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Presentation title: Walking the walk – vocational educators using technology to learn about technology

Abstract:

If teachers and trainers are to contribute in meaningful ways to the changing social and technological bases of what counts as knowledge in our society, then their own professional learning should be examined. This paper reports initial findings from a research project constructed around the views of a cohort of twenty (20) teachers/trainers on the language, literacy and numeracy demands of their jobs and the nature of the learning experiences they believe they require to do that work. The research project utilizes features of the Blackboard learning management system (LMS) to evaluate participants’ engagements with a course entitled ‘Literacy @ Work’. A unique feature of this course is its location in programs for people who are studying to work in secondary schools and/or TAFE colleges and/or private training providers and/or on-site training for businesses, industries, community organisations. All participants are mature-age adults who have prior industry and/or trade qualifications as well as relevant work experience in their chosen vocational teaching/training areas who are studying through an Australian university.

The research participants are engaging with the LMS technology to learn about the multiliteracies of the complex connections of meaning that are generated through varying combinations of spoken, visual and written language and multi-modal communication systems. They are also using the selfsame technology to provide evaluative data on the nature of their professional learning throughout the course. These data are used to address the key research question: What knowledge and performance based demands does an electronic learning management system make upon a cohort of vocational educators who are learning about English language, literacy and numeracy teaching? In answering this question, data will be discursively analysed to identify participants’ perceptions of the knowledge base/s and nature of the learning experiences they believe will best assist them in their current and future work as teachers and trainers.

Key words: e-learning, online learning, professional development, evaluation, learning management systems, adult literacy and numeracy

Walking the walk: vocational educators and researchers using technology to learn about technology

Introduction

One constant that vocational educators and researchers have been able to rely upon is the fact that they are working with change. Change comes through encounters with the people with whom they work as students, colleagues, administrators and managers. Change also comes from the institutionalised powers of their employing organisations and the systems within which they operate. Change is endemic in the forces of globalisation that have enmeshed new and old technologies, language and power in marketised integrations of economic, social, cultural and political aspects of daily life throughout the world (Beck, 2000; Prakash & Hart, 2000). Globally oriented learning organisations such as colleges as universities are increasing their use of technology to manage the knowledge production and flow of their staff and students. In this paper I engage with the use of one such technologically mediated content management system, through the question: What knowledge and performance based demands does an electronic learning management system make upon a cohort of vocational educators who are learning about English language, literacy and numeracy teaching?

Vocational educators are professionally mobile as they work across intersectoral and transnational contexts in which socio-economic changes and technological innovations are being continually brokered. In practice, Australian vocational educators work among schools, colleges, universities, community centres, industry and businesses. Their professional identities are signalled by contextually-dependent name changes such as ‘teachers, trainers, lecturers, consultants and/or facilitators’. A feature of the vocational education and training system is the integration of language literacy and numeracy provision into all aspects of course design and delivery. Consequently, this produces pedagogical implications and a somewhat problematical call for all vocational educators to be teachers of literacy and numeracy; while continuing the stand-alone provision of previous years (Watson, Nicholson & Sharpin, 2001; McKenna & Fitzpatrick, 2004). For some vocational educators, ‘language and literacy’ and/or ‘numeracy’ are not concepts that frame their professional identities; while for others, these concepts constitute a major component of the disciplinary knowledge/s that they teach/train. This is indicative of a peculiarity of vocational educators’ identities in general, because, within their own communities of practice, they may use any or all three key signifiers as professional identity markers: (1) the trade they teach; and/or (2) the educational sector, system or level in which they are working; and/or (3) the work-specific sites in which they are employed.

This paper presents an account of but one phase of an ongoing participatory action research project (Kemmis & McTaggart, 2000). The project is being undertaken with mature-age professional people who have chosen to either upgrade their formal instructional qualifications while they are currently training in industry settings in the private and public sector, for private training providers and/or teaching in TAFE colleges; or to change career direction and become teachers in senior secondary schools. It investigates the changing knowledge and performance based demands made upon them, and constructed by them, as they are learning about vocational English language, literacy and numeracy teaching. Together with a lecturer and a lecturer/course designer, they constitute a thirty-nine person group of adults participating in a twelve-week university undergraduate level course that focuses on adult and adolescent language, literacy and numeracy (the study guide is entitled, ‘Literacies @ Work’).

A unique feature of this course is its location in a teacher education program for people who are studying to work in secondary schools and/or TAFE colleges and/or private training providers

and/or on-site training for businesses, industries, community organisations. All of these people who are enrolled in the course are working in the vocational education and training sector in some capacity while also studying part-time to gain a university level qualification. The research of which this paper is part, is premised upon the notion that if we are to contribute in meaningful ways to the changing social and technological bases of what counts as knowledge in our society, then as vocational educators, our own professional learning should also be examined.

The title of the paper reflects the research's theoretical orientation plus the specific focus of research actions reported. 'Walking the walk' encapsulates the participatory nature of this project in which the vocational educators are the researchers into their own practices as learners and teachers. Central to investigations at this phase of the action research cycle is the positioning of trainers and teachers as learners using an electronic, online learning management system (LMS) which is an integral component of the 'blended' or 'hybrid' course delivery platform which also includes teletutorials, paper-based course profile and resource material readings from a university course (De Freitas, 2002; Franks, 2002; Selwyn & Smalley, 2004).

The nature of our individual and collective engagements with the LMS as both students and teachers is the specific focus of the paper for this conference. This means that I am investigating the ways in which the technology positions both students and teachers as learners who are also acting upon that technology and positioning it as a learning tool to serve their individual and collective interests. Thus the students as teachers are learning about their socio-cultural constructions of the LMS technology in and through a particular learning context.

Building the conceptual and contextual frameworks for the part of the research I have elected to present in this paper is a necessary precursor to understanding its participatory nature and the justification for the initial question that has guided our actions to this juncture. In this cycle of planning, acting, observing and reflecting (Kemmis & McTaggart, 2000), the research is designed to fit in with the rhythm of the course activities which extend from November 2004 to February 2005. The first phase of the research reported in this paper has focused on the Blackboard online [e-]Learning Management System (LMS). The second and third research phases address the learning activities, resources and assessment tasks followed by critical analysis of the course objectives, content, learning activities, assessment processes, resources and the multi-modal nature of the course delivery. The paper is organised into three sections. In the first section, the conceptual frame is elaborated with reference to its theoretical and methodological orientation. This is followed by the construction of a contextual frame within which the research actions are located. In the third section, a preliminary discursive analysis presents initial findings.

Conceptual frame

Conceptually, this research is aligned with the notion that changes in the field of post-compulsory education are not just the province of social systems, cultures or institutions; nor are they the sole province of individuals and their actions. Change as conceptualised in this research is examined through the negotiations and contestations of power relations mobilised in and through learning contexts. This means that conceptually, the research engages with changes in both systems and individuals; changes that "shape learning, the structure and historical conditions framing, indeed defining (*sic*) the learning event" (Merriam, 1999, p. 340).

By this reasoning, the research is aligned with a critical theory orientation that enables questions about knowledge and the power relations around its construction, access and changing nature to be raised (Habermas, 1987, 1989; Welton, 1995). With respect to the use of a computer software program that is called a 'learning management system' within a university operating as a corporatised organisation, research concerned with technical and practical knowledge may very

well be quite useful for both individuals and the system of which the university organisation is part. Yet it is not until an emancipatory or reflexively dialectic view of knowledge is included that individuals are positioned as co-constructors of their own knowledge. Not only do they determine what counts as knowledge for themselves, but collectively and individually they claim the power to engage with systems' level knowledge claims and constructions that may or may not be congruent with their own.

Therefore participatory action research has been chosen to scaffold this research because it centralises the notion that a collective knowledge production can be embodied in the enactment of emerging understandings (Kemmis & McTaggart, 2000; McTaggart, n.d.). It best 'fits' the research purposes in working with a cohort of vocational educators who are positioned at different times and in different spaces and places as teachers, trainers, tutors, students and lecturers (Beare, 2002; Rowe, 1997).

Theorising participatory action research requires articulating and – to an extent – formalising what is implied when participants in a social setting decide to take the construction and reconstruction of their social reality into their own hands, knowing that they are not alone in constructing or reconstructing it, but nevertheless taking an active, agential role in changing the processes of construction of social realities. Kemmis & McTaggart, 2000, pp. 572-573)

Predicated as it is upon a Habermasian construction of knowledge as socially, historically and discursively constituted by human agency and social action (Habermas, 1987 & 1989), Kemmis and McTaggart's (2000) conceptualisation of research offers an encompassing view of practice. In their formulation, practice is both reflexive and dialectical; in which 'objective' constructions of individuals and social systems are interrogated through the 'subjective' lifeworlds of individual actions and the languages, histories, discourses and traditions of that practice (see also Kemmis & McTaggart, 1988).

In building the conceptual framework, the social constructions of 'participants, practice and participation' that are inimical to the theoretical stance of participatory action research are addressed first. Next, the research methodology and methods of data collection and analysis are explained.

Participants, practice and participation

Research into practice is constructed in and through social relations between people and involves technical, practical and critical ways of thinking or reasoning about practice. Each way of thinking constructs different types of knowledge. Technical knowledge is built from the material artefacts that structure our systems world and is verified as 'true' through those same artefacts (rules, regulations, rituals and so on). Practical knowledge relies upon communication with others to establish its claims to 'truth', thus it is dialogic in nature and relies upon consensus and shared interpretations between participants to establish truth claims as to what counts as knowledge. Emancipatory knowledge is developed through critique and reasoned analysis of the social forces that empower some people at the expense of disempowering others as to what counts as knowledge and 'truth', how that knowledge is to be used and by whom.

To meet the University's needs for knowledge and knowledge management, a learning management system 'presence' has been mandated for all courses, including this blended or hybrid course delivery process. The systems' level evaluation processes and organisational course review policy are designed for, and implemented in, ways that are congruent with institutional knowledge production and management. As such, it could be argued that they reflect a technical (and perhaps practical) treatment of practice that may or may not engage with the knowledge production and management needs of all participants in the communicative acts of education, including learners and teachers (i.e. students and staff). McTaggart (n.d.) has provided four sub-categories of educational practice that he argues typify the work of various groups of

education professionals, that are intricate in practice and interact in profound ways (see Table 1 below).

Table 1: Sub-categories of education practice (McTaggart, n.d., pp. 4-5)

Curriculum practice	(the substantive work of the institution, organisation or system)
Administrative practice	(leadership, policy development and management)
Professional education practice	(staff training and development, pre-service and in-service)
Educational research practice	(any research, evaluation or appraisal informing practice)

Following McTaggart’s reasoning, these sub-categories of education practice are neither conceptually mutually exclusive nor should they be operationally independent from one another. Thus educational research practice is implicated in all other practice sub-categories and vice versa. This is a useful and quite necessary conceptualisation of practice because as will be seen when the preliminary consequences of this research are presented, the participants themselves are engaged in a plurality of education practice because of the systems and lifeworlds through which they construct and negotiate their professional identities, work and power relations.

Methodology and methods

To finish the work of conceptualising the research, the methodology underpinning its design and the methods of data collection and analysis are now elaborated. The enunciation of a research methodology is a theoretical means of proceeding from the questions driving the research to its blueprint or design. The development of this research methodology continues to be an iterative process as the questions continue to be developed and refined. Both interpretive and critical modes of inquiry are being deployed via a methodology in which qualitative ways of knowing predominate in all areas of the researchers’ assumptions, purposes, strategies and the varying roles of the participants-as-researchers.

The following table (*Table 2*) summarises the relationship between these key elements of the methodology. Glesné’s (1999) work on the interpretive mode of enquiry has been used to inform the articulation of this relationship.

Table 2: Methodological relationships in [this] participatory action research

Assumptions underpinning the research: Reality is socially constructed and its variables are complex, interwoven and difficult to measure.	Research purposes: Understand and interpret how the participants in their social settings construct the world around them (contextualisation).
Research approach: Focuses on in-depth interactions with relevant people in one or several sites; seeks pluralism and complexity with minor use of numerical indices; uses a descriptive write up.	Researchers-as-Participants’ roles: Participants become one of the main research instruments as they observe, ask questions and interact with each other as researchers and participants

(adapted from Glesné, 1999, pp. 5–6)

This qualitative approach is characterised by what Denzin and Lincoln (1998, p. xi) have identified as key attributes of a qualitative enquiry: (i) an examination of the major public and private issues and personal troubles that define a particular historical moment; (ii) strategies of empirical enquiry that enable connections to be made among people’s lived experiences and larger social and cultural structures; and (iii) an interpretive perspective that is reflexive and reflective in its historical and biographical questioning of the human experience. Interpretations have been framed from within a critical framework that questions the social and cultural re/reproduction and potential transformations of power, privilege and oppression in areas of educational practice (Merriam, 1998, p. 4).

Contextual frame

For vocational educators, their professional identities are inextricably intertwined with, and dependent on, the ever-changing contexts of their worlds of work (Harreveld, 2004). As McKenna and Fitzpatrick (2004) concluded from their extensive review of adult literacy provision, there is currently in Australia a heightened need to:

...pay closer attention to literacy teaching workforce issues and build the capability of the existing workforce in the light of an expanding range of teaching methods, new technologies, emerging new literacies (such as effective use of technology) and the diverse range of contexts for delivery. (p.4)

Building workforce capability in this conceptually, contextually and pedagogically complex field is difficult because professional development opportunities have decreased in proportion to the demand for training from teachers and trainers working with credentialed work-focused training, and those working in adult and community education. The change in thinking required for vocational educators to feel confident and competent to construct and manage knowledge about their students' language, literacy and numeracy (LLN) learning needs in relation to changing requirements of systems, institutions and individuals is at the centre of this research.

This presents three key challenges not only for educators, but also for their employers, the profession and credentialing authorities. First, employers face a human resource management challenge from within their organization/s if integrated LLN knowledge is to be not lost but employed productively to build capacity within the organizations (Lonsdale & McCurry, 2004). Second, there is also a challenge for a profession in which the dichotomy between generalist and specialist LLN teachers/trainers has continued to be maintained (McKenna & Fitzpatrick, 2004). Third, credentialing authorities in Australia are being explicit in their requirements for the underpinning LLN knowledge base for trainers and assessors which serve to reinforce the generalist-specialist binary while leaving the uniqueness of this discipline mix to implicit understandings (Wickert, 2004).

From individuals to institutionalised systems, this research is located within an Australian university which, in a globalised education marketplace, is similar other such organisations catering to a clientele of post-compulsory learners. This University operates at the confluence of consequences from its own and government systems' strategic decision making in recent times. With a large distance education infrastructure, multiple domestic and international campuses, and an increasingly corporatised management structure, the University bought first one (WebCT), then another (Blackboard) electronic learning management system (LMS). It is currently using the latter. Concurrently, it moved its financial and administrative management to an enterprise resource planning (ERP) system that promised full integration and other flow-on benefits to managing the university's business as a corporatised organisation (Davenport, 1998).

The ERP integrates with systems such as Blackboard and other specially developed course management system modules. Including LMS such as Blackboard, course management systems are now integral to, and a core component of, organisational infrastructures throughout the world (Morgan, 2003; Green, 2004). In his analysis of recent data from The Campus Computing Project (www.campuscomputing.net) in the United States, Green (2004) found that across all the post-compulsory education institutions surveyed, at public and private universities, public and private 4-year colleges and community colleges, the percentage of courses using such technology has more than doubled from 2000 to 2003. These technologies function as tools to manage knowledge and knowledge-dependent processes.

For staff and students at this Australian university, there is no choice as to whether or not they will engage with the Blackboard LMS, and the PeopleSoft ERP to which it is linked. If they wish to have a job (the lecturers) or if they wish to receive the qualification (the students), then they have to engage with the technology that has been deemed to manage their learning and teaching. Furthermore, it is expected that people will have the knowledge to interact with a continually evolving LMS, for example:

Application Pack 3 for Blackboard 6 is due out next month ... The new features are: 1. Adaptive Release ... 2. Syllabus Builder ... 3. New assessment items in the quizzes ... 4. Tests and survey submissions will be downloadable to use in advanced stats programs ... 5. Performance Dashboard ... 6. The Course menu will change ... 7. Bug fixes to gradebook.

(email communication, Information Technology manager, Blackboard LMS implementation, 29 November 2004)

On the one hand, the utilisation of these new features could be construed as the University responding to Post's (2004, p. 12) call to "move beyond records management and into the technology that enhances the learning process itself". Conversely, it could also be construed as the LMS technology further determining what counts as course design, delivery and assessment, and even what counts as learning.

In this context also, the most recent University course review policy requires processes to address as a minimum the following issues:

1. How the course objectives/outcomes contribute to the program's graduate attributes.
2. How the course articulates with the CQU generic skills.
3. The alignment of the course content to the program's graduate attributes.
4. Course learning resources.
5. How the assessment task(s) measure the achievement of the course outcomes.
6. How the marking criteria are defined and made explicit with respect to grades.
7. Course viability.
8. Evaluation of student work in the course. A sample of at least three student assessment responses for the whole course, across delivery sites (if applicable), is to be integral to the review process.

(Central Queensland University, 2004, pp. 2-3)

A discursive reading of the policy issues noted above shows that the nature of course delivery (i.e. fully online, blended or hybrid, face-to-face) is not explicitly addressed in this listing of minimum requirements for course review. The text is silent on this matter.

Also at the individual course level, reviews (i.e. evaluations) are conducted every second time a course is offered; with each teaching staff member allowed at least one teaching evaluation per year. The Evaluation Services unit conducts these evaluations and compiles the confidential results which are distributed to the relevant Faculties for their internal processes of analysis and action. From 2001, as well as the Graduate Destination Survey (GDS) data, and in accordance with Graduate Careers Council of Australia requirements, an institution-wide evaluation of students' perceptions of the quality of courses (Student Evaluation of Courses, SEC) and teaching (Student Evaluation of Teaching, SET) was begun (Central Queensland University, 2003a & b). Some of the strengths and weaknesses of the organisation's technical capabilities to support an e-learning, online learning environment are able to be extrapolated from these review processes.

However, at the University's 2004 Teaching and Learning Showcase (16-17 February), teaching staff nominated ten areas of concern and/or issues for further consideration with system level and organisational review (evaluation) processes:

- Response rates (the small number of students participating)
- Representativeness of surveys (there is no way of determining if the responses recorded are representative of a particular student cohort)
- Survey fatigue (students are asked to do too many course evaluations)
- Student perceptions of effectiveness (and in relation to the previously noted survey fatigue, students do not generally perceive that their comments are acted upon)
- Cultural interpretations (the cultural differences between domestic and international students' perceptions of the evaluation process and its instruments are notable)

- Student diversity (the survey questionnaire instruments are considered to be non-inclusive of the diverse range of students enrolled)
- Time-related pedagogical considerations (i.e. when the evaluations are undertaken and the usefulness/uselessness of this for timely responses)
- Teaching appraisals (the range of perceptions as to the use of these findings)
- Types of evaluation (only the GDS, SEC and SET surveys described above).
(Nouwens, Ross, Thomson, Harreveld & Danaher, 2004)

These concerns and/or issues pose serious considerations for lecturers seeking to learn with their students so as to improve practice. It is perhaps timely to reflect upon Laurillard's (2002) contention that:

Research and development projects on educational media pay quantities of hard cash for development, lip-service to evaluation and, no attention to implementation. There is rarely enough cash to equip a decent programme of piloting, dissemination, and staff training. (p. 6)

Her words resonate with the rationale and justification for this research because each of the formal review processes identified in this section does not in and of itself fully engage with a cycle of curriculum development, implementation and evaluation that is transparent (to all stakeholders) and inclusive (of all key stakeholders). The holistic processes of piloting, disseminating and staff training on the use of educational media within a blended or hybrid course delivery requires a conceptual framework that is robust enough to encompass the constituencies of different groups of participants who may choose to engage in the research for various purposes.

Consequences

From previous work with students undertaking this course at the same time of year over the Spring/Summer period (which includes Christmas and New Year celebrations), the first four weeks were found to be crucial for engagement with the course. If they could access all their resource materials, connect with one another and the lecturers and start the verbal and written dialogues about LLN teaching, then they stood a good chance of submitting the first assignment (week 6) and actually completing the course with the submission of the second assignment in week 12. Therefore the focus for the initial phase of the research was framed around the actions of: (i) accessing online e-learning; and (ii) navigating in Blackboard.

Data collection

Of the thirty-nine (39) people participating in the course, twelve (12) have agreed to have their words used as data for the purposes of analysis. These twelve comprise ten students and two lecturers (I am not currently taking the course, but have worked on its design and delivery in previous terms). Pseudonyms have been assigned to all participants for anonymity purposes in line with ethical safeguards in the conduct of the research. For Phase I of the research, data was collected from four sites:

- (i) transcript of the first teletutorial at the beginning of week 2;
- (ii) individual email responses to specific questions (see below);
- (iii) transcribed responses to a telephone interview; and
- (iv) written discussion board responses via the communication section of Blackboard.

The teletutorial lasted for approximately 50 minutes and was digitally recorded then transcribed. The telephone interview was offered as a trial data collection technique. Only one participant chose this option. All others used the email to 'talk' about the issues.

The individual emails were initially sent via Blackboard because all participants' email addresses could easily be accessed. Further communications did not however go through Blackboard, with everyone connecting with each other directly via their own email addresses.

The following questions were developed from the first teletutorial data and lecturer comments on issues being encountered in the weeks prior to course commencement:

1. How helpful was the information in the Course Profile about how to get online?
[In what ways un/helpful?]
2. Have you used Blackboard before this course?
3. What were the two main problems (if any) that you had getting started with Blackboard?
4. How did you deal with them?

These questions functioned as prompts and participants provided additional information as they considered necessary.

The written discussion board responses were submitted to, and retrieved from, the Blackboard site for this course. They were directly related to specific discussion topics relevant to the course content, learning activities and readings. During the first teletutorial, all participants were advised to engage with the potentially collaborative and collegial learning via this medium:

...the discussion board is to enhance your learning so that you can collaborate with your colleagues from around the state or around the world...get your own ideas, add to it from other people's input...it's important I think but it's not critical to your assignments which are a totally different thing. [Terry-Lecturer1, teletutorial, 22.11.04]

The findings from an initial discursive analysis of data suggest that for these participants, they learn about the LMS technology through using it 'on-the-job' as a student.

Knowledge and performance demands of LMS technology

Previous experience with Blackboard has been the most important factor in determining participants' confidence in learning via this medium. Some people take this course at the end of their first year of university study while others take it towards the end of their candidature. Either way, it is not designed to be a first term, entry-level course. However as people can take a number of years to complete their study program, some people may have 'escaped' having to engage with this technology until towards the end of their program.

Access

Nine of the ten data sets from the individual emails showed no problems with access and navigation because as the example from Louise notes:

I found it easy to access blackboard. I have used blackboard as a means of accessing myinfocom for "Communication & Culture" [Louise, email communication, 10.12.04]

While Len found:

...the information in the course profile to be adequate. I had used blackboard previously so I basically just went straight into the program. ..I used in the first semester this year in "Language for Learning"

[Len, email communication, 7.12.04]

The course profile was sent out in the mail and it included instructions for accessing the Blackboard website. If these directions were not clear, then they would need to be revised for the next offering of this course. However, it became evident that it was not simply a matter of 'access'. For some participants, it was rather 'access and navigation' that was an issue.

Access and Navigation

The following text sequence illustrates a three-way conversation in which Carol shares her frustrations with Liz, is consoled and ultimately resolves the problem with the help of her own work colleagues.

...I find it difficult to navigate. The instructions are not clear. I have had to get my IT guy to assist me. Is there any step-by-step instructions available on how to use and navigate. I have done some screen dumps but these seem to be for another course. Sometimes I feel so thick !!!!!!!!! [Carol, email communication, 6.12.04]

Liz [Lecturer 2] does not have the knowledge to respond to Carol's issue. Liz is aware that it is possible to access a step-by-step guide on using Blackboard from the website but makes a judgment call to consult the other lecturer who is more familiar with Blackboard. She forwards Carol's email through to Terry.

What do you think is happening at her end? [Liz, email communication, 6.12.04]

Terry replies to Liz:

Is she logged into the course itself or has she selected another course. Depending on enrolments the only other courses will be the BB training module.

Once logged in you should be able to navigate through the pages just as you and I do at uni. Things that may prevent this is (sic): cookies not enabled from the computer... Network firewalls blocking the course from loading. Using a non compatible browser (Mozilla, Opera and some of the others may have issues)...

Not actually logging in to CQU's blackboard but logging into the Blackboard page linked from CQU's. This is the help section and is provided by BB but is actually before you login. [Terry, email communication, 6.12.04]

Liz decides to set this response out for Carol by chunking it into its various sections of: logging on to the correct course site; Blackboard step-by-step training module; impediments to navigation. She begins her reply:

Good morning Carol. Here below are some suggestions from Terry as to what may be cause problems with Blackboard... [Liz, email communication, 7.12.04]

Carol replies one hour later:

Yes I can get through now, there was a fire wall blocking the BB section. I have now been able to access what everyone else has. Thanks a million. [Carol, email communication, 7.12.04]

She was accessing Blackboard via her work computer. The information technology person at the group training company for which she worked removed the fire wall.

During the first teletutorial, a number of participants expressed difficulties in accessing and navigating around the site. From the tape it was not always possible to determine how many people were murmuring agreement with the two main speakers concerns on this issue. It was sufficient though to take up a considerable time of the teletutorial, so much so that Len complained:

The first half of the tute was unwittingly dedicated to solving numerous participants' computer problems. [Len, email communication, 7.12.04]

Paul did not share his navigational problems on the teletutorial but in via email he did note that when trying to send his answers to the discussion board topics:

First problem was working out where to go to put my responses to activities. After a while I realized I had to go into "communications"...

How did he deal with that?

... by trial and error, eventually worked out where to go to put in responses. [Paul, email communication, 8.12.04]

So Paul too found he needed to know how to access different parts of the Blackboard site and then navigate within them. From data collected to date, no one has explicitly mentioned the Blackboard training module as a source of knowledge for accessing and navigating within the LMS site. By the second teletutorial three weeks later (13 December), there was not one request for assistance with accessing or navigating within Blackboard.

The data were replete with shared reflections on reading the visual literacies of electronic screen text which was compared with the reading of paper-based text.

Reading

Reading from the screen is difficult. Ed confesses that:

I am still a paper trail person and prefer to read information in my hands rather than on a screen...I spent a bit of time printing out the information. [Ed, email communication, 14.12.04]

Reading discussion board threads is a whole new genre for some.

[I] found the screen layout a bit overwhelming...when going back in to read other's responses, it was difficult to work out who was responding to who... after a while I did notice responses to other's comments were indented beneath the original responses [Paul, email communication, 8.12.04]

Reading and Responding

When reading and responding via the discussion board, the LMS positions the learners as particular types of writers and challenges previous performance based knowledge of word processing and composing text to 'post' to the discussion.

...when I go to create [a] new message ... I don't know how to format my answers... I thought I would use a table (as other people have done) for one of my responses. I typed my response in word thinking I could cut and paste it over to blackboard for entry onto the discussion list, but unfortunately lost all of my formatting... also not sure how to add an attachment I have tried several times...

How do you solve the problem?

...[by] conversing with another student via email to try and work out what I am doing wrong. She assures me that she used the blackboard platform to create new messages and format her responses, including tables. [Louise, email communication, 10.12.04]

Len found that "the 'window' within the 'window' makes it difficult to scroll back over what you have written before you send it" but he dealt with the problem "by being patient" (email communication, 7.12.04).

Awareness of Time, Cost and Convenience

Shifting the printing costs from the organization to the student is a consequence of using this online, electronic learning platform. It is an identifiable outcome that positions students as particular types of learning consumers. Noela's words depict the relationship from a learner's perspective:

Time

It is too easy for course designers to add in extra links, forgetting that they often lead to 30+ page pdf documents...

Cost

...I now tend to print out the online material though that is time-consuming and costly...

Convenience

I also prefer receiving the printed book of readings as I can take it anywhere with me to fit in reading when I get a chance (much more convenient) [Noela, email communication, 13.12.04]

Discussion

These students had to know how to get online and access the LMS from the directions provided from the university website. They had to know that access to the learning materials did not come through reading extensive print-on-paper materials and/or a CD but through reading a one-page letter directing them to the LMS website. This meant, for example, that they had to know the significance of terms such as 'username' and 'password' and the procedures for inputting their usernames and passwords within prescribed sequences of actions. Once into the LMS website for the particular course, they had to know how to navigate around the site. One specific example of the navigational challenges students encountered was knowing what a discussion board thread was and how it operated. Conceptually, they had to understand that they were following and participating in an asynchronous conversational thread with people distant from them in space and place. Navigation using the 'breadcrumbs' at the top of the Blackboard site screen was a technique that most students learnt by trial and error because they did not access and read the

information on Blackboard provided through the LMS site. There were however, some who had used Blackboard before and they could navigate confidently.

Reading information directly from the screen was not the preferred behaviour for most students. They reported saving articles to their desktop for printing out at a later date and they were aware of the cost-shifting from the organization (i.e. the university) to the individual. While not appreciative, they were sanguine about the ways in which they are expected to access documents in electronic form via direct links to websites and pdf files linked to the LMS. Nonetheless, this reading behaviour was not possible when they had to read and respond to discussion board topic questions, activities and other students' responses. Students found that they had to learn to read from the computer screen and respond direct to the screen for these activities.

One of the major problems students encountered was in composing replies to the discussion board. Writing their responses in a word processing package (e.g. Microsoft Word), then cutting, or copying, and pasting that message into the LMS for sending to the group discussion board was problematical because all the formatting of the message was lost in the translation from Word to Blackboard. The inclusion of tables and /or attachments could not be done and was a source of frustration for students when they could not find immediate help in solving the problem – not to mention the fact that they often lost their initial response/s. Here the collegiality of fellow students helped alleviate their unfamiliarity with the software as tips were shared through individual email communications.

As already noted the students in this course were all working as either vocational educators in colleges, private training providers and in some instances contracted to schools; or they were practicing professionals who were studying for a career change into vocational education. While they accepted the inevitability of the web-environment through which their learning materials were disseminated, they were critical of the time, cost and in/convenience involved in retrieving and responding to the learning activities, readings and assessment tasks through the LMS. Downloading large documents takes time, and consequently incurs increased financial costs of time on-line. For students such who are earning as they are learning, the convenience of print-based learning materials lies in their minimal cost if the university produces them as well as the perceived ease with which they can be transported and accessed at any time.

Conclusion

The data collected to date and subjected to an initial tidying-up and discursive reading reflect but surface level interpretations of vocational educators positioning as students and the knowledge and performance based demands made upon them as learners who had to use an electronic learning management system to learn about English language, literacy and numeracy teaching. They have identified emerging knowledge and performance based demands of this LMS technology, namely knowing about and knowing how to: access and navigate; read and respond; and balance the time, cost and convenience of the old and the new technologies. This paper has built a conceptual and contextual framework for an ongoing participatory action research project and presented these tentative consequences of a first-phase data analysis.

The institutionalized system, of which the University is part, prefers the electronically mediated mode of a learning management system while the students-as-learners prefer some aspects, but not others. Concern for each other as learners is emerging from the data as the participants use the technology to learn about the technology:

I would like to say you are doing pretty well with using information and communication technologies; after all you were one of the first 3 students to figure out Blackboard and post to the discussion board! [Noela, discussion board response, 23.11.04]

From the world of business and its conceptualization of change management and learning organizations, Karp (2004) exhorts us to “better learn the dance of change” because “people more than ever will determine the speed of change and success of change initiatives” (p. 355). In the interstitial spaces between the system and the lifeworld perhaps we can begin to address the challenge of change in the twenty-first century by walking with our students as partners in learning.

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