

## Introduction

This thesis is about ICT as political action. In this Introduction I give a brief background to my research. I explain how I experienced myself as a living contradiction when my values were denied in my practice (Whitehead 1989) as a teacher and ICT consultant and how this gave rise to my research question and to my claim to knowledge.

I proceed by setting out the main themes of the thesis which focus on achieving justice for my students, my colleagues and me through political action and I address issues of how ICT can be a form of communicative action, in the sense that ICT can form the basis for people joining together in dialogical processes of negotiating their futures and planning ways to achieve them. I present my approach to achieving justice in terms of a 'web of enablement' whereby I provide supportive relationships that enable my students and colleagues to achieve their own goals. This involves developing practices within my workplaces that allow people to feel that what they are doing is important. Transforming practices is achieved in a context of developing uses of ICT that are liberating and empowering for those involved. This involves reconceptualising ICT in ways that support individuals' human agency so that people are not seen as passive consumers but as active creators of their own lives.

Reconceptualising ICT as a means of supporting individuals' agency stems from my values base, which is rooted in the pursuit of justice. Because of my emancipatory values I have taken the decision to use an action research approach, itself an emancipatory methodology, to my research and my work. In attempting to establish criteria for the evaluation of this work I indicate how I transform my values of justice and care for the other into my living standards of judgement which provide the basis for the evaluation.

In this introduction I explain the need for generative transformational forms of theorising. I set out how these forms of theorising are different to propositional theories and why I have chosen these forms. The choice of form of theorising has an influence on the form of the thesis and I set out my approach to devising two theses in two forms, one as a linguistic thesis and the other as a multimedia thesis.

Later, I indicate the significance of both forms of the thesis in terms of contributing to new living forms of theory and to the knowledge base of educational enquiry. I describe how the

research has been carried out using an action research approach and why the presentation of the multimedia thesis supports such an approach.

### ***Background to my research and formulating the research question***

Here is an outline of my research and the key ideas developed throughout. First I describe my work contexts and explain my values base.

I work in two capacities for two separate organisations. One context is that of teacher and information and communications technologies (ICT) coordinator in a large secondary school for boys in north Dublin. The second is as an ICT consultant for a national awarding body, the National Council for Vocational Awards (NCVA). The two positions share some characteristics, and have other characteristics which are different. In both locations ICT form the overall focus for my work. While teaching is the primary focus within school, administration is the primary focus in the awarding body. As the similarities and differences between the two organisations are an important part of this work I will address these here. From a personal point of view a key similarity between my work in both contexts is that my work is driven by my personal values base.

While ICT work can often be seen in impersonal, mechanistic terms, I have personal values which are person-centred. I regard the uniqueness of the individual as important in my work. Because of this I place a value on the experience of democracy in my work and life and I see a need for an approach to practice that is collaborative in nature. However it is in my day-to-day experience that these values are frequently denied in my practice.

As a teacher I work in a school with a highly authoritarian structure. I work with students and colleagues that I like and whom I like to work with. However, the authoritarian structure that we are located in frequently acts to prevent us working in ways that we find are beneficial for us. As an ICT consultant with a national awarding body I also work with people that I like and like to work with. In this case the main issue is not with the structure of the organisation but with the pressures caused by the rapidly growing and changing further education sector which the body serves. The result of the pace of growth and change is that people feel that they are exposed to excessive pressure of work and find it difficult to deal competently with the demands placed on them.

Within my practice as a teacher I find myself questioning the nature and quality of educational experience that I am offering to myself, my students and my colleagues. Within my workplaces people are not always treated as unique individuals with a unique contribution to make. This situation is a denial of my values, as I believe strongly in the uniqueness of the individual and their capacity to make valuable contributions in the world (Arendt 1958; Sen 2001). Instead, many people, particularly young people in school, are often marginalized and 'silenced' (Giroux 1992: 158). For example, as a novice teacher I was respected by those around me as one who could maintain an orderly class. But that model of orderly class was on the basis of me, as teacher, insisting that my students sit quietly and listen as I told them what they needed to know. I then expected them to write down carefully what I had told them. Within this classroom arrangement there was little room for discussion or debate. I recall one particular student who seemed to enjoy thwarting my efforts and that I, eventually, sent out of my class. The deputy principal, supporting me strongly, insisted that if the student wished to stay in the school he should be quiet, do his work and stay out of trouble. At the time I considered this a success.

However, in hindsight, I see that I offered little opportunity for this student to show his abilities or interests. I now realise that I was contributing to a situation where sometimes the work and contributions of people are not valued and, sometimes, as a result, people are not valued and, sometimes, are, in consequence, denied their full humanity. There are times when I marginalise those with whom I work. I am not alone in marginalising my students. My actions in removing the student mentioned above from my class were supported by those in authority. To that extent the marginalisation of this student was an aspect of institutional practice. At that time, it was common practice that those who did not fit within particular norms of behaviour and work were treated as if they had something wrong with them and told they did not belong. Ironically, while I was treating my students in this way I also held values around respect for people and the importance of people. Clearly my practice was in conflict with my values. Later, while seeking to improve my practice, I learned that when dealing with 'non-programmed, difficult or threatening situations', people frequently do not follow their 'espoused theories' but follow 'theories of action' which are not congruent with their espoused theories (Argyris 1982: 85). As a result of this conflict between my values and my practice I experienced dissonance in my professional work. In Whitehead's (1989; 1993) words, I experienced myself as a 'living

contradiction'. Consequently, in response to the experience of dissonance, I began to follow Whitehead's approach to addressing the experience of oneself as a living contradiction by asking questions of the kind, 'How do I improve what I am doing?'

However, while asking questions about how I improve my practice within my class so that my espoused values can be seen to be realised in my practice, I find other cases of conflict. Within my institutional structure, 'theories-in-use' include ideas that students who are late or do not wear their complete uniform are 'deficient' in some way and need to be 'corrected'. As my insights into these matters deepened, I came to see that I was marginalising and pathologising students who do not learn by listening and sitting still. I punished and excluded students who spoke too much or moved around class.

My desire to improve what I was doing and how I was doing it positioned Whitehead's question as a core concern for me. While looking at improving my practice I needed to understand the role of ICT in improving what I was doing. As with much of my work I draw on insights from the literature to support me in understanding how my 'theories-in-action' are in conflict with my 'espoused theories' (Argyris 1982: 85). To help me with this I draw upon the ideas of Hannah Arendt (1958; 1973; 1978; 1994) and Habermas (1975; 1979; 1980; 1984). I will explore Habermas's ideas in Chapter 1, and here I outline some of Arendt's ideas that have been influential for my research.

Arendt (1958) argues for a three-sided view of human activity: she calls these labour, work and action. Labour refers to routine behaviour required to meet basic needs; work includes activity by artists and craftspeople to make lasting objects that comprise the human world; action requires collective interaction to determine what is good and just (see also Sutherland 2001). In examining my practice I find that much of my school work in ICT relates only to 'labour' – those routine activities that are required to keep the systems running. However, it is also possible to conceptualise ICT as 'work'. The development of multimedia tools and Internet technologies that support creative interaction are consistent with Arendt's concept of 'work' as activities that produce artefacts that are durable in the world. A third conceptualisation of ICT could involve the use of multimedia tools and technologies to support original human agency – this can be 'action'. Furthermore, 'action' is the defining quality of freedom. Arendt argues that it is a mistake to take freedom to be primarily an inner, contemplative or private phenomenon, for it is in fact active, worldly and public (Arendt 1958: 30). Using Arendt's ideas as a basis for practice could be seen in

Argyris' (1982) and Argyris and Schön's (1974) terms as taking one's espoused theories and turning them into theories of action.

With this analysis in mind I decided that among my difficulties was the reality that my class-work focussed on routines and, when my students found that they could not cope with the routines, I found that I could not cope with my students. An Arendtian approach to my class-work might suggest that I should focus less on labour and attempt to move toward activities that are more life-affirming for me and for my students. I therefore decided that I should try to identify forms of practice that would enable me to move our joint activities toward 'work' and 'action'. Consequently, my research has focussed on finding ways to encourage movement away from 'routines' and 'labour' toward action – taking control of one's life – that will provide an environment that will allow us all to achieve our educational aims and remove some of the conflicts that result in my students being removed from class or being punished in other ways.

In adopting Whitehead's (1989; 1993) question, 'How do I improve what I am doing?', I am shifting the focus from pathologising my students' behaviour to focusing on examining my practice with a view to improving it, in order better to support their learning how to take responsibility for their behaviour. This is a general statement of my intentions. Underneath the general statement there are specific questions: What can I do to enable young people to achieve what they want? What are the conditions that I put in place as I teach? How can I help marginalised people to speak for themselves? Do ICT have a role in enabling me to enable others? With these questions in mind I formulate my primary research question as, 'How can I reconceptualise ICT as political action?'

Within NCVA my activities have been concerned with supporting administrative workers as they devise ways of dealing with the administration of certification processes that would ensure the quality of those processes, despite the rapid rise in the number of learners seeking certification. Over a number of years my activities have concentrated on devising computer programmes, redesigning forms and developing workflows that would support the integrity of these processes (O'Neill 1997). Despite our best efforts workers were disillusioned with perceptions of the quality of their work. In an interview about the transfer of candidate details from paper entry forms to the computer one administrator commented:

[There was] ... a huge impact, with constant cross-checking both by hand and by computer... and some errors managed to get through, which at such a late stage caused more problems. [The outside view was] that we were not sure ourselves of what was going on.

(O'Neill 1997: 36)

Workers were frustrated that, despite their best efforts, the scale of the job was such that their efforts always appeared to be inadequate. Certification administrators have considerable access to ICT but this in itself does not enable them to reconceptualise their activities. This raises questions for me about how ICT are conceptualised, whether as a means for self-realisation, or as a form of technological effectiveness. Within the certification environment, ICT operates more as a productivity tool, as an aspect of the cult of efficiency (Callahan 1962). While my work in the context of NCVA is different to my work in school, the question, in many respects, is similar: Can our work be reconceptualised to support original human agency as political action? Can we find a way to understand how ICT can be conceptualised and used as a means for personal freedom to make one's valuable contribution to the world?

In using the term 'political' I am drawing on Arendt (1958: 23), and using the term in the sense of 'an alliance between people for a specific purpose'. In attempting to 'reconceptualise ICT as political action', I am attempting to use ICT as a means of supporting original human agency by forming alliances between people to give meaning to their lives. Specifically, I needed to find ways to support my students, colleagues and myself to author our educational action whether in school or NCVA.

In my work in school I have operated on the basis of the 'one who knows', imparting knowledge to those who do not know. This 'expert mode' of operation exists in NCVA also where there is a perception that there are people who 'know' and there are people who 'do'. This is another aspect of the 'theory/practice' divide (Cochran-Smith and Lytle 1999; Coulter 1999; Coulter and Wiens 2002; Plato 2003; Richardson 1994; Zeichner 1995 *inter alios*). It arises from a perspective that knowledge is abstract, and 'doing' implies not knowing. In NCVA 'knowing' is valued above 'doing'. Delivery of certification is regarded as a straightforward administrative procedure; administration itself is regarded in a technical-rational light. In reflecting on my work in school and NCVA I see a need to move out of 'expert mode' toward a position that values the knowledge and contributions

of all – teachers, students, and administrators. This would enable a shift from the prioritisation of abstract conceptual knowledge over embodied practical knowledge.

Fundamental to Arendt's conception of action are the ideas of 'natality' and 'plurality'. Natality emphasises that as a result of their birth alone, every person has the possibility to contribute something new to human experience and therefore to give meaning to life (Arendt 1958: 178). However natality is not expressed in isolation. It is expressed in community – we can define ourselves and create our identities in relationship with others. Arendt (1958: 184) tells us that '...the realm of human affairs...consists of the web of human relationships...' The web of human relationships is enlivened by plurality – the diversity that exists among people (Arendt 1958: 8). Arendt's conception of natality resonates with my values around the uniqueness of individuals, and her conception of plurality resonates with my desire to value diversity. Taking Arendt's analysis as my 'espoused theory', how can this form the basis of my 'theory of action'? My research questions begin to take the form: Are there ways that I could work with students, whom I otherwise isolate and marginalise, that would recognise their natality and plurality? Are there ways that I could work with colleagues in NCVA that would recognise the unique contributions that they have to make and enable them to enable others to do the same?

Therefore, by asking the question, 'How can I reconceptualise ICT as political action?' I am asking whether it is possible to conceptualise ICT as a means of supporting individual human endeavour by people working in collaboration with others in life-affirming practices which enable them individually and collectively to create a new world for themselves. Can I provide students and colleagues with an opportunity to design and develop their multimedia artefacts which are relevant to their lives? By exploring and reflecting on their learning in producing these multimedia artefacts, can they become creators of their learning? Are there ways that I could support my colleagues in NCVA to develop practices that are relevant to their lives and support them in becoming creators of their learning? Who do I need to be in my professional identity to enable people to get to where they want to be? Furthermore, asking these questions prompts other questions:

- How can I support my students to reach their capacity through the use of ICT?
- How can I use ICT to support political action?
- What are the conditions that I can put in place as I teach to support agency?

- Can I learn to teach in ways that allow people to realise their natality?
- Does the programme of work using ICT that I have undertaken constitute political action?
- What are the characteristics of this programme that would allow me to make this claim?
- Can I develop my living theory of learning as I work and support others in their learning?
- While the programme of work I describe involves innovative practice can I conceptualise this practice as a personal theory of education?
- How do I demonstrate the validity of my evidence-based claims to knowledge?

These are the questions that I will address throughout the thesis.

### ***Using ICT as a form of communicative action***

In Arendt's (1958: 178-9) formulation, the actor's action becomes relevant through the spoken word. It is through the spoken word that actors identify themselves as actors and announce what they do, have done and intend to do. As I engage with the questions in this thesis I will engage in a dialogical form, using the spoken word, both real and virtual, to offer my labour, work and action to public critique. In doing this I am being political because '...to be political means that everything is decided through words and persuasion...' (Arendt 1958: 26). The actions communicated in this thesis, whether mine or those of my students or colleagues, are frequently offered dialogically. Within the thesis I am taking several steps to support a dialogical approach to my research. My approach to writing this thesis is dialogical in nature. I am endeavouring to involve the reader in this thesis by writing for the reader and supporting the reader in walking through this thesis with me. Through the online forum in the multimedia version of the thesis, readers can and have communicated their thoughts and ideas to me and to other readers. Throughout the writing of the thesis I have communicated the ideas of the thesis in a wide range of fora including presentations within my school and at educational conferences. By these means I am engaging dialogically with the reader and the public and offering my claims to public critique.



The process of dialogue in itself can be seen in terms of ‘communicative action’ (Habermas 1975). The thesis shows that my practice has moved from the coercive, marginalising, authoritarian approach described above to a practice where individuals’ voices are heard in dialogical processes of deciding future plans, planning activities and carrying them out. In school this has been achieved through the implementation of a range of projects, including the Setanta project, and in NCVA through the Action Learning Group. I will pursue the idea of communicative action further in Chapter 1 and detail the work of these projects in Chapter 5.

### ***The need to identify my standards of judgement***

It is acknowledged that practitioner action research has much to offer in terms of informing good practice, but its capacity to generate theory is challenged by questions of what counts as quality and what standards of judgement can be used in assessing quality (Furlong and Oancea 2005). There have been calls on practitioner researchers to do serious work on identifying their own criteria and standards of judgement ‘to show that they know what quality means in action research and that they are capable of articulating those standards and producing theories that stand the test of the standards in achieving originality, significance and rigour’ (Whitehead and McNiff 2006: 2). Later in the thesis I respond to this call by offering criteria that can be used to assess the validity of my claims to knowledge. My criteria are based on the idea of transforming my ontological values into living standards of judgement (Whitehead 2005; Whitehead and McNiff 2006: 84). I will show the validity of my claim to know by showing the standards of judgement used in realising that claim. I ground my claim to know in personal knowledge, my sense that what I am doing seems right. My personal knowledge will be tested against the evidential base of the thesis that shows the realisation of my values in practice, as well as against criteria for social validation (Habermas 1987). These criteria include establishing the comprehensibility, the truthfulness, sincerity and appropriateness of the account of my work (Habermas 1987). I will assess the validity of my claim to knowledge through the achievement of my values in my practice. In Chapter 5 I will show the achievement of my values of justice, natality and plurality in my practice. I will explain how I transform my values into living standards of judgement in Chapter 6.

### ***My claim to knowledge***

In carrying out my research I have investigated my capacity to enable young people and colleagues to think for themselves and to act on their own behalf. I have learned how to teach, or in other words, I have learned to arrange the conditions of learning in order to find ways of enabling other people to feel valuable. I am claiming to know what I am 'doing' in my practice, and by 'doing' I am claiming to know my practice. In this way I am bridging the theory/practice divide. By enabling people to speak for themselves, to exercise their agency in their lives, to take control of their lives, to overcome negative influences in their lives and to become critical, I am claiming that I have made myself critical. While I have become critical my students have also become critical. My claim to knowledge is that I know my practice. In the process of coming to know my practice I have generated my living epistemology of practice as well as my living theory of practice; and my living theory of practice is grounded in my core values based in justice, creativity and freedom and in my capacity to encourage people to think for themselves and regard themselves as knowledge generators. Central to my living theory of practice is the idea of reconceptualising ICT as political action. As the theory is embodied within myself this is a living theory (Whitehead 1989).

The thesis is an account of the development of my living theory of practice. While my practice is about contributing to a just and caring society, my living theory of practice is about how I have encouraged myself and others to work in solidarity to exercise our agency through communicative action (Habermas 1975). I have made brief reference above to some of my experiences within my practice in school and as ICT consultant to the national awarding body, NCVA. Over a period of time I have changed my practice in both institutions from one that was authoritarian, controlling and coercive to a practice that is relational, co-operative and enabling. This has been accomplished through a process of communicative action, in many cases using ICT as a medium for action. The process of achieving this change in my practice forms the basis of my original claim to know my practice.

My learning has been stimulated by my experience of dissonance when my values are not being realised in my practice. My research has involved a process of looking for ways to bring my practice into line with my values. As I did this, I found inspiration from other

areas of work and from the literature. I came to understand that a learning process could be collaborative, relational and liberating, and that learning can be understood as a reciprocal process. So I need to learn how to help my students to learn. In this way my learning is improving as my students learn. But my students' learning benefits from my learning. In the evidence base that is presented in more detail later you will find one of my students indicating that his learning had improved as a result of a web design project. But the web design project had grown out my learning that project work enabled students to take control of their learning. Taking control of your own learning is a powerful encouragement to learn. I have come to understand that knowledge is something that we may create together. I create knowledge as I work with other people who are creating their own knowledge. A claim in the thesis is that I know some of the ways that I learn. The evidence of my learning can be seen in the change in my practice. My early practice was as a didactic, controlling, traditional teacher. My later practice shows me involved as a collaborative co-learner.

Within these processes of change the transformational quality of ICT has been a focus of my learning. ICT may be a context, a tool, and a form of representation or a methodology. But the focus is my learning – the claim to knowledge is around my learning. Developing understandings of my learning is an aspect of dealing with the dissonance within my life and it enables me to take control of my life and assist others to do the same.

This thesis provides the account of my research which shows some of these processes through which I have come to understand my learning.

### ***A living form of theorising***

I have indicated above that my preferred theoretical approach to my work is a living theory approach. This has been a deliberate choice, in light of the fact that a number of different theoretical approaches could have been taken to this work. Propositional, dialectical or living theory approaches would have been possible. A propositional approach tends toward seeking definitive answers arrived at through a linear form of logic. I empathise, however, with Schön's view that

In the varied topography of professional practice, there is a high hard ground overlooking a swamp. On the high ground, manageable problems lend themselves to solution through the application of research-based

theory and technique. In the swampy lowland, messy and confusing problems defy technical solution.

Schön (1987: 3)

The contrast between Schön's high, hard ground overlooking a swamp is reminiscent of the contrast between Plato's Cave and the clear sky. In *The Republic* Plato (2003: 179) describes the world of human affairs in terms of shadows and darkness, and instructs those who aspire to truth to leave the cave of human affairs and stand under the 'clear sky of eternal ideas'. Plato's advice represents the classic dichotomy of theory and practice. Possibly Plato would have chosen to stand on Schön's high, hard ground and Schön would be more comfortable struggling in Plato's cave. I find my work lies in the swampy lowlands and the dark shadows and does not lend itself to technical solution. However I do not accept that work in the swamp or the cave cannot be theorised. I suggest that a theory of the swamp or of the cave needs to take the form of a living theory of practice.

The approach taken in the thesis towards addressing how ICT can be used to take political action in attempts to improve organisational learning draws on the development of ideas arising from the 'New Science' which suggest that organisations need to be conceptualised as transformative processes that recognise the agency of transformative individuals (Wheatley 1992). The metaphors of the new science transfer to how the practices of social scientific and educational enquiry are conceptualised. New paradigm research in education embraces newer forms of enquiry such as action research. Like the 'New Science' these newer forms of educational enquiry emphasise uncertainty and the need to embrace contradiction. These new forms offer the prospect of entering into Plato's cave and Schön's swamp and being able to work there without the certainty of the 'high ground' or 'the clear sky'.

Whitehead (1989) has developed the idea of 'living theories'. He sees practice as a form of real-life theorising and calls the theories developed in this way 'living theories of practice'. I have come to appreciate the need for new models to reconceptualise social processes and the education of social formations (Whitehead 2003b; 2003d; 2004). In my work as an educator and as an administrator I have explored these issues and found ways of understanding my teaching and administration as educational practices. This work supports Boyer's (1990) concept of the New Scholarship by developing a theory grounded in my practice and the practice of colleagues, and supports Schön's (1995: 27) development of

Boyer's ideas by contributing to an epistemology which is relational and inclusive in nature and therefore challenges the norms of technical rationality. I am practising 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 significance of my research***

Within the thesis I am contributing to a new scholarship of educational enquiry (Whitehead 1999). Whitehead's work is part of an evolution of ideas started by Boyer (1990) when he developed the idea of a new scholarship of teaching. Schön (1995) advanced this idea by arguing for the need for a new epistemology for the new scholarship of teaching. Whitehead (1999) further advanced this with the idea of a new scholarship of educational enquiry. I see my contribution to a new scholarship of educational enquiry in the sense that I am involved in developing my living educational theory. I am putting that theory to the test in my practice and offering it to public scrutiny. By offering my work to public scrutiny in the thesis, on the Internet and elsewhere, I am contributing to a knowledge base to show how I have developed my personal theory of education. My contribution to the knowledge base is presented in the form of a multimedia thesis and in that way I show how I am transforming propositional theory into a living form of theory.

This thesis reflects my learning in a programme of work extending over many years. In undertaking a self-study of my practice I am studying my educational influence in the self-studies of colleagues and students. These self-studies, my own and those of colleagues and students, form a part of the education of social formations (Whitehead 2003b; 2003d) by the influence that they have had in changing the forms of practice within institutions. I pursue the idea of linkage and connectedness throughout this thesis and I draw on the work of Bateson (1979) to theorise them as a web of connection that, I have learned, provides the links to different strands of my work. The various projects, described later in the thesis, contribute to the formation of sustainable good societies (McNiff and Whitehead 2005) by the change they engendered within their environment and in the way that they contribute to the work of others. The projects support changes to the social order. By this I mean that the projects support changing the way that particular groupings live and work together, and

what kinds of discourses they use to negotiate how they should do this (McNiff and Whitehead 2005).

The groupings that I have in mind are those formed by my colleagues, students and me in our daily work and practice. The kinds of discourses used are dialogical in nature. I relate my work and the work of my colleagues and students to the ideas in the literature around dialogue. The importance of dialogue as a way to understanding appears in the writings of a wide range of authors (Bohm 1996; Burbules 1993; Freire 1972; Gadamer 1979; Habermas 1984). Gadamer's use of the metaphor of conversation as a means of coming to understand the subject matter at hand can be seen in my thesis in the accounts of students interviewing each other about their work and hopes and ambitions (see Chapter 5). The realisation of Habermas's idea of an 'ideal speech situation' can be seen when two Prime Ministers respond to difficult questions posed by young people (see Chapter 5). It can also be seen when NCVA staff present their research reports at an education conference (see Chapter 5). Burbules (1993) lists some of the virtues or emotions which are necessary for dialogue: concern, trust, respect, appreciation, affection, hope. These virtues can be seen in the evidence of students' work available online ([www.ictaspoliticalaction.com](http://www.ictaspoliticalaction.com)).

The work of educators detailed in this thesis, although undertaken in the context of a school programme, frequently does not entail formal teaching; rather it is that form of teaching which is, paraphrasing Buber, 'undertaken most successfully when educators are not consciously trying to teach at all but when they act spontaneously out of their own lives' (Hodes 1972: 142). It is the form of teaching and learning that involves developing relationships of trust, commitment and friendship rather than focusing on formal curricula, pedagogies and methodologies. Later in this thesis, and in the enveloping multimedia version, examples will be given of 'teachers acting spontaneously out of their own lives' through the support given to the Leaving Certificate Applied programme and in supporting initiatives of the Setanta project. Throughout the thesis there is a struggle to represent wholeness within the confines of the linear linguistic form which we recognise as the form of a traditional thesis. Bohm's (1995) challenge to fragmentation and the development of his idea of an 'implicate order' is reflected in this struggle and in the multimedia representation of the thesis which attempts to provide a non-linear, interactive, unified view of life which, rather than being simplistic and linear, is complex and web-like. The evidence in various multimedia formats is available on the website

www.ictaspoliticalaction.com. I will develop these ideas around linearity and diversity in Chapter 4.

### ***My contribution to the knowledge base of educational enquiry***

The main focus of my research is in examining my educational influence and transforming my embodied knowledge into explicit knowledge and from explicit knowledge into public knowledge (Varela *et al.* 1993). In making my embodied knowledge public I am responding to Snow's (2001: 3) call to systematise personal knowledge so that it will become publicly accessible and contribute to the knowledge base of teaching. In my thesis I show this process in action and explain its significance. In particular I aim to show my educational influence in the learning of others while I support them as students, administrators and colleagues. I explain how ICT have exhibited a transformational quality in supporting my learning and the learning of colleagues. I explain how my educational knowledge has developed through my practice, as I have engaged colleagues and students in enquiries into their learning as they ask and research the question: how can I improve what I do? The production of the multimedia version of this thesis at www.ictaspoliticalaction.com is part of the process of systematising my personal knowledge and making it public. The forum facility on the web site invites public critique of the thesis and supports a collaborative approach to the building of the knowledge base of teaching.

### ***Forms of the thesis***

An important part of this work has been evidence of the impact of change brought about by my initiatives through the medium of the technology. I am making the case that technology has a transformational quality within classrooms and in other places of work. I go beyond that by using technology to transform the doctoral thesis from a purely linguistic form to a living form which enfolds (Bohm 1992) the linguistic within it. Eisner (1997) has warned that using alternative forms of data representation is not without promise and perils. The promise and perils may be even greater in attempting an alternative representation of the thesis. Nonetheless the multimedia thesis, at www.ictaspoliticalaction.com, addresses one of Eisner's principal reservations about alternative forms: the constraints imposed by our publication system on material that does not take printed form. The multimedia thesis is in

a web based format that offers the promise of clearer representation and wider dissemination than the printed form. You can see this also in the accompanying DVD in Appendix C.

Over a period of some fifteen years I have undertaken action research as part of my practice in my work as a teacher and consultant. At this point I see action research as an integral part of my practice. I have taken this approach because I perceive a need to operate out of a theoretical base rather than seeing my practice simply as an operational activity that is carried out unproblematically. Within this framework I do not distinguish easily between theory and practice. I see practice as a form of theorising and theory generation as a form of research practice. The significance of this approach is that practice can be theorised in a way that shows how I am contributing to new forms of practice and new forms of theory and I can show how practice and theory are related.

I see my work as morally committed practice. As such it cannot be carried out routinely but demands an ongoing process of examination and reflection. I draw on Schön's (1991) ideas of 'reflection on action' and 'reflection in action' to improve my learning and as a means of helping others to improve their learning. Within this process I have developed my living theory of my learning (Whitehead 1993). It is not universally accepted that practitioner research has a part in generating theory of high quality (Whitehead and McNiff 2006: 157). This thesis addresses the issue by providing, not just a description of workplace learning, but also explanations of my research and of my living theory of learning. I used the methodology of educational action research, which involves an enquiry into one's practice, to understand that practice better and by reflection on that practice to understand better the process of improving that practice.

Action research cycles were used to gather data in order to identify concerns. Reflection on these concerns produced plans for change giving rise to further rounds of data gathering and evaluations of the effectiveness of actions taken (Lomax 1996: 24; 1994b). My approach to action research follows that set out by Whitehead (1989; 1993). I have experienced myself in a range of contexts that have positioned me as a 'living contradiction' in my work, and I understand the nature of my action enquiry as a series of steps which arise from the following:



I experience a concern where some of my educational values are being denied in practice.

I imagine a solution to that concern.

I act in the direction of the proposed solution.

I evaluate the outcome of the solution.

I modify my practice, plans and ideas in the light of the evaluation.

However my view of the process is more complex than simply following these steps. Each of the steps gives rise to questions. The questions are often recursive and the steps become iterative.

I hope the brief outline given here indicates the methodological framework I have followed in carrying out this study. I hope that this framework is obvious throughout the thesis. The linguistic thesis is represented in a series of steps similar to those in an action inquiry. Chapter 1 provides the background to the thesis by addressing the question 'What is my concern? Chapter 2 develops these points by addressing why I am concerned. In Chapter 3 I explore what I might do to address my concerns and attempt to reduce the dissonance in my professional life when my values are denied in my practice. Chapter 4 concentrates on how a reconceptualisation of ICT in terms of new forms of theory might contribute to addressing my concerns. Chapter 5 accounts for the action taken to bring my practice in line with my values. In Chapter 6 I address issues of validity and the influence of the research. Chapter 7 deals with the significance of the research.

I now turn to Chapter 1 which sets out the background to my research.