

Online learning: Transcending the physical

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Abstract: *A recent study has suggested that one assumption that accompanied the push to e-learning in tertiary institutions was that university teachers would change the way they conceptualise and implement education. However, the study found that, in many instances, the use of online course management systems and the pursuit of economically viable methods of "educating" large numbers of learners led to a focus on the distribution of materials, thus maintaining the transmissive, "delivery" mode of teaching. This resulted in some sense of disappointment and scepticism about the role and value of online learning in the knowledge society. This paper argues that online education can provide dynamic, learner-centered environments where knowledge is built through collaborative interactions with highly motivated learners. The authors have identified several critical principles of pedagogy which contribute to the success of the online learning experience. The paper also examines the experiences of learners in two postgraduate online courses and reflects on the feedback provided by those learners.*

Introduction

The internet has increased the opportunity for flexible approaches to learning in the education environment. Many tertiary institutions have responded to these opportunities by offering online courses or moving into online learning as an adjunct to traditional modes of course provision. The increasing ease of access to internet technology and the creation of a number of learning management systems, such as WebCT and Blackboard, have led to internet components, such as bulletin boards or discussion forums, being often regarded as standard features in university courses. Educators use the discussion forums to promote interaction among course participants based on the belief that interaction is essential for effective learning (Collis, 1996). These assumptions are embedded in a constructivist educational perspective, a perspective that has increasing support in contemporary educational literature (Palloff & Pratt, 1999; Laurillard, 2002). Palloff and Pratt (1999, p. 15) claim that "in the online classroom, it is the relationships and interactions among people through which knowledge is primarily generated".

While some educators are enthusiastic about the use of internet technology to support interaction, research also suggests that much of the online education has a focus on distribution of materials, thus maintaining the transmissive, "delivery" mode of teaching (Zemsky & Massy, 2004). Zemsky and Massy (2004, p. iii) suggest that "there is a sense of disappointment and scepticism about the role and value of online learning in the knowledge society". Buckingham-Shum and Sumner (2001) discuss different learning media and techniques used for closing the gap between distance learners and their tutors. They note, however, that although the Internet is widely acclaimed as a medium to revolutionise distance teaching, its primary role in many contexts has been the convenient publishing of "digital paper" plus simple hypertext, and that convincing examples of shared, networked multimedia are still relatively scarce.

The authors of this paper argue that online education can provide dynamic, learner-centered environments where knowledge is built through collaborative interactions with highly motivated learners. Perceived critical "elements" for sound design were first articulated by the authors with colleagues some time ago (Reushle *et al*, 1999). These elements have been further explored by the authors and the assertions in this paper have emerged from their experience in the online teaching and learning environment, their current research, and their study of relevant literature. In this paper, the claims are particularly supported by feedback from learners in two postgraduate online courses.

Context

The authors are online teaching practitioners, researchers and instructional designers in an Australian tertiary institution (University of Southern Queensland – USQ). They have worked in the online field for some years, particularly in the postgraduate, education arena. They have worked collaboratively on the design and teaching of online courses and this has enabled them to reflect on the teaching and learning strategies implemented by referring to learner feedback, personal teaching experience, and current literature in the field. Both authors are completing doctoral research in the online pedagogy field. The paper refers to two postgraduate (Masters level) online courses currently being taught by one of the authors. The other author has been extensively involved in the design of both courses, and has taught one of the courses in past years. Both courses are fully online and no print materials or face-to-face contact with learners is provided. One course, *Instructional design for flexible learning*, is a foundation course in the postgraduate program. It aims to provide learners with knowledge of the principal and commonly adopted theories and processes of designing instruction for flexible learning environments, and the ability to apply these theories and processes to practice. The main objective of this course is to prepare participants to design flexible programs within their own work situation while providing a sound theoretical base to inform their design, development and implementation decisions. The other course, *Teaching online: Strategies and tactics*, is a more conceptually advanced course. It explores principles of online pedagogy and the strategies and tactics required to operationalise those principles.

Formal evaluation data for the course, *Instructional design for flexible learning*, collected at the end of Semester 1 2004 through the online evaluation form (63% response) will be reported upon. Synchronous chat activity conducted in the *Teaching online: Strategies and tactics* course will be also be discussed in this paper.

The potential of online learning: Critical principles of online pedagogy

There have been enthusiastic predictions about e-learning's growth potential. Harris, Logan and Lundy (2001) have suggested that by 2005 e-learning will be the single most used application on the web, and corporate investment in e-learning will grow from US\$2.1 billion to US\$ 33.4 billion in 2005. Over time, several universities in the US have launched online initiatives. However, many of these universities have been unsuccessful (for example, Columbia University's Fathom initiative and NYUonline), while other online initiatives have undergone several makeovers. Zemsky and Massy (2004, p. 3) suggest that these e-learning failures have led to bad jokes such as "can you imagine telling your children to go to their rooms and study college for four years?" However, the authors believe that the provision of models of good online practice and a thoughtful innovation process is the way to support the pedagogical mind shift that is required to move e-learning from the pioneering stage to mainstream good practice.

Mayes (2001, p. 17) has observed that never before has there been so much agreement about the pedagogical fundamentals of teaching and learning. He observes that:

the shared theoretical assumptions are those of constructivism, and they result from two distinct shifts of emphasis - shift from a representational view of learning to a constructivist or constructionist view where learning is primarily developed through activity...Second shift is away from the focus on the individual, towards a new emphasis on social contexts for learning.

This constructivist approach to teaching and learning has a focus on dialogue, learning partnerships, and the joint construction of knowledge. In 2003, the authors of this paper were involved in a DEST-funded Evaluation and Investigations Program (EIP) research project titled *Online Teaching and Learning in Higher Education: A Case Study* (Postle et al, 2003). The study explored the emergence of online learning and teaching in higher

education and traced the adoption of flexible learning approaches at USQ. Data were collected to develop an understanding of the nature and extent of key issues affecting the adoption of totally online approaches at USQ. Respondents to a staff survey stated that the adoption of online approaches to teaching and learning provided a number of advantages over traditional distance education. One of the most significant points discussed was the increased opportunity for interaction, particularly between teacher and student, and between students, both synchronously and asynchronously. Students enquiring about the quality of online education offered at USQ have indicated that one of the most important factors in choosing between online universities is the quality of instruction, student support and level of interaction available with the online teacher (Reushle, Cleary & Mangubhai, 2004). The synchronous and asynchronous tools (discussion groups, email and virtual chats) provide environments for collaborative group learning, where learners can actively exchange ideas and co-construct their knowledge within the context of an online learning community (Wenger, 1998).

The pedagogical principles that underpin the design of both courses discussed in this paper include:

1. development of a supportive and productive learning community where participants can access, comment and interact in a safe environment, and their progress is monitored.
2. a focus on situated learning. The activities and assessment support the concept of situated learning that is based on the idea that if knowledge is learned in meaningful and relevant contexts, it will be used in that, or similar contexts. Both courses require participants to develop learning activities that can be applied to their own work contexts. The facilitator provides feedback that is meaningful and timely on the activities and assessment items.
3. interactive and collaborative learning. Participants are encouraged to interact with the content, with their peers, with "experts" in the field and with their facilitator. They are also encouraged to participate with their peers collaboratively in problem solving and generative writing activities.
4. use of reflective practice. Participants are required to reflect critically on their practice and relate to the learning acquired through their participation in these courses in order to explore their own perspectives.

These principles also reflect the literature on adult learning which proposes that an adult's past experience, individual learning style, desire for flexibility in the learning situation, readiness to learn and motivation to learn in areas relevant are important guiding principles when developing resources and instructional programs for adults (Knowles, 1996).

Literature suggests that the role the teacher plays in facilitating online learning is a crucial aspect of the educational process (McDonald & Reushle, 2002; Salmon, 2002). A study conducted by Cashion and Palmieri (2002) identified a range of key features which students believe constitute a high-quality online learning experience. One of the features identified by the research was the importance of *responsive teachers* who exhibited high levels of interactivity and availability, and who negotiated response times which they subsequently adhered to. As reported in an ANTA (2002, p. 6) research report, "An important success factor in online learning is developing rapport with the students: knowing them, their progress and their interests intimately to help to enrich their learning experiences as much as possible".

The concept of "human-ness" has been identified by the authors as critical to a successful online learning environment. The human touch (which can be referred to as "social presence") must be created and maintained throughout the learning experience, enabling learners to be members of a facilitated, interactive, safe learning community. Learner feedback from the courses has highlighted the importance of this sense of "connectedness" and "sharing" with peers and teachers which promotes "consciousness

expansion", a sense of being "hardwired into each others' cognitive processes" enabling the "construction of new understandings and relationships". Words and phrases such as "exhilaration", "sense of euphoria", "inspiration" and "passion" have also been used by learners to describe their experiences in these online courses.

The approach to online pedagogy advocated by the authors is aimed at shifting learners from passive to active learning, from teacher-centred to learner-centred environments and from decontextualised tasks to authentic, meaningful experiences. It also can enhance the independent learner model by providing media-rich resources and the opportunity to self-manage learning in a flexible mode (Reushle & McDonald, 2000). Many of these learning strategies have not been available in the traditional print-based delivery of distance education which, for access and equity reasons, has often been designed within the framework of independent learning. The collaborative learner model acknowledges the importance of the co-construction of knowledge through collective learning and peer exchange, often referred to as a many-to-many learning experience (Paulsen, 1995).

In educational literature (Bates, 1999; Jonassen, 2000), it is argued that learning within a constructivist environment promotes meaningful learner engagement and critical, creative and complex thinking by learners. This paper places significant focus on communication technology, while noting that other technology-based learning/teaching tools such as Jonassen's (2000) "mind tools" also support engaged learning by students. The idea of constructing knowledge using technology, rather than using technology as an information-gathering tool, is an important aspect of online pedagogy. Online discussion groups can provide a permanent record of discourse, a collective memory resource for subsequent reinterpretation. Laurillard (2002, p. 147) suggests that "the key issue is the quality and type of learning activity the communication media can support, and the role they play in the learning process as a whole".

The learner experience: Feedback on the courses

Formal evaluation data for the course, *Instructional design for flexible learning*, collected at the end of Semester 1 2004 through the online evaluation form (63% response), indicate success in achieving the outcomes of the course. The learner responses (listed below) reflected an appreciation of the pedagogical principles related to collaboration, interaction, authentic tasks, social presence and reflective practice.

What did you find were the most helpful/effective aspects of this course?

- Developing an online community of learners which allowed interaction and exchange of thoughts and ideas.
- The facilitator's humanity which helped reduce the feeling of isolation and the challenge of fitting this all into a regular 60 hour working week.
- The ease of contacting the facilitator. The interaction between course participants, and knowing that people are willing to share ideas and resources.
- The announcements and emails [from the facilitator] which I found to be extremely motivating during a hectic work period. They are primarily the reason that I was able to keep going.
- The emphasis on collaborative learning i.e., use of discussion activities posted to group areas (including wrapper and self-assessment activities) facilitated group discussions.
- The resources (both within the course material, the ones we were directed to, the ones we found for ourselves, and those discovered by fellow students) were invaluable. Useful modelling for how to run an online programme at Post-grad level... has provided further

experience for me to draw on when discussing communication techniques with teaching staff embarking on online delivery for the first time.

- The applicability and practicality to my job of everything! Flexibility to adapt the course to my own teaching context.

In the course, *Teaching online: strategies and tactics*, one of the interactive strategies employed is the use of the synchronous chat facility ("Virtual Classroom"). In Blackboard, the chat facility is comprised of text, some simple drawing tools, and a whiteboard. Chat can be regarded as an excellent means of enabling learners to engage in "real time" but there is much debate in the literature about its actual "worth" in an online environment. Ko and Rossen (2001) have some interesting things to say about virtual chat when they suggest that it can be the most exhausting, intensive activity an online instructor may ever encounter with its often disjointed or widely digressing conversations where lines of communication are often "out of sync".

However, chat can also be used to provide reinforcement and immediate feedback when no face-to-face meetings are possible. Virtual office hours and personal consultation can be provided and it can serve in lieu of email or phone conversations. The social aspect of chat may be one of its most important uses. Students may appreciate chatting amongst themselves without it being an official class activity. It can help students form bonds with others in the class. Whole class or group chats may add to the sense of cohesion among group members. Chat may provide a suitable outlet for humorous exchanges, social chatter, and team-building conversations. It can also be used in conjunction with asynchronous group areas for group project meetings and discussions, brainstorming, or finalising unresolved problems.

The problems with chat are well detailed in a study by Murphy and Collins (1997) (no observable kinaesthetic or para-verbal cues, requires substantial typing skills, unsuitable for online lecturing, differences between novices and experts in using chat). Murphy and Collins (1997, p. 4) maintain "...the ever-changing flow of messages results in considerable cacophony in the number of simultaneous thought-trains expressed on a channel. The closest analogy in the non-networked world would be a pub or a party".

In both courses discussed in this paper, chat is used for a number of these reasons and is employed on a fortnightly basis. The facilitator establishes an asynchronous discussion area for "chat" information. Here protocols for engagement can be outlined and discussed, agenda items can be posted and post-chat reflections can take place. Feedback from learners on the chat facility used in these courses indicates its worth and potential as an educational tool:

- What technology affords us is the opportunity to reach out without the need for touch or eye contact. Perhaps we are challenging the notion that you can see a person's soul in their eyes, and that in fact, the soul transcends the physical to such an extent that you can feel and touch it even through a chat on the computer.
- What we experienced [in the chat] was like astral travelling into each other's consciousness and connecting at such a fundamental level that it caused euphoria of sorts.
- Leave your ego at the door and be prepared for anything. The parameters are articulated but the possibilities are endless. Be free.
- Maybe a successful interactive experience is like an addictive drug - just one chat isn't enough! It was certainly the catalyst I need to get involved and get on board.
- ...we were perceived as real people, even transcending this to a plane that I have only experienced in a period of intense meditation, where bodies, personalities, souls merge so that you are no longer aware of how or why this is occurring but you feel "at one" with the experience. Even the medium becomes irrelevant. Personally I was not aware of typing, of

looking at a screen or thinking "we are online", it went beyond the physical...If social presence is the ability to project yourself socially and emotionally as a real person then perhaps we achieved social transcendence. We collaborated to such an extent that we went beyond sharing to merging our understanding of meaning...

In this context (with postgraduate learners), the authors have determined that a pre-determined agenda for synchronous chat is important, but not essential. The presence of the facilitator, although very important, is not critical. The establishment of a safe, relaxed, respectful and supportive environment is critical and a post-chat discussion which draws out issues, points of interest, and future discussion points is important.

Conclusion

The adoption of online technologies has meant that teachers are experiencing change in terms of their teaching philosophies, their relationships with learners and their work patterns and activities. The authors have developed considerable insights into how to use online technologies in order to strengthen the concept of a learning community. Zemsky and Massy (2004, p. iii) suggest that the promised boom in e-learning did not eventuate as expected because "the hard fact is that e-learning took off before people really knew how to use it". This paper has demonstrated that with thoughtful design, e-learning can effectively "transcend the physical" but it takes time for learners and educators to adapt to this changed environment. Well designed and implemented learning strategies can create opportunities for highly interactive learning and transform the educational experience for participants. As Anderson and Kanuka (2003, p. 7) observe:

We are convinced that a networked society is not a fad and that we are at the beginning of a new era in human collective activity. This era is not marked by elimination of the value or unique functionality of face-to-face and place-bound interaction. Rather, it represents the growth of parallel and alternative forms of many types of human interaction and discourse. These parallel forms are not inherently better, nor worse, than pre-Net forms of interaction and education. However, network-enhanced interaction better fulfills some human needs at certain points in time by providing access, convenience, utility, speed and cost-effectiveness. These attributes result in the eager exploration of cyberspace by many citizens, thereby creating a new human context that selectively, and individually, forms a merged environment of networked and face-to-face environments.

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