Theorising the Impact of Online Technologies on TAFE Teachers Practice

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Abstract

This paper reports on research proposed as part of a Doctor of Education degree at Monash University. A justification for the research is presented along with descriptions of purpose, research questions and research method. The paper also presents justification for the application of Basil Bernstein's constructs of classification, framing, regulative discourse and instructional discourse to analysis of interview data collected from a small number of teachers. The paper concludes with a request for feedback from conference participants.

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Introduction

This paper reports on research in progress as part of a Doctor of Education degree (EdD) at Monash University. The purpose of the paper is to seek feedback on the proposed research topic and the proposed methodology. The aim of this research is to explore the impact of online technologies (OLTs) as instructional devices, on the teaching principles that underpin the practice of TAFE teachers. In particular, the research will investigate the impact of OLTs where computers are connected to the internet or an intranet, these might constitute part or all of the teaching program. At present the research topic has been accepted by the Faculty of Education at Monash University, a submission has been presented to the Monash University Standing Committee on Ethics in Research Involving Humans but is yet to be approved.

Justification for the Research

The introduction of OLTs as an integral aspect of education is a worldwide trend. In Australia, this trend is supported by government policy along with significant investment from public and private sources. This trend is also reflected in VET. It is demonstrated at a national level by ANTAs Flexible Learning Framework (http://www.anta.gov.au) and in Victoria by the Victorian State Government's Flexible Learning Strategy (http://www.pete.vic.gov.au) (The State of Victoria, 2000).

Attendance at conferences, searches of conference proceedings, searches of major databases and reading a range of literature suggests that the impact of the introduction of OLTs on teaching practice is poorly theorised. Most literature falls into the categories of policy promotion, personal views and descriptive case studies, a conclusion that is consistent with the findings of other authors (Harper, Hedberg, Bennett, & Lockyer, 2000; Schofield, Walsh, & Melville, 2000; Thomas, 2001). Recently more robust work that investigates teaching practice has begun to emerge (Bate, 2000; Brennan, McFadden, & Law, 2001; Harper et al., 2000; Jasinski, 1998; Schofield et al., 2000). For example, Schofield et al (2000) reports on preliminary research findings concerned with the knowledge and experiences of VET practitioners who use OLTs. These authors found that VET policy and practice in online teaching and learning rarely draws from theoretical perspectives. Where theoretical perspectives were found, these were from the field of adult education and, to a lesser extent, theories of change and change management (Schofield et al., 2000).

In theorising the impact of OLTs as instructional devices, the research proposed in the current paper will contribute to literature on TAFE teachers work, as well as

informing teachers, administrators and policy makers about the ways in which TAFE teachers are responding to the introduction of online technologies.

The Purpose of the Research

The purpose of my proposed research is to address four questions.

1. What teaching principles underpin the intentions of TAFE teachers when integrating online technologies into their practice?
2. Which intended teaching practices are enabled and dis-enabled by the integration of online technologies into TAFE teachers practice?
3. What, if any, tensions do the introduction of online technologies impose on TAFE teachers practice?
4. How do TAFE teachers resolve tensions that are identified as being associated with the introduction of online technologies?

These questions are based on the contention that the introduction of OLTs into teachers practice influences teachers potential to implement particular teaching principles. The contention underpinning the research is consistent with the ideas of Bowers (1988) and Blomely (1998) who challenge the idea that technology is value neutral. Bowers (1988, pp.32-33) uses the terms *amplification* and *reduction* to describe the advantage or disadvantage that particular perspectives experience when technology is used. At its core, the research investigates values: the values that TAFE teachers bring to their teaching practice; the values that OLTs advantage and disadvantage; any value tensions that are created when TAFE teachers integrate OLTs into their teaching practice and how those tensions are played out in the interaction between the teachers and the technologies.

The Research Method

The research investigates the impact of change, that is the integration of OLTs into teachers' practice, from the perspective of the teachers themselves. The research method required here is a form of inquiry that helps to understand the meaning of a social phenomenon from the perspective of the actors involved, these requirements are consistent with a qualitative approach (Merriam, 1998, p.5).

Data will be collected by interview with five to eight TAFE teachers who have completed a formal qualification in teaching, and have integrated the use of OLTs into at least two courses of study in which they teach. Each teacher will be interviewed on two occasions, data will be analysed in two phases and participants will be provided with the opportunity to comment on the researcher's findings following each analysis.

The purpose of the first interview is to document the participant's biography and the teaching principles that underpin their intentions in integrating OLTs into their practice. In the first part of the first interview, participants will be asked about their work history, how they came to be involved in integrating OLTs into their teaching practice and their roles in using OLTs in their teaching. In the second

phase of the first interview participants will be asked to respond to a hypothetical situation.

You are offered the opportunity to integrate OLTs as part of your teaching practice into a teaching program of your choice. You are provided with the time and resources to do the best job possible.

The interview will progress with the researcher aiming to gather responses to three questions. Firstly, what questions you would ask yourself in designing the teaching program? Secondly, can you characterise the principles that are important in informing the design of this teaching program? Thirdly, can you think of a metaphor that characterises your intended practice? The interview will progress as an open conversation with the researcher seeking clarification to answers as required. This interview will be audiotaped and transcribed.

Following the first interview, the researcher will identify the teaching principles that the participant intends to use in their 'best practice'. These will be identified through the categories (themes) that emerge from the transcript of interview (Merriam, 1998, pp.179-187).

At the commencement of the second interview, teaching principles identified from analysis of the first interview will reported to the participant who will be provided with the opportunity to comment on the researcher's findings. The participant will then be requested to demonstrate examples where they have implemented teaching principles identified from the first interview. In cases where these principles are demonstrable, the participant will be asked to identify factors which enabled the application of the specific teaching principle. Where participants are unable to demonstrate specific teaching principles they will be asked to identify factors that inhibited their implementation.

It is anticipated that participants will be able to demonstrate the implementation of some teaching principles but not others. As the interview progresses, the participant will be asked to talk about any tensions that the integration of OLTs bring to their teaching practice and the ways in which they resolve these tensions. This interview will be audiotaped and where possible examples of the application of teaching principles will be gathered, these might be in the form of web pages or other documents.

Following the second interview, and again using analysis that attempts to identify categories (themes) and sub-categories (sub-themes) from the interview (Merriam, 1998, pp.179-187), the researcher will endeavour to identify factors that enable and dis-enable the intentions of TAFE teachers, the tensions that the introduction of online technologies impose and the ways in which TAFE teachers resolve those tensions. On completion of the analysis, the participant will be provided with a report of the analysis and an opportunity to comment.

Following the analysis of the second interview, the researcher proposes to apply Bernstein's Theoretical Framework of Symbolic Control (Bernstein, 1996) to an analysis of findings from the interviews with participants. Bernstein's framework offers a sociological model for analysing issues of power and control. Other

examples of work that have used this framework in a similar manner to that proposed here have been identified (FitzSimons, 2000; Hunter, 1999; Hunter & Jimenez, 1998; Kirk, Macdonald, Penney, & Braiuka, 1997; Short, Singh, Yarrow, & Millwater, 2000). Of these, the work of Short et al (2000) is most informative to the current proposal.

In summary, the research method will progress in the following sequence.

1. Interview one.
2. Analysis of interview one.
3. Feedback from interview one and interview two.
4. Analysis of interview two.
5. Feedback from interview two.
6. Application of Bernstein's constructs to findings from interview one and interview two.

Therefore, data analysis will occur at a number of levels. Firstly, the identification of themes and sub-themes from interviews with individual participants. Secondly, using Bernstein's constructs to analyse themes and sub-themes that emerge from interviews with individual participants. The results of this analysis of data from interviews with individuals will then be used to identify similarities and differences in outcomes that emerge and to identify any general findings across the respondent group.

Applying Bernstein's Theoretical Framework to the Research

In his work over almost three decades, Bernstein theorised a number of constructs. Four of these, classification, framing, instructional discourse and regulatory discourse are considered here, they provide an opportunity to analyse and report on the research findings in terms of power and control (Bernstein, 1996).

Classification is defined as the means by which power relations are transformed into specialized discourses. Where classification is strong, there is a high level of insulation between categories of discourse, this maintains the principles of the social division of labour.

Framing refers to the nature of the control over the selection of the communication, its sequencing, its pacing, the criteria and the control over the social base which makes this transmission possible. Framing is the means whereby principles of control are transformed into pedagogic relations which attempt to relay a given distribution of power. Bernstein describes framing as the result of two discourses, instructional discourse (ID) and regulative discourse (RD), such that the instructional discourse is always embedded in the regulative discourse.

Regulative discourse refers to social order. Where the rules of social order are explicit, the regulative discourse is strong. Where the rules of social order are apparently implicit, regulative discourse is weak.

Instructional discourse refers to discursive order, that is, the selection, pacing and sequencing of the knowledge to be taught. Where selection, pacing and sequencing are controlled by the teacher the instructional discourse is strong, where these are controlled by the learner the instructional discourse is apparently weak.

In general, where framing is strong, we have a visible pedagogic practice. The rules of instructional and regulative discourse are explicit, the transmitter (teacher) has explicit control over selection, pacing, criteria and the social base. Where framing is weak, we are likely to have an invisible pedagogic practice, the acquirer has more apparent control. Here the rules of regulative and instructional discourse are implicit, and largely unknown to the acquirer.

Short et al (2000) report on the application of Bernstein's theoretical framework to the research question 'How does a pre-service teacher plan, enact and reflect upon classroom teaching in order to achieve learning outcomes for students?' (Short et al., 2000). The work of Short et al (2000) and the research proposed here are similar in the respect that they both investigate the intentions of teachers in planning teaching activities and the implementation of those intentions. Short et al (2000) applied an analysis using classification, framing, instructional discourse and the regulatory discourse. They found that the teacher used in their case study showed strong framing and classification of both discourses in her lesson plan. During the delivery of the lesson, the strength of the regulative discourse was retained while the classification of the instructional discourse and the framing of both discourses were exposed as being weak. In reflective interview the teacher revealed weak classification and framing in both discourses. These finding are summarised in Table 1.

Table 1: Results of Short et al (2000)

	ID/RD Relationship		
	Stage 1: Lesson Plan	Stage 2: Lesson Implementation	Stage 3: Reflection
Instructional Discourse (ID)	+C +-F	+-C-F	-C-F
Regulatory Discourse (RD)	+C+F	+C+-F	+-C-F

C = classification   F = framing

Short et al (2000) concluded that 'Bernstein's framework has been invaluable in the pilot study because it has provided the researcher with a set of linked conceptual constructs that could be systematically applied in the analysis of the various available data' (Short et al., 2000, p.22).

As described earlier in the current paper, teachers who participate in the proposed research will be interviewed on two occasions. Information from interview one will be analysed in an attempt to determine the principles that underpin each individual teacher's practice. Results from interview two will be analysed in an attempt to determine teaching principles that are implemented in the application of OLTs.

Together, it is hoped that the teaching principles intended and applied in the integration of OLTs in teacher's practice will be able to be expressed as shown in Table 2. Using this framework, it should then be possible to conduct a comparative analysis of intentions and applications in terms of classification, framing, regulative discourse and instructional discourse. Thus providing a framework within which to theorise tensions that teachers experience in integrating OLTs into their teaching practice.

Table 2: Possible representation of teacher intentions and application in the use of OLTs

	ID/RD Relationship	
	Teacher Intention	Teacher Application
Instructional Discourse (ID)	+-C+-F	+-C+-F
Regulatory Discourse (RD)	+C+-F	+-C+-F

Summary

This paper has described the intentions of research that aims to theorise the impact of OLTs on TAFE teachers practice. A justification for the research has been presented along with a description of the purpose of the research and research questions. The proposed research method has been described in some detail along with a description and justification of the application of classification, framing, regulative discourse and instructional discourse to the research. Given the proposal described in this paper, I am seeking feedback.

1. Is the research worthwhile?
2. Is the working definition of online technologies useful?
3. Are the research questions reasonable and useful?
4. Are the selection criteria for participants appropriate?
5. Is the methodology appropriate to the research?
6. Is the research method likely to produce useful data?
7. Are Bernstein' constructs a useful analytical framework?
8. What problems can you foreshadow?

References

Bate, F. (2000, 6-8 December). *On-line learning: a search for good practices.* Paper presented at the Open Learning 2000, Brisbane.

Bernstein, B. (1996). *Pedagogy, symbolic control and identity. Theory, research, critique.* London: Taylor and Francis.

Brennan, R, McFadden, M., & Law, E. (2001). *Review of research. All that glitters is not gold: online delivery of education and training.* Adelaide: NCVER.

FitzSimons, G. (2000). *Mathematics in the Australian VET Sector: Technologies of power in practice.* Unpublished PhD, Monash University, Melbourne.

Harper, B., Hedberg, J., Bennett, S., & Lockyer, L. (2000). *Review of research. The on-line experience: the state of Australian on-line education and training practices*. Leabrook: NCVER.

Hunter, J. (1999, 29 November - December 2). *Preparing future Australian citizens: a primary school teacher's story*, Annual conference of the Australian Association for Research in Education.

Hunter, J., & Jimenez, S. (1998, November). *Civics and citizenship education: what pedagogy? what possibilities?* Paper presented at the Annual conference of the Australian Association for Research in Education, Adelaide.

Jasinski, M. (1998). *Teaching and learning styles that facilitate on-line learning: documentation project*. URL: http://www.tafe.sa.edu.au/lsrsc/one/natproj/tal/survey accessed 21 January 2002.

Kirk, D., Macdonald, D., Penney, D., & Braiuka, S. (1997, December). *Students' constructions of educational discourse.* Paper presented at the Annual conference of the Australian Association for Research in Education, Brisbane.

Merriam, S. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass Inc.

Schofield, K., Walsh, A., & Melville, B. (2000, 10-13 December). *Working knowledge of online learning amongst vocational education and training practitioners.* Paper presented at the Working knowledge. Productive learning at work, Sydney.

Short, J., Singh, P., Yarrow, A., & Millwater, J. (2000, 4-7 December). *How does pre-service teacher plan, enact and reflect upon classroom teaching in order to achieve learning outcomes for students? An application of Bernstein's theoretical framework.* Paper presented at the Annual conference of the Australian Association for Research in Education, Sydney.

The State of Victoria. (2000). *Skilling Victoria for the information age. A strategy for post compulsory information and communications technologies, education, training and employment*. Melbourne: Office of Post Compulsory Education, Training and Employment.

Thomas, J. (2001). *Online learning and innovation. A discussion paper*. Melbourne: Victorian TAFE Association.