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Re-Visioning the Learning Process Online

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Abstract

This paper will explore the use of online learning processes for undergraduate and postgraduate units that are web enhanced and compare these with web based postgraduate units that are completely taught online. It will draw on the framework developed by Billings(2000) to evaluate the 'dynamic interaction' of the various aspects of the technology and the teaching learning practices of web based learning.

It will explore the extent to which such learning processes can promote the development of a 'knowledge ecology' (Lewis, 2000) and the quality of the learning paradigms that underpin such approaches. It will particularly focus on the role of the instructors to develop a conceptual map of the learning process and incorporate appropriate communication processes and structures into the unit being offered.

It will examine the specific implications for developing online units in the field of religious education. The paper is concerned with developing a vision, an understanding of the learning process which draws on the availability of information but is concerned with the use of information to enable students to develop knowledge and ultimately understanding and wisdom.

Re-Visioning the Learning Process Online

Introduction

This paper will address the re-visioning process required for teaching units online from several perspectives. It will enter into conversation with recent developments in the study of learning and teaching as well as discussions about the values of the online process. The writers' personal experience of teaching both partial and total university units online will be analysed within this framework. It will attempt to express the learning/teaching process in a way that will assist the evaluation of the use of the medium from a learning perspective. This paper draws on the framework proposed by Billings(2000:1) 'to study the impact of the use of technology in higher education'.

Background

The following definition for online learning is provided by the Blackboard website.

> An approach to teaching and learning that utilizes internet technologies to communicate and collaborate in an educational context. This includes technology that supplements traditional classroom training with web-based components and learning environments where the educational process is experienced online. (Blackboard inc: 1999:1)

This paper is concerned with both these situations. The technology is seen both as a medium for communication and part of the learning process.

Billings (2000:3) 'framework for assessing outcomes and practices in web-based courses in nursing' analyses five major factors:

- Use of technology
- Educational practices
- Outcomes
- Faculty support
- Student support

She established the relationship between the various factors in her framework and the outcomes of the learning processes. This paper explores similar questions with respect to a range of units using web enhanced or totally web delivered material and will use these headings as the basis for its presentation.

The writer has been involved for the past two years in delivering a final year pre-service education course which uses both attendance and web enhanced modules. This year I have also delivered a MEd unit in religious education and a professional doctoral unit on contemporary issues in education in a similar mixed mode, using a section of the normal university web site called the 'virtual campus'. I have also delivered two units in the Master of Religious Education program completely online using a dedicated web site call 'acuweb'. There has been technical support provided by a commercial partner available for the 'acuweb' project.

Use of Technology

Billings (2000: 4) noted from her review of a range of studies that 'internet-based technologies also have great power to enhance knowledge skills such as critical thinking, clinical decision making, and use of data sets.' In the field of religious education critical thinking is essential as some students have accepted religious perspectives in their personal lives and have not always approached the process of religious education with the same level of analytical criticism that they use in other subject areas. The advantage of online learning processes is that students have a greater level of freedom in putting forward ideas without concern for immediate peer response. The discussion board allows for posting of anonymous messages although the students chose not to use this option and instead were able to articulate their questions and their doubts in the safe environment provided in the Discussion Board.

Billings also noted that 'socialization can occur through the use of peer groups that emerge from the Web course' (Billings, 2000:4). Several students in their evaluations commented on the value of responding to the other students and discussing issues with their peers. To promote this activity in the web enhanced module of the doctoral unit students were required to post an annotated bibliography of the theorist they were examining and were also required to make a comment on at least two other students' bibliography. The comments at first were not sufficiently critical and simply applied the points raised to a different context or added other examples. The lecturer had a special role in modelling appropriate levels of critical comment, which enable students to begin to critique more effectively what they were reading. In the online Masters unit students were required to present a metaphor to describe the role of religious education coordinator and again to respond to at least two other metaphors. The level of interaction and the degree of creative and critical thinking were quite effective.

Lewis (2000:1) notes that 'the belief that placing information technology and their methodologies in classrooms will change the teaching/learning environment and "modernise" education had not eventualised in many learning situations.' She argues that

teachers and systems are not using the technology appropriately and speaks of developing a new knowledge ecology. She defines this term (2000:8) as

> A knowledge ecology is perceived as a complex, adaptive system of ideas, information, insights and inspiration, interacting with each other and their shared environment. Its primary domain of action is the design and support of knowledge ecosystems in which information, ideas and inspiration cross-fertilise and feed on one another.

This type of interaction is at the core of religious education so the teacher online in this discipline has to be able to plan to draw on all dimensions of the field and provide the learning situations from the beginning of the unit. When teaching in a class situation it is easier to change direction and add other dimensions. The online technology does allow for the addition of resources and the writer at times attached other material when student comments or interests showed that they were ready to extend their understandings. One of the great advantages of online teaching is the ability to provide links to other sites where visual or statistical information is easily available. The ease of availability means that the lecturer has to be discriminating to ensure that there is no information overload and that there is sufficient associated process to ensure that the students is able to move to some level of critical understanding.

Lewis (2000:3) speaks of the need for an 'evolutionary dynamic process' in which knowledge can be created and re-created as well as the need for diversity if the knowledge ecology is to thrive just as species diversity is needed in natural systems. Teaching online provides the opportunity to have a diversity of materials and the challenge is to provide the conceptual framework and appropriate processes and structures so that the students and staff can cross fertilise each other and create a new learning environment. To achieve this kind of educational outcome all involved in the learning process need support not just to use the technology but to change their conceptual framework. Ellyard (1997) in presenting an overview of education in the new millennium spoke of a movement from information technology (IT) to knowledge technology (KT) and finally to wisdom technology (WT). Wisdom is certainly the goal of religious education so the learning processes need to provide the opportunity for all participants to grow in wisdom.

Many of the students and staff involved in these units have only limited computer skills and the frustrations involved, if the server has any difficulty, were quite high. One student expressed this in the following evaluation statement:

> Sometimes I found the technical aspects frustrating but there was adequate support and fairly quick responses. I think it's probably a matter of a learning curve for all of us and I think it's been really important in terms of future directions for learning (Masters Student EDRE623 Nov. 2000)

This same student added as a final general comment: 'I really like the quick response and feedback from assignment work. I've actually started using e-mail a bit with my own students at school.' This change was brought about in one semester of studying one unit and was typical of several Masters students who began their first unit on line with a high level of anxiety but gained the confidence to participate very effectively.

Staff have difficulty conceptualising how their material will appear on the web and the computer experts ask for files in formats and names that they see as logical for their process but actually increase the sense of the foreign to staff in general. The first units were prepared by staff, including the writer, who were willing to attempt a difficult task without a great deal of support or appreciation of all that would be involved. These staff are now acting

as mentors for the new lecturers and also are able to discuss with the technical staff the available parameters in language that is more educational and less technical. The use of web enhanced teaching requires technical personnel with a good understanding of the learning process and lecturers who are willing to learn a new technical language that can provide a new way of promoting and enabling the learning process.

Peregoy (2000) offers a timely warning of the relative importance of the two dimensions of teaching/learning online.

> The technology of distance learning continues to influence the practice of education. Yet the users of technology need to recognize the pitfall of allowing the technology to drive the curriculum. Obviously, the process should work the other way. Professors who are asked to provide courses using the modern technology of delivery systems must fit the topics to be covered, no matter the subject, to the technological tools provided

There is a constant challenge to begin with the nature of the subject and then examine the tools available to communicate this in such a way that individuals may be stimulated to question and reflect and to participate in worthwhile learning processes. In preparing to present religious education units online the writer found it necessary to reflect on the range of strategies and activities that had been most effective for various individuals in teaching these units on campus and in various settings. In a unit on the cultural contexts of religious education students were required to analyse their local media for a week and then present what was really an online poster by responding to specific questions on the discussion board. The discipline required to obtain the data; analyse it and reflect on the implications before making statements such as Religion is.. and, Religion is not.., simply based on this data provided a framework for a very effective and discerning discussion. Clear reports on the visit to the art gallery where specific questions were provided and a journalling task completed before material went online actually ensured that these students were not simply carrying out tasks for assessment. The integration of learning and assessment strategies, is however an essential dimension of effective learning online.

Educational Practices

Much of the current debate now acknowledges that the focus for the discussion about the issue of technology in education is the learning process itself. Lawnham, in an interview with Dr SchWeber, of the University of Maryland University College, reported in the 'Higher Education Supplement' of the *Australian*(Oct., 2000) that the outcome of a government study to 'determine the appropriateness of content and effectiveness of delivery' of the many online courses will be a new pedagogy. Dr SchWeber was quoted as saying 'the online environment is really a doorway to the rethinking of higher education.' Teaching online demands that he lecturer conceptualises the whole process before beginning and then requires the ability to respond to the learning needs of individual students in a much more immediate way. Students sitting in a large lecture room may just see it as their problem if they don't understand what is happening. Students online immediately e-mail the instructor if they do not understand the relationship between material or processes. The instructor is given immediate feedback and has to be able to respond to the need to change or add extra instructional material as needed.

McConnel (2000:2) set out the following as being values of computer supported collaborative learning (CSCL): where discussions largely take place asynchronously and not in real-time. Students:

- have time to participate as and when they like;

- are not tied down to particular times and places;
- have time to reflect on what is being discussed.

Masters students in their evaluations consistently note the availability of the material and the opportunity to make responses when they have the time. As one student noted ' I found the ability to feedback answers in your own time very useful.' The following were responses from Masters students completing web course EDRE622 to the question *'Which aspects of learning online were most effective for you?'*

1. , 'Choosing to work at the time that suited during a busy time of year.'
2. ' Being able to work from home and access the material at the times most convenient.'
3. 'The discussion board and interaction which this provided with the lecturer and the other student.'

Several commented on the need to think before they write a response and to provide a more considered response than would occur in an oral discussion in a tutorial group. The permanence of their written comment and the ongoing responses to it promoted a more considered statement.

Outcomes

The educational advantages set out on the Blackboard website (1999:1) for the use of web-based tools are

- Enhancing student-to student and faculty-to student communication.
- Enabling student-centered teaching approaches.
- Providing 24/7 accessibility to course materials.
- Providing just-in-time methods to assess and evaluate student progress.
- Reducing 'administrivia' around course management

The student feedback as illustrated above would certainly affirm that these outcomes were achieved in the range of online and web-enhanced courses under discussion. Alexander (1997) cited in the Blackboard paper notes that ' as students become aware of the variations in interpretation and construction of meaning among a range of people (they) construct an individual meaning.'

Shepard (2000) has 'developed a "social-constructivist" conceptual framework, borrowing from cognitive, constructivist, and socio-cultural theories' which provides another way to explore the learning process that can occur online and help the lecturer to conceptualise the process effectively. Lecturers need to consider what she notes we have learnt from the cognitive theorists:

> . that existing knowledge structures and beliefs work to enable or impede new learning, that intelligent thought involves self monitoring and awareness about when and how to use skills, and that "expertise" develops in a field of study as a principled and coherent way of thinking and representing problems not just as an accumulation of information.(Shepard: 2000)

Early in the unit there is a need to provide learning activities and strategies that enable students to speak from their existing frameworks and thus provide the lecturer with the information needed to adjust the learning process for each individual. She also reflects on the fact that 'that cognitive abilities are "developed" through socially supported interactions.' This is a challenge for online learning but the technology effectively allows for the use of

discussion board and for whole class or group activities. In their evaluations student noted the value of the cooperative learning process. As one undergraduate student commented

> I found this unit challenged me to work quickly so that others may benefit and to assert my understanding. I was happy with the challenge given to cooperate and share. It was a real affirmation of our respective and corporate resources.' (Evaluation summary EDFD204, Spring 99)

Billings (2000:5) reported that several studies had reported that students 'preferred the immediacy of the verbal and nonverbal feedback they receive in the classroom'. There is, however, always a distance and individual dimension to the process of de-constructing information and making meaning and the lecturer can only provide the tools and interactive framework to assist the student in this process. Learning processes on the web as well as in the classroom have to provide for the different learning styles of the individual as they seek to make meaning within their context.

Faculty support

At present the university provides technical support for those developing and teaching units for 'acuweb'. Preliminary workshops are provided and staff can access existing units that are considered exemplary. There is still insufficient support given within the various disciplines to help staff envision the learning processes that are inherent in teaching online as well as specific issues related to the discipline being studied. At this stage there is a resistance among some staff to explore the new medium although others are now interested in learning from the experiences of those who have already developed and taught units using the medium.

As Turoff (2000:4) noted the 'success of this form of education is largely dependent on the capabilities of the instructor', he further states 'instructors need to create discussion structures based on their conceptual map of the course material'. The challenge in preparing courses online is to be able to conceptualise a range of ways that can promote the type of learning outcome desired and then provide activities and discussion questions that will assist individuals develop their understanding. The additional challenge here is that lecturers not only need to be able to conceptualise the learning they also 'need complete control over the communication processes and structures used in a course' (Turoff, 2000:5). This is going to require an ongoing professional development, which will improve the quality of learning in all contexts.

Krapp(2000) reflecting on the use of web materials in the German context noted ' that far from making people redundant, the net calls for people to acquire the know-how to get across their teachings.' This is part of the ongoing challenge for academics as they move into a new medium and does require a re-conceptualisation of the learning process and a focus on individual(s) rather than a group of varying size in a lecture theatre.

Student support

Student perceptions on the ease or otherwise of the use of the technology is an important dimension of effective use of the technology to promote learning as McLouglin (2000) discussed in her research on students involved in distance learning. She also noted that ' several students mentioned that the style of learning in the electronic classroom helped them engage in independent inquiry and become more self-reliant.' This has certainly been the experience of the writer. The same units have been taught online and in a mixed mode with some web enhanced modules and also completely in an attendance mode. A higher level of personal interaction which has led to a better-articulated personal stance has been

the outcome of the online material. It has been obvious though that assessment needs to be linked to the various learning processes as students who are studying part time in any mode tend to focus their time on those sections of the unit that are required for assessment.

In their evaluations several Masters students commented on the difficulty and anxiety they experienced until they were able to manage the technology. 'Acuweb' provides immediate technical support but some students still seek such help from me, as their lecturer, as they have not been able to establish the same level of relationship with the technical support personnel. I have had to forward their request and act as an intermediary. There is probably need for some personal introduction of the technical personnel so that they have a human face when students feel frustrated with some aspect of the process.

Dellit (2000) notes

> A visible sign of knowledge-age educational delivery might be the emergence of new jobs such as mentors, coaches and learning program managers. We will observe greater use of a range of diagnostic tests and tools, of varied learning program options such as small groups, large groups, online flexible learning and modular components along with the emergence of specialist options and a wide range of learning services for individuals.

Staffing of units online may need to provide such specialised roles and not simply assign students to lecturer/tutor. Staff may need to consider themselves carrying out some new roles in order to promote effective learning online and in every context.

This type of change may need re-structuring within higher education. Dellit (2000) commented in summary:

> Like other sectors, education will have to become faster at delivering services and will need to learn to work more efficiently. The hierarchies, the difficulties of cross-subject, cross-course, cross-school communication will have to be broken down. Establishing the motivation, intellectual engagement, opportunities and dividends for such widespread change is difficult, but essential

To achieve the flexibility required we will need to regard the individual as the primary unit of organisation and free up our delivery to adjust to the demands of a variety of individuals and groups of differing sizes, in different places and times

Conclusion

Teaching online is simply another mode in which learning takes place. The structure and medium are the language in which the learner and lecturer interact. The learner is less dependent on the lecturer for access to information but requires greater help in interacting with the material in a meaningful way so that understanding can lead to personal wisdom. All the skills learnt in online learning are applicable to lifelong learning from the various sources available in the wider society. The advantage of this type of learning process is that the learner develops an independence and gains access to information that is not limited to University attendance. Social interaction can be increased throughout this medium but the learning has to respect all the human dimensions of the individual and provide the human face and presence to the content being studied. Technology should be used because it

promotes learning for the particular individual and in the given subject area and not simply because it is available.

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