

Implementing online in a hybrid model. A matter of principles?

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Abstract

Expectations that teachers will use online technology to support their practice are commonplace. Governments have invested in technical infrastructure and manufacturers are developing software that is more accessible and easier to use. Debates about what 'online learning' means are less dominated by technical experts than only a few years ago and there are increasing contributions by educationalists.

So how are teacher practitioners responding in their use of online technology to support their practice? And, what is the impact of using online technology on the teaching principles that teachers bring to their practice?

This paper reports on two case examples conducted as preliminary research in studies towards a Doctor of Education (Monash University). The paper is largely descriptive drawing on two interviews with each participant to compare the teaching principles that individuals bring to their practice with those that are reflected in their use of online technology.

Introduction

This paper reports on preliminary research in progress towards a Doctor of Education degree at Monash University. The paper is a descriptive report that compares the principles that underpin the teaching practice of two TAFE teachers with the teaching principles that are embedded in online teaching materials (OLTMs) that they use in their teaching practice. Both participants use OLTMs that are based on WebCT, they are primarily accessed through an intranet system in a computer laboratory or classroom environment and can also be accessed through the internet. This approach is often referred to as a hybrid or blended teaching model. Both participants use these OLTMs in a teacher-centred approach, they control the content, pace and sequence of learning. Typically, classes are scheduled and all students complete the same lesson. The teacher will introduce the topic and orchestrate the activity in the classroom shifting between teacher-directed discussion and the use of OLTMs to complete exercises that may be completed individually or collaboratively.

Two major premises underpin this research presented here. Firstly, that teachers' beliefs inform their teaching practice and are influential when implementing new initiatives (Errington, 2001). Secondly, that technology is not neutral but advantages some cultural knowledge and value orientations while disadvantaging others (Bowers, 1988; Bromley, 1998).

The purpose of this paper is to identify teaching principles that underpin the practice of TAFE teachers who use OLTMs in a classroom, to identify which of these teaching principles are embedded, and, which of these teaching principles are not embedded in

the OLTMs demonstrated by the teachers. Whilst the paper makes some preliminary comments to explain the presence or absence of evidence of particular teaching principles in the OLTMs demonstrated, a comprehensive analysis is yet to be conducted and is not presented here. The paper describes the research method, provides general biographies for both teachers, an analysis and discussion of the interviews conducted and some preliminary conclusions.

It is hoped that the research reported here will contribute to the growing body of knowledge on the use of OLT for teaching. Some authors note the emergent nature of the use of OLT in teaching and learning (Ellis & Phelps, 2000; Harper, Hedberg, Bennett, & Lockyer, 2000) and, to date, no consolidated theory to underpin the use of OLT for teaching and learning has emerged (Schofield, Walsh, & Melville, 2000, p.382). Early attempts at the use of OLTs have been dominated by a behaviourist or transmission approach to teaching and learning, this is an approach which is criticised by many authors (Bate, 2000; Brown, 1997; Oliver, 2000a; Schreiber & Berge, 1998). Constructivism rejects the notion that learning is a passive process characterising learning an active process where the construction of knowledge and meaning is built upon previous experiences. Two schools of constructivism are represented in the literature, cognitive constructivism and social constructivism (Alexander & Boud, 2001; Brennan, 2002; Gibson, 2002; Love, 2002; Mayes, 2001; Oliver, 2000b; Oliver & McLoughlin, 2001). There are three further conversations that have been promoted as principles that should underpin the use of OLT in teaching and these may be interpreted as specific approaches for promoting constructivist learning. They are scaffolding (Love, 2002), problem-based learning (Gibson, 2002; McAlpine & Clements, 2001; Oliver & McLoughlin, 2001) and promoting social interaction (Bate, 2000; Cashion & Palmieri, 2000; Salmon, 2000).

Other publications are edited volumes that bring together major contributors in the field of using OLT in teaching (Lockwood & Gooley, 2001; Stephenson, 2001). There have also been significant consolidation and investigative studies conducted in Australia (Brennan, McFadden, & Law, 2001; Cashion & Palmieri, 2002; Choy, McNickle, & Clayton, 2002; Harper et al., 2000; McKavanagh, Kanis, Beven, Cunningham, & Choy, 2002). The significance of the current research is that it explores the teaching principles that individuals bring to their practice with those that are reflected in their use of OLT. It is hoped that the research will expose the ways in which the integration of OLT into teachers practice impacts on their intended practice. Which teaching practices are 'amplified' and which teaching principles are 'reduced' (Bowers, 1988, p.36).

Method

Participants in the research are qualified teachers with classroom experience who incorporate the use of OLT into their teaching practice. The participants were interviewed on two occasions, interviews were audiotaped and transcribed. Transcripts of interviews were notated and coded to identify themes that captured recurring patterns of meaning that were relevant to the research (Merriam, 1998).

The first interview used semi-open questions to elicit the participant's biography, what drew them to teaching and the teaching principles that underpin their practice. This

interview was audiotaped, transcribed and analysed to identify any teaching principles that the participant intends to implement in their teaching practice. The transcript and analysis were returned to the participant for verification. The second interview sought concrete examples as evidence that teaching principles identified in interview one had been embedded in the OLTMs demonstrated by the participant. This interview was also audiotaped and evidence in the form of screen-grabs or related documents were gathered. The analysis of the second interview and conclusions about the comparison between intended and implemented teaching principles were returned to the participant for verification.

The analysis in this paper is limited in some significant ways. Firstly, the paper is limited to a comparison of teaching principles that were identified at an initial interview with evidence of the implementation of these principles in OLTMs that each participant demonstrated at a second interview. Secondly, both participants are using OLT in a hybrid-teaching model, analysis of the way that OLTMs are used in the classroom or computer laboratory is limited to a few remarks about the use of these materials in transcripts of interviews. Thirdly, attempts to link the findings of interviews with the existing literature are also limited.

General Biographies of Participants – Lim and Jenny

Lim originates from Vietnam where she graduated as a Chemistry and Mathematics teacher, she arrived in Australia in 1981. In the next few years Lim learnt English, worked in factories, married and returned to study. She completed a Diploma in Education, a Graduate Diploma in Mathematics Education, she also studied TESOL and LOTE subjects. Lim gained employment as a Teachers Aide at an English language school in 1985. In 1995 Lim commenced work at a TAFE institute teaching ESL, numeracy, literacy and basic computing. In 1999, Lim participated in a professional development program related to the use of OLT, she has developed several programs that incorporate the use of OLT. Lim teaches primarily in English as a Second Language (ESL) programs and uses OLT in a significant way. Learners are adults returning to study, the ESL programs are conducted as full-time on-campus programs, teaching occurs in computer laboratories involving the use of OLTMs along with teacher-directed activities.

Jenny enrolled as a mature age student in a block-release program for teacher training in 1985 and gained employment at a regional TAFE college. Jenny's first teaching engagement was in shorthand and office skills, soon after she became involved in teaching word-processing. In the early 1990s, Jenny moved to a large metropolitan TAFE college. In 2000, she volunteered to develop online resources in the area of e-business. Jenny acted as the project manager for a suite of modules and partially wrote a number of these. She was also responsible for teaching two of the modules from their introduction in 2001. Jenny's teaching experience with OLT is in the area of business programs, particularly those that teach aspects of e-business. Most learners in these programs enrol directly from year 12 (VCE), they are full-time, on-campus students. Teaching occurs in computer laboratories, programs are teacher-directed with the use of OLTMs to support learning.

Results

This section of the paper provides a descriptive account of the primary themes that were identified from transcripts of interviews with Lim and Jenny. The research to date has identified teaching principles that emerged from the analysis of interview one and concrete examples of teaching principles that were embedded in the OLTMs that participants demonstrated at interview two, the findings are categorised according to language that was typically used by the participants in the research.

Accommodation of Learner Characteristics and Learning Needs

At interview one both participants showed a concern to accommodate learners' predisposing characteristics and their learning needs in the development of teaching programs. In respect to accommodating learners' predisposing characteristics, Lim refers to the particular needs of adults and Jenny makes specific reference to the needs of learners who are entering TAFE programs directly from Year 12 (VCE).

... in my area they have lots of problems, they don't have jobs, they don't have money and their children are sick. (Lim)

In the first year of the course, in the first 6 months there is a lot of transition stuff that happens. (Jenny)

The participants also make reference to the need to accommodate what they describe as different learning needs, identifying the need to accommodate a range of inputs and a range of activity types.

... we try to give different exercises, not all the same, a little bit of reading here, a little bit of writing, a little bit of grammar exercises. Not all reading, not all writing, not all researching. And even now the units that we have incorporate listening, we incorporate audio. (Lim)

... I guess the major principle underpinning it all for me is recognising the learners needs and that to me underpins the whole thing. You can't teach unless you understand that everybody learns differently. (Jenny)

In both cases the OLTMs examined in interview two showed concrete evidence of features that appeal to a range of sensory inputs. The use of text for reading, images for iconic recognition, video for viewing and audio for listening. In addition, the OLTMs showed evidence of a range of learning activities. These include visiting internet sites, active engagement with e-business activities, the use of checklists for self-evaluation of learner's existing skills, assignments that require investigation as well as a written or oral report.

Concrete evidence of teaching strategies that might accommodate learners' predisposing characteristics was not obvious in the OLTMs that were demonstrated at interview two.

Provision of Opportunities for Social Interaction

Interview one shows that both participants are concerned to promote social interaction, this includes teacher-learner and learner-learner interaction.

They come from High School and they need to make some adjustments, so the development of methods to do that I believe still comes through in a lot of peer group activity. (Jenny)

The group work is important because they learn from each other, keep motivated and keep interested in the course to. And also they need the reassurance from the teacher, the encouragement, and sometimes you can explain a bit more. (Lim)

The examples of OLTMs demonstrated by both participants at interview two failed to show concrete evidence of the use of OLT to support social interaction. Both participants said that they have attempted to use some of the communications elements of OLT (chat and discussion forum) but had not found these successful. Further, neither participant would seem to be particularly positive about the potential of OLT to support social interaction and successful outcomes for their learners. When asked if she believes that an entire course can be delivered online Lim is definitive in saying.

No, never, because the student is so isolated when you do it online. You need to teacher-student interaction, you need pupil interaction too. (Lim)

'Chunking' Learning and Multiple Opportunities for Learning

Interview one showed that Lim supports the practice of dividing learning into small segments (chunking) and providing multiple opportunities for learning. Although Jenny did not articulate this practice at interview one, when the practice of limiting the amount of content per screen was pointed out she responded that this was a practice that was very important.

I would have the introductory page first and then follow on with some searching and then some activities to follow on, and then some sort of research project and then some sort of assessment task at the end of each topic or something. (Lim)

Yes it is we had to be very careful about that ... very precise ... we worked on the principle that they are not going to read a lot and to make it as clear and succinct as possible. (Jenny)

For Lim, small pieces of study are seen as important in building to larger exercise where there are opportunities for learners to repeat or 'overlearn'.

... if it is write a formal or informal letter then you need to give them the skills to practice and at the end revision then a test at the end. (Lim)

At interview two, the OLTMs of both participants showed concrete evidence of 'chunking'. Both participants were using WebCT, an online learning management system that promotes the development of learning materials in small chunks that are

linked. Repetition was obviously incorporated into the teaching programs demonstrated by Lim, and she had consciously incorporated this feature, in Jenny's case learners were able to repeat a range of exercises on numerous occasions.

Developing Learner's Strategies for Successful Learning

Interview one with Jenny showed her belief that learners come to her programs lacking some of the underpinning knowledge and skills that are necessary to be successful in their study. These weaknesses relate to the vocational area of study and the ability to study using OLT. Lim also noted that her students are concerned about the use of OLTs.

... students coming from VCE certainly have no idea what a business is. How to view a business, how to do a case study those sorts of things. (Jenny)

online learning is a new environment, it's so scary, they hate it at the beginning but at the end they can move on. (Lim)

Interview two with Jenny showed two primary examples of strategies that she uses to assist learner's to learn. Firstly, the use of checklists to provide learners with the opportunity to self-assess their existing skills and to identify those aspects of the course on which they should concentrate. Secondly, Jenny demonstrated case studies that build sequentially to allow learners to learn more independently. In step one

... it's talking about what is a case study, some of the definitions for it, and how to use it, and how to determine [whether] a case study is a suitable one for you to use. And then there is a small piece of assessment. (Jenny)

In step two and three

To go and find another case study and pull out of it what you think you need and the third [step] would be to actually develop up some sort of case study out of what you have learnt.

Jenny's concern for providing learners with the skills to learn successfully and the idea that learning is a staged process is reinforced when she is asked to identify a metaphor to characterise her intended teaching practice.

... I would probably see myself as a conduit between two lampposts if you want to put it that way because there's carrying some sort of energy that will continue to go further. (Jenny)

When asked what appeals to her about that metaphor, Jenny says

I'd say that the lampposts are points in people's lives where they cluster at a period of time and then move on to another one. That conduit is assisting them to get to the next stage. (Jenny)

Jenny goes on to explain that she believes that learning should be an active process and that teachers have traditionally placed too much emphasis on delivering content rather than on providing learners with the skills to move onto the next point.

Whilst the transcript of interview one with Lim does not show overt concern for developing learning to learn skills the OLTMs demonstrated at interview two reveals several strategies that might support the development of these skills. For example, in the case of spelling a series of exercises are presented that require different skills, also spelling exercises that use audio prompts to assist learners to use a range of strategies to support their learning.

Flexible and self-directed learning

The Australian National Training Authority defines these terms as follows.

Flexible learning: the provision of a range of learning modes or methods, giving learners greater choice of when, where and how they learn.
Self directed learning: learning in which the learner is the principal driving force, deciding how, when, and at what pace learning takes place.
(<http://www.anta.gov.au/gloftol.asp>, accessed 26 March 2003)

At interview one Jenny articulated flexible and self-directed learning as principles that were important in her teaching. In the case of international learners, the flexible learning would appear to be primarily motivated by a pragmatic perspective.

... we need something that can be a bit more flexible up front that we can adjust to international students who get here late and higher ed students who don't think that they start until March when we have started in February and I'm looking at 4 to 5 weeks for this upfront program. (Jenny)

And, when initially asked to describe the principles that inform the development of OLTMs she says

Well the teaching principles behind it are I guess ... there is certainly a lot of self-evaluation, if this is what you are talking about. There is self-directed learning ... there is certainly flexible delivery issues. (Jenny)

In the OLTMs that Jenny's presented, the use of OLT in her teaching is used in a teacher-directed manner. When asked if she is 'orchestrating the activity' within a classroom, Jenny replies 'Yes, absolutely' and in describing her use of materials that are online in a computer laboratory she says

... we would choose which topic we are going to do for the day ... Then get them to go on and read some of this (online course) and pick out 2 or 3 activities that they need to do and get them to do those (Jenny)

Evidence from interview two showed that, to the extent OLTMs allow learners to access course materials at any time through the internet and to the extent that the OLTMs do not require that topics are learnt in a specific order, the modules reviewed have the potential for flexible delivery and self-directed learning. Whilst interview one with Lim shows that she has concern for meeting learner's predisposing characteristics and attempts to accommodate individual learner needs, flexible learning and self-directed learning were not raised as teaching principles important to her. However, she

does provide opportunities to use OLTMs for a self-directed learning on an exceptions basis.

I have one student in my class who only attended one session. But he came in he said to me show me the course, I show him the materials, I show him how to use TAFE VC but once he got all that information he said he could work at home, he submitted through TAFE VC and he done all the twelve learning outcomes in that module and I only see him once. (Lim)

Discussion

The results of analysis of interview one and evidence of implementation of teaching principles in OLTMs demonstrated at interview two show that the findings, to date, fall into four broad categories.

A desire to accommodate a range of learning styles was the single teaching principle that was identified in the transcript of interviews one of both participants where there was evidence of implementation in the OLTMs of both participants. There is a large body of literature on learning styles and this implies the need for multiple instructional strategies (Brennan et al., 2001). The OLTMs demonstrated at interview two show that, to the extent that the materials cater for a range of sensory inputs and a range of activity types, this teaching principle is being implemented.

Accommodation of learner's predisposing characteristics and the provision of opportunities for social interaction were two teaching principles that were identified at interview one with both participants, interview two failed to show concrete evidence of the implementation of either principle in the OLTMs demonstrated. Given that both teachers use OLTMs in a hybrid-teaching model it is possible that, the accommodation of diverse and complex predisposing characteristics is achieved in the classroom practice in which the OLTMs are used. The provision of opportunities for social interaction, particularly in the form of learning communities has been promoted in the use of OLT (Bate, 2000; Cashion & Palmieri, 2000; Salmon, 2000). In the cases reported in the current paper, WebCT which is used by both participants, provides mechanisms for communications but neither participant is using these mechanisms in their practice. Both participants articulated negative experiences in using online communication with their learners and neither was keen to promote the use of online communications to promote social interaction in their 'hybrid' teaching practices.

Chunking, providing multiple opportunities for learning and developing learner's strategies for successful learning were identified in the transcript of interview one of a single participant, interview two revealed evidence of implementation in the OLTMs of both participants. Interview one with Lim shows her concern to 'chunk' learning and to provide multiple opportunities for learning as important teaching principles. At interview two, the OLTMs of both participants showed concrete evidence of 'chunking' with the breaking of learning into small components. Repetition was clearly incorporated into the teaching programs demonstrated by Lim, she had consciously incorporated this feature with numerous exercises providing multiple opportunities for learning and self-assessment. In Jenny's case, the principle of repetition was limited to learners having multiple opportunities to revisit learning materials and complete non-assessed tasks. Both participants use WebCT which promotes the division of learning

materials into small sections thus breaking teaching into multiple screens. WebCT also promotes the provision of multiple opportunities for learning with the provision of quizzes as an important facility embedded in the software platform. Chunking and repetition would appear to be facilitated by the use of this technology irrespective of whether these practices are consciously promoted by the teacher.

Learning to learn skills are seen as a prerequisite for self-directed learning (McKavanagh et al., 2002). Interview one with Jenny showed a desire to develop learner's strategies that promote successful learning. Whilst Lim did not articulate this desire in an overt way there was concrete evidence of the implementation of strategies that might promote successful learning in both cases. Through the provision of procedural prompts and sequential exercises Lim appears to provide temporary structures that support learners in developing new understandings and skills, this is consistent with the idea of scaffolding (Love, 2002).

Accommodation of flexible delivery and self-directed learning are identified in Jenny's transcript of interview one, interview two failed to demonstrate concrete evidence of the implementation of this principle for both participants. These principles are policy directions that have been promoted by governments for many years, it is a moot point as to whether any articulation of these principles is the result of a deeply held desire or a desire to comply with expectations. Although Jenny specifically articulated the need to accommodate flexible delivery and self-directed learning her comments suggest that she takes a relatively pragmatic approach to these directions. In Lim's case, there was no explicit mention of flexible delivery or self-directed learning but expressed a desire to accommodate situations where learners could not attend classes because of personal circumstances. Evidence demonstrated at interview two indicates that apart from the fact that the OLTMs demonstrated are accessible at any time, there did not appear to be any concrete evidence that the materials were being used to promote flexible learning. In both cases, the learning materials are implemented in a classroom or computer laboratory in a teacher-directed manner. Further, neither participant sees independent flexible learning as desirable for their learners suggesting that such an approach is likely to be unsuccessful.

Finally, while numerous authors advocate teaching practices that promote constructivist learning (Alexander & Boud, 2001; Brennan, 2002; Gibson, 2002; Love, 2002; Mayes, 2001; Oliver, 2000b; Oliver & McLoughlin, 2001), and the implementation of a problem-based teaching approach (Gibson, 2002; McAlpine & Clements, 2001; Oliver & McLoughlin, 2001), there is no concrete evidence of support for these teaching principles in the transcripts of interview one for either participant. An analysis of the OLTMs demonstrated at interview two shows, at best, limited implementation of teaching principles that would promote a constructivist learning approach. These include, adopting a coaching role in a learner-centred setting, active engagement in authentic tasks within authentic learning environments, learners engaging in reflection, opportunities for peer discussion, collaborative and cooperative learning or the exploration and valuing of intellectual, social and cultural backgrounds where learners are exposed to a variety of different perspectives. To the extent that the OLTMs demonstrated contain exercises that require some problem solving, these are of a relatively simple nature requiring information gathering and analysis. There was no evidence of problem-based activities that required reflection, detailed or critical analysis and the construction of solutions from multiple perspectives.

Conclusion

This paper reports on the teaching principles of two teachers who use WebCT in a hybrid-teaching model. From the evidence provided in this paper it is possible to conclude that thematic analysis of interviews was successful in identifying a number of teaching principles that are important to each participant. Interview two was successful in identifying concrete evidence of teaching principles embedded in the OLTMs demonstrated by each participant. A comparison of the results of analysis of interview one and evidence of implementation of teaching principles in OLTMs demonstrated at interview two show that the findings, to date, fall into four broad categories. Given that these findings are part of research in progress, the findings are preliminary in nature, and given that only two cases are reported here the results cannot be interpreted as representative but might contribute to more rigorous and representative conclusions.

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