Internet-based Student Support Systems

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Abstract

This paper discusses some of the challenges which arise out of delivering instructional materials and providing student support via the Internet. It briefly describes a course being trialled at The University of Southern Queensland in terms of history, student population, aims and content and then discusses the computer mediated communication which has been set up to engender collaborative learning and support within an interactive distance learning system. The pedagogical principles underpinning the structure of the course are briefly discussed as well as the challenges arising out of providing such a learning environment. The paper also examines how this institution is endeavouring to include traditional student support services in a collaborative support network using the Internet as a medium for communication.

Background

The University of Southern Queensland, in a move to embrace the principles of flexible delivery, is presently trialling the delivery of instructional materials to students via the Internet (World Wide Web). The first course offered solely by electronic means through the University is a Graduate Certificate in Open and Distance Learning. The development of the course was initially funded by the Australian Federal Government through the Committee for Staff Development; by a global distance learning initiative of the American Telegraph and Telecommunications Foundation (AT&T); and by the International Council for Open and Distance Learning (ICDE). The course aims to provide, on a global scale, vocational education and training for professionals and students who are seeking skills in the design and development of open and distance learning systems. This course was trialled in 1996 and formally offered to students in semester 1, 1997. Participating students need to have appropriate hardware and software in order to access materials via the Internet and to communicate via electronic mail and other computer conferencing systems. Extensive use is made of existing electronic resources already available on the World Wide Web (WWW).

Students are required to complete four units of study encompassing topics such as perspectives on open and distance learning, systems approach to O&DL, designing instruction for O&DL, WWW publishing, and audio, video, print and multimedia design and development. Although the course focuses primarily on the teaching profession, the model is easily transferable to education for many professions. The approach has the flexibility to meet the needs of busy professionals in full-time employment, irrespective of geographical location (Taylor, 1996). In semesters 1 and 2 of 1997, there were approximately 100 students per semester enrolled in the course. Some units are also offered during semester 3, the University’s “summer term”. It had been determined that a quota of 25 students per unit would be set until the course logistics had been resolved. In semester 3, 1997, the University has trialled offering one unit to a larger group of almost 200 students. This is certainly proving to be a challenge.

The course is offered to students worldwide with an entry requirement of an undergraduate degree or equivalent work experience, involvement in distance education environments, access to appropriate resources and the skills required to access the electronic materials. The characteristics of the student population are varied. This year my cohort of students has come from Canada, South Africa, USA, the West Indies, Papua New Guinea and most states of Australia. Most are practicing professionals whose backgrounds include university lecturing (psychology, psychophysiology, economics), freelance writing/editing/instructing, primary and secondary teaching (both face-to-face and distance), administration, TAFE teaching, and curriculum design.

With the paradigm shift away from paper-based delivery of materials to electronic systems of delivery comes the question of how to provide support to students using this electronic medium.
Interaction in an electronic environment

Providing education at a distance has always presented challenges to the educator. Traditionally, distance education has been defined according to several principal characteristics: separation of teacher and student; the existence and influence of an educational institution; use of technical media; provision of two-way communication; absence of group learning; and the focus on independent learning (Keegan, 1986; Rumble, 1986; Barker, Frisbie & Patrick, 1989). Various aspects of “distance” can affect the success of delivering education at a distance. Hodgkinson (1991, quoted in Eastmond, 1995) discusses the aspects of physical distance, intellectual distance, cultural distance and social distance.

Providing learning experiences at a distance using purely electronic means presents further challenges but also opens up a whole new world of opportunities and possibilities. By using computer conferencing as an integral part of the learning process, the teaching team has attempted to bridge these various aspects of distance. For one, it questions the definition of distance education as having an independent learning focus and lacking in group interaction. Interaction with the teaching staff, students enrolled in the unit and course and other experts has been made possible through computer mediated communication (CMC). In addition, it enables and encourages teachers to provide guidance in preference to lectures and to become facilitators of learning rather than merely instructors delivering subject matter content. In this course, it is assumed that each member of the group has knowledge and skills to share with the others. The unit leader is considered to be facilitator, resource person and peer. For another of the Grad. Cert. units, the teacher has promoted interdependent teams in which students work with each other to produce the academic deliverables. The final product attests that the instruction has become more effective by having students do something instead of just talking about it and working together as a team - a real collaborative learning approach. This electronic environment also enables various means and levels of student support to be made available.

Computer mediated communication

CMC uses computer-based communication tools such as electronic mail, computer conferencing, electronic mail lists, newsgroups and Internet Relay Chat (IRC) to hold discussions (either individual or group) that generally use text messages as a medium for communication and the Internet as the delivery mechanism. As previously mentioned, students enrolled in this course come from many countries spanning several time zones. Because of this factor, electronic communication has been mainly asynchronous to enable flexible access for students. This communication is through electronic mail and through Web-based conferencing systems, one of which uses the software called ABOUT™. This software has enabled several discrete “conferences” to be set up within which certain topics are discussed. For example, within the Coffee Chat conference, issues and topics of general interest may be discussed - social interaction is encouraged. Other conferences deal with the content of the unit and the assessment requirements. A Course Improvement conference has been created for students to raise issues and share concerns about the teaching/learning environment.

Mentoring

One of the main pedagogical principles underpinning the structure of this learning environment is teacher as facilitator of learning. The facilitating teacher advises, coaches and guides, and not only presents concepts and organises the learning environment but also helps learners study, question, reflect on and relate their experiences to others.

For the unit Designing Instruction for Open and Distance Learning, we have had a teaching team of three this year. Early in the semester, we decided to adopt a mentoring approach to the teaching/facilitation of learning and each teacher became responsible for a sub-group of students. It was our responsibility to provide feedback on assessment pieces as well as provide support to the individuals in our group. We were concerned about students who might find difficulty “exposing themselves” to the rest of the group and encouraged students to contact us by personal email if they...
wished. In addition, we found that students and teachers with similar interests, cultural backgrounds or professional experience developed certain affinities with each other and these relationships were encouraged.

Reflections

The design of this unit drew its impetus from the learning cycle processes identified by Kolb (1984) as being essentially present for learning to occur. These processes are concrete experiencing, reflective observation, abstract conceptualisation and active experimentation. The design particularly focuses on the facilitating role of the teacher in engendering collaborative reflection on practice. Collaborative learning has been defined by Kaye (1992, p. 4) as the “acquisition by individuals of knowledge, skills, or attitudes occurring as a result of group interaction”. It also requires “an active sharing of information and intellectual resources among students in a group” (Klemm & Snell, 1996). Forming a major part of the assessment requirements in this unit is the reflection on practice component. Students are required to consider various concepts and stages of the instructional design process and then reflect on their current practice. This is done through the Reflections conference and is therefore open to public (other students currently enrolled in the unit) scrutiny. Throughout this process of reflection, members of the teaching team provide ongoing feedback (posted via private email). Other students are encouraged to comment on the responses of their peers.

Other Means of CMC

Synchronous methods of communication such as Internet Relay Chat (IRC) have also been trialled at USQ. IRC enables groups of students and teachers to participate in a “real time” conference/tutorial via computer. This, of course, does cause some difficulties across time zones - one student, who was participating in a conference from the USA at 2 a.m. observed that she had never before been to school in her pyjamas! Real audio, which enables voice to be transmitted via computer, and real video are also being trialled.

Other means of student support

The University has always been proud of the level of support offered to its distance students. Within the Distance Education Centre, the first point of call for student enquiries is through the section called Outreach Services. The purpose of Outreach Services is to assist distance students to progress satisfactorily through their courses of study. In 1997, the University also introduced a student intranet called USQconnect. This intranet provides students who have Internet access (i.e. all students enrolled in the Grad. Cert.) with numerous electronic facilities. Through USQconnect, students can access course materials which are available on the Web, Outreach Services, the USQ Library, electronic noticeboards, assessment results, names of students willing to participate in study groups, and Faculty and course details. Within the units offered through the Grad. Cert., a direct link to USQconnect and all its associated services is provided. In addition, a link from the Grad. Cert. unit under discussion in this paper to the University’s Student Services section was added in semester 2. Through this link, students requiring specialist counselling advice can be linked directly to an online counsellor. This raises the possibility of providing access for students to a whole network of specialists in the field of student support - for example, career and disability counsellors.

Challenges and issues arising out of the electronic environment

Technological Difficulties

An important consideration in the use of electronic delivery and communication systems is that of technical support. Research conducted in 1996 by Information Technology Services, USQ (Uren, 1996) revealed that students who are unfamiliar with using the technology spend a large amount of time coming to grips with it. An observation by Mason (1993) still seems to be a factor in 1998 - that the technical side of the process such as setting up suitable equipment, logging on and acquiring familiarity with online commands and procedures is a significant hurdle for many users.
and a deterrent to those who are isolated without technical support. Cost of accessing the service continues to be a significant factor.

Social Relations and Learning Styles

Some students respond extremely well to working and discussing with others online. However, collaborative learning may not work for everyone in every setting and with all people. Research conducted by Eastmond (1995) discovered that students in the same course can have opposite learning experiences based on their social acceptance of the collaborative ventures set up in the course design. Kaye (1992) found that his research clearly indicated that social factors are the main determinants of the success or failure of CMC. For some students, the prospect of posting comments to a group of strangers can be very intimidating. The teaching team, as discussed earlier, are very aware of this and provide opportunity for students to contact us individually by electronic mail. On a couple of occasions during semester 1, 1997, it became apparent that immediate access to an online counsellor may have proved beneficial to the teaching/learning experience (serious illness in the family, relationship problems), hence the decision, in semester 2, to provide the link to the Student Services section of the University.

Many of the key social skills needed for nurturing online collaboration, however, are not specific to a CMC environment. They are the skills needed by any tutor or facilitator involved in a peer learning situation - the ability to make group members aware that their own experiences are important and worth contributing, that others can be as valuable a source of knowledge as the course materials and that we, as educators, are here to assist and encourage the student throughout the learning process (Kaye, 1992).

Another factor we are interested in during the course of this online experience is the concept of social presence. Do the online social relations between student and student and student and teacher affect the quality of the learning experience? Does using this technology tend to dehumanise the teaching/learning process? Our experience so far has found that, as with face-to-face teaching, relationships can be established with others based on common interests, beliefs, senses of humour, and so on. This in turn has appeared to influence the quality and quantity of interaction, enthusiasm and participation. An evaluation we are presently conducting will examine this aspect further. Eastmond (1995) considered this in his research into computer conferencing. He concluded that perhaps online relations were not meant to last but to fulfil important needs of the moment. He also observed that online relationships may be important to more isolated learners who have the time, energy, and personal need to create and nourish them. He felt that many of the adults are so engaged in other life demands or have sufficient other relationship that they do not have the interest or inclination to cultivate online associations (p. 144). The open nature of conferencing, where members can contribute messages directly themselves without editing or control by others differentiates this medium from other forms of public written communication. The public, recorded, textual nature of the medium sometimes leads to expectations concerning content and style which may not be shared by every member of the group.

The research conducted by Andrusyszyn and Davie (1995) reveals some interesting insights from students who had participated in a distance education course which used CMC. Students indicated positive reactions in terms of increased self-awareness, enhanced communication skills, greater awareness of own learning styles, development of partnerships and the opportunity to share perceptions. They also indicated feelings of vulnerability in terms of having to expose their thoughts to others through the written word.

Conclusion

The provision of support to students is always a primary consideration in educational institutions. The University of Southern Queensland has always prided itself on the level of student support offered. The use of an electronic environment to provide learning experiences opens up new challenges in terms of student support. However, it also enables an interactive and collaborative approach to student support not previously available. Students now have the opportunity to link
into so many available services. The challenge for us continues to be how we structure this electronic environment to provide students with easy access and satisfying results.

References


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