# Metaphor, online technology and recontextualisation in teaching

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**Abstract**

Online technology represents a new space in which education occurs. Using teacher's self-declared metaphors to identify the teaching principles to which four vocational education and training teachers aspire, this paper describes how each teacher has integrated online technology into their classroom practice. Analysis occurs at two levels. Firstly, an examination of these case examples elicits strategies that teacher's use to align their use of online technology with the teaching principles to which they aspire. Secondly, Basil Bernstein's construct of recontextualisation is used to explore the impact of policy and pedagogy in determining the pedagogic discourse characterising the teacher's practice.

**Introduction**

The use of the online technology for education represents a new space in which education occurs. As part of his theoretical framework, Basil Bernstein developed the idea of the pedagogic device, a construct for theorising the selective development and legitimisation of pedagogic discourse (Bernstein, 1996). In Bernstein's terms, the movement of education from one site to another, for example from classroom-based to online technology, or print to online technology, occurs through a process of recontextualisation (Atkinson, Singh, & Ladwig, 1997). This process opens the possibility for changes in power and control relations that are embedded in the organisation, transmission and acquisition of curricula (Atkinson et al., 1997). Teacher's self-declared metaphors are used in this paper to explore the impact of online technology on their preferred teaching practice.

Robertson (2003) used the idea of metaphor to explore academics understandings of research, teaching, learning and knowledge and the research/teaching relation. She suggests that the different, often unrecognised beliefs revealed in these metaphorical structures both sanction and preclude particular research/teaching practices (Robertson, 2003). This idea shows similarity to Bernstein's pedagogic device which enables the legitimization of particular pedagogic discourses (Bernstein, 1996). Another author used metaphors to explore early childhood attrition. In this work she revisited earlier analysis of metaphors that used an interpretive perspective to use a critical perspective (Sumision, 2003).

The current paper will review the notions of the pedagogic device, and, more specifically recontextualisation as constructs that are useful in analysing the impact of the introduction of online technology in vocational education and training (VET). Using teacher's self-declared metaphors to describe their preferred teaching principles, the paper will describe the practices of four VET teachers who use online technology to complement their classroom practice and identify strategies that these teachers use in recontextualising online technology to accommodate their preferred teaching principles.

**The pedagogic device and recontextualisation**

The pedagogic device is described as a symbolic ruler of consciousness that provides the intrinsic grammar, (grammar in a metaphoric sense) of pedagogic discourse (Bernstein, 2000, p.28). This grammar is mediated through three interrelated rules. Distributive rules distribute different forms of knowledge to different social groups. Recontextualisation rules construct the 'thinkable', official knowledge, and, the 'what' and 'how' of pedagogic discourse. Evaluation rules construct pedagogic practice by providing the criteria to be transmitted and acquired (Bernstein, 2000, p.114). Variable forms of realisation of the pedagogic device have the capacity to restrict or enhance the legitimacy of potential pedagogic discourses and are not ideologically free. Those who own the device own the means of perpetuating their power through discursive means and establishing, or attempting to establish, their own ideological representations (Bernstein, 1996, p.117).

Recontextualisation is influenced by two recontextualising fields. Through the Official Recontextualising Field the State and its delegates operate at a generative level to legitimise official pedagogic discourse, this undergoes further recontextualisation through the Pedagogic Recontextualising Field when policy is interpreted and implemented by those who are directly involved in teaching. Whilst the state legitimises the principles of distribution of social power and control which are incorporated into the official pedagogic discourse these principles undergo further recontextualisation (Neves & Morais, 2001). Firstly, this occurs at the level of the construction of the transmitters' discourse. Secondly, at the level of acquisition (Soloman & Tsatsaroni, 2001, p.296).

The idea of recontextualisation as a means of analysing the impact of technology was used by Lamnias and Kamarianos who assert that the symbolic control of technology is subject to alteration by other agents. They found that the characteristics of this new techno-pedagogic code reaffirm the strength of rationality, quantitative differentiation, effectiveness and efficiency of the official educational system. Further, that the digitisation of school knowledge constitutes a new form of recontextualisation of school knowledge (Lamnias & Kamarianos, 2000). Holmes and Russell explore the take-up of communications and information technologies by adolescents as interactive and wearable technologies as a paradigm shift, a recontextualisation of existing education and cultural practices. They describe this change as the development of a 'new space' in which to operate (Holmes & Russell, 1999). These authors also note that technologies are not neutral in nature but have a history based in particular social, cultural and political biases, an issue that has been considered by others (Bowers, 1988; Bromley, 1998).

*The Official Recontextualising Field*

The Official Recontextualising Field is found represented in national and state policy, institutional arrangements, in centrally endorsed curriculum and in dominant subject epistemology.

In Australia, policy in VET is dominated by a 'competency based training' (CBT) curriculum approach. The CBT approach (which Bernstein refers to as a performance-based model) underpins the context of the implementation of the use of online technology in VET. Whilst it is acknowledged that CBT forms an integral part of the prevailing pedagogic device in VET, CBT is not the central focus here and is not considered in any further detail in this paper. All of the teachers interviewed for this paper identified the current manifestation of CBT as an important influence in 'what' is taught. However, in an explicit sense, it is not identified as a major influence in determining 'how' that teaching occurs.

At a national level, government promotion of online technology in VET is represented in high level policy documents. *Bridge to the future. Australia's national strategy for vocational education and training 1998-2003* (ANTA, 1998) sets the overall direction of VET. The national commitment to the use of technologies in VET is demonstrated by *Flexible Learning for the Information Economy. A Framework for National Collaboration in Vocational Education and Training 2000-2004* which is designed to support the accelerated take-up of flexible learning modes and to position Australia as a leader in applying new technologies to vocational education products and services (EdNA VET Advisory Group, 2000, p.4). At a national level the implementation of online technology has been supported through the development of online teaching resources, for example *ANTA Toolbox Projects* and professional development programs such as *LearnScope, Flexible Learning Leaders* and *Flexible Learning Fellowships* (for further information see http://www.flexiblelearning.net.au).

Some authors have raised concerns about the liaison between government and commercial interests in the introduction of government sponsored online technology in education. For example, in critiquing the National Grid for Learning (NgFL) in Britain, Selwyn observes that the commercial promotion of the computer as a powerful and flexible teaching and learning machine throughout the 1980s reflected and built on the image of the 'educational computer' constructed in government discourse (Selwyn, 2002, p.436). Through the collaboration of commercial and government interests, commercial imperatives form an integrated part of the Official Recontextualising Field, thus moving commercial interests to a preferred position in influencing the pedagogic device.

At an institutional level, the nature of support for the use of online technology can also influence the Official Recontextualising Field. Errington argues that decisions about what teachers feel they can, or will, support by way of flexible learning initiatives are influenced by the degree of perceived support available at all levels of the institution. The quality of support for new initiatives is embedded in the institution's own culture and will determine the degree to which change will be facilitated by teachers (Errington, 2001).

It should also be acknowledged that different subject areas vary in their pedagogic traditions and subject epistemologies. These will influence what is seen as a legitimate use of online technology in teaching, Bernstein acknowledged these differences and characterised these through the idea of pedagogic codes (Bernstein, 2000). The impact of personal values is expanded further in the next section.

*The Pedagogic Recontextualising Field*

The Pedagogic Recontextualising Field is found represented in the espoused pedagogic principles that those who influence the pedagogic transaction bring to their practice. In the case of traditional classroom-based teaching, agents of the Pedagogic Recontextualising Field include teachers and authors of texts that are used by students. The impact of teacher's belief on the relative success of innovation in traditional settings has been discussed elsewhere (Errington, 2001), and the values and theories that agents bring to bear in the educational transaction are critical to the manifestation of the Pedagogic Recontextualising Field.

What differentiates the introduction of online technology from other technologies that have been introduced into education is the influence of programmers and software manufacturers on the Pedagogic Recontextualising Field. This is achieved through values and preferences that are 'invisibly' embedded in the hardware and software on which the use of online technology is dependent. Some authors have articulated the argument that the technology of the online environment is not 'neutral' (Bowers, 1988; Bromley, 1998). Some values are 'amplified' and others 'reduced' (Bowers, 1988, p.32). This is partly achieved through the operating systems and learning management systems upon which the online environment is dependent. Jackson and Anagnostopoulou also argue that software design is guided by the educational theories held by its developers (Jackson & Anagnostopoulou, 2001), these become part of the Pedagogic Recontextualising Field when online technology is used in teaching.

The focus of the current paper is an exploration of what happens when online technology is integrated into the classroom practice of experienced VET teachers who are employed in metropolitan TAFE institutes. It is an exploration of the consequences of the juxtaposition of the Official Recontextualising Field with the Pedagogic Recontextualising Field as influenced by software developers and teachers as agents of recontextualisation.

**Method and Data Analysis**

Participants in this research were qualified teachers with classroom experience who had integrated the use of online technology into their teaching practice. Using semi-structured questions the interviews collected biographical information such as how the individual came to teaching, how they came to use online technology and how they used online technology in their practice. An attempt to elicit the teaching principles that underpin the informants teaching practices was made by asking participants to respond to a scenario that placed them in the position of developing 'the best' teaching program that they could and asking questions such as what would the program look like?, what questions would they ask in the development process?, and, what issues they were most concerned about?. Finally, informants were asked to describe a metaphor that most typified their preferred teaching practice.

Interviews took 40-50 minutes, were audio-taped 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 transcript and thematic analysis were returned to each informant for validation.

In the current paper, the focus is on the metaphors identified by each participant. The author's interpretive analysis of the metaphor against each participant's preferred teaching principles as elicited at interview is used to explore the impact of online technology on the teaching principles to which each aspires. At a second level of analysis, Bernstein's construct of recontextualisation is used as a means to describe and analyse the relationship between aspirational and implemented teaching practice.

**Case examples**

Interviews with four teachers who have integrated online technology into their practice have been useful in exploring the notion of recontextualisation as it relates to the use of online technology in VET. These teachers have several similarities. All participants:
• Have completed a formal teacher training program.
• Have more than 8 years teaching experience in TAFE.
• Teach programs of a competency based nature where the outcomes are determined by a central authority.
• Work as full time employees in a metropolitan TAFE college.
• Have self-initiated the integration of online technology into their teaching practice.
• Work in organisations where the use of online technology is promoted but not obligatory.
• Use online technology in a hybrid or blended model. That is, online technology complements face-to-face, teacher-directed sessions.

Participants vary in relation to student characteristics such as age, gender, prior educational level and cultural background, and, the vocational area of study.

*Faye*

Faye teaches in the nursing/health care area. Her students are largely female with an average age of about 30 years, they are studying full-time. She uses the metaphor of 'the ripening bud' to describe her preferred teaching principles, she promotes transformative learning with a focus on personal as well as professional development. Faye espouses teaching practices that promote a community of learners, self-managed learning and development of the individual. She describes her teaching approach as 'flexi-mode' which incorporates a mixture of face-to-face sessions and a self-managed assessment component.

Faye limits her use of online technology to internet searches and the use of group email. In Faye's flexi-mode approach the course outcomes are comprehensively addressed in assignments that are completed by students in their self-managed time outside of the classroom. She embeds internet searches into the text based assignments. Group emails are used for the distribution of notices to her student groups, they are also used by students to post notices to each other. Faye rarely uses online technology to support her face-to-face group sessions, the use of online

technology is largely restricted to the completion of assessment and communication outside of classroom time.

*Lim*

Lim teaches English as a Second Language (ESL), basic numeracy and basic computing, her students are largely adults who are new to Australia and studying full-time. Lim uses the metaphor of 'being a friend' to describe her preferred teaching principles. Lim arrived in Australia as a refugee and seems to be conscious that her students are in a period of transition, they need support and pastoral care. She promotes social interaction, meeting the needs of individual learners, reduction and repetition. Lim uses instructional materials and self-marked tests located on an online learning management system (WebCT) (see http://www.webct.com for details) as well as written assignments. Whilst students have access to online learning and assessment materials at any time, they are primarily used in a teacher-directed manner in a classroom (computer laboratory).

Lim orchestrates the use of online learning resources in her face-to-face classroom based sessions. She moves between teacher-directed instruction and the directed use of online learning content with students working individually and collaboratively in using the online component. Instructional online materials fall into two types. For example, in the case of spelling or numeracy exercises, content, examples of exercises and self-marked assessment items are provided. In the case of literacy exercises, online materials are content light, they set the scene and then require students to search for information which develops into a written or oral report.

*Jenny*

Jenny teaches in business (e-business), her students are largely school leavers and international students who are studying full-time. She uses the metaphor of a 'conduit between two lamp-posts' to describe her preferred teaching principles. Jenny aims to provide the means and the direction for students to learn and to progress. She promotes social interaction, meeting the needs of individual students, developing strategies for successful learning and self-directed learning. Using course materials located on a web based learning management system (WebCT), the use of online technology is a requirement of both instruction and assessment. These materials can be described as content light. They provide some information, assignments direct the activities that students need to complete, and these require some exploration on the part of the student. They may be asked to search web sites or undertake a task that involves interaction with individuals outside of the classroom.

*John*

John teaches in business (marketing), like Jenny his students are largely school leavers and international students studying full-time. The institution where John teaches has adopted a lecture-tutorial model of teaching, staff are required to work within this framework. Lectures are seen as a means of delivering content, tutorials as

a means of undertaking practical activities. John likens his teaching principles to 'mission control'. He promotes learning through discussion and interaction, meeting the needs of individual learners and a teacher-centred approach.

John uses online technology as a repository for comprehensive notes, presentations and links to useful web sites, review notes are also provided. Student use of these resources is optional. Course materials that are required are also photocopied and distributed to students so that access to online technology is not a requirement. This approach is partly driven by institutional requirements for teaching to be in a lecture-tutorial format. Lectures involve up to 120 students, tutorials small numbers of students who engage in a range of individual and group activities. Using online technology John is able to access and use course materials such as presentations in the lecture room and to project these onto a screen. Also, as John has many international students who may arrive in Australia a few weeks after the program has commenced, this strategy allows students to view presentations that would have been used in missed lectures. John uses a bulletin board function to lodge notices and directives to students. While students can email John on an individual basis this is on an ad-hoc basis rather than systematically embedded in the program.

**Discussion**

Each teacher's use of online technology is consistent with their espoused teaching principles as expressed in metaphor. This finding may not be surprising when we consider Errington who cites Forster and Hewson (1988) to suggest that 'Given teachers' often firm views about teaching and learning, there is a natural tendency to reproduce the same kinds of pedagogical approaches - regardless of the very different kinds of media employed' (Errington, 2001, p.32).

Through the explicit separation of instructional and assessment practices Faye's approach is consistent with a desire to move her teaching practice beyond skill based development to encourage students to develop skills in self-management and the development of the individual through transformative learning. Faye's flexi-mode approach allows course outcomes to be achieved through comprehensive assignments that are completed by students outside of the classroom and which incorporate the extensive use of intenet searches. This approach also allows Faye to use classroom time to explore issues and ideas without the restraints of needing to achieve specific outcomes in this time. These strategies are consistent with Faye's espoused teaching metaphor of 'The Ripening Bud', they provide space for personal and professional development as well as meeting the outcomes dictated in curriculum. Faye's use of group email also provides opportunities for teacher-student, student-teacher and student-student communication through group email, a strategy is consistent with her expressed desire to establish a community of learners.

Lim's overall practice is consistent with her espoused teaching principles of 'being a friend'. She does not use the communications capacity of online technology to develop relationships, her espoused desire to encourage social interaction is not embedded in her use of online technology. However, her description of a mix of computer-based and group based activities in her classroom suggest that this teaching principle is embedded in her classroom teaching practice. Classes are teacher-directed

with a mixture of teacher-centred instruction and group work using the computers. She has not allowed the potential of isolation and disarticulation that are inherent in technology based teaching to impose on her practice. Lim is the only teacher to use online technology for computer marked assessment items such as multiple choice questions, this is consistent with her desired teaching principle of reduction and repetition. She has consciously embedded audio into her online teaching materials in her desire to accommodate a variety of learning styles.

Like Lim, Jenny's teaching approach is to orchestrate activity in the classroom, selecting which activities are to be conducted, the sequence and pace. Teacher-directed activities include teacher presentations, questioning and group discussions. These activities are interspersed with the use of computer-based resources which is also teacher-directed. Jenny's use of online technology is consistent with her espoused metaphor for teaching 'conduit between two lamp-posts'. She provides the means and the direction for students to learn and to progress. Also like Lim, the online materials show evidence of scaling, with easier activities conducted in the first place being replaced with more difficult activities as her student's progress. These activities are initially supported with examples and additional support early and this reduces over time.

John's metaphor of 'mission control' leaves little doubt that his preferred teaching approach is teacher-directed. His use of one-way communication using a bulletin board and his distribution of program content using online technology as a repository for notes and presentations is consistent with his espoused metaphor.

My central argument in this paper is that the practices of the teachers described are examples of the pedagogic recontextualising field in action. Whilst the case examples demonstrate that teaching staff implement the use of online technology in different ways, in each case the implementation is consistent with the teacher's espoused teaching principles as expressed in metaphor. This is achieved through three broad strategies.

1. Selective adoption of different aspects of online technology.
2. Selective application of online technology to teaching and assessment practices.
3. A variable level of integration of online technology into practice.

It is proposed that three rules govern the application of these strategies.

1. Aspects of online technology may be adopted, applied and integrated if they are supportive of the teacher's preferred practice.
2. Aspects of online technology may be adopted, applied and integrated if they do not have a negative impact on the teacher's preferred teaching practice.
3. Aspects of online technology will not be adopted, applied or integrated if they have a negative influence on the teacher's preferred teaching practice.

The selective adoption of features of online technology is demonstrated by the selective use of group email, bulletin board, computer marked assessments by individual teachers in this study. Group email is used by Faye to support the development of a community of learners, a bulletin board is used by John to provide

direction to learners, computer marked tests are used by Lim to support her desire to implement reduction and repetition as a teaching strategy. These features would appear to support the individual teacher's preferred teaching practice. In addition to this selective use of online technology, all four teachers provide links to useful web sites and embed internet searches into their assignments, they use individual email on an ad-hoc basis and provide an option for the submission of assignments online. It would appear that whilst these features of online technology may not have a positive influence, they do not have a negative impact on their preferred teaching practice

The selective adoption of online technology into teaching and assessment practices is demonstrated by Faye who uses online technology in assessment but not in her teaching practice. Alternatively John uses online technology primarily for his teaching practice. Lim and Sue have integrated online technology into both their teaching and assessment.

The level of integration into teaching practice is also variable, in John's case the use of online technology is entirely optional whereas it is required in the other three cases.

If we now return to the Official and Pedagogic Recontextualising Fields, we find that the relationship between these two constructs is most obvious in the cases of Faye and John. In Faye's case, there is an explicit separation of her instructional and assessment practices, a characteristic which is not found in the practices of Lim, Sue or John where there is a level of integration of instruction and assessment. Faye's approach ensures that the Official Recontextualising Field and Pedagogic Recontextualising Field are separated. The Official Recontextualising Field dominates the assessment component of the program where centrally determined learning outcomes are evaluated. The Pedagogic Recontextualising Field dominates the face-to-face component which allows Faye to pursue her desire of a teaching approach that is transformative, promoting personal and professional development.

In John's case teaching practice is dominated by his organisations directive to use a lecture-tutorial model. This is an example of the Official Recontextualising Field dominating the Pedagogic Recontextualising Field, teachers are limited in their discretion. They must implement teaching practices which are consistent with the legitimate pedagogic code as dictated by the Official Recontextualising Field. This circumstance does not appear to be problematic for John whose espoused teaching metaphor is 'mission control'. The lecture-tutorial model is consistent with his desire to control the learning mission, to provide resources and advice.


**Conclusion**

This paper has examined the practices of four TAFE teachers who have integrated online technology into their classroom practice. Using the teacher's self-declared preferred teaching principles as expressed in the metaphors of 'the ripening bud', 'being a friend', 'conduit between two lamp-posts' and 'mission control', the evidence shows that these teachers selectively adopt, apply and integrate online technology into their teaching practice in ways that support their preferred teaching principles.

In Bernsteinian terms the practices of these teachers recontextualise online technology through the Pedagogic Recontextualising Field to support their preferred teaching principles. This is achieved through the selective adoption of different aspects of online technology, the selective application of online technology to their teaching and assessment practices, and variation in the level of integration of online technology into their practice. It is proposed that three rules govern the application of these strategies. Aspects of online technology may be adopted, applied and integrated if they are supportive or do not have a negative impact on the teacher's preferred principles. And, aspects of online technology will not be adopted, applied or integrated if they have a negative influence on the teacher's preferred teaching principles.

The relationship of the Official and Pedagogic Recontextualising Fields is explored. Faye uses the strategy of explicitly separating the instruction and assessment components of her practice to provide space for dominance of the Pedagogic Recontextualising Field in her instructional practice whilst the requirements of the Official Recontextualising Field are achieved in the assessment component. In John's case the Official Recontextualising Field limits the possibilities of the Pedagogic Recontextualising Field, and hence possible teaching practices, through the requirement to practice in a lecture-tutorial model. In this case there appears to be confluence between the Official Recontextualising Field and the preferred practices of the teacher, as a consequence tension does not exist.

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