

LEARNING TO LEARN ONLINE

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Abstract

With an increasingly diverse range of pedagogical methods being employed by academics, little that students have previously experienced in traditional classrooms has prepared them for the era of online learning. In addition to struggling with the technical issues associated with online technologies, students are increasingly being confronted with new paradigms of learning. Many students under-utilise tools such as computer mediated communication (CMC) simply because they lack the competence and the confidence to do so effectively in their studies. In short, students need the opportunity to learn how to learn online.

In an effort to address this issue, in 1999 Charles Sturt University piloted a supplementary subject for students called Skills for Learning Online. The subject was delivered totally online and aimed to provide students with both the competence and the confidence to use the online resources provided for them in their studies.

This paper will focus on why students require support in the online environment. It will also look at the theoretical underpinning of the subject Skills for Learning Online and the initial evaluation from the first student cohort.

Keywords

student support, computer mediated communication, CMC, online learning, supplementary instruction, Internet, Web based delivery, adult learning, constructivism.

Background

Charles Sturt University (CSU) is one of the largest providers of distance education in Australia. While much has been written on the tyranny of distance and the hurdles that face a distance education student (Blainey 1983, Northcott 1984), CSU is aiming to overcome some of these obstacles with the introduction of online support to students. Pro Vice Chancellor of CSU, Bernie O'Donnell states "what we are trying to do for CSU distance education students all over the world is to use on-line technology to mimic much of the communication available to on-campus students, therefore breaking down isolation, creating learning communities and making the University's resources available to all." (Times 1998, p.7).

With this goal at the forefront, CSU began delivering online-supported subjects to students in 1997. The initial trial involved 26 subjects and approximately 1000 students. The subsequent trial included 126 subjects and over 6000 students. In 1999 every distance education subject has online support making this the largest on-line program for any University in Australia. Online support refers to the use of a Web interface which allows students to access subject outlines, online subject resources, administrative details, the library and other support divisions of the University and computer mediated communication (CMC) facilities such as email, listservs and Web forums.

Rationale

The introduction of online technology into CSU subjects has meant a steep learning curve for many involved with the teaching and production of learning materials. It is widely recognised that merely transferring existing printed materials to the Web (or any other medium) is ineffective and a great deal of planning and design is required to create a pedagogically sound and educationally effective learning experience for students. (Alexander, 1995; Bates, 1995; Forsyth, 1998). In order for academics to fully exploit the potential of the Internet in their teaching at CSU much time and resources have been spent in staff development.

While an infrastructure to promote and develop the professional abilities of academics in regard to online teaching has been set in place at CSU, it has become apparent that students also require support in order to derive the maximum benefit from learning online. To many students the Web and associated communication technologies are very new. As academics take the opportunity to reassess their teaching methods and alter their approaches to those more consistent with what the Web can offer, many students are being confronted not only with new technologies, but a whole new paradigm of learning.

Comments from students, academics, educational designers and learning skills staff indicated that many students were not gaining the maximum benefit from online supported subjects. For a variety of reasons ranging from lack of confidence, knowledge, support or the fact that they didn't believe online technology could enhance what they already received on paper, some students weren't using the Web at all in their studies despite resources being available. In response to the perceived need of students requiring assistance in developing generic online learning skills the Division of Student Services developed a supplementary subject that focused on arming students with the necessary confidence and competence to utilise the Web to enhance their learning experience at CSU.

Why do students need support to study online?

The rationale behind and possible advantages of using the Web and CMC in teaching distance education students are well supported. (Harasim et al, 1995; Rowntree, 1995; Eastmond, 1995; Rohfeld & Hiemstra, 1995; Jonassen, 1996). However, there is an increasing body of literature to indicate the need and importance of preparing and training students in new learning environments such as using the Web and CMC in particular if their learning is to be as effective as possible.

The need for students to be technically competent in order to succeed in a Web based learning environment is described by Florini(1989), Eastmond (1992), and Corderoy and Lefoe(1997) . Leslie (1998) in discussing his experiences using CMC at the University of Florida reported students' initial discomfort in expressing themselves via email. He also commented that not surprisingly, the students who were most active in discussions were those who had been using CMC for some time. While the focus is often on technical strategies, more attention is now being paid to training of a more cognitive nature required by students to successfully study online.

Mason (1994) talks of the importance of training students in the use of computer conferencing technologies prior to commencing courses that use them. He believes that in addition to learning the fundamentals of logging on and navigating a CMC environment, the most difficult but perhaps the most important training required is how to become an active learner within the context of a computer mediated communication system.

Corderoy and Lefoe (1997) suggest that students require training in the use of CMC, but also contend that a significant challenge for teachers is the 'silent student'. Klemm (1998) puts forward several reasons for the 'silent student'. He argues that the differences in students' academic background, skills and life experience will differ enormously and this will be reflected in their level of participation in CMC environments.

He goes on to say "some students lack the confidence to assert themselves in public. Some do not like to write...some are afraid they will embarrass themselves with postings that are not clever, erudite or interesting to others." (Klemm 1998, p.1).

In a recent CUTSD report titled *Evaluation of Information Technology Projects for University Learning* (1998), Alexander et al cite several factors that were found to contribute to unsuccessful learning outcomes in Information Technology Projects. Of the findings, one was particularly relevant and catalytic in the development of the enabling subject to support students.

The project team found that of projects that were not successful, "students were not adequately prepared for participation in learning experiences which they had not encountered before." (Alexander et al 1998, p.4).

This point highlighted the need for further support for students using the Web and CMC in their studies. For many students, using the Web and CMC is a totally new learning experience. As Williams (1998) states, there is little in the traditional classroom that prepares students for the learning that occurs using CMC. According to Eastmond (1995, p.111), using CMC "represents an entirely new learning environment with which learners have to deal." He talks of students who, having discovered successful study strategies in other settings attempt to transfer these strategies to a CMC environment. While many study strategies are common to all environments, several are unique to learning using CMC and students require assistance in acquiring and developing these skills. Eastmond lists the strategies unique to learning through computer conferencing as:

- learning technical procedures to effectively participate online;

- processing the online information;
- deciding when to contribute and how best to present one's thoughts online;
- determining a frequency of reading and writing, primarily to follow multiple discussions, avoid information overload, and achieve maximum interactivity;
- inviting further interactivity through timely contributions that solicit response; and
- learning to express oneself accurately and concisely through text.

In a study of adult learning in CMC environments Burge (1994) also discusses cognitive and affective strategies cited by students necessary for learning in a CMC environment. Some of the necessary skills were found to be:

- interacting with peers (getting different perspectives and connecting with their thinking),
- organising information (keeping up, filtering, sorting and linking ideas, staying focused, finding common threads in messages, putting new ideas into a framework),
- handling parallel discussions, using personal experience in the analysis of ideas, establishing and maintaining self-confidence, self-direction, preparedness and commitment.

The above points relate not only to the use of CMC. In addition to communication aspects, students using the Web in their studies require skills in navigating and searching the Web, and evaluating and referencing the information they find.

Subject design

Skills for Learning Online is conducted fully online in order to be accessible to all students regardless of geography and time and more importantly to situate the students in an 'authentic learning environment' (Bednar et al, 1992). No face to face contact is required but for any students who require assistance in achieving a level of competence to be able to access their materials online, teleconferencing and/or printed support materials are available.

Skills for Learning Online comprises four modules representing the equivalent of approximately 13 hours study. Students may enrol at any stage during the year, and may complete the subject intensively over a few days or more leisurely over an entire semester depending on their commitments. The four modules cover an introduction to the Web and the CSU website, using CMC, searching for, evaluating and referencing material found on the Web, and finally information on where to access further assistance regarding online study at CSU.

The modules and topics are set out so students can either progress through them in a linear fashion, or choose to study them in any sequence according to individual need and interest. Each module contains information, links to the next and previous topic, a resource list, practical exercises, self-assessment activities and details of formal assessment.

CMC, in particular the use of Web forums is a major focus of Skills for Learning Online as each Distance Education subject at CSU utilises such forums. It is intended that by using the forum in this subject, students will have the opportunity to iron out any technical issues prior to commencing their formal subjects, and to also gain the skills and confidence necessary to be effective participants in an electronic learning community.

Those students wanting official recognition of their successful completion of Skills for Learning Online must submit several assessment activities via email and the Web forum. Assessment activities require students to make postings to the forum and also respond to the postings of others. Participants are also required to successfully use a listserv, and complete simple exercises involving searching for, evaluating and referencing information found on the Web. Those students who enrol in the subject who do not wish to receive an academic transcript or a certificate of successful completion may choose not to complete the assessment activities but still utilise the electronic resources provided.

Theoretical underpinning

The design of Skills for Learning Online was strongly influenced by the constructivist approach to learning which among other things sees learning primarily as a social activity where learners construct their own knowledge (Duffy & Jonassen, 1992; Cunningham et al, 1993). The learning paradigm for the subject was student centred and outcome focused.

Adhering to the principles of adult learning as espoused by Knowles (1975) was also considered essential in the design process of Skills for Learning Online. Knowles model of adult learning called andragogy has as its key features interaction, task centredness, individualisation and self -directedness and has many similarities to the tenets of constructivism.

Knowles (as cited by Lane 1999) lists several key aspects of andragogy that were relevant to the design of Skills for Learning Online:

Readiness and motivation to learn - adults become ready and motivated to learn because of a need to be able to perform more effectively in some area of their life. Many students do not feel such need or motivation until they are actually confronted with an online subject and realise they lack the skills or self-confidence necessary to succeed. For this reason enrolment in Skills for Learning Online is not restricted to certain times of the year. Student intake is a continual process meaning students can commence study at a time suitable to them and when they are most motivated to learn.

Role of the facilitator - the basic format of the andragogical model is to assign dual roles to the facilitator. Providing content is a secondary role to that of managing the processes and procedures whereby students acquire knowledge. Skills for Learning Online has been designed so students can direct their own learning. Numerous online resources have been provided and can be used according to interest and individual need. Students are also encouraged to use the knowledge of their peers via the Web forum.

Appropriate climate for learning- Knowles emphasises the importance of setting a climate that is informal and conducive to learning. This ideal is closely linked to the role of the facilitator. The subject Skills for Learning Online has attempted to create both an informal yet collaborative and supportive working environment for all students. Language used is informal and friendly and students are given as much support as necessary yet still encouraged to take responsibility for their own learning.

Student involvement - the androgogical model promotes the ideal of students diagnosing their own learning needs and being involved in the formulation of their learning outcomes. This recognises the wealth of prior knowledge and experience that adult learners bring to their studies. While Skills for Learning Online does include prescribed objectives and assessment activities these are meant to serve as a guide for both students and teachers as to what can be expected in the subject. Students are given the option to negotiate individualised learning outcomes and assessment schemes that are tailored to their unique needs and experience.

Student involvement - Knowles is an advocate of involving learners in evaluating their learning by judging the quality and worth of the total program. To this end, an online evaluation form is included in Skills for Learning Online and students are strongly encouraged to make comments on the value and quality of the subject, the facilitation and whether or not they felt it met their learning needs. Students are also encouraged to pass any comments, good or bad, about the subject on the forum in order to promote discussion amongst their peers.

Evaluation and lessons learned

What the students thought

The initial evaluation of Skills for Learning Online was encouraging for the coordinators. With only minimal promotion more than 140 students from as far afield as Canada enrolled in the subject. Of those students, 32 selected to be assessed for formal recognition of their achievements. Each of these students completed an online questionnaire the results of which are summarised below.

How easy was it for you to use the Skills for Learning Online site?			
Extremely Easy 38%	Quite Easy 47%	Quite difficult 12%	Extremely Difficult 3%
How would you rate the appearance of the Skills for Learning Online site?			
Extremely Attractive 47%	Quite Attractive 50%	Quite unattractive	Extremely unattractive
Were the instructions and information provided in the Skills for Learning Online site clear and helpful?			
Definitely 84%	Probably 16%	Probably not	Definitely not
Please indicate your Web skill level prior to completing Skills for Learning Online:			
No Knowledge 9%	Low Knowledge 78%	High knowledge 12%	Very high knowledge
Please indicate your Web skill level after to completing Skills for Learning Online			

No Knowledge	Low Knowledge	High knowledge 91%	Very high Knowledge 9%
Generally, how would you rate the value to you of Skills for Learning Online ?			
Extremely Helpful 56%	Quite Helpful 44%	Quite unhelpful	Extremely unhelpful
Generally how would you rate the facilitation of Skills for Learning Online ?			
Extremely Helpful 69%	Quite Helpful 31%	Quite unhelpful	Extremely unhelpful
Do you think Skills for Learning Online will help you in your studies?			
Definitely 75%	Probably 25%	Probably not	Definitely not

Valuable feedback also came in the form of qualitative comments made by students via the Web forum an example of which is included below:

STUDENT COMMENT: On-line learning, I thought it was easy. Buy a computer, with the various attached hardware and software. Plug it in, find an internet server and off you go. As easy as that - WRONG. If I hadn't commenced this on-line learning course, I would be still trying to work out how to access my on-line subjects....I no longer feel like a cyber-dummy.

STUDENT COMMENT: I loved the flexibility of being able to work at your own pace. It has provided me with a lot of useful information, including things I was completely oblivious to. I really like the way it's set out providing links to other Web sites containing relevant information, interspersed with practical exercises both assessed and not assessed.

Lessons learned

Coming up with the idea for the subject, writing it and producing it were the easy parts! It was the administration of Skills for Learning Online that proved the greatest challenge. Although being able to enrol at any stage during the year and progress at individual rates was highly attractive to the students, for the coordinators this level of flexibility made the administration of the subject quite arduous. Once the subject went into its second round of offering and was mainstreamed into the University's existing administration and production infrastructure the problems were magnified.

Automatically generated grade sheets, access to secure forums, listserv subscriptions and online production schedules were examples of the issues that needed to be addressed.

The use of CMC in a collaborative environment is also problematic in a self-paced subject with no set start and finish date. Because there is no guarantee that any two students will be working on the subject at the same time, careful thought needs to be given to the design of assessment activities which require students to work together.

Another issue not unique to this particular subject but still of significance is the rapid rate at which information on the Web changes. Skills for Learning Online, like many subjects delivered online, requires regular and thorough revisions in order for information to remain accurate and current and for links to remain accessible and of relevance to students.

Conclusion

While it is now commonplace for universities to employ academic skills advisers or learning skills advisers to assist students in acquiring and developing necessary study skills, thought needs to be given to the new range of skills required by students to learn effectively in an online environment.

As academics increasingly utilise the online environment in their teaching it is important to remember that although the Web celebrated its tenth birthday this year, to many students it is still a new phenomenon. Innovation in teaching is to be commended, but we must remember that it is the students who are on the receiving end of any innovation, and in order to receive maximum benefit they must be adequately prepared for any new learning experience.

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