, as flexible delivery increases, it is essential that lecturers identify potential barriers or stumbling blocks their students may encounter (Belcheir & Cucek, 2001). Bigum and Rowan (2004) argue that there has been limited attention given to what these new forms of distributed learning mean for students.

Researchers and teachers need to hear students’ voices as well as consider technical issues if they are to provide optimal learning environments and support opportunities for participation of all students. Awareness of students’ perceptions can increase the lecturer’s ability to design more effective learning experiences and help individuals through understanding and alleviating barriers to learning (Muilenburg & Berge, 2005, pp. 29–30). “Understanding the features that students actually use and those that they find helpful in their coursework can help instructors to focus their time and attention on incorporating those particular features” (Ballard, Stapleton, & Carroll, 2004, pp. 198-99). Student responses may

provide not only immediate feedback to help educators refine online learning environments and improve teaching, but also helpful information to monitor the quality of online learning sites and raise levels of student satisfaction. Ham (2005) suggests that the realities of students' experiences with online learning impact their motivation to continue with further education.

There is a growing body of literature that discusses the effectiveness of online teaching and learning. Much of this focuses on online delivery of distance education (off-campus) courses with "online" referring to additional support in the form of communication (Anderson, 2004; Fung, 2004; Harasim, 1987, 1995 cited 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).

Distance education students have specific needs and issues. They frequently feel a sense of isolation (Boyd, Herrmann, & Fox, 1998). Abrahamson (1998) suggests that there is often a lack of interaction among distance education students, and stresses the importance of creating opportunities for them to interact. Getting students connected with each other also enables them to gauge their progress (Abrahamson, 1998) and to receive feedback (McKenzie, Bennett, & Mims, 2002). 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. Wagner, Werner, and Schramm (2002) and 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 restructure their learning styles to accommodate this new learning. Reliance on online learning technologies has changed the way students have traditionally engaged with course content, with teachers and other students (Howland & Moore, 2002). Although there is a considerable literature on the effects of online learning there is neither agreement nor clear answers to the challenges raised by online learning technologies. Nevertheless, in this new environment, Sproull and Kiesler (1991, cited Bigum & Rowan) state that some changes are certain: “people pay attention to different things, have contact with different people, and depend on one another differently” (p. 216). Kelly and Schorger (2002) suggest that students need to adapt to this paradigm shift to benefit from online learning.

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 more equitable and democratic discussion) (Swan, Shea, Fredericksen, Pickett, & Pelz, 2000; Swan, Shea, Fredericksen, Pickett, Pelz, & Maher, 2000). In contrast, Fung (2004) found that participation in online environments was low for distance learners. The reasons given were lack of time and the fact that students preferred to spend time reading. Fung (2004) suggested that this phenomenon was a direct result of the nature of distance/part-time students who were often faced with conflicting demands and desired to integrate study with other commitments. Gorsky, Caspi, and Trumper (2004) found their students wanted help instantaneously; 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 their perceived needs (Kelly & Schorger, 2002).

While there is growing research concerning students' perceptions of online learning (e.g., Atan, Rahman, & Idrus, 2004; Ham, 2005; Howland & Moore, 2002; Huang, 2002; Rovai & Barnum, 2003), most of this research focuses on distance learners. However, online learning is being used increasingly for on-campus education students at Queensland University of Technology, as well as for distance learners (Ballard, Stapleton, & Carroll, 2004). There is a paucity of studies comparing the on-campus and distance students' attitudes toward and perceptions of online learning.

Online learning in the School of Early Childhood, Queensland University of Technology

Queensland University of Technology (QUT) has developed its own Learning Management System called Online Learning and Teaching (OLT). OLT sites, developed for each unit (subject) offer a variety of features. Teaching staff use these features as they deem necessary for the delivery of their particular units, and/or as they feel comfortable or skilled in using them. Features include administrative information, unit (subject) content, and communication functions. Communication via the OLT site can be either one way (e.g. notices from lecturers and media files), or more interactive, including discussion forums, chat rooms or other features that encourage reflection and discussion. In the School of Early Childhood, online learning and teaching for the delivery of its teacher education courses is becoming a mainstream activity. This has become increasingly the case as distance education programs have moved away from the provision of print-based materials, and on-campus programs supplement traditional face-to-face programs with online support materials.

The School of Early Childhood offers a variety of early childhood courses: undergraduate (on-campus and distance education), graduate entry (on-campus, distance education, and mixed mode), and postgraduate (on-campus, distance education, and mixed mode). Although some courses are only offered in distance education mode, others are offered in both modes. Therefore, some students study in distance mode as a result of the course only being offered in that mode, while other students choose to study in distance mode because of family and/or work commitments, or because they live too far from university. Interestingly, the many distance learners enrolled in early childhood courses live within the greater Brisbane metropolitan area, that is, they live relatively close to the university and could attend on-campus if they wished. There are the same learning outcomes and assessment tasks for on-campus and distance learners for each of the units (subjects) in which they are enrolled.

Initially, the online learning and teaching web sites (OLT) for each unit were developed as an adjunct to the on-campus student experience, not as a teaching and learning tool for distance education students. Currently OLT aims to go beyond delivery of information through the provision of interactive tools that can be used for the construction of understanding (e.g., discussion forum, notepad). OLT has the potential to have a positive impact on student learning and experiences (Atan, Rahman, & Idrus, 2004) through innovative pedagogical practices encouraging active participation of students in the construction of knowledge. Atan, Rahman, and Idrus (2004) suggest that online provision can reduce the separation by time and space of the lecturer and students through, for example, synchronous and asynchronous communication features and learning activities. However, researchers have noted a tendency for teachers to simply transfer what they do with on-campus students to the online environment (Boddy, cited in Bird, 2004; Conrad, 2004;

Ladyshevsky, 2004). “Opportunities for teaching and learning activities informed by constructivism and student centredness remain largely unrealised at this stage” (Bird, 2004, p. 68). In the ideal situation, online communication systems require and monitor active participation by *all* students. They are part of a community of learners mediated by the teacher. Students are expected to demonstrate their engagement in the learning process by commenting, questioning, solving problems, critiquing and developing complex understanding of ideas, often via regular written communication. Both staff and students can build on previous understanding by accessing electronically archived contributions.

While a great deal of the literature supports constructivist models of teaching and learning with the development of online communities of learners, how to achieve this is not so clear. Rovai (2002, cited in Anderson, 2004) maintains that online communities should be bi-dimensional in nature. The construction of understanding and the development of feelings of cohesion and connectedness are significant. Arbaugh and Benbunan-Fich (2005) summarized a variety of research that investigated roles of instructors and students in developing online communities. Some studies (e.g., Shin, 2003) report that the instructor’s presence in student interactions online is the most significant predictor of student learning and/or satisfaction. In contrast, other studies (e.g., Anderson, 2004) 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).

OLT sites contain material for both on-campus and distance education students, and some OLT sites do not distinguish between the two modes of study. There is a convergence between the on-campus and off-campus experience; the boundaries are blurred as both cohorts are treated as a homogeneous group. At this point in time, all new units developed for

distance study are delivered totally online. Distance education students must access the OLT sites for all unit material, such as Study Guides, communication with staff and other students, and links to Web sites. On-campus students must also access OLT for additional support materials (e.g., lecture and tutorial notes), although they are still expected, on the whole, to attend lectures and tutorials. In some instances, streamed videos of lectures are available for both groups of students. While on-campus students should attend lectures, distance education students might be expected to access the lectures online. Both groups of students might also be expected to participate in online tutorials, group work, and discussion forums. Therefore, there appears to be loss of contextual identity of the two groups; increasingly, they are being treated as one. However, we propose that there are contextual differences between the on-campus and distance education experience that warrant special attention.

Currently, we have limited knowledge about our students' preferences for particular kinds of learning experiences or their perceptions of effectiveness of the various features of our online learning system. The purpose of this study was to identify the perceptions of OLT that were specific to the individual groups and also those shared by both. In summary, this study was developed so that the teaching staff, who design learning for both on-campus and distance education students, could have a better sense of students' perceptions and could use this information to improve the student learning experience.

Method

This case study used an online survey to identify students' use and perceptions of OLT features. Items on the survey addressed: student demographics; 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. Likert scales (1–5) were used. The surveys also invited qualitative descriptive responses.

Participants

The participants were all currently enrolled early childhood students: on-campus and distance education; full-time and part-time; domestic and international; and undergraduate, graduate-entry, and postgraduate – across all year levels, in all School of Early Childhood teacher preparation programs. The response rate was 29% of the entire student cohort, providing 335 completed surveys. More on-campus students responded (33%); 17% of distance education students responded.

In general, the on-campus students were represented by a younger generation than that of the distance education students. Most of the on-campus students (73%) were 24 years of age or younger compared to 10% of distance education students. Most of the distance education students (71%) were in the 25–39 age range compared to 20% of on-campus students. Seventeen percent of distance education students were in the 40–49 age range compared to 6% of internals.

The majority of respondents lived in the Brisbane metropolitan area (75%), followed by those residing in regional towns and cities in Queensland (22%); 3% lived interstate or overseas. As would be expected, 87% of on-campus students lived in metropolitan Brisbane compared with 36% of distance education students. Twelve percent of on-campus students and 52% of distance education students lived in a regional town or small town in Queensland and 1% of on-campus students travelled from the adjacent state. Of the distance education student respondents, 5% lived in a regional town in another state, 3% were overseas, 2% were in a capital city area in another state, and 2% lived in a remote area in any state.

Distance education students were more likely than on-campus students to own a new desktop PC (one or two years old) (57% versus 33%); on-campus students were more likely to own older PCs (three or more years old). Participants' access to the internet varied; most

respondents used broadband (52%) followed by dial-in access to the internet (41%); 7% of students had no internet access at home. However, there were differences between on-campus and distance education students. On-campus students were more likely to use the faster access provided by broadband connection (53% versus 46%). Therefore, although distance education students were more likely to own newer computers, they were more likely to have slower internet access than on-campus students, despite the fact that they were completely reliant on internet access for all their learning resources

Data analysis

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 Morehouse (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 recurring issues. The research team negotiated categories and meanings as a group until agreement was reached. Descriptive statistics were used to compare responses from on-campus and distance education students.

Findings and discussion

Many common "highs" and "lows" of OLT were identified by the on-campus students and distance education students. Overall, most students (both on-campus and distance education students) stated that they believed that OLT had improved the quality of their learning, and did not present barriers to their learning. Convenience, accessibility, flexibility and interactivity were frequently noted as perceived benefits by many students. Nevertheless, students from both cohorts commented on the limited nature of student-teacher interaction on

some sites. Issues around costs (time and money) and technology were perceived as barriers and caused frustration for some students. However, there were some specific issues and aspects of OLT that appeared to have more of an impact on distance education learners than on on-campus students, and that affected their learning experiences. For some distance education students, flexibility and interactivity were seen in a negative light. Some distance education students considered options were becoming less flexible. When qualitative comments relating to helpful features and perceived barriers presented by OLT were examined, some significant messages emerged.

What aspects of online learning did students favour and perceive as helpful for their learning?

More on-campus students (92%) than distance education students (77%) agreed that OLT had improved the quality of their learning. Convenience, flexibility, accessibility, and usability were valued by both groups of students. They appreciated the fact that they could access sites and specific information when it best suited them and that these were available “24/7.” Generally speaking, they found sites user-friendly and easy to access and understand. Information was available for the semester, so if they wanted to return to material covered early in semester to clarify or revise, they had everything at their fingertips.

- *I can revisit something as often as I like to clarify details (on-campus student).*
- *Convenient way for many people to access the same resource (on-campus student)*
- *Can be at home with no need to attend campus (distance education student)*
- *Allows the flexibility required at this stage of my life (distance education student)*
- *OLT enables lecturers to add bits and to update resources as they happen rather than waiting until the next offering of the unit (distance education student).*

The potential for interactivity was also seen as a positive feature of learning online, especially for many distance education students. They valued OLT as a means of staying connected to the university, staff and other students. They considered that it:

- Makes learning more exciting/interesting
- Allows contact with other external students
- Helps maintain a link to “real people” at QUT.

On-campus students specifically commented on the usefulness of the PowerPoint lecture notes and audio- and video-streamed lectures (where available). The availability of PowerPoint presentations was nominated as the most-valued feature. A number of comments revealed that students used these to support and enhance their learning and understanding.

Comments included:

- *Allowed you to prepare for lectures*
- *Easier to concentrate on ideas in the lecture (rather than furiously writing).*

In contrast, only one distance learner specifically made mention of PowerPoint presentations as a positive feature of OLT.

The Course Materials Database (CMD) (a subject-specific electronic repository of readings managed by the library) was also highly valued by on-campus students. These students noted that it was easy to access, cost-effective (cheaper than the purchase of text books), and provided a good selection of up-to-date material to prepare for tutorials and complete assignments. It appears that on-campus students value access to timely and relevant unit content.

In contrast, the best features nominated by the distance education students were notices, chat rooms and discussion forums (all interactive communication) and the availability of online study guides (unit content). These features help the distance learners

obtain pertinent information about their studies, and enable them to see other viewpoints (and to compare their thinking process with that of other students) and to feel “connected.”

Comments included:

- *Great to hear a range of viewpoints. Makes you feel less isolated as an external student.*
- *Helps external students feel more connected to the university and helps provide additional information or activities to make sure you're on the right track.*

What aspects of online learning did students dislike and consider as barriers to their learning?

Although a third of on-campus students and a smaller number of distance learners (17%) considered OLT presented few barriers to their learning, some specific issues were identified. In terms of the worst features of OLT, the study revealed that both groups of students experienced similar frustrations and expressed similar negativities, especially in relation to download time and the cost of downloading and printing. Percentages of on-campus and distance education students identifying barriers were similar to each other for the following issues:

- Download times (26%, 28%)
- Cost of printing (15%, 17%)
- Cost of internet access (6%, 7%)

For both groups of students, age of computers and other technological issues were barriers. For example, some on-campus students mentioned inconsistencies between the OLT sites of different units and links not working as frustrating. More distance learners (26%) than on-campus students (17%) found time to access a computer an issue of concern.

I'm sitting at home with lots of reading, assignments for two units and usually another member of the family needing the computer — I have a partner who is a school teacher and a stepson doing his Higher School Certificate.

There are some other points of difference between these two groups of students. For example, the single most common complaint from on-campus students related to the apparent disorganized nature of some OLT sites. This made maneuvering around them a frustrating and over-complicated process. This may have been an issue for distance learners, but none remarked specifically on this issue.

As mentioned above, on-campus students valued the availability of PowerPoint slides to support the lecture. Similarly, this group of students articulated annoyance when the slides were not available before the lecture. While on-campus students valued the Course Material Database and many stated that it was cost-effective (cheaper than the purchase of textbooks), others criticised the cost of downloading and printing.

There is one other significant negative aspect of a general nature that distance education students commented upon. This was that many of the interactive OLT features were not effectively utilized. These students experienced frustrations with those OLT sites that made limited use of features such as FAQs, forums, group emails and the like. Presumably, this is more an issue for distance education students than on-campus students, as they can only interact or receive information through OLT, while on-campus students have lectures, tutorials and peer networks for sharing ideas and information.

Though the type of complaints identified by on-campus and distance education students were largely similar, there were some small but significant differences which warrant special attention, especially in terms of enhancing the learning experiences of distance education students. While all students would benefit from improved functionality and the ability to maneuver easily around OLT sites, the issue of relying solely on online

materials and learning processes for distance education students has contributed to a perceived loss of flexibility—yet this was articulated as one of the key reasons why students actually sign up for distance learning in the first place. Some distance education students perceived that they had actually lost a measure of flexibility and choice with OLT having become the only option available for their studies, now that print materials have been replaced with online materials. This is an interesting counterintuitive take on online teaching and learning, as OLT is generally championed as a strategy that enhances student flexibility. Flexibility and interactivity in this case were seen in a negative light. Furthermore, the shifting of costs associated with online learning onto distance education students is a perceived negative. The enhancement and more consistent use of OLT features that could improve distance education students' transactional presence with the institution and with other students are desirable.

While it appears that OLT enhances flexible learning, questions can be raised around the issue of *quality* of access. For example, it could be speculated that the low response rate of distance education students (17%) to the survey reflects the difficulties that some students may have with access to online material, especially as many students reported unfavorably on the cost and speed of internet access and download and the printing costs associated with the use of OLT. From personal communications with students, for example, staff are well aware that some students experience significant difficulties accessing and using internet services, especially, though not exclusively, due to diminished services in remote and rural locations. On-campus students at least have opportunities for face-to-face interactions to resolve problems with “helpdesk” staff in computer laboratories or the library. Another issue for distance education students might be their older age, compared with that of the on-campus students. The following comments illustrate this:

- *Hard copy should be provided as notes can be made on hard copies; hard copy is always at your finger tips.*
- *Hard print is better, has more flexibility of access – you can take it with you anywhere, anytime.*

These comments echo those made by students in Atan, Rahman and Idrus's (2004) investigation. Although students recognized the advantages of Web-based learning, they preferred the portability of printed modules, and they liked to write notes as they were reading. Connection was enhanced because the modules were written in ways that invited readers to enter into a dialogue.

Many of the barriers our students identified were similar to those nominated by students in the much larger study by Muilenburg and Berge (2005). In their study, which only canvassed those enrolled in online classes, lack of social interaction was perceived as the most severe barrier by students. However, they too identified administrative/instructor issues, technical skills, time and support for study, cost and access to the Internet and technical problems as barriers to effective learning.

Overall, perceptions of and experiences with learning through OLT were similar for both on-campus and distance education students. Therefore, it appears that we should be tempted to treat the two cohorts as a homogeneous group. However, there were identifiable aspects that were particular to distance education students. These issues have been identified elsewhere in the literature; in particular, a sense of isolation and lack of interaction (e.g., Abrahamson, 1998; Boyd et al., 1998).

Summary

Consistency of course design, access to instructors, and active engagement have been identified in the literature as aspects which enhance student learning (Swan, Shea, Fredericksen, Pickett, & Pelz, 2000; Swan, Shea, Fredericksen, Pickett, Pelz, & Maher,

2000). Similarly, in our study, both cohorts of students commented negatively on some OLT sites because the sites were not easy to navigate, there was limited teacher presence, and there was limited opportunity for interactive communication. In particular, distance education students voiced their desire for more opportunities for interaction as they do not have the same chance as on-campus students in face-to-face settings for asking questions or hearing other viewpoints. In contrast, on-campus students voiced concerns about access to unit content.

Conclusions and implications for practice

It appears that there are some small-scale changes that teachers can make, which can produce significant improvements with respect to student learning in online environments. These include: attention to coherence in site design, timely upload of unit materials, and availability of interactive communication functions. Orey, Koenecke, and Crozier (2003) recognize that merely providing interactive communication functions does not guarantee online engagement. They stress the very human nature of the teaching and learning process and suggest that sustained effort is required on the part teachers to create and maintain a sense of community. This echoes an earlier statement by Phipps and Merisotis (1999): “It seems clear that technology cannot replace the human factor in higher education” (p.16).

For distance education students, Howland and Moore (2002, p. 192) suggest that instructional materials need to be much more detailed. Difficulties arise if teachers assume that the same material is appropriate for both on-campus and distance education students. When distance education students have questions or concerns about content that are not speedily resolved, this may well contribute to their feelings of isolation. Belcheir and Cucek (2001, p.13) report that lack of immediate clarification slows down the learning process for some students. Staff should pay attention to timely responses to student queries, use the

frequently asked questions (FAQ) facility for collective responses, and create discussion spaces for students to engage in high level communication with their peers.

Further, staff can explore ways to improve support for distance education students when they enrol (e.g. help to enhance technical skills rather than assuming all students have adequate computer competencies required for successful engagement with OLT sites). Although access and computer compatibility issues are constantly improving, we also need to be aware of difficulties faced by some distance education students. Technical problems are likely to be exacerbated when there is wide variation in computer hardware and software capabilities. Howland and Moore (2002, p. 193) warn that “creating ‘high-tech’ learning environments does not necessarily improve the quality of learning, but may increase technical problems and the ineffectiveness of the learning experience.”

In the School of Early Childhood, we are attempting to address distance education students’ challenges in computer competencies. An interactive web site, “Arrivals Hall,” was designed in order to provide a “one-stop-shop” for these students (see Figure 1). This brings together in one virtual space the multitude of administrative and student support services that the university offers, but about which students are often unaware or that they have difficulty locating. Built into the design of “Arrivals Hall” is a learning process that provides scaffolding for various online functions. These include “checking in,” uploading a photograph of themselves, engaging in a discussion forum, and using a chat room that, initially, will be hosted by a more experienced student. The desire is that this website will initiate students’ entry into an online community of learners by facilitating peer-to-peer interactions. Given the importance of a learning community for developing a sense of connectedness between learners (Shea, Li & Pickett, 2006), it will be useful to monitor how efficacious the “Arrivals Hall” is in assisting the development of such an online community.

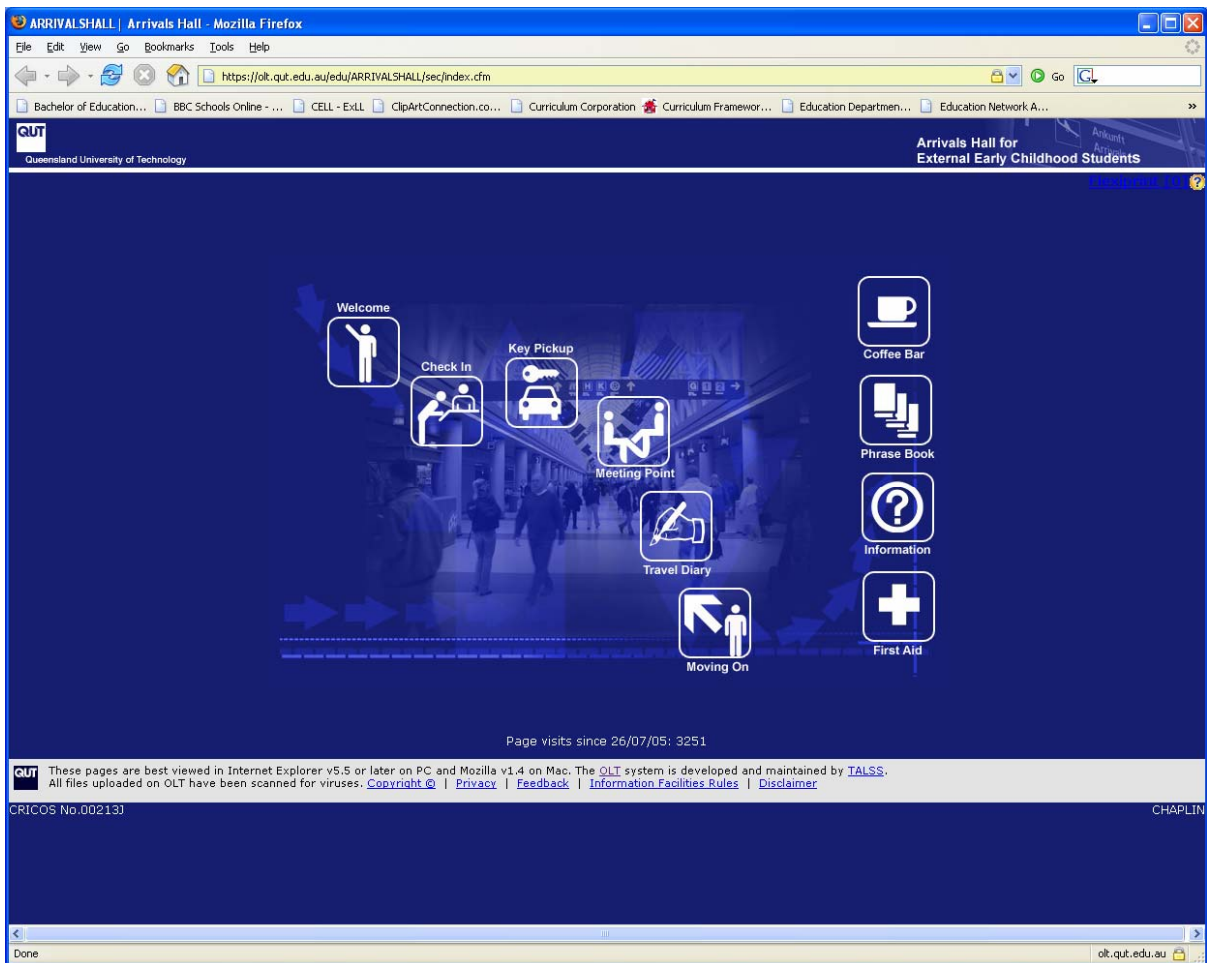


Figure 1. Screen dump of home page of “Arrivals Hall” interactive website.

References

- Abrahamson, C. E. (1998). Issues in interactive communication in distance education. *College Student Journal*, 32(1), 33–43.
- Anderson, B. (2004). Dimensions of learning and support in an online community. *Open Learning*, 19(2), 183–190.
- Arbaugh, J. B., & Benbunan-Fich, R. (2005). Contextual factors that influence ALN effectiveness. In S. R. Hilz & R. Golman (Eds.), *Learning together online: Research on asynchronous learning networks* (pp.123-144). Mahwah, NJ: Lawrence Erlbaum Associates.
- Atan, H., Rahman, Z. A., & Idrus, R. M. (2004). Characteristics of the Web-based learning environment in distance education: Students' perceptions of their learning needs. *Educational Media International*, 41(2), 103–110.
- Bigum, C., & Rowan, L. (2004). Flexible learning in teacher education: Myths, muddles and models. *Asia-Pacific Journal of Teacher Education*, 32(3), 213-226.
- Ballard, S., Stapleton, J., & Carroll, E. (2004). Students' perceptions of course Web sites used in face-to-face instruction. *Journal of Interactive Learning Research*, 15(3), 197–211.
- Belcheir, M. J., & Cucek, M. (2001). *Student perceptions of their distance education courses* (Research Report. No. 2001-04). Idaho: Office of Institutional Assessment.
- Bird, J. (2004, July). *Mapping flexibilities*. Paper presented at the 2004 Conference of the Higher Education Research and Development Society of Australasia, .Miri, Sarawak, Malaysia..

- Boyd, A., Herrmann, A., & Fox, B. (1998). *Do distance students get value for their HECS dollar?* Retrieved January 26, 2007 from the Proceedings of the 7th Annual Teaching Learning Forum (Curtin University of Technology, Perth, Australia) Web site: <http://lsn.curtin.edu.au/tlf/tlf1998/contents.html>
- Conrad, D. (2004). University instructors' reflections on their first online teaching experiences. *Journal of Asynchronous Learning Networks*, 8(2). [Electronic version]. Retrieved November 19, 2005 from <http://www.sloan-c.org/publications/jaln/index.asp>
- Finger, G., McGlasson, M., & Finger, P. (2007). Information and communication technologies: Towards a mediated learning context. In Y. Inoue (Ed.), *Technology and diversity in higher education: New challenges* (pp. 81-102). Hershey, PA: Information Science Publishing.
- French, D., Olrech, N., Hale, C., & Johnson, C. (Eds.). (2003). *Blended learning: An ongoing process for Internet integration*. Austin, Texas: e-Linkages, Inc.
- Fung, Y. H. (2004). Collaborative online learning: Interaction patterns and limiting factors. *Open Learning*, 19(2), 136–149.
- Gorsky, P., Caspi, A., & Trumper, R. (2004). Dialogue in a distance education physics course. *Open Learning*, 19(3), 265-277.
- Ham, M. (2005). Students' perceptions of web-based distance learning: A study of satisfaction and success. *The Journal of Continuing Higher Education*, 53(1), 21-33.
- Howland, J. L., & Moore, J. L. (2002). Student perceptions as distance learners in Internet-based courses. *Distance Education*, 23(2), 183–195.
- Huang, H. (2002). Student perceptions in an online mediated environment. *International Journal of Instructional Media*, 29(4), 405–422.

- Kelly, K. L., & Schorger, J. (2002). *Online learning: Personalities, preferences and perceptions*. (Report No. 143). (ERIC Document Reproduction Service No. ED 470 663).
- Koohang, A. (2004). Student perceptions towards the use of the digital library in weekly Web-based distance learning assignments portion of a hybrid programme. *British Journal of Educational Technology*, 35(5), 617–626.
- Kramarae, C. (2001). *The third shift: Women learning online*. (Report. No. 142). Washington: American Association of University Women Educational Foundation.
- Kurubacak, G., & Prentice, B. H. (2002). *Creating a virtual community with PT3: College of Education students' beliefs, expectations and attitudes toward online learning*. ED_MEDIA 2002 World Conference on Educational Multimedia, Hypermedia and Telecommunications 2002(1), 1057-1062. [Electronic version]. Retrieved from <http://dl.aace.org/10277>
- Ladyshevsky, R. (2004, February). Online learning versus face-to-face learning: What's the difference? In *Seeking Educational Excellence: Proceedings of the 13th Annual Teaching Learning Forum*, Murdoch University, Perth, Australia..
- Masi, A., & Winer, L. (2005). A university-wide vision of teaching and learning with information technologies. *Innovations in Education and Teaching International*, 42(2), 147-155.
- Maycut, P., & Morehouse, R. (1994). *Beginning qualitative research: A philosophic and practical guide*. London: Falmer.
- McKenzie, B. K., Bennett, E., & Mims, N. (2002, March). Assessing distributed learning: Student perceptions and future directions. *Technology and Teacher Education Annual* –

- 2002, (pp. 2379–2382). Nashville, TN: Association for Advancement of Computing in Education.
- Muilenburg, L. Y., & Berge, Z. L. (2005). Student barriers to online learning: A factor analytic study. *Distance Education*, 26(1), 29–48.
- Natriello, G. (2005). Modest changes, revolutionary possibilities: Distance learning and the future of education. *Teachers College Record*, 107(8), 1885–1904.
- Oblinger, D., Barone, C., & Hawkins, B. (2001). *Distributed education and its challenges: An overview*. Washington, DC: American Council on Education.
- Orey, M., Koenecke, L., & Crozier, J. (2003). Learning communities via the Internet à la epic learning: You can lead the horses to water, but you cannot get them to drink. *Innovations in Education and Teaching International*, 40(3), 260–269.
- Phipps, R., & Merisotis, J. (1999). *What's the Difference? A Review of Contemporary Research on the Effectiveness of Distance Learning in Higher Education*. Washington, D.C., Institute for Higher Education Policy. (Eric Document Reproduction Service No. ED429524).
- Rovai, A. P., & Barnum, K. T. (2003). On-line course effectiveness: An analysis of student interactions and perceptions of learning. *Journal of Distance Education*, 18(1), 57–73.
- Shea, P., Li, C.S., & Pickett, A. (2006). A study of teaching presence and student sense of learning community in fully online and web-enhanced college courses. *The Internet and Higher Education*, 9, 175-190.

- Shin, N. (2003). Transactional presence as a critical predictor of success in distance learning. *Distance Education, 24*(1), 60–86.
- Shin, N., & Chan, J. (2004). Direct and indirect effects on online learning on distance education. *British Journal of Educational Technology, 35*(3), 275–288.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: Sage.
- Swan, K. (2001). Virtual interaction: Design factors affecting student satisfaction and perceived learning in asynchronous online courses. *Distance Learning, 22*(2), 306–331.
- Swan, K., Shea, P., Fredericksen, E. E., Pickett, A. M., & Pelz, W. E. (2000). Course design factors influencing the success of online learning. *WebNet 2000 World Conference on the WWW and Internet Proceedings* (pp. 513-518). Norfolk, VA: Association for the Advancement of Computing in Education (AACE).
- Swan, K., Shea, P., Fredericksen, E., Pickett, A., Pelz, W., & Maher, G. (2000). Building knowledge building communities: Consistency, contact and communication in the virtual classroom. *Journal of Educational Computing Research, 23*(4), 359–383.
- Wagner, R., Werner, J., & Schramm, R. (2002). *An evaluation of student satisfaction with distance learning courses*. Paper presented at the Annual Conference on Distance Learning, University of Wisconsin, Whitewater, WI.