Conclusion

In this account of a programme of research extending over some ten years I am showing my educative influence on myself, my students and colleagues (Dewey 1981). Through the process of this research I have generated my living theory of practice (Whitehead 1993). By generating my living theory of practice and offering it to critique in the public domain I am contributing to the knowledge base of educational research as advocated by Snow (2001) and Hiebert *et al.* (2002) *inter alios*. In this conclusion I will briefly outline how this has been accomplished, what its significance is and how it can contribute to the knowledge base of educational research.

At the outset I set out my reasons for carrying out my research and writing this thesis. I indicated that I was motivated by the dissonance that I was experiencing when my practice was in conflict with my values (Whitehead 1993). That conflict arose between the authoritarian nature of my institutional settings and my values of justice, inclusionsality and respect for people and for their unique contribution to life. While I held values around the capacity of people to think and learn for themselves, I was working within contexts that are highly prejudicial to my ideas. I was working in two contexts: one an autocratic system, where people's life world experiences were diminished and the values base of practice is systematically factored out, the other a more participatory organisation but where people's life world experiences were diminished from the sheer volume of work. Within these environments people can be regarded as objects to be manipulated. The messages communicated through the cultures of many schools and other educational institutions can reinforce the ideas of autocracy.

My work centres on finding ways of combating these cultural factors – eventually perhaps to change the culture – and I am doing this in a systematic way. First I produced descriptions and explanations of my practice to show how I was trying to live in the direction of my values and later how I was influencing colleagues to change their perceptions of practice. I hold deep values around people, their capacity to learn and think for themselves, and for transforming their life circumstances. As my intention in examining my practice was not only to interpret my world but to change it (Marx and Engels 1978: 145) I took an approach of educational action research in an attempt to address the dissonance and bring my practice into line with my values (Whitehead 1993). The action

research approach to my research allowed me to turn my tacit knowledge (Polanyi 1966) into explicit knowledge (Varela *et al.* 1993) and in getting to know what I already knew, and learn more about how I learn, it enabled me to improve what I do (Lohr 2006: x). I came to understand the comment that you must be the changes you wish to see in the world (an idea attributed to Gandhi). In order to change the situation in my classroom I needed to change my practice and that necessitated changing my worldview. I came to understand educational practices as emergent processes, all interlinked, and having a common root in a values base of justice and democratic agreement.

As I researched my practice I came to see that traditional forms of theorising did not provide the impetus for change that my practice required and I realised that there was a need for new dynamic, generative transformational forms of theorising (McNiff 2000; 2002 *inter alios*). As my work was based within Information and Communications Technologies (ICT) I set out to reconceptualise ICT as a form of political action (Arendt 1958). Reconceptualising ICT involved moving away from technicist interpretations of ICT toward an understanding of ICT as a means of achieving justice through communicative action (Habermas 1975). The practical meaning of ICT as political action may be through finding ways that ICT can support people in learning to think for themselves. In thinking for themselves people can learn to be free thinkers, indeed, critical thinkers and to ask awkward questions to achieve an open society (Russell 1988). They can support Said's (1994) call for intellectuals to challenge normative assumptions. In challenging normative assumptions they can challenge normative systems, particularly attitudinal systems (Habermas 1975).

This research provides evidence of people taking action to challenge the normative systems in which they are located. I undertook this research programme because of my commitment to emancipatory forms of learning; the recognition of people's rights to opportunity. The research was carried out in the context of ICT because of ICT's capacity as a medium for supporting opportunity and for my professional learning. My research shows a persistent pursuit of ICT as political action (Arendt 1958). In this way ICT can be seen as a feature of communicative action (Habermas 1975), providing an emancipatory context for practice at the same time as providing a more appropriate means of representation (Eisner 1997). However, reconceptualising ICT does not occur in isolation. In reconceptualising ICT I found myself reconceptualising what it means to be a teacher,

moving from an authority figure to co-worker and co-creator of knowledge, locating my understanding within practice.

I have come to understand that dominant forms of theorising are theories 'about' things. They are propositional theories. Traditional forms of research concentrate on linguistic analysis (Bourdieu *et al.* 1994). Propositional theory and traditional research are usually located within words and our language tends to be metaphorical. Consequently linguistic representations of theories are usually metaphors. They give a picture – they are not reality. One of my important learning moments occurred when a colleague drew my attention to Magritte's painting entitled *Ceci n'est pas une pipe* (this is not a pipe). The painting is of a pipe as one might see in a sign over a tobacconist's shop. The painting has been analysed endlessly but a simple interpretation is that it is an image of a pipe, not a 'real' pipe. An image of a pipe and a 'real' pipe are not the same thing. If this idea is applied to propositional theory it could be argued that traditional research paints a picture although it claims to present the 'real' thing (Lather 1994). I am conscious that the same analysis can be applied to this thesis. The research and the research report of the thesis are not the same thing. What you are reading now is the research report, which is a real artefact representing a real-life practice.

Action research as a methodology deals with reasons, purposes, intentions, and values. There is an immanent dialectic – it is understood in action – meanings are not expressed in a form of words. By engaging in action research I am going beyond metaphor – I am undertaking action and developing a personal theory. Action research is a form of systematic enquiry which involves the generation of a personal theory (Polanyi 1966). This thesis shows how I have developed my living educational theory (Whitehead 1993) from a combination of established action research methods and educational practice (Lohr 2006). One aspect of the development of my living educational theory is supporting others to theorise their practices. The account of students' personal reflective tasks using the 'Saipan incident' in Chapter 5 shows students using their everyday theories as a means of developing their living theories of learning. This activity encouraged them to create living theories and to test the validity of those theories. Supporting students in developing their living theories of learning was part of supporting them to move from being silenced (Giroux 1992: 158) toward gaining their voice.

My claim to know

Within this body of work I ground my claim to knowledge. The claim is that I have generated my living theory of learning grounded in my practice and in my values. The development of my living theory involves the reconceptualisation of information and communications technologies as a form of political action. I understand political action in terms expressed by Arendt (1958) and in the context of Habermas' theory of communicative action (1984).

My living theory is a theory developed through practice and of practice and as such is a living theory of practice. In researching my practice I have come to know my practice and have over time changed that practice from being a traditional, authoritarian and didactic practice to a more democratic practice which focuses on teachers, students and administrators as co-learners and co-authors of their educational journeys. I have come to understand that the transformative potential of ICT can be used as a means of supporting a transformation in practice enabling the recognition of the natality and plurality of people (Arendt 1958) and in doing this I have reconceptualised ICT. I have come to see that Arendt's (*ibid*) conception of labour, work and action can be used as a means of analysing the activities that we undertake and of privileging those which support human agency. In developing my living theory of practice I have come to understand the limitations of traditional forms of theory in effecting change although they still provide insights that are valuable in practice. Nonetheless I recognise that new forms of living theory lack complete credibility in the academy because of the issue of quality and what kinds of standards of judgement can be used in assessing quality (Furlong and Oancea 2005) and that there is a need to develop a knowledge base of practitioner research (Hiebert *et al.* 2002; Snow 2001) that would provide a base from which teachers could learn and develop their practice in the light of others' experiences. Such a validated and legitimated knowledge base would have implications for new policies and practices (Whitehead and McNiff 2006: 119).

In developing my practice I have enabled students to become autonomous learners. The means of enablement were wide ranging and diverse and in many respects formed a web of enablement. In the evidence base within this linguistic thesis and in the supporting multimedia thesis, through photos, videos and written reports of their work my students are showing how they have been enabled to learn, and they show their knowledge. In their

written accounts there is evidence of peaceful productive learning. Reports and videos of meetings with national leaders show evidence of the realisation of an ideal speech situation (Habermas 1975). There is evidence of developing lively creative minds operating as autonomous thinkers. It is clear that the young people have developed the capacity to think for themselves (A.N. Whitehead 1929; Dewey 1916).

Arising from the research I set out to support Boyer's concept of the New Scholarship (Boyer 1990) by developing a theory grounded in my practice and the practice of colleagues and by contributing to an epistemology which is relational and inclusive in nature and therefore challenges the norms of technical rationality (Schön 1995: 27). I have practised Boyer's scholarship of integration by drawing on work from different contexts, my school context and administrative context, and bringing them together in a single integrated theory of practice. The research demonstrates the transferability of knowledge from one context to another to support more learning. This practice allied with collaborative work between school and university demonstrates the unity of being recognised in the development of communities of practice (Wenger 1998).

Forms of theory and forms of representation

My research was undertaken more from the point of view of a participant than an observer (Coulter and Wiens 2002). The approach was non-linear and in fact emphasised interconnectedness describing my worldview in terms of a web of connection (Bateson 2000). The nature of the research is that it is local, time bound, particular, oral and concrete (Toulmin 1990). Such research lends itself to narrative forms and seeks more appropriate forms of representation than linguistic forms. I have produced the thesis in two forms, linguistic and multimedia. Multimedia forms can communicate the ideas of dynamic generative transformational forms (Whitehead 2002), and multimedia can show processes of political action in action. I am aware of the need to show the validity of these new forms, and show how the forms have validity in relation to how they enable you to live your values in your practices.

I have shown how I have transformed my values into living critical standards of judgement. I offer these living critical standards of judgement as criteria that can be used to assess the quality of my research.

This thesis is based on a dialectical relationship between theory and practice which resists the idea that knowledge exists independently of the practices that created it. I have referred earlier to Capra's (1992) commentary on the work of Heisenberg claiming that '…the patterns scientists observe in nature are intimately connected with the patterns of their minds; with their concepts, thoughts and values…' In Chapter 5 I have challenged the view that '…educational research devote(s) too many pages to 'how' we know rather than 'what' we know…' (Snow 2001: 4) and presented evidence from my students' work that suggests that 'how' we know is crucial to 'what' we know. These ideas are supported by Lave and Wenger's (1991) ideas of 'situated learning', and Wenger's (1998) notion of 'communities of practice', Polanyi's (1966) idea of personal knowledge and tacit knowing and Schön's (1991) 'knowing-in-practice'. For example the personal reflection task undertaken by LCA students could be seen as an example of socially constructed knowledge.

Lather's comments on traditional validity practices raise a challenge not alone to establishing the validity of my knowledge claims but to the form of the thesis itself:

> Contrary to dominant validity practices where the rhetorical nature of scientific claims is masked with methodological assurances, a strategy of ironic validity proliferates forms, recognizing that they are rhetorical and without foundation, postepistemic, lacking in epistemological support. The text is resituated as a representation of its "failure to represent what it points toward but can never reach..."

(Lather 1994: 40-41)

Lather's (1993) idea of 'rhizomatic validity' requires the thesis to be read as if it has multiple inter-connecting centres and to represent an inter-related network of ideas, emotions, impressions, and accounts. A multimedia representation of the thesis may have a contribution to make in attempting to meet the challenges to the traditional thesis described by Lather. Eisner (1997) argued for the use of alternative forms of data representation. This thesis has made the claim that technology has a transformational quality within classrooms and in other places of work. This claim can be extended to using technology to transform the doctoral thesis from a purely linguistic form to a living form which enfolds (Bohm 1992) the linguistic within it. The multimedia version of this thesis is available at www.ictaspoliticalaction.com (see also Appendix C).

This thesis is contributing to a knowledge base around teaching ICT in schools. This is changing the form of theory so that ICT becomes both the subject matter and the medium.

While multimedia forms are becoming more common the discourse around multimedia is still in a linguistic form. This thesis is moving toward a living theoretical basis for the inclusion of ICT within practice. In this sense I have created the knowledge base that Snow (2001) and Hiebert *et al.* (2002) call for. Through the thesis I am creating a conceptual framework around political action. In the form of the multimedia thesis I have shown how I am doing it. My research and the multimedia thesis are contributing to the idea of teachers and other practitioners as theorists and shows the need for teachers to equip themselves around knowledge of theory. I have reconceptualised ICT as political action.