Working with collaborative projects: my living theory of a holistic educational practice

by

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Abstract

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This thesis is the narrative account of my research programme that has enabled me to make my original claim to have developed a living epistemology of practice that is grounded in dialogical, holistic and creative ways of knowing. From my belief that each individual is capable of developing their potential for learning and knowledge creation, I have come to see the interconnectedness of people and their environments as a locus of learning which may be embraced through technology.

Through my research I have developed my capacity for critical engagement, especially in relation to critiquing many normative practices in dominant forms of education; specifically in terms of their underpinning technical rational ontologies and epistemologies of fragmentation. My original contributions to knowledge are to do with how I show that I can account for how I have transformed my own erstwhile fragmented epistemologies into holistic and inclusional forms of knowing and practice. From the grounds of my research-based practice, I am able to make my original claim that I have developed my living theory of a holistic educational practice, through collaborative multimedia projects, and I ground my evidence in the multimedia narrative of my research account.

A distinctive feature of my research account is my articulation of how my ontological values of love and care have transformed into my living critical epistemological standards of judgement, as I produce my multimedia evidence-based living theory of a holistic educational practice. Through working with collaborative multimedia projects, I explain how I have developed an epistemology of practice that enables me to account for my educational influence in learning.

Glossary

Ár gCeantar Project:
This was a project wherein the class investigated their own locality in terms of culture, history and geography. Its literal translation is 'Our Region' and its purpose was to provide a snapshot of life in our locality.

Curaclam Na Bunscoile (1971)
The Irish primary school curriculum from 1971 to 1999.

East/West Project
Our *East/West Project* was part of the *East/West Schools Programme* (see http://www.leargas.ie for more details) which is a part of the Socrates education programme. The *East/West Programme* aims to strengthen school partnership and to encourage friendship and understanding between young people in Ireland and the UK. Our *East/West Project* spanned over two years and I gathered a substantial amount of data for my research from it. It was a partnership between my class and a class in Prescott near Liverpool. The partnership began with a project about the Famine (which we abandoned) and then continued with poetry sharing via the internet and an email exchange. The two groups had two meetings, one in a water sports centre in Ireland and one in the UK near Liverpool. Our *Working as a Historian Project* was undertaken as part of this partnership.

ICP Internet based Collaborative Projects:
Internet based Collaborative Projects invite collaboration between schools, students, teachers and occasionally the wider community, utilising the internet and e-mail in the process. ICPs are about the integration of projects into the curriculum, which allow teachers and pupils the opportunity to exchange ideas, data and multimedia presentations globally on a given theme, using internet communication tools.

Learning Circles Project
This is a biannual event where groups of schools from all over the world participate in collaborative projects. We were one of a group of six schools and our objective was to share elements of our geography, culture and history with students from the other schools while exploring their history and culture through their submissions to the project. This programme utilised e-mail and postal mail and the results of the project can be seen at http://inver.org/ceantar/Learning_Circle .

NCCA
National Council for Curriculum and Assessment are the statutory body that advise the Minister for Education and Science on curriculum and assessment for primary and second level schools.

Online Expedition Project
The class followed via the internet, the daily adventures of a lone oarsman who was travelling around the world. They also communicated with him by email and satellite telephone.

PCSP

The purpose of the Primary Curriculum Support Programme (PCSP) is to mediate the Primary School Curriculum for teachers towards enabling them to implement it in their schools.

People in our Community
This was a project where the class recorded interviews with various members of the community about their work:
http://www.iol.ie/~bmullets/community

Primary School Curriculum (1999)
 The Irish primary school curriculum from 1999 to the present day.

Sound garden
This was a project where the class recorded sounds from around the school and drew pictures with which to match the sounds: http://www.iol.ie/~sound_garden

Travel Buddy Project
This is a soft toy exchange between two classes, frequently in two different countries. A soft toy was sent to the partner school, to be 'shown around' its host country and the pupil or their parent filled in a diary and took some photographs of their experience of 'entertaining' the soft toy. The students then exchanged e-mail messages to update their partners on the latest adventures of the soft toy. At the end of the exchange, the soft toy returned to its own classroom with a diary filled with reports of the visit.

Working as a Historian
This project was part of our *East/West* collaboration. The class interviewed members of the community about life and times in the past. The used a video camera, digital camera and audio recordings as well as traditional pen-and-paper methods of recording their interviews.

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Finally, I would like to thank my family; Red, Dara, Katie and Róisín for their endless love, continuous coaxing and infinite patience.

Introduction

This thesis is a celebration of my learning journey as I transform my understanding of my practice as a primary school teacher into my emergent living educational theory (Whitehead 1989). It tells the story of how, in forming a deeper understanding of my practice, I developed a living educational theory that is grounded in a living epistemology of practice. It embraces ideas around freedom, spirituality, holism, technology and community and how these elements can be nurtured through education. In presenting this thesis, I invite others to engage with my ideas, to respond to them and help me to continue my learning journey towards transforming education from a practice of domination as outlined by Chomsky (2000) into a practice of freedom (Freire 1970).

In this introductory chapter of my thesis, I will organise the text as follows:
1. What is this research about?
2. Why I did the research
3. What did I learn?
4. The potential influence of this research
5. An overview of the organisation of the material in this thesis

(0.1) What is this research about?

This thesis is a report of the research programme I undertook from September 2001 until September 2006. It is the report of the first stage of an ongoing enquiry. It tells how I, as a primary school teacher, have come to a deeper understanding of my practice, of why I work in the way I do; of how this understanding influences my work, and of the significance of this new understanding.

As I have chosen an action research approach for my research, my research is practice based, as outlined by McNiff *et al.* (2003), McNiff and Whitehead (2005b), Whitehead (1989), and Whitehead and McNiff (2006). As McNiff *et al.* (2003) explain, action research focuses on learning and embodies good professional practice and praxis; it will hopefully lead to personal and social improvement; it is a response to a social situation; it demands critical thinking and political intention and the focus is on transformation specifically within myself. I

have come to create my own living educational theory as outlined by Whitehead (1989) in the process of the research:

> In living educational theories the explanations are produced by practitioner researchers in enquiries that are focused on living values more fully in the practice of enquiries of the kind 'How do I improve what I am doing here?'
>
> Whitehead (in McNiff *et al.* 2003, p.165)

The thesis gives an account of my learning at both theoretical and practical levels as I learn how to live my values more fully in my practice.

For many years, in my professional life as a primary school teacher, my work practices have incorporated the creation of learning opportunities, in the form of collaborative projects with other teachers and people outside the classroom, which usually include aspects of information and communication technology (see http://www.iol.ie/~bmullets for examples of some of these projects). My research originally took the form of a quest to understand these work practices and their educational value. The focus of my research changed as my understanding of my work emerged and as I began to develop my emergent living educational theory, which I generated from my practice. I will outline this change of focus in greater detail in the course of this thesis. I will examine how the focus changed from being an investigation into the nature of internet based collaborative projects to how I developed an understanding of how traditional technicist approaches to learning can be inadequate for many students and what I need to do so that all students can celebrate their capacity to learn. This understanding has led to my emergent new epistemology that is located in dialogical, holistic and inclusional ways of coming to know. In the research process, I have developed an understanding around these collaborative projects such that I can now perceive them as processes for developing spirituality and holism in education, as I understand it. Palmer talks about spirituality in education thus:

> I see the ancient and abiding human quest for connectedness with something larger and more trustworthy than our egos - with our own souls, with one another, with the worlds of history and nature, with the invisible winds of the spirit, with the mystery of being alive.
>
> (Palmer 1998a, p.6)

Like Palmer, I see *connections* as being at the core of educational processes, where teacher and learner, teaching and learning are woven into a 'communal relationship' (Nakagawa 2000). I have learned that the projects that I undertake with my class and that feature strongly in my work practices, have gone some way towards enriching the connections between my students' and my own learning in intellectual, artistic and natural environments. I see how these projects gave my students and myself an opportunity to engage with one another and with other people in a holistic manner as we learn together, and how technology can enhance such connections. In my thesis I explain how technology can be seen both as a functional means of communication which tends to be a dominant conceptualisation (see Livingstone and Bovill, 1999; and see also Chapter Five of this thesis) and also as a form of communicative action (Habermas 1976) through which people can come to work together with social intent.

I am now also at the point where I can show how from beginning my research from the starting point of questioning the role of technology in education, I have extended my understanding of education through generating my living educational theory of practice. This new understanding is kernel to my claim to knowledge and is at the core of this thesis. I am now submitting this claim to knowledge to public scrutiny, in the hope that the claim will be validated, in relation to identified criteria and standards of judgement. One set of criteria is to be found in the academic regulations of the University of Limerick, my validating University, which state:

> A doctoral thesis must show evidence of independent enquiry, originality in the methods used and/or in the conclusions drawn and must make an appreciable new contribution to knowledge or thinking in the candidate's field.
>
> (University of Limerick 1999, p. 59)

I believe that my thesis demonstrates my capacity for independent enquiry, originality in the methods used and in the conclusions drawn while making a new contribution to thinking. I have supported this claim throughout the thesis with examples and evidence drawn from my practice. I demonstrate throughout, and particularly in Chapter Six, in testing the validity of my claim to original

knowledge, that I am engaging with the social criteria of comprehensibility, truth, sincerity and appropriateness as outlined by Habermas (1976) in relation to people engaging in communicative action. While addressing the academic regulations of the university I have also developed my own living epistemological standards of critical judgement (see Whitehead 2005a), which have been drawn from my ontological values, and I will use these throughout the thesis to test the validity of my claim to knowledge. (See the final section of this chapter and also Chapter Six for more details on my living epistemological standards of critical judgement).

I am claiming as my original contribution to educational theory and practice that I have developed an epistemology of practice which is informed by the fact that I know what I am doing in my practice and I know how I have come to practise in this way. I am claiming that I am developing an epistemology of practice that is grounded in dialogical, holistic and inclusional ways of knowing (Whitehead and McNiff 2006). I perceive the interconnectedness of people and their environment as a locus for learning and I believe that people can develop their own learning potential and create their own knowledge, through improving their capacity to establish and nurture relational practices. I believe that technology can be a vehicle for enhancing such interconnectedness and creativity. My new personal epistemology influences how I have come to reconceptualise my understanding of curriculum in a holistic manner, which includes 'the spiritual dimension in life', as suggested by the Primary School Curriculum (Ireland, Department of Education and Science 1999, p.9), as one of its key issues, through the use of dialogical and inclusional ways of knowing.

When I speak of 'dialogical ways of knowing', I am drawing on the thinking of Bohm (2004) as he talks about dialogue in terms of a flow of understanding that emerges between and through people. He describes how new understanding may emerge that was not present at the outset of the dialogue and that such emergent processes are creative and crucial to creating shared meanings between people. These ideas of Bohm's support my own thinking about dialogical ways of knowing, and I am suggesting that dialogue can play an important role in how educators think about education and how learning might be approached. I am embedding Bohm's (1980) ideas around fragmentation in my thinking about

dialogue also. Bohm (1980) talks about fragmentation in people's thinking and ways of being and of learning, and he says that attempts to live life in a fragmented way have brought about an imbalance such that many people now live in an environment on the brink of destruction. He also explains that fragmented thinking influences people in such a manner that they see life itself as a fragmented process. I perceive that dialogical ways of coming to know can diminish this sense of fragmentation that seems to influence many facets of modern day living, including education. I see dialogue as a form of holistic encounter, akin to Buber's (1954) ideas around seeing the whole person, as a 'Thou'. He says

> To be aware of a man [sic], therefore, means in particular to perceive his [sic] wholeness as a person determined by the spirit; it means to perceive the dynamic center which stamps his every utterance, action, and attitude with the recognizable sign of uniqueness
> (Buber 1954/1962 cited in Yoshida 2002, p.134).

Buber (2000) outlines two different modes of relationship: the 'I-It' and 'I-Thou' relationships. The 'I-It' relationship is an objective separate relationship where there is little human connection between the two people, and the subject and object are divided. 'I-Thou' relationships have 'no borders' (Buber 1970, p.56) and the 'I' and the 'Thou' are relational in a deeper communicative relationship. I am drawn to Buber's ideas as he acknowledges what he understands to be the essence of being human. I like to use the term 'human-ness' when referring to this sense of wholeness, where 'the "I and Thou" is a holistic, direct, mutual relationship with no subject/object separation' (Yoshida 2002, p.128). In my understanding, a key characteristic of 'human-ness' is that it is relational. The realisation of one's human-ness is the capacity to develop relationships where such relationships are grounds for personal growth. It is about engaging with wholeness of the person, accepting their human flaws and imperfections, as well as their strengths, as they create their identities in relation with others.

I am building on the thinking of Bohm (1980, 2004), Buber (2000) and Miller (1996), as I develop my living educational theory around dialogical, inclusional and holistic approaches to education. I am, however, developing and expanding on their ideas as I develop my living educational theory from my practice, as outlined by Whitehead (1989). My living educational theory is of a different form to

traditional forms of education theory that engage in educational discourses solely in conceptual terms (see Pring 2000) and that are generated from the traditional disciplines of education such as the psychology, philosophy, sociology and history of education. I am critical of education theory that is embedded solely in Cartesian and technical rational epistemologies. I understand Cartesian thinking to be a form of analytic thinking, as expounded by René Descartes, which 'consists of breaking up complex phenomena into pieces to understand the behaviour of the whole from the property of its parts' (Capra 1997, p.19). Descartes saw mind and body as separate entities and the universe as a mechanistic entity which could 'be understood through analysing it in terms of its smallest parts' (Capra 1997, p.19).

Similarly, Usher (1996) reminds us that the dominant view, in education theory, is such that research that is considered to be valid 'must come from being located outside of any context' (1996, p.9). Such forms of theory assume that abstract theories of education should be generated by academia and should inform the practice of teaching in the classroom (see Hiebert *et al.* 2002) (although teachers rarely draw from this research-based knowledge to inform their efforts, as noted by Huberman 1989 cited in Hiebert *et al.* 2002, p.3). My form of living educational theory follows the thinking of Whitehead (1989) and is based on the living, organic and dynamic elements that constitute my practice and my understanding of my practice. Living theory, as I understand it, is *live* as it draws on and informs organic, live engagements with real people in real live situations.

As I develop my living educational theory, I am aware that my embodied values-those values that inform how I live my life and why I live as I do - are being communicated in how I work and in how I understand my work. As my theory emerges from my practice, I gain clarity around my values and see them being transformed into the living standards of judgement (Whitehead and McNiff 2006) by which I can judge if I am living in the direction of my values.

I believe that a perception of the universe as something that is reducible to separate isolated components and which sees mind and body as separate (Miller 1996), and which informs a perception of people also as separate isolated components of a wider system from which they are separate, does not adequately address the

human-ness of students in the classroom or indeed the human-ness of the teachers either. Thomas (1998) explains that the academy's persisting faith in rationality has restricted the development of less conventional ideas around knowledge generation. Thomas claims that this faith is destructive of 'imagination, curiosity and innovation' in terms of educational research (1998, p.143). Despite Thomas's thinking, I am not necessarily choosing to reject the traditional abstract education theories which were drawn from the traditional disciplines of education. I, like Whitehead (2005a), perceive living educational theory to pertain to descriptions and explanations of my practice that include insights from the traditional disciplines of education 'without being subsumed within any of the conceptual frameworks …of the traditional disciplines of education' (2005a, p.7). Therefore, I incorporate the term 'inclusional' as characteristic of my emergent living educational theory to denote that I am choosing to include traditional abstract forms of education theory to assist my understanding of my emergent epistemology.

(0.2) Why did I undertake this research?
As I reflect on the reasons for undertaking this research, I am aware that the reasons are manifold, complex and interwoven. I will outline these reasons here in terms of (i) how I have theorised my practice, (ii) my desire to live my ontological values in my practice and (iii) how I have experienced myself as a living contradiction (Whitehead 1989). I explain how these elements come together to form strong grounds for my research which is driven by an intent towards developing a good social order, where people are mutually respectful of one another and where education is seen a pathway towards developing good social relations.

(i) How I have theorised my practice
Initially, my desire to engage with further research as I was completing my masters degree was embedded in the sense of enjoyment and satisfaction that I derived from my involvement with a masters programme in education. For my masters degree, I had investigated the role of internet based projects or Internet based Collaborative Projects (ICPs) in my work with my class (see Glenn 2000). Internet based Collaborative Projects invite collaboration between schools,

students, teachers and occasionally the wider community, utilising the internet and e-mail in the process. I had engaged in my masters programme (see Glenn 2000, 2005) in some investigations around these projects so as to establish their educational value, and these investigations provided me with my initial impetus for continuing my learning journey. (See examples of these projects online at http://www.iol.ie/~bmullets/patty.htm and http://inver.org/ceantar/).

I was drawn to an action research methodology by an intuitive sense that practitioner knowledge must be of value to other practitioners. Snow (2001), in her presidential address to the American Education Research Association, talks about the creation of a knowledge base of educator-knowledge that would be of benefit to other educators. I had perceived that much of the theory that informs education is of an abstract nature and frequently has little to do with the practical issues that arise in the everyday occurrences in the classroom. For example, in the professional education courses I attended as a trainee teacher in the early 1980s, Piagetian theories of education were considered to be kernel to successful teaching. Conway (2002) explains how much of the thinking behind *Curaclam na Bunscoile* (Ireland, Department of Education and Science 1971), was based on constructivist theories, especially those of Piaget. Yet, when I began to teach in a real classroom, I found Piaget's thinking to be somewhat redundant and sought unsuccessfully to locate examples of good practice that were located in *real* classrooms by real teachers to assist me in my teaching. Now, action research, where practitioners intervene in and improve their own learning (Whitehead and McNiff 2006), was providing me with real examples of good practice that has also been theorised. Action research was also giving me an opportunity to theorise my own practice and to share my thinking and my practice with others who were interested in hearing my story.

These were the initial reasons for engaging in this research: that I could theorise my practice and that I would continue my investigation of internet based collaborative projects. I had barely begun to engage with my research programme, however, when I realised that the reasons for undertaking my research were more complicated and more deeply rooted than my initial thinking had indicated: even though I had undertaken the research so as to evaluate internet based collaborative

projects, this focus began to transform into an emergent new epistemology for me as I began to develop my living educational theory. I no longer saw collaborative projects as being the focus of my research. Instead, as I began to engage in the critical thinking that is inherent in action research (see Winter's principles of *reflexive critique* and *dialectic critique,* Winter 1996, p.13), I began to query why I felt compelled to undertake these collaborative projects, to question what was amiss with a classroom without such projects, and how they influenced students' learning. As I asked, 'How can I improve my practice?' (Whitehead 1989) and 'How can I best understand my practice?' I began to encounter difficulties with questions of the kind, 'What is knowledge?' and, 'How do we communicate our knowledge?' and 'Whose knowledge is considered to be of value?' (see Apple 2001). Epistemological conflicts began to appear in my thinking as I struggled to clarify my emergent thinking on dialogical, holistic and inclusional ways of knowing while my epistemological stance was of a somewhat technicist nature at the same time. I struggled to answer the question, 'Why do I work in the way I do?', and I discuss how I learned from the difficulties surrounding this struggle in greater detail in Chapters One and Two. As I struggled I learned that I was the product of a system of education described by Chomsky (2000, p.24) that keeps 'people from asking questions that matter' wherein people 'learn to behave, how to dress appropriately, what type of questions may be raised [and] how to fit in (meaning how to conform)'. My practice reflected this internal confusion, with regard to my epistemological conflicts, as I grappled with new ideas with which I was then ill-equipped to engage. On one level I was encouraging my classes to engage with independent thinking and ways of working, while on another level, my own ability for critical or independent thinking was questionable. My thesis outlines how I began to address some, but not all of these epistemological conflicts through the research process, and through a newly developed ability to think critically to query the normative accepted rules (both written and unwritten; both personal and social) that governed my practice.

(ii) My desire to live my ontological values in my practice

I was drawn to an action research methodology for my research also because I knew that it was an approach that aligned the educational commitments of the

researcher closely to the researcher's own values. Whitehead and McNiff (2006) explain how

> We understand our ontological values as the deeply spiritual connections between ourselves and others. These are embodied values, which we make external and explicit through our practices and theories.
>
> (Whitehead and McNiff 2006, p.86).

The authors explain how the researcher's ontological values can transform into educational commitment. Bullough and Pinnegar (2004, p.319) also talk about the centrality of one's ontology in self study research in terms of one's being in and towards the world. I understand this transformation of my ontological values into educational commitment as drawing on my sense of morality and my capacity for creativity as I strive towards giving life to my values in my everyday dealings with others. Raz (2001) describes how a value continues to be an abstract concept until it makes meaning in someone's life and is transformed into living practice. I believe that attempting to give life to my embodied values in a practical way in my practice, is a challenging way to live. It challenges my own moral commitment to people and to my work as I ask myself, 'Am I living in the direction of my values?' The transforming of ontological values into everyday actions and work implies a moral commitment to living in the direction of my values and working towards better ways of being and relating to people.

These were the ideas that attracted me to engaging in action research; I was drawn to the idea of 'deeply spiritual connections' (Whitehead and McNiff 2006, p.86), the sense of holism and being at-one with the world, that was embedded in them. Yet, as I began to engage in the processes of my research, I realised that not only did I experience difficulty with living in the direction of my values; I also found it nearly impossible to articulate what I understood my values to be. I will outline in greater detail in Chapter Two the difficulties that I encountered with articulating my values, despite my enthusiasm to live my life in their direction. Whitehead explains how in the course of an enquiry or a research process, the meanings of ontological values are clarified in the course of their emergence into practice (Whitehead 2005a). I experienced this clarification process as I engaged with my research and for now, my understanding of my ontological values is such that I can

say that I value love. Enmeshed in this conceptualisation is my engagement with the human-ness of people in terms of experiencing the wholeness of the person as outlined by Miller (1996), Yoshida (2002) and others. When I refer to this engagement, I am not thinking of a utopian engagement that presumes that all people 'live in peace, love one another and are free from … want of any kind' (Berlin 1990, p.20). Berlin (1998) explains that such Utopias assume that the human condition is static and therefore 'can prove literally fatal' (Berlin 1998, p.12). I agree with Berlin as he dismisses unrealistic utopian stances, and instead recognise that life is full of conflict and people live by many different sets of values. As part of the recognition of the human-ness of people I attempt to recognise people for who they are, not what they are. Therein, I locate my value of nurturing dialogical (Bohm 2004), holistic (Miller 1996) and inclusional ways of knowing (Whitehead 2005) and the relationality of education to present-day life processes (Crowell 2002). These values are embodied within me and in my practice. The way I work is a tentative demonstration of how I am coming to understand and articulate my values and this thesis contains the evidential base for these claims. I am aware that these values may be altered, re-shaped and transformed with each encounter I have in my life, but for now, this is how I understand them. This thesis is an articulation of my present best thinking (McNiff 1993).

My ontological values inform my work practices and my relationships with others, and they also provide me with guidelines to assess the validity of my work. Whitehead (2005a) explains how my embodied values can be transformed into the living epistemological standards of critical judgement that can be used to establish the validity of my claim to knowledge here in this thesis. These standards, along with the traditional criteria established by the university as outlined earlier, will help demonstrate that my claim to knowledge is valid. I believe that I demonstrate academic rigour throughout this thesis, as outlined by Winter's (1989) criteria of reflexive critique, dialectical critique, risk, plural structure, multiple resources and theory practice transformation (see Chapter Six for more detail around demonstrating the validity of my theory). I show the methodological rigour of my research, and my research account by focusing on issues of establishing the validity of my tentative knowledge claims.

(iii) I undertook this research as I experienced myself as a living contradiction

Whitehead (1989) talks about how one can experience oneself as a living contradiction, when one's values are not being lived out in their lives or their practice. He also suggests that the space in which one experiences oneself as a living contradiction can provide the researcher with a good starting point for their research as they ask, 'How can I improve my practice?' For me, this was a holistic way of working and it was of the key aspects of why I chose to undertake my research. As I sought to gain understanding around my practice, I experienced conflict between what is perceived to be the normative expectations of teaching as completing textbooks, and my own ontological values around love and nurturing holistic relationships in learning. Much contemporary classroom life appears to revolve around completing textbooks (see Carr and Kemmis 1986), learning by rote and filling in workbooks, in spite of the policy recommendations by bodies such as the Department of Education and Science (see Ireland, Department of Education and Science 1999) and the National Committee for Curriculum and Assessment (see NCCA 2005) that recommend a child-centred curriculum that is grounded in enquiry learning. The recent evaluation of the implementation of the Primary School Curriculum by the inspectorate supports my view (Ireland, Department of Educational and Science 2005) and includes the following comment:

> Textbooks exert a dominant influence on teaching and learning in a significant number of classrooms. In these class settings the teaching tended to be didactic, and undemanding and repetitive learning tasks were provided for the pupils. There was little emphasis on the development of higher-order thinking skills, on nurturing pupils' creativity, or on encouraging pupils to respond emotionally and imaginatively. Teaching methodologies were restricted… and pupils were not sufficiently interested or engaged in their learning.
> (Department of Educational and Science 2005, p.49)

I perceived that this finish-the-textbook approach to education not only closed down the learning process for many students, it was also incommensurate with my ontological values around engaging with the human-ness of the children in my class, of nurturing dialogical and inclusional ways of knowing and of making connections between the classroom and community and the natural environment

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outside. I was experiencing what Conway (2002) describes as the dominance of technical and transmission-oriented discourses with regard to pedagogy in Ireland and what Lynch (1999) refers to as a system that is problematic. My understanding of these transmission-oriented discourses is that they can restrict learning, whereas if I live and work in accordance with my values, I see learning as being emancipatory and child-centred (see also Montessori 1949, Dewey 1938). As I became aware of myself as a living contradiction, I perceived the space between my ontological values and the living out of my values as a space of creative tension that gave direction and inspiration to my research. This was an energising experience for me, as I saw this incommensurability as an indication of my own human-ness; as the space between my values and my practice, between what is and what might be.

This sense of celebrating my human-ness as a form of glorious imperfection (see Berlin 1990), as I experienced myself as a living contradiction, became a very important aspect of why I undertook my research. I looked to my own values to see how they might be best lived out in my practice and then explored the areas in need of the most improvement. I acknowledged my own imperfections and human frailty (Arendt 1998) as part of this process. As I sought to theorise my practice, the sense of acceptance of my own imperfections and frailty were transformed into a desire to engage with the human-ness of those I teach. Traditional technicist approaches to learning, such as those outlined by Skinner (1978) and Thorndike (see Zimmerman and Schunk 2003) that are embedded in an objectivist epistemology understand knowledge to be external to the knower and that the student is an empty vessel waiting to be filled (Locke, cited in Mathis *et al.* 1970, p194). The human-ness of the student (in terms of their wholeness), their own individual learning strengths and weaknesses (see Gardner 1993), their inherent possibility for growth and their capability to become independent learners, all seem to be disregarded or inadequately acknowledged by technicist perspectives. Like Burgess, I see the traditional organisation of formal education as being 'inimical to learning, involving as it does prescriptive, assessment-driven curricula, age-bound grouping and the remorseless provision of answers to unasked questions' (Burgess 1998). Yet, as I engaged with the ideas of experiencing myself as a living contradiction, and as I saw these ideas being

transformed into what was emerging as my living educational theory. I saw that the children I teach frequently 'fail' to conform to the expectations of attaining certain grades, of learning by rote and by rejecting transmission models of teaching (Holt 1970). Instead of dwelling on how the system was failing the children and how the children were perceived to 'fail' within the system, I chose instead to examine approaches to education that would celebrate the human-ness of each student; the imperfections that make us each individual, as I developed an epistemology of practice that acknowledged the human-ness of each of the students as, together, we developed personal and dialogical ways of knowing.

As I engaged with these life-enhancing ideas around celebrating my own imperfections as pertaining to my understanding of what it means to be human, I developed a living educational theory that addresses the human-ness of those I teach. Like Miller (1996), I see how the relationships that are developed in an educational setting can influence a wider society:

> If nature is dynamic and interconnected and our education system is static and fragmented, then we only promote alienation and suffering. But if we can align the institutions with interconnection and dynamism, then the possibilities for human fulfilment increase greatly.
>
> (Miller 1996, p.3)

I perceive my research as going some way to promoting this interconnection and dynamism. My hopes are that practitioners in institutions may be influenced and encouraged by my research. The story of my research as narrated in this thesis outlines how I have promoted such interconnections and how it might influence the development of new institutional epistemologies (Schön 1995).

(0.3) What have I learned?

In the course of my research I have gained a deeper understanding of my work practices in that I now understand why I am drawn to creating projects for my class that include technology and extend the learning environment to people and places outside the classroom walls. I know, now, that I engage in such practices because I have learned that traditional dominant forms of knowledge are frequently of a technicist nature (Carr and Kemmis 1986) and can shut down learning (Gardner 1993) and suppress free and critical thinking for many. These insights have also helped to bring about an enormous epistemological change in

me, which has influenced my practice such that it has now transformed into a form of praxis, that is, action that is informed by reflection with the aim to emancipate (Kincheloe 1991, p.177). In this section I offer explanations and descriptions of what I have learned in the course of my research programme. I will discuss my learning under the following three sections, as I perceive these to be kernel to what I have learned and how I have learned in terms of: (i) my epistemological transformation, (ii) how I have become a critical thinker and (iii) how these elements have influenced my practice so that it has now become a form of praxis which has the potential of carrying my hopes for education.

(i) My learning as the grounds for my epistemological transformation

My learning has been of an epistemological nature primarily in that I have reconceptualised how I perceive issues pertaining to knowledge, knowledge generation and the kinds of relationships that can foster knowledge generation. I have learned that many of the dominant traditional conceptualisations of knowledge are of a technical rational nature and these can frequently restrict creative and dynamic forms of learning (see Lynch 1999). I believe that many of these restrictions are located in the inadequacy of technical rationality to recognise that people are human beings and therefore are unpredictable and in process (Miller 1996). I have shifted my epistemology from locating knowledge solely in an externalist and objectivist perspective to an organic, dynamic, personal, dialogical yet inclusional perspective. My new epistemology is exemplified in the relationships that I nurture with and for my class and in particular, through the projects we undertake. I perceive that this epistemology can be liberating for teachers and students alike when embedded in educational settings.

I have also learned how technology can assist me as I endeavour to create learning environments that nurture holistic and dialogical ways of knowing. Perhaps at some tacit level, I was initially drawn to the use of technology for this reason. I know now that I use technology in a manner that I believe enhances learning. When I speak of enhancing learning, I am not specifically referring to raised standardised test scores, as much of the educational research literature does (see Sandholtz *et al.* 1997, Kulik 1994 and Wenglensky 1998) although sometimes, my classes' test scores *are* raised. Instead, I am referring to how technology can

enable holistic forms of learning (through presenting work in multimedia format perhaps instead of text solely, for example) and the making of connections between classrooms and the world outside (through e-mail or web based connections, for example). Eisner (1997) talks about the 'potential of other forms of representation for illuminating the educational worlds we wish to understand' (1997, p.4). I am developing ideas around how technology can enhance personal forms of knowing (Polanyi 1958) and how technology can be emancipatory and person-centred. Brown and Duguid (2002) explain how the social context helps people to understand how they might best use technology. My understanding of how I use technology is that I use it to enhance and strengthen the connections I endeavour to make between my classroom and the world outside. The NCCA (2004) report states:

> Today, students can collaborate in real time with their peers and with experts, on global or local projects, via email, interest groups, discussion fora and so on. Video conferencing is a valuable means of communication where literacy barriers may have prevented communication in the past. Opening up the classroom to the wider world in these ways provides students with a stimulus to communicate for real purposes, and also to examine the appropriate forms of communication for the audience.

(NCCA 2004, p.54)

Palmer (1993) talks about the spirituality of education that assumes that there exists a 'hidden wholeness on which all life depends' (1993, p. xix). He perceives 'that intellect and spirit would be one, teachers and learners and subjects would be in vital community with one another, and a world in need of healing would be well served' (1993, p. xix). In a similar manner, O' Donohue (2003) talks about the 'web of betweenness' which exists as 'the secret oxygen with which we secretly sustain each other' (p.133). I believe these ideas are pertinent to my thinking around connectedness and spirituality in education as I strive to create opportunities for making 'webs' between my class and others. O'Donohue's use of the word 'web' is especially pertinent here as many of the connections that I create for my class frequently make use of the world wide web to facilitate these relationships.

As an educator, my epistemological stance is kernel to how I teach, to the relationships I nurture in my classroom and to how my classes learn. Apple (2004) talks about how schools are mechanisms through which power is maintained and how teachers frequently and unknowingly are the conductors of such power. The idea of the power-constituted nature of such relationships is commensurate with Foucault's (1980) thinking that locates power in the capillary-like actions within the relationships that people have with one another. When I examine how traditional epistemologies operate in classrooms, I see many examples of power/knowledge tensions. In traditional epistemologies, knowledge is perceived to be external to knowers and therefore the holder of the knowledge has power over the non-knower. Here, when I use the term 'power', I am drawing on Woehrle's (1992) understanding of power as domination or 'power over'. Woehrle (1992) sees power in three forms: 'power over', 'power to' and 'power with'. In traditional pedagogies, practices that are embedded in 'power over' relationships, locate the teacher as the knower; as the powerful one, and the student as the one who is powerless and acquiesces to the 'power-over' constituted nature of the classroom. The notion of the power-wielding teacher seems to be nearly Dickensian in an Ireland of the twenty-first century, yet, traditional epistemologies, which espouse didactic methodologies, are still considered to dominate educational discourses in this country, as highlighted by the *Evaluation of Curriculum Implementation in Primary School* report (Ireland, Department of Education and science 2005). Freire talks about the nature of control-oriented relationships in learning thus:

> ....knowledge is a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing. Projecting an absolute ignorance onto others, a characteristic of the ideology of oppression, negates education…
>
> (Freire 2003, p.58)

Learning, in such conditions, can be difficult for children who find rote-learning difficult; who have difficulty relating to transmission models of learning; who want to develop their own personal knowledge and for those who feel diminished by situations that are dominated by relationships of power and control. It is important here to explain that while I perceive 'power over' relationships, those that seek for domination over others, as being harmful to the learning process, I

believe that 'power with' relationships are important to nurture. If one understands 'power with' relationships (Woehrle 1992) as forms of personal or collective empowerment; then these are crucial for people as they develop their capacity to work towards realising their own potential and to be enabled to work towards it. Freire called this a 'liberating education' (Freire 1970) as he strove towards transforming education from a practice of domination towards a practice of freedom.

I believe that my new epistemology of educational practice goes some way to re-balancing educational relationships. If, through engaging in dialogical and holistic ways of knowing, all participants can participate equally in the conversation and everyone is listened to with respect, the dynamic of the power relationship shifts. Like Bohm (2004), I see how in dialogical ways of knowing, people are not 'playing a game against each other, but *with* each other' (2004, p.7) and learning can take place when people 'are able freely to listen to each other, without prejudice' (2004, p.3). In engaging with dialogical and holistic ways of knowing, the teacher is not perceived to be the only 'knower' and no longer do textbooks provide the sole answer to questions. Each person, whether a teacher or a student; a community member or a distant communicator by e-mail, is of equal status and they use their power in a manner that respects the other and enables others also to use their power of agency. Like Capra, I see the world as an 'integrated whole rather than a dissociated collection of parts' (1997, p.6).

(ii) My learning as I have become more critical in my thinking

As I embarked on my research programme, I was unable to engage in critical thinking in great depth. I was unable to question the 'givens' that were embedded in how I taught and how I thought about teaching. Finishing textbooks and completing workbooks were normative expectations in the classroom and I, too, strove to fulfil these expectations. I rarely stopped to reflect on such practices or to question their value. Apple (2004) explains:

> There is nothing very odd about the fact that we usually do not focus on the basic sets of assumptions which we use……they are very difficult to formulate explicitly…However, if we are to be true to the demands of rigorous analysis, it is a critical enquiry into just such

things as the routine grounds of our day to day experience that is demanded.

<div align="right">(Apple 2004, p.120)</div>

However, because I have now undertaken to engage in practitioner research and to investigate my practice, I have had to engage with questions of the kind, 'How can I improve my practice?' (Whitehead, 1989) and 'How can I best understand my practice?' The difficulties that arose for me, as I grappled with these questions, were significant and I will outline these difficulties in greater detail in Chapters One and Two. I now realise that my inability to question my work practices and to engage in any but the most superficial forms of critical thinking were embedded in a lifetime of acquiescence to the norms that govern teaching at primary level. Freire (2003) suggests that schools promote obedience and passivity, that teachers learn how to conform and learn not to question and that these values are then passed on to students:

> And since men [sic] "receive" the world as passive entities, education should make them more passive still, and adapt them to the world. The educated man [sic] is the adapted man, because he is better "fit" for the world.

<div align="right">(Freire 2003, pp.60-61)</div>

I have now learned that I subscribed to and endorsed the normative practices of such a system and that I had conformed to the norms of this system to such an extent that I was nearly inarticulate around being able to critique it or to explain my practice. Carr and Kemmis (1986, p.2) remind us that despite teachers having better qualifications than ever before with more opportunities for professional development, the profession continues to be conformist. This thesis explains how I have transformed myself from being an unquestioning conformist to being an agent in the creation of my own life.

One of the main areas of growth in my learning has been in how I am now more adept at thinking critically. I have also learned the importance of critical thinking. Like Freire, I have come to see how:

> Bureaucracy annihilates creativity and transforms persons into mere repeaters of clichés. The more bureaucratised they become, the more likely they are to become alienated adherents of daily routine from which they can never stand apart in order to understand their reason for being.

(Freire 1998, p.117)

As I began critically to engage with my work practices, it became clear to me that a dissonance existed between my practice and my values around love and caring relationships. I saw that an injustice was being perpetrated on the children in my classroom as they were expected to conform to the norms of a standardised education system, to absorb meekly the knowledge that was to be transmitted to them (Brown 2002) and to be voiceless in a system that appears to value them mainly for their future contribution to our economy (Greene 2003). I saw how my blinkered understanding of my work practices had contributed to the closing down of learning opportunities for them. As I developed my ability to think critically, I saw that I was developing ways of teaching that helped to overcome these issues (Freire 1970). I learned that completing workbooks and finishing textbooks was perhaps not the best way of learning for many students and so became confident enough in my own work to abandon many workbooks.

Questions of the kind 'Why do I do what I do?' or 'How can I improve my practice?' (Whitehead 1989) that are kernel to action research, form part of the process of critical thinking. Tormey (2003) draws on the thinking of Freire, as he outlines the connections between critical thinking and action. He suggests that critical thinking 'would enable people to see through the myths, veils and lies of ideology to the truth of their situation in the world. This, in turn, would give people a basis for acting to change their world' (Tormey 2003, p.215). I believe that my own new-found ability to engage in critical thinking has inspired my own action as I am now developing an understanding of my practice and am clarifying my values in the process of the research. McLaren (2003) says that the dialectical nature of critical thinking enables the researcher to perceive the school not 'simply as an arena of indoctrination… or a site of instruction' but more as a 'cultural terrain that promotes student empowerment and self-transformation' (2003, p.70). My new understanding of my practice and the clarification of my values has influenced my work practices as I attempt to work in the direction of my embodied values in that I now perceive my classroom as a location for creative work, for caring relationships and for self-transformation (see Noddings 1999).

Laidlaw's (2002) ideas about how theory can help people understand what they are doing in terms of reasons are pertinent here, as the connections between theory and practice, between critical thinking and action become more apparent. As Whitehead and McNiff (2006) explain, a generative transformative process takes place between theory and practice. I see this process in how my living educational theory emerges from my practice and how my practice in turn is informed by my living educational theory. Coulter and Wiens (2002) explain how a theory-practice divide exists, and argue for moving from debates about theory and practice to how all educators can foster good judgement. They cite the work of Arendt (1964) to support their ideas around engaging in thinking and acting, without privileging either. I perceive similar transformations taking place between my critical thinking and my action as my ability to engage in critical thinking highlights the inadequacies of the system in which I work. I see, as part of my participation in living theory processes that I experience myself as a living contradiction, where my work practices are not commensurate with my ontological values. In action research approaches to research, this experience suggests an action. For me, this action is often in the form of praxis and this praxis forms the basis of the third major area of learning for me. I will discuss these ideas in the next section.

(iii) My learning around how epistemological change and critical thinking have influenced the development of my practice so that it has now become a form of praxis

Theory can inform practice and practice, in turn, can inform theory in a cyclical manner, according to Carr and Kemmis (1986). This process can then generate new theory. Praxis, according to Carr and Kemmis (1986, p.33) is 'informed action which, by reflection on its character and consequences, reflexively changes the "knowledge-base" which informs it…praxis is "doing-action" …it remakes the conditions of informed action and constantly reviews action and the knowledge which informs it'. Praxis has become what I now perceive to be a natural progression as I develop a new epistemology, clarifying my values and engaging in critical thinking. I am drawn to the holistic nature of theory and practice as they influence one another in an ongoing dialectic (Carr and Kemmis 1986, p.33) as I develop my living educational theory. My practice influences my emergent living theory, and as I clarify my embodied ontological values in the process of

developing my living theory, they are turned into the living epistemological standards of judgement which I will use to test the validity of my claim to knowledge (Whitehead 2005a). As I test my living theory, it influences my practice as I strive to improve it, and thus the holistic cycle of praxis begins again.

I am aware that my own human frailty and the frailty of those with whom I work (Arendt 1998) frequently disrupt the transformational flow between my embodied ontological values, my practice and the living theory that emerges from it. It would be dishonest of me to say that my praxis emerges in a smooth and faultless manner. Sometimes, being human, being tired, or irritable or being less than compassionate interrupts the flow of praxis. Yet this interruption, this human intervention, sometimes gives rise to reflective moments which can change the knowledge that originally informed the praxis.

The theory/practice dilemma is discussed by Carr and Kemmis (1986) who suggest it is one of the most powerful beliefs upon which conformist uncritical thinking in educational discourses rests. They explain the dilemma thus: practice is considered to be what teachers do in their everyday work while theory is produced by researchers through their enquiries. They call for critical reflection on these and other assumptions that have become normative in educational discourses. Schön (1995) also problematises the theory-practice dichotomy and calls for a new epistemology that takes account of practice based theory. McNiff (2005) takes Stenhouse's (1975) idea of 'teacher as researcher' further and calls for public discourses to engage with the idea of the practitioner as theorist (McNiff and Whitehead 2002) and teacher as theorist (McNiff and Whitehead 2005b).

 I believe that my research, as outlined by this thesis, is such that I am a practising teacher who is also a theorist and this has been one of the greatest areas of learning for me. My research is part of what Boyer (1990) termed the 'new scholarship' as I develop my living theory and epistemology of practice. Traditional research, according to McNiff (2005c), is drawn from an epistemology that aspires to categorise and analyse using a propositional form of logic. It is frequently of an abstract and objective nature. My research is of a different form. Much of my learning is in the form of the realisation that I am a theorist who engages in

practice and a practitioner who is able to theorise my practice. I have found this to be an emancipatory life-affirming experience as I have developed a confidence around my ability to engage in critical thinking, to learn to clarify my values in the course of my practice and to develop a sense of connectedness, spirituality and creativity in my work.

(0.4) The potential influence of my research

I believe my research is important to others because I am developing an epistemology of practice that is different from the traditional propositional epistemologies on which our education system is based. Traditional epistemologies view knowledge as being external, objectified and separate from the knower (see Thomas 1998). Such epistemologies are embedded in the traditional technicist discourses that uphold our education system (Conway 2002). Capra (1997) talks about the fragmented nature of Western thinking. Such fragmentation can also be found in educational settings. I see traditional epistemologies, as they draw on a Cartesian legacy, supporting such fragmentation. Evidence of fragmentation can be seen in technicist approaches to learning, in how knowledge is perceived as being external to the knower, in our schools that divide students by gender, age or ability, in the Irish curriculum as it divides learning into discrete subject areas and even in our timetabling as learning is divided up into periods of thirty or forty minutes (Miller 1996).

My epistemology, while recognising and valuing objective forms of knowledge, is of a different nature in that I perceive knowledge also as being embedded in the knower; a personal knowledge as described by Polanyi (1958). I also understand that knowledge is organic and dynamic and can be generated within and from dialogical and dialectical relationships as outlined by Bohm (1980 and 2004). I also understand that holistic ways of knowing, that are attuned to the wholeness of the person and are connected to human community and the environment, are kernel to balanced and inclusional epistemologies (Nakagawa 2000). I believe, therefore, that my emergent epistemology goes some way towards diminishing the fragmentation that Bohm (1980) has observed and the embedded technicist discourses outlined by Conway (2002).

This is a different epistemology to traditional thinking around knowledge and knowledge generation that underpin much classroom work and educational policy. Much thinking around knowledge in schools is from a behaviourist and cognitive perspective. Skinner (1968), one of the primary proponents of behaviourism, recommends the use of reinforcers to control behaviour in the classroom. He suggests that learning will take place as the 'arrangement of contingencies of reinforcement under which children learn' (1968, p.64). He explains also how 'children do not learn much from the natural environment' (1968, p.131). This practice of presenting learning in small steps, undertaking tasks in sequence and rewarding success is common in many classrooms. Piaget proposed a schema-based theory of cognitive development (see Piaget 1972) which informed much of the thinking behind curriculum in Ireland until recently (Ireland, Department of Education and Science, Curaclam na Bunscoile 1971). The understanding here is such that knowledge is about the construction of meaning and is constructed by people's actions and experiences with the world. While both behaviourist and constructivist perspectives have influenced how teaching and learning in Ireland are conceptualised, and Curaclam na Bunscoile (1971) would have promoted a constructivist approach, Conway (2002) maintains that transmission models of learning continued to remain dominant.

Not only is my emergent epistemology different to the behaviourist/constructivist models outlined above, it also implies a different type of dynamic in the classroom, one that perceives the student as a valid knower in their own right. Freire (2003) describes this well: 'The teacher is no longer merely the-one-who teaches, but one who is himself [sic] taught in dialogue with the students, who in turn while being taught also teach. They become responsible for a process in which all grow' (2003, p.63). The following example helps to elucidate such ideas:

Fig. 0.1 A screen shot of our *Holiday Brochure* project

The screen shot here at Fig. 0.1 is from our *Holiday Brochure* project. I believe that my living educational theory is important for the learning of my students, as they become potential knowledge creators in their own right. In our *Holiday Brochure* project the class designed their own (not entirely factual) brochures, promoting their locality as a possible holiday destination. They used a digital camera to take their photographs and used web page design software to make their web pages. They presented the project on the internet at http://www.iol.ie/~bmullets/brichure/index.html. In the practice of my classroom, I see how my emergent dialogical, holistic and inclusional epistemologies were the inspiration for these practices where the children took charge of their own knowledge generation.

The students also explored their learning in an open and creative manner as they chose their own topics for study and used technology to help them record and express their work. The class also engaged in ways of learning that appeared to be commensurate with their own learning strengths and styles as they chose themselves to present their brochures with an emphasis on pictorial recording, or to record their project in text or a mixture of both, as they so chose. Margaret, one of the students involved in the project commented, 'I prepared my brochure on the river beside our house. I never knew that was a legend about it. I think my

photograph is really beautiful. I hope people look at our brochures and see how great our area is…' (data archive, 2/03/2003). I believe that this is an important aspect of my research because it demonstrates how my practice has moved away from the traditional didactic models of learning, whereby I might have 'taught' elements of local geography and expected a formal essay to establish if the class had learned what I taught them. I believe that the brochure project enabled the children to engage in forms of learning that acknowledged their own potential as knowledge generators. I am also aware that I too was a fellow learner along with my class of eleven year olds as I learned elements of local geography and history that I had not known before. Whitehead (2005a) talks about how the influence that one person attempts to exercise on another is mediated by the other's originality of mind and capacity for creative critique. I can see how, by giving the class the opportunity to create their own brochures, they began to influence one another. They also influenced me and my learning and in this thesis I am inviting other teachers to engage with these ideas also, to take these ideas and mould them to their own needs.

I perceive my research to be of importance for many adults as I share my living educational theory with them. I am aware however that the Cartesian legacy that sees mind and body as separate is deeply embedded in normative thinking. Callan (1997) claims that 'the reality of school-learning can be profiled with such descriptors as "primarily didactic in nature, the teacher is the primary initiator, students work alone; lessons are structured around content with a focus on factual content…"'. The concept of transmission of knowledge, whereby a teacher is transmitting the knowledge to the students is an 'excellent example of the Behaviorist model of learning' according to Forrester and Jantzie (1998, p.3). They continue to explain that examinations as the measurement of observable behaviours of learning, the use of rewards and punishments in our school systems, and the breaking down of the teaching into small steps, can be traced to Skinner, Thornndike and Pavlov. These ideas do not address the human-ness of the student and perceive knowledge as something external and are deeply embedded in how people think today. Polanyi (1958, p.381) talks about 'crippling mutilations' in reference to the embedded nature of such objectivist thinking in our society. Yet, I share my thinking with others and see the transformational potential as my

ontological values are expressed in my practice and my living educational theory is shared with others (Whitehead and McNiff 2006). I believe, as I share my practice and my emergent living educational theory, that my research has the potential to encourage educators to question their practice, to critique why they do what they do and to re-examine their own epistemological stance. This would be a generative transformational process (McNiff 2005a), where my own key ideas would grow and be transformed as others engage with them and transform them.

I believe that my research also holds potential for policy implementation and change. I have developed a new conceptualisation of curriculum that may be of importance to other educators and policy-makers. I acknowledge that the principles promoted by *Curaclam na Bunscoile* (1971) to 'promote the full and harmonious development of the child and to make due allowance for individual difference' are in keeping with my own ideas around curriculum. The principles of the (new) Primary School Curriculum (Ireland, Department of Education and Science, 1999, Introduction) are similar: 'celebrating the uniqueness of each child and ensuring the development of the child's full potential'. However, I am also aware that discourses in Irish education have paid little attention to critiquing curricular issues (Conway 2002) and that there is little evidence of these ideas being embraced, as yet, by teachers (see Murphy 2004).

I am drawing on the ideas of Stenhouse (1975) and Elliott (1998) and from their work understand curriculum as being organic, dynamic and alive in terms of being a creative conversation between the teacher, the student and their context. I am developing an alternative interpretation of curriculum and I am inviting others who are involved in education to engage in critical reflection about their work and to liberate their thinking about curriculum and educative processes (see Morgan 2002). Whitehead talks about the process of 'educating a social formation' (Whitehead 2005b) which he describes as 'a social formation's learning to live values that carry hope for the future of humanity more fully in the rules and processes that govern its social organisation' (2005b, p.9). Some of the bodies involved in educational policy in Ireland such as the National Council for Curriculum and Assessment (NCCA), the National Centre for Technology in Education (NCTE) and the Irish National Teachers Organisation's Professional

Development Unit (INTO PDU) are embracing aspects of my work practices in their documents (see INTO/NCTE 2005 and NCCA, forthcoming for example). Some of the projects I have done with my classes have been used as exemplars to demonstrate creative engagement with the Primary School Curriculum and many of my ideas are now embedded in courses for teacher professional development. I believe I am beginning to make a contribution to the education of social formations (see Chapter Seven for more details of my contribution to the education of social formations). I believe this research has the potential to change the social order in our Irish education system in a manner whereby educational values are more fully lived. In my research I am demonstrating and explaining this change from the praxis of my classroom, from my re-interpretation of curriculum and from my emergent epistemology of practice. Crowell (2002) explains: 'Both teaching and learning are part our very humanity. They must somehow address who we are, not just what we know' (2002, p.14). Through my living educational theory I remind myself and invite others to remember our human-ness to engage in practices that address who we are and not just what we know.

(0.5) An overview of the organisation of the material in this thesis:

Here is an outline of the chapters contained in this thesis. Its structure is based on McNiff and Whitehead's (2005) interpretation of an action-reflection cycle, and the organisation of my chapters reflects the process of such an action research cycle:

- What is my concern?

- Why am I concerned?

- How do I gather evidence to show reasons for my concern?

- What do I do about the situation?

- How can I check whether any conclusions I come to are reasonably fair and accurate?

- How do I evaluate the validity of my account of learning?

- How do I modify my practice in the light of my evaluation?

- How do I explain the significance of my work?

<div align="right">(McNiff and Whitehead 2005b, p. 3)</div>

Chapter One of my thesis asks 'What were my concerns?' and implicitly examines the background of the research. The chapter opens with a description of how, originally, I believed that a technicist approach to teaching and learning was not only the best but was in fact the only way to teach and learn. The shattering of this illusion and the learning that occurred for me are the key issues here. In this chapter, I offer an outline of my work contexts and how the research I undertook for my masters degree provided me with the starting point for this research. The chapter also outlines the epistemological conflicts that began to emerge in my thinking, and their realisation in practice, as I begin to discover ideas about dialogical ways of knowing. Drawing on the work of Mellor (1998) I describe the 'struggle' I experienced at this initial stage of my research. As I engaged with the question 'Why am I working in the way I am working?' my understanding of my difficulties began to emerge. This chapter contains ideas drawn from the writing of Chomsky (2000) around how teachers can be indoctrinated so as to become obedient and uncritical. The chapter concludes by saying that while I could not yet understand why I was working in the way I did, my understanding of my inability to articulate my explanations was beginning to emerge.

Chapter Two asks 'Why was I concerned?' which implicitly examines my understanding of my practice as I clarify my ontological values. I describe why I was concerned in terms of the dissonance I experienced between the external world of filling in workbooks and completing textbooks, and my own internal values around love and caring relationships in education. The chapter then outlines my values and how they have emerged and been clarified as I engage in the research process. I discuss what 'experiencing oneself as a living contradiction' (Whitehead 1989) means for me.

I came to realise that my engagement with projects that embraced technology, was a movement towards diminishing the injustices brought about by fragmented approaches to learning (Bohm 1980, Miller 2002, Nakagawa 2000) and banking

systems of education (Freire 1970).The chapter also outlines how I see the Primary School Curriculum (Ireland, Department of Education and Science1999) as being commensurate with my own embodied ontological values, although this is not unproblematic. The chapter concludes by saying that I have chosen to take action against the frequent injustices of technicist approaches to education and to take action towards creating opportunities for learning in a dialogical and creative way as I develop a better understanding of my practice.

Chapter Three addresses the question 'What could I do about my concerns?' and examines issues around methodology. I explain how in the process of investigating my practice, I developed an emergent living educational theory from my practice (as defined by Whitehead 1989) in the form of an epistemology of practice, which is informed by the fact that I know what I am doing in my practice and I know how I have come to practise in this way. I then outline how I was drawn to the literatures of action research, recognising that there were conflicting accounts in the literature around action research. I discuss Whitehead's (1989) ideas around living educational theories, embodied values, communicable standards of practice and judgement and the meaning of questions of the form 'How do I improve what I am doing here?' I explain how, as my new epistemology evolved and changed, so too did my research questions. The chapter also summarises my claim to knowledge and I state my research question and address ethical issues and issues of securing permissions for the research.

Chapter Four asks 'What did I do about my concerns?' and gives descriptions and explanations of my practice. It explains how I took informed committed action to developing a praxis as a result of my understanding around my concerns and why I was concerned. My praxis took the form of developing an understanding of my work that emerged as my claim to knowledge. I am claiming that I have developed an inclusive epistemology of practice that is embedded in dialogical and holistic ways of coming to know.

My committed informed action took the form of developing an understanding of my work practices and creating an original living theory of practice from them.

The recurrent themes that emerged in my research have given meaning to what I do and why I do it and I describe how they have bearing ultimately on the creation of a better society.

Chapter Five asks how I can use technology to enhance a holistic and inclusional epistemology. It examines some of the current debates around computer-based communications. The chapter also outlines how, frequently, the literatures around holistic approaches to education engage very little with the role of technology and similarly, the literatures of technology generally do not address spirituality in education, connectedness or holism. My understanding is that technology can and does enhance holistic approaches to education and I support this claim with examples from my practice. I explain how I perceive technology not as an 'add-on' discrete subject in an already over-loaded curriculum, but as an aid to connectedness, creativity and self-expression. I see it as a connecting thread between the disparate parts of the curriculum, between the classroom and the outside world.

Chapter Six asks 'How do I evaluate my work?' and implicitly examines the epistemological and methodological justification of the research and outlines how I demonstrate the validity of my claim to knowledge. As I share my epistemology of practice with others, I demonstrate in this chapter how I assess the quality of my work, with rigour, as outlined by Winter (1996), in terms of reflexive critique, dialectical critique, risk, plural structure, collaboration and theory practice transformation and by referring to the specific standards of judgement that are drawn from my values in education. I support the validity of these claims with substantiated evidence from my practice and I offer my claim to others for public scrutiny. I explain how one's embodied ontological values are transformed through the process of clarification into the living epistemological standards of critical judgement that can be used to test the validity of one's claim to educational knowledge (Whitehead 2005a). The chapter then continues to explain the personal and social validation processes that I have undertaken in relation to testing my claim to knowledge.

Chapter Seven asks 'How do I contribute to new practices and theory and to the education of social formations?' while examining the significance and potentials of my work. Whitehead (2005a) talks about his understanding of living theory such that people can offer explanations for their educational influence in their own learning, in the learning of others and in the education of social formations. In this chapter, I address issues to do with my educational influence in my own learning, in the learning of others and in the education of social formations.

To conclude

This thesis outlines my learning journey, which has been a rich and rewarding experience for me. As I now embark on the narrative of my learning, I would like to draw the reader's attention to the idea of 'plural structure'; one of Winter's principles (1996) which he considers to be central to action research. He explains how a plural text is needed to accommodate the plural structure - the 'collection of fragments' of an action research report. In an attempt to accommodate this plurality, I am submitting evidence throughout the thesis in the form of links to web pages my classes have produced. I am also submitting a CD-ROM with this thesis which will have a digital version of this thesis which will include hyperlinks to video recordings, sound recordings and other digital elements that have been pertinent to my research. I invite readers to explore the digital version so as to gain a deeper perceptual experience (Bolter 1996) of my learning journey.

Chapter One: What were my concerns?   Examining the background and contexts of the research

Knowing, then, begins with the shattering of illusions, with disillusionment.

(Fromm 1979, p.47)

Introduction

This thesis tells the story of my learning journey as I developed my living educational theory (Whitehead 1989) in the form of an emergent epistemology of practice. This epistemology is of the form that I now know what I am doing in my practice and I know how I have come to practise in this way. This was, and continues to be, an emergent process for me as my thinking developed and as my embodied ontological values became clarified in the course of my research and were eventually transformed into my living critical standards of judgement (Whitehead 2005a). In this first chapter, I will outline my concerns and explain how my concerns changed as my new epistemology began to emerge and how I developed an ability to engage in thinking critically.

The 'shattering of illusions' can be a distressing occurrence, one that can cause confusion and disorientation, but, as Fromm (1979) says, it can pave the way towards coming to know. This thesis is an account of my learning journey and in this chapter I am describing and explaining my initial stages of coming to know, as my illusions were shattered. The illusions to which I refer are located within the normative discourses of education and are perceived as being the everyday acceptable way of thinking about education. I am alluding here to the hold technical rational thinking has in education (Thomas 1998), to the unquestioning way in which many educators, including myself, conduct their lives without critiquing the norms (Apple 2004), and to the 'dumbing down' and hegemonising processes that frequently exist in education systems (Chomsky, 2000). McLaren (2003) talks about hegemony as

> the maintenance of domination not by sheer exercise of force *but primarily through consensual social practices, social forms and social structures produced in specific sites such as the church, the state, the school…*
>
> (McLaren 2003, p.76 emphasis in original)

McLaren sees hegemony as a 'struggle in which the powerful win the consent of those who are oppressed, with the oppressed unknowingly participating in their oppression' (2003, p.76). I believe that unknowingly I was part of this hegemonic process, wherein I was perpetuating education processes from the past, by engaging in educational practices that closed down the learning process for many students. I am referring here specifically to Gardner's (1993) ideas around how western culture prioritises logical and linguistic intelligences more than others to the detriment of other intelligences such as bodily-kinaesthetic, spatial intelligence and so on. Freire (2003, p.58) describes this as the 'banking concept of education', where knowledge is bestowed by those 'who consider themselves knowledgeable upon those whom they consider to know nothing'. Projecting a state of ignorance onto others is a form of oppression, according to Freire, and I will explore this issue in greater detail in Chapter Two. He considers that bank-clerk teachers (and I consider myself to have been such) are frequently well-intentioned but they fail to see that they are serving to 'dehumanize'. I now believe that my own attempts to perpetuate the dominance of linguistic and logical intelligences did serve to dehumanise others, albeit unintentionally.

McNiff (2005) talks about how, frequently, the very discourses people engage in, are based on illusion or fabrication and that basing their beliefs on such illusory foundations can cause instability or even devastation. Often, such beliefs are so embedded in people's minds that seeing them clearly as the fabrications they really are, can prove to be very difficult. Russell (1971) explains how universal education has increased opportunities for propaganda as education itself is a propagandist process and the power of the press for those who are increasingly literate makes whole populations susceptible to the influence of the press. Russell's argument is even stronger in today's world of mass media and communications. I will outline in this chapter, how much of my professionalism was based on the belief that knowledge was external to the knower (see Capra 1997), that the teacher was the transmitter of that knowledge (Skinner 1978) and the student was the empty vessel waiting to be filled (Locke, 1690). At the outset of my research programme, I believed that such technicist approaches to teaching were not only the best but were, in fact, the only way to teach and learn. The

shattering of this illusion and the subsequent learning that occurred for me are the key issues that I address in this chapter. I will discuss these issues in terms of the background to and contexts which pertain to my research. I will explore these contexts in the following terms:

(i)   Personal and professional contexts

(ii)   The forms of injustice which are inherent in contemporary Irish systems of education

(iii)   The changing focus of my research

(iv)   My inability to engage in critical thinking

(v)   My lack of awareness around my ontological values

(vi)   My complacency around issues pertaining to education

Before exploring how the contexts outlined above inform my research and how they inform my emergent epistemology, I would like now to give a brief outline of my epistemological stance at the outset of my research so as to illuminate how my new epistemology emerged in the various contexts outlined below.

My epistemological stance at the outset of my research

Before I embarked on my learning journey around my intellectual and spiritual growth that has become my area of research, I saw my role as a teacher as one who transmitted a commodity called knowledge (see Apple 2004; Ball 2004; Brown 2002; and Lyotard 1986). I was an agent (Clandinin 1986), finishing textbooks and filling in workbooks; fulfilling the intentions of what I understood to be curriculum. I now realise, that instead of engaging with the curriculum, I was probably fulfilling the desires of the publishers of various textbooks and workbooks, or at a more sinister level, fulfilling the desires of those who see education as a business and students as human capital (Apple 2001). Now that the articulation of my living educational theory is in process, I have become aware that the traditional rational forms of imparting knowledge, that have been inherent in the Irish education system, inadequately address the multiplicity of learning needs of many people (see Conway 2002; NCCA 2005; OECD 1991). I believe that learning can be enhanced when it occurs through the dialogical relationships between people and that it has the potential to address the multiplicity of learning strengths and needs of many people (see Gardner 1993; Goleman 1996) as outlined throughout this thesis.

Since beginning my learning journey, I have come to see that I now understand knowledge as being something quite different from the view I held before; not as a commodity but more as a process (Dewey 1938) that is fluid, organic and emergent. Bohm (2004) describes dialogical ways of knowing as a 'stream of meaning' that flows through people such that a new understanding may emerge. I have tried to attune myself to an epistemology of wholeness, interconnectedness and context as suggested by Miller (1997). I have also seen my own role shifting from being a teacher who transmits factual knowledge to that of one who tries to attune to the wholeness and individuality of the children in my care while nurturing their strengths and addressing their needs. This shift in my thinking has provided me with the capacity for generating my claim to knowledge which I outline below. As I embarked on my research process, the content and form of my living educational theory was as yet unknown to me. It was only as I engaged in the process of my engagement with a living educational theory approach to action research that my own living theory emerged.

Painting the landscape of my work

In this section I will outline the background and contexts, which are pertinent to my research. Crowell (2002, p.14) suggests: 'Who I am and how I teach is woven together by the tapestry of my life's experiences and, I believe, by the ultimate quality of my commitments'. If I were making a tapestry of the story of my research I would use many different colours and shades, textures and techniques to represent the various nuances of my story. Because this is a tapestry of a real, living and organic story, the loose threads are never tidied away neatly; they are always unfinished and sometimes unravelled. Action research embraces the unfinished nature of its narratives, as each 'ending' is the new beginning, with a new set of questions (Said 1994). McNiff *et al*. (2003) call this the 'paradox of the ideal' where 'we imagine the way things could be, but as soon as we have an answer, new questions arise' (2003, p.71). I believe that my own narrative will never be completed as an active living story. Instead this thesis will be presented as the best possible understanding at that given time (McNiff 1993), while the act of living and understanding continues.

I will now address some of my concerns as noted earlier, in terms of issues pertaining to the background and contexts of my research under the following headings: (i) personal and professional contexts, (ii) the forms of injustice which are inherent in contemporary Irish systems of education, (iii) the changing focus of my research, (iv) my inability to engage in critical thinking, (v) my lack of awareness around my ontological values and (vi) my complacency around issues pertaining to education.

(1.1) Personal and professional contexts

The fact that I was raised in a rural village, that I have taught in both urban and rural settings, that I am involved in teacher professional development programmes, that I am a parent, that I am a reflective practitioner, together with the many other aspects of my living, all give shade and depth to my story. This thesis deals mainly with my learning as a primary school teacher. Clandinin and Connelly (1995) use the metaphor of a landscape to describe the professional locus of teaching, and they refer to the multi-layered professional lives of teachers, where moral, historical, personal and epistemological worlds merge.

I have been teaching for over twenty years in primary schools. I have spent some years teaching in both urban and rural settings and both senior and junior classes. In more recent times I have worked in a rural school and it is mainly this setting that provides the context of my research. My school is geographically remote and designated as 'disadvantaged' by the Department of Education and Science because of the high rate of unemployment in the area. The families whose children attend our school are mainly small farmers or part-time fishermen, where often there are financial strains, but despite this, they manage to ensure that their children are well cared for. Most, but not all families own a car, which is a necessity in remote rural areas such as ours. The school building is now over one hundred years old, having been modernised and extended in 1997. Many of the original structures are still in place, which help to retain the sense of history in the building, but items such as the new heating system and the satellite link to the internet are welcome modern improvements. Many of the children who attend the school are the descendents of the people who attended the school when it was first built and there are many sets of cousins in all the classes. The sense of continuity

and history is almost tangible in the building and in more fanciful moments you can nearly hear the voices of past schoolteachers and their pupils echoing around the walls. The leak in the roof of the corridor on very wet days serves to remind me of the century of teaching and learning that have gone on in the school despite not having the well appointed classrooms that the school now has.

The children are cheerful, bright and fun loving. Generally there are few discipline problems in the school. With the advent of modern communications and greater ease of travel, their interests are very similar to those of their urban counterparts: soccer teams, pop stars, grand-prix drivers and Gaelic football. The students still have a keen interest in the things that are particular to country living such as sheep and the lambing season, the bogs and the turf-cutting season and fishing and the salmon season.

I am now presenting my claim to knowledge, in the form of this thesis, as it has emerged from my practice in teaching in the environment outlined above.

(1.2) The forms of injustice which are inherent in contemporary Irish systems of education

I have learned from reflection on my practice and through my engagement with the literatures that dominant technicist forms of knowledge as I understand them today, do not necessarily lead towards a just form of education. Thomas (1998) talks about the 'artificial simplicity' of technicist thinking that reduces people's understanding of the social world to that of the physical and the quantifiable. In this 'reduced' understanding of education, the teacher's role frequently is to transmit knowledge and so therefore the student is frequently in a passive mode (Jonassen 1991). Issues such as passivity, the taking of small steps to an overall measurable learning goal in the form of an examination, and rote learning (Skinner 1978) are symptomatic of objectivist approaches to learning (Jonassen 1991). I believe that frequently, an over-emphasis on such approaches close off possibilities for freedom of thought and creativity for many students. I will explain this belief in the following manner: first, education can be a dispiriting process for many students. Lynch (1999) talks about the tight system of control in education that 'creates great injustices and frustrations for those who cannot find a sense of

achievement within it' (Lynch 1999, p.276). Second, these injustices and frustrations are kernel to my concerns. Many children, whose learning strengths are not of a logical/linguistic nature, are being denied an adequate education in an education system that prioritises maths and languages. Lynch continues, '…different forms of knowledge and relatedly different forms of ability do not have parity of esteem within schools' (1999, p.276). Lynch's point is that our education system gives priority to children who have mathematical and linguistic skills while largely ignoring children who have good social skills or who are talented at gymnastics, for example. The Education Act (1998) includes the following objectives:

> …to provide that, as far as is practicable and having regard to the resources available, there is made available to people resident in the State a level and quality of education appropriate to meeting the needs and abilities of those people…
> …to promote equality of access to and participation in education and to promote the means whereby students may benefit from education…
> …to promote best practice in teaching methods with regard to the diverse needs of students and the development of the skills and competences of teachers.
> (Ireland, Department of Education and Science, 1998, Section 6)

Therefore, it can be seen that while the state is obliged to ensure that all children receive an education, and that equality of access and participation is meant to exist, I believe that this obligation is frequently only observed at the level of rhetoric. The reality for many students is that their needs are not catered for. Not only do students not have an opportunity to participate in learning environments to suit their learning strengths, they also 'lack a medium of self-expression which is sympathetic to their intelligence' (Lynch 1999, p.274). The classroom often mirrors the culture of its society (Bourdieu and Passeron 1977) and examples of freedom and self-expression being denied in classrooms abound (see Devine 2003). In my practice as an educator, I frequently perceive the dominant role of technicist assumptions as curtailing one's ability to think for oneself and to be creative. As an Irish educator, I am aware that the national examination system draws on linguistic and mathematical skills mainly (see the report of the National Council for Curriculum and Assessment, NCCA 2005). There exists also a popular

perception of the teacher as the 'knower', inspired by our points system that pressurises our secondary schools and our over-dependence on 'finish-the-textbook' styles of teaching (Carr and Kemmis 1986) and that are all examples of how traditional technicist approaches to education can diminish the flow of creativity and development of the individual. These normative behaviours that are inherent in our education system can close down opportunities for learning for many people whose learning strengths are not linguistic or mathematical (Gardner 1993) (see Chapter Two). I believe this to be a form of injustice because if, as O'Hanlon (2003, p.8) explains, 'teaching is an ethical activity', it is ethically wrong that the learning needs of some children are not adequately addressed by our education system.

(1.3) The changing focus of my research

Some years ago, I watched my class of six year olds share and experience the excitement of learning about other cultures, and as I reflected on it, I learned much from their learning (see Glenn 2000). They were partaking in a Travel Buddy exchange wherein they exchanged a soft toy with a class in a school in another country. The soft toy was to be shown around its host country and the pupil or their parent filled in a diary and took some photographs of their experience of 'entertaining' the soft toy. The students then exchanged e-mail messages to update their partners on the latest adventures of the soft toy. At the end of the exchange, the cuddly toy returned to its own classroom with a diary full of interesting entries and photographs (see Fig. 1.1 below).
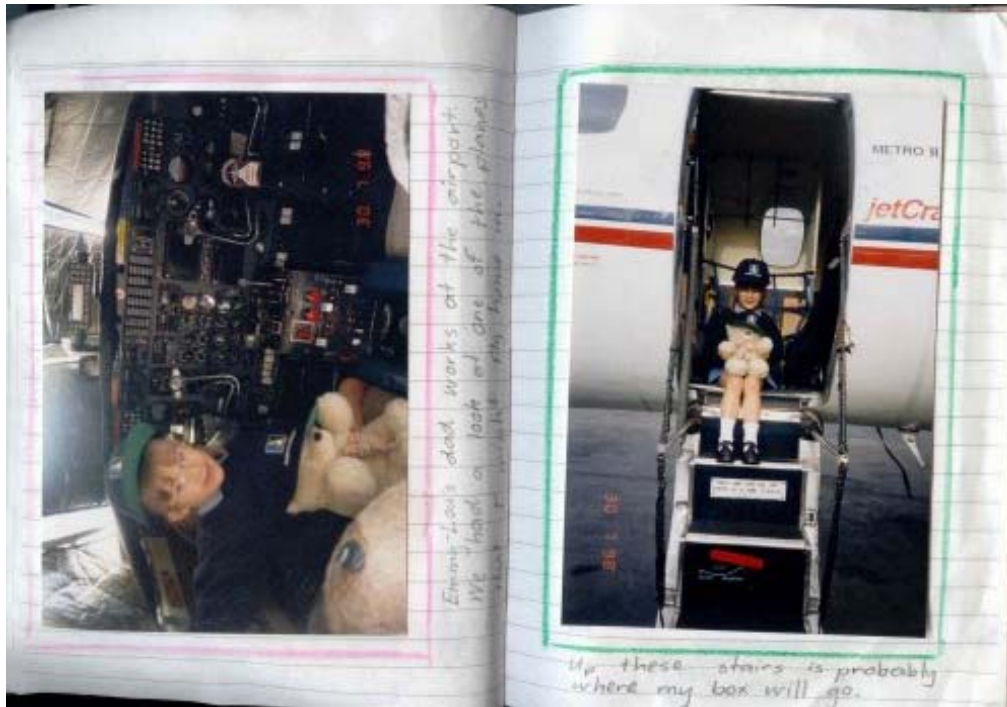
Fig. 1.1 A section of a *Travel Buddy* diary

Fig. 1.1 is an extract from our Travel Buddy diary. In 1997 my class sent a teddy bear which the class named Seán to Australia. The following year, Seamus, the leprechaun, went to France and then Lorcan (another soft toy) went to the United States. I began to realise for the first time in nearly twenty years of teaching, that children, and their teachers, could engage in such deep learning experiences from being involved in dialogue with one another. Examples of extracts from these Travel Buddy exchanges can be accessed at http://www.iol.ie/~bmullets/patty.html. Through such conversations via e-mail and through reading diary entries, my class learned that when it is Spring in Ireland, it is Autumn in Australia. They learned about killer box-jellyfish, lemon trees and the need for sun hats in the schoolyard (see Appendix A). They learned how in France, people sometimes eat frogs legs and the grapes grown in vineyards are then made into wine. They 'taught' their partners by bringing their Travel Buddy to their farmyards, to milk cows and to see the new born lambs. One Travel Buddy got a beautiful golden cloak hand stitched for him to ward off the chilly winter winds, while another went to a wedding and yet another was brought on a trip to the Aran Islands.

The practical knowledge I accumulated at this time was manifold. The children became 'virtual' travellers to these other communities. The children commented

on this: Rose (Field notes 3/11/99) said, 'It's like they're really there with you, like on the phone to you.' Leo replied, 'It's better than the phone. You'll know that they'll remember what you said because they can keep it and read it later'. The sense of geographical isolation that was a feature of our school became less important. Susie commented on 26/01/00: 'In our learning circles we get to know things about the world'. Ann Marie's comment (Field notes 26/01/00) was 'It's good to tell other children what films we watch. Then we can compare the things we are interested in with what they are interested in'. Parents, grandparents and other members of the community took part in making the project a success. These young children were excited about literacy through the reading and writing of their e-mail messages. The children began to show signs of being easily motivated also. They often pleaded for a 'go' at writing their e-mail, or writing up their Learning Circle project. They would never before have pleaded for an opportunity to hand-write their news, or stories. Norah, whose handwriting would not be as neat as her friend Susie's, also commented to me that she loved writing on the computer, because it always came out neatly (Field notes 4/01/00).

The launch pad for my learning

This project outline above, along with others of a similar nature, is frequently called an internet based collaborative project (ICP) (see Sofweb 2000). ICPs formed for me, the beginnings of my own learning journey. Internet based collaborative projects invite collaboration between one school and at least one other body using the Internet. ICPs also invite collaboration between the students, between the students and the teacher and perhaps the wider community (Riel 1999). I had undertaken investigations around these and similar projects so as to establish their educational value in a masters programme prior to my doctoral research (Glenn 2000, 2005). In that study, I found that internet based collaborative projects could help to make children's learning real and relevant because they were writing for a purpose (Riel 1993). I also established that ICPs could enhance children's self-esteem and could nurture an enthusiasm and excitement for learning (Berenfeld 1996). The study also suggested that such projects could help to diminish the sense of socio-economic disadvantage that was inherent in our school.

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The work that I had produced for my masters degree became the launch pad for my doctoral research. I experienced a sense of dissatisfaction around my masters thesis because I felt I had not reached the real heart of my work with ICPs. As part of my engagement with practitioner research, I engaged in asking critical questions, as suggested by McNiff (2000). Consequently, at the initial stages of my research, I asked 'What is my concern?' and 'Why am I concerned?' My reply, then, was in terms of my perceived need to explore the role of ICPs in education in more detail. In my research proposal for this PhD programme (Glenn 2001), I wrote 'In doing this research I aim to question the inclusion of online technology, and in particular the value of ICPs in the primary curriculum' (see Appendix B). In revisiting my proposal in light of my new learning now, I perceive that its underpinning tone is one of being rather self-assured. I had the impression that I already 'knew' that ICPs were 'good' and expected that in my doctoral research I could collate evidence that would 'prove' this. As outlined in this chapter, this self-assurance was somewhat misplaced and naïve, and my subsequent process of coming to know gave rise to much angst in my learning journey. As my research has progressed, its focus has changed from examining ICPs to asking why I felt compelled to engage in collaborative projects. This change (outlined in greater detail later in this chapter) was indicative of a deeper epistemological shift that was beginning to take place within me.

I can now see that my angst was located in the epistemological conflict that I was beginning to experience. I located my perceptions around processes of coming to know in a traditional technicist epistemology, where knowledge was understood as something external to knower; something perhaps reified and objective. Coulter and Wiens (2002) talk about the debate between 'spectators and actors' and at the outset of my research I could probably have been positioned as a 'spectator'. Having developed my research programme now, I can see how my enthusiasm to include internet based collaborative projects in education was derived from a desire for making connections between the classroom and life outside (Miller 1996). A key learning for me, in the course of my research, was that my need for making connections between my classes and the outside world were embedded in my ontological values around love (Noddings 1984) and the relationality of learning to the community and the environment (Bentley 1998). As yet, I had to

'discover' these ontological values and therefore I had no explanations to offer for these felt, but unspoken desires to make connections between my classroom and communities outside. I would only come to understand my desire to nurture these connections as my ontological values became clarified in the course of my research (Whitehead 2005). I will outline in greater detail in Chapter Two how my embodied values around love and the interconnectedness of people and their environment were being manifested in a practical way in the collaborative projects that I undertook with others. Initially, I could only follow these tacit desires (Polanyi 1958) that compelled me to nurture connections with the environment (Capra 1997) and with others outside of the classroom. I can now see that my work practices were indicative of a drift to a different epistemological perspective. At a practical level I saw that dialogue and holistic approaches to education and the connections between the classroom and the world outside were also pertinent to how people come to know. At these initial stages of my research however, I was only aware of the difficulties and problems that I experienced from not being able to understand or theorise my practice (see Mellor 1998). The angst and 'shattering of illusions' as I attempted to develop explanations for my practices are outlined below, and while they were exceedingly uncomfortable, they proved to be a rich resource for my learning and development.

Getting ready to come to know

Initially I anticipated an excitement around my doctoral studies which was new and invigorating. The following is an extract from my research diary of 2001:

> **Take a Parachute and Jump**
>
> (A pause for reflection before embarking on a research project.)
>
> This is the moment before the writing takes place. It is a peculiar feeling, the waiting for the beginning of the research. This is when every piece of reading takes on a certain glow, a particular relevance to my research area. Every book I read, every newspaper article I peruse and every educational web site I visit seems to be feeding my views, thoughts and reflections. This is the period of eager calmness and quiet anticipation before the storm of activity. The strains of the Something Happens song 'Take a parachute and jump' in the distance is spurring me on to become ready for my leap. I am taking preparatory steps for my jump out

of the cosy safe world I currently inhabit, and leaping into the great world of the unknown: my research project. I am beginning to spin the web of practical, necessary jobs and chores that will help me create my research space, and which will be necessary for my work for the next few years.

 Journal entry, June 2001

I realise now that my excitement was well reasoned and had I anticipated the amount of learning and understanding that I would encounter, my excitement would have been greatly increased. Had I realised that the amount of inner conflict and turmoil the process of my knowledge generation process was to unleash, I may have held a less romantic perspective.

Here, in this section, I have outlined the background to my work practices in terms of my response to my own personal, tacit knowledge around learning. I have explained how, initially, the focus of my research was planned to be an objective exploration around ICPs. This focus changed as my research interest became clarified in the process of the research. The change of focus, and its underpinning explanations (as explained in Chapter Two) was kernel to the background of my research.

(1.4) My inability to engage in critical thinking

Conflict and chasms: monsters lurking in the dark

At this time, as I was embarking on my doctoral research, my epistemological stance was such that I generally viewed knowledge as something external to both myself and others. I acknowledged that personal knowledge existed (Polanyi 1958) but I did not rate it as being of equal importance to a propositional form of knowledge that is articulated in an abstract, conceptual form. I subscribed to a monistic way of knowing as outlined by Berlin (1998) and believed that knowledge was propositional or procedural as outlined by Pring (2000) and Ryle (1949). A research diary I kept at this time confirms this as I wrote about how I believed knowledge was acquired:

> A tension arises between the 'donor' of the knowledge and the 'seeker'. If the donor is bestowing knowledge, then the questions of ownership of knowledge, and the power of that ownership arises. The recipient may be somewhat overawed by the process. If however, the seeker of knowledge personally and actively wishes to comes to know, then they are taking charge of their own learning and may create their own knowledge.
>
> (Journal entry, 11 September 2001)

This journal entry appears to be from a technical rational viewpoint (Schön 1983) whereby the view of knowledge is something that is 'specialised, scientific, standardised, firmly bounded' (Schön 1983, p.23) and external. At that time also and what appears to be in a conflictual manner, I was aware, at some level of my psyche, of knowledge being created in the engagements between people. The same journal entry holds the following insights which appear to contradict the extract above:

> Instead, we might explore the idea of knowledge as a process, a period of learning. Visualise a pliable changing body of matter, perhaps a cloud that changes its shape with breezes, temperatures and many other factors. Knowledge is similarly moulded, changing with every experience of life. One's knowledge and how one comes to acquire knowledge depends on the knowledge base one has already established. Coming to know is a process of growth, change and adaptation. The events of today (11 September 2001) may change a knowledge base or a world -view totally.
>
> (Journal entry, 11 September 2001)

As I read these writings now, in the light of my new epistemology, the ambiguity of their meanings appear to be perplexing. The statements seem to contradict one another. How could I think that knowledge could be 'donated' or 'transmitted' in one paragraph and then describe it as a process later on within the same text? These contradictions in my thinking were also reflected in my workplace. My work practices at that time (see example below) seemed to demonstrate that I perceived the potential for people to create their own knowledge on one level, yet my personal writing seemed to contradict that. The following example explicates this conflict in my thinking:
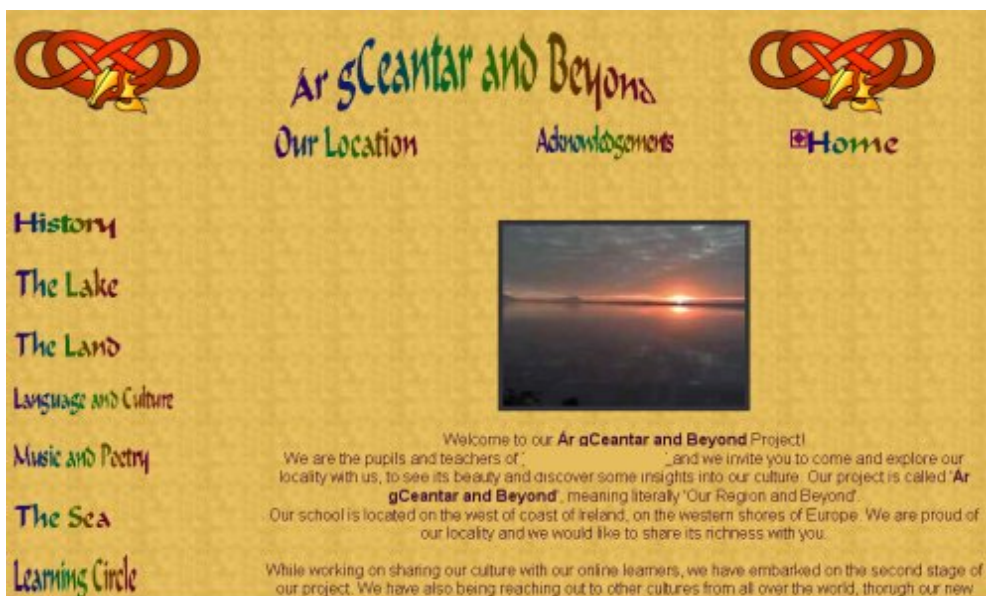
Fig. 1.2 Screenshot from the *Ár gCeantar* project

The *Ár gCeantar* project (see Fig.1.2), which my combined Fifth and Sixth Class undertook in 2001/2, was an investigation and report on our locality ('Ár gCeantar' being the Irish for 'Our Region'). These were an interesting group of students and were untypical of the main body of students in the school as many of them presented with substantial literacy difficulties, while many had social problems and had difficulties relating to one another and to school. Working with them proved to be challenging.

The project, which I prepared, was to provide a snapshot of life in our region (see Fig. 1.2). At a practical level, each student chose one or two topics for the project, investigated them and reported on them. The topics loosely fell into the following categories: the sea, the land, history, language and culture. I had asked each student to prepare a web page about their research with at least one graphic. I taught one student on our classroom computer in the basic skills of using simple web design software, while a third watched on. When the first student had completed his project, the second taught the skills to the third student while a fourth watched on. Then, when the second student finished their work, the third became the trainer for the fifth student while the sixth 'watched on' and so on. The skills were thus percolated around the class with little disruption to other activities in the classroom or need for assistance from me. All the children managed to acquire the necessary skills easily and without any problems.

Some students were enthusiastic about producing the project work, while others experienced great difficulty in collating the information, but eventually all the students made a contribution to the project. Ian chose to research traditional music and in the process of his investigation recorded some live traditional music on his own tape recorder to add to the project. Kathleen, Tim and Lynn chose not just to look at the use of the Irish language locally but instead, to make animations and sound recordings of phrases in Irish and to translate them into English. Kian disregarded his initial work on lambs in Spring and instead was moved to write a beautiful poetic description of the dawn on the frozen lake (see Appendix C). Paul interviewed his grandmother about traditional cures and customs. Chris videotaped her father cutting turf in the bog for fuel. Martin scanned an image of a mechanical digger and wrote a short piece about farm machinery. Kieran took the digital camera home and took many photographs of the farm machinery his brother managed. These inputs to the project, along with many others, may be viewed online at http://www.inver.org/ceantar.

Because the parents of the children did not have internet access at home, I invited the parents to come into the school and have their children show them, in the privacy of our computer room, their own input into the project. This was a worthwhile exercise because the parents gained insight into their children's work and the children developed a sense of pride in their work as they showed the projects to their parents. The invitation to parents also served to enhance the connections between the classroom and the community.

Developing an understanding of conflicts in my thinking and in my practice
While re-examining this period of my life, and examining the project described above, I can see now that I appeared to be functioning at different levels of awareness. On one level, I could see that the work here was drawing on the idea that each student was capable of learning (Gardner 1993) and presenting this learning for themselves. These web pages reflected my own tacit inclination towards creating connections with people outside the classroom. Yet, at that time, had I been asked, I would have been of the opinion that teaching was basically the transmission of knowledge with the help of textbooks.

The level of confusion I experienced was quite overwhelming. As I look back now, I realise that I worked in a manner that, almost unknowingly, embraced dialogical ways of knowing (see Bakhtin in Holquist 2002) and that supported my students as knowledge creators in their own right. Yet, I was unable to articulate this knowledge in any way except through my work practices while my conscious thinking was located within a more technicist epistemology. I was able to offer descriptions for my work to others but I was unable to explain or therefore to theorise it. The frustration and confusion I experienced was challenging. Mellor's comments (1998) now prove to be insightful as he talks about the difficulties he experienced in undertaking his research. He describes how he came to accept that his struggle in the swamp was the methodology of his research:

> I know I have a goal, which is that I want to look at my job but I don't know what the questions are to ask but I will know when I get there…It is only by getting stuck in and …being confused and asking questions: What am I doing? Why am I doing it? that it becomes clear…
>
> (Mellor 1998, p.454).

These were the questions that had echoed around in my mind. I had approached the research with the notion that I already *knew* why I was working with ICPs. Yet, as I explored my work and reflected on it carefully, the more I realised that a chasm existed somewhere within my knowledge, the more dumbstruck and inarticulate I became.

And so, the focus of my research gradually changed. I was no longer as concerned about the role of internet based collaborative projects in my work. Instead, I was more concerned about my inability to offer adequate explanations of my practice. This new focus became an overwhelming concern for me because initially I was unable to articulate explanations for my practice and this was exceedingly frustrating. Eventually, these concerns transformed into what is now emerging as my living educational theory. It is helpful here to look at the work of Argyris and Schön (1974), who talk about a form of tacit knowledge that people are unaware of: 'the tacit knowing of a problem whose solution we do not have yet' (1974, p.36). On the surface, the knowing of something at an internal level that I did not know at an explicit level seems to be a contradictory notion. Yet, in light of my

learning throughout the research process, I can now see that this innate, barely formed knowledge was kernel to my first faltering steps towards developing my living educational theory. I see how my practice reflected the barely-formed knowledge in terms of creating projects that nurtured connectedness, but my thinking and my ability to theorise were locked into a technical rational way of functioning.

In this section, I have outlined how my own inability to engage in critical thinking, to move away from objectivist ways of thinking, that consists of a belief in a reliable, fixed body of knowledge and the perception of the teacher as the conduit for that knowledge (Jonassen 1991), were key contexts in which my research was located.

(1.5) My lack of awareness around my ontological values

A glimmer of understanding around my practice

Perhaps such thinking may have persisted in my mind had I not been involved in a creative research programme. This research programme was such that the researchers and tutors were involved in forms of learning that were rooted in dialogue and critical debate as well as the traditional texts from the libraries. The programme, developed by Jean McNiff and others at the University of Limerick, was innovative in several ways. It was unlike traditional PhD programmes that 'conform closely to the "sorcerer's apprentice" tradition where students come to sit at the feet of an individual supervisor' (see Dunleavy 2003, p.6). It was innovative in that the programme was structured so that a group of practitioner researchers met regularly, received off-campus support between meetings and also communicated as a study group while off-campus. The programme was also innovative in that dialogue was structured into all teaching and learning activities. It was an expectation of the programme that all participants actively participated. My research colleagues and I were therefore constantly involved in conversation, and this conversation was characterised by care. It was an environment, in which we, doctoral researchers, talked with one another in an open attentive learning space, wherein every voice was listened to and dialogue could take place without fear of ridicule or offence. The kind of learning space I am referring to here seems to be what is required to fulfil Shulman's (1999a) ideas around dialectical ways of

knowing. He suggests that learning can best occur when people become involved in a dual process whereby they articulate what they know, share it, modify it by consideration of other people's ideas, and then internalise their transformed knowledge. This, says Shulman, is a dialectical process of knowledge generation. The process was evident within our doctoral group. We talked with one another and discussed the issues with which we are concerned, we modified our ideas, we internalised our thoughts again, and we found that our thinking had progressed. Some of us might have become more entrenched in our original views, or we may have altered our views to varying degrees. Whatever might be the case, learning and growth had taken place. While our conversations took place within an ethic of care, they were, however, lively and characterised by creative critique. I believe we were taking note of Gadamer's idea (in Whitehead 1999) that dialectic may be viewed as the art of questioning and the art of real conversation. Gadamer cautions that conversation is not about winning arguments: conversation, he says, 'requires that one does not try to out-argue the other person, but that one really considers the weight of the other's opinion' (Gadamer 1975 cited in Whitehead 1999).

The shattering of illusions

At one study-group session, my complacency in my knowledge base was shaken to such an extent that I knew that I had to interrogate my own thinking very seriously. The question 'Why do you feel you have to work with multimedia and technology? What is it that makes you do this?' were posed by P., a member of our study group. She voiced the question that had been surfacing in me for some time. I found that I could not explain why I felt compelled to use multimedia and engage in collaborative projects. I was unable to provide her with an adequate response; I could reply to her in terms of my describing my work but not in terms of offering satisfactory explanations for it. Initially, I responded to the question around why I felt compelled to create collaborative projects in terms of how such projects could reduce the sense of isolation and social disadvantage that my students experienced and that such projects also gave the students a sense of writing for a real audience. I believed at that time that this was an acceptable explanation but I soon realised that I was offering descriptions of my work but was unable to offer adequate explanations.

There followed a period of turmoil in my thinking around the question 'Why am I working in the way that I am working?' I wrestled with various descriptions of my work and struggled to articulate an explanation for my work. Jean, my tutor, encouraged me with questions like: 'What is the benefit of locating communities in cyberspace? Why do you want to want to encourage people to share their ideas? This is very important, and central to what you are trying to do. Let's try and work out why you want to encourage people to share their knowledge and how technology can do that' (e-mail 29/8/2001). My responses were confused and clouded. I 'knew' and 'felt' that my way of working was good, and that it was somewhat different to how many of my colleagues worked, but I experienced difficulties in explaining why I believed it was good. I presented samples from my work to my research colleagues and at education conferences (see Glenn 2003, 2004, 2004a, and 2005a) and as a tutor of professional development seminars. My audiences agreed that my way of working was good, but I was still unable to answer the question: 'Why am I working in this way?'

My struggle to engage with the questions and the issues around the question 'Why am I working in this way?' slowly became an overwhelming concern. It became a new dauntingly difficult focus for my research. I perceived it to be difficult simply because I had trouble finding a response to it. I was no longer so deeply concerned about the effects of ICPs on teaching and learning; questions around understanding my practice became my main concern. This change of focus was gradual and organic and emerged alongside my new, but confusing, epistemology, as I began to develop my capacity for critical thinking. Slowly, slowly through my engagement with my tutor, my research colleagues, the writings of Apple (2001), Freire (1970), Foucault (1980), and Polanyi (1958), my understanding of my inarticulateness began to emerge. Jean, my tutor, tried to guide me with questions like 'You also asked me at the end of your letter if you are going in the right direction. What are the assumptions that underpin that question? Probably that there is a right direction and possibly that I know what it is if there is one', (e-mail 30/10/01). But such subtle guidance and gentle probing could not seem to awaken my awareness of my internal tacit knowledge.

My reading of Polanyi's (1958) ideas around personal or tacit knowledge clarified my thinking about my own personal knowledge. Polanyi outlines personal or intuitive knowledge as being a valid form of knowledge: 'We can know more than we can ever tell', says Polanyi (1967, p.4). He called this pre-logical stage of knowing 'tacit knowledge'. He continues that such knowledge initiates a compelling sense of responsibility for discovering a hidden truth. The recognition of my own tacit knowledge, in terms of my innate desire to create projects with my classes which explored connectedness and was manifested in my practical work, compelled me to continue my learning journey.

As I reflect on this period of coming to recognise the importance of personal ways of knowing, I can see clearly that despite my inability to explain or theorise my practice, my ontological values around dialogical holistic and inclusional ways of knowing and the relationality of education to present-day life processes were being expressed in how I worked. I was developing learning spaces for my students that embraced different ways of learning (Bentley 1998, Craft *et al.* 2001), of building caring relationships (Noddings 1992, 1999) and engaging with the wholeness and human-ness of people (Nakagawa 2000). Whitehead (2005a, p.18) describes how values are the 'living energies of action that give meaning and purpose to life and whose meanings are clarified in the course of their emergence in educational enquiry'. I was practising in such a way that I was living in the direction of my ontological values, but in an unknowing manner. I can see now that I was developing these projects more from an intuitive perspective, than from a position of critical thinking. I was, as yet, unable to explain, to theorise my practice or indeed to think critically about the system that produced such naïveté in me (Apple 2004).

Theory and Practice

Clandinin and Connelly (1995, p.6) describe practice in education as 'personal knowledge at work'. They also outline the dilemma posed for educational researchers who wish to produce practically useful theoretical knowledge. They explain (1995, p 6) how the practical narratives of the educational researcher have a poor record: 'The kind of research and theory produced tends to be held in little theoretical regard by disciplinary scholars and held to be of little practical value by

practitioners'. I empathised with this thinking because I was experiencing a theory/practice dilemma myself but I reached a level of understanding around my thinking that allowed me to acknowledge the importance of my work practices; these were the outward manifestations of some internal thought processes that were as yet unclear. I would at a later stage see that such dilemmas were located within the struggles between technical rational and dialogical ways of knowing. I would perceive that such forms of personal knowledge are frequently shut down in education systems because they are contrary to the normative technicist forms of discourse inherent in such systems. I would learn that my desire to dabble in projects that encouraged the building of connections between my class and others outside the classroom, was drawn from my ontological values (then, still unrecognised) around loving relationships, around engaging with the human-ness and wholeness of the person and the relationality of education to everyday life processes in the world outside the classroom. But as yet, the recognition of these values was still lying dormant within me; I was struggling at the level of being able to articulate a response to questions of the kind, 'Why am I working in this way?' and 'How can I understand my practice?'

I gained more confidence around my work and my inarticulate way of knowing though my engagement with the works of Polanyi (1958 and 1967) and Clandinin and Connelly (1995 and 2000) because I could now see that personal ways of knowing were of value and could be of relevance to others. This insight was in itself illuminating because until now, I had understood that knowledge, or at least knowledge that could be considered to be of value, would be in the possession of those involved in objective institutionally-based research. That I could now embrace my own personal knowledge and perceive it to be of worth was a new and exciting step for me.

As I developed a confidence in my own personal knowledge, I began to take my first tentative step towards being able to develop an understanding around my practice. I also gained some clarity into my difficulties as I engaged with Chomsky's (2000, p.3) ideas around education systems:

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> Schools ...are institutions for indoctrination and for imposing obedience. Far from creating independent thinkers, schools have always throughout history, played an institutional role in a system of control and coercion.
>
> Chomsky 2000, p.3

Such was my own inability to think in an independent manner at that time, I understood that Chomsky's words (2000) were referring to teachers and schools in *other* places and not to my school or me. Yet, as I reflected on his writing, it finally led me to pause and prompted me to question my ability to think independently. The possibility that Chomsky's words might refer to *me* specifically alarmed me. They shook me out of my complacency and as a result I began to engage with writings of other critical thinkers in education such as Apple (2001; 2004), Darder (2002), Freire (1970; 1973), and hooks (2003). I came to realise that I was bound within my own unquestioning acceptance of the norms of my understanding of the Irish education system and that even though my own personal knowledge was being realised in my practice, as yet I was unable to offer any explanations for it. However, it was an epiphany for me to realise that I was colluding in my own subjugation and imposed obedience myself (see Foucault 1980 and the section 1.6 of this chapter). Now, at last, I was beginning to understand w*hy* I was unable to explain, and this was to provide me with my initial theorising of my work. I undertook my research against the background of this process of developing new understanding.

(1.6) My complacency around issues pertaining to education
Education as a site of indoctrination
As explained previously, my professionalism was based on the misconception that knowledge was external to the knower and that transmission models of teaching were the 'correct' models of teaching. It was in this context that I embarked on my research programme. This misconception is one that has been transmitted through our culture, through previous generations of teachers (see Carr and Kemmis 1986; Murphy 2004; OECD 1991) and through educational discourses. Conway (2002) points out that discourses in Irish education have been notably inattentive to critiquing curriculum; what is taught, how it is taught and why it is taught. He is critical of the dominance of transmission models of teaching and technical rational discourses in relation to pedagogy here. McNiff (2005) takes the argument a step

further when she suggests that many of our normative behaviours are based on theories founded on rational conceptualisations drawn from the disciplines of education rather than on living educational theories (Whitehead 1989) drawn from real-life experiences in education. I am keenly aware that my own complacency was a substantial context for my research; one which caused many difficulties for me as I engaged in my research process. Both Conway (2002) and McNiff (2005) are engaged in processes that aim to shatter the illusions that prevent educational growth. More processes like these are needed to illuminate and problematise the complacent thinking that permeates so much of educational discourse currently. I hope that my own newly acquired ability to think and speak critically will contribute to such processes.

I now know that I was not a critical thinker and my complacency was indicative of being embedded in such a system of non-critique. The 'dumbing-down' of people is often associated with issues of power. Chomsky reminds us that 'once you are educated, you have already been socialized in ways that support the power structure' (2000, p.3). Assumptions are frequently ingrained within a culture and are normalised within the culture as suggested by Foucault (1980), and, as members of that culture, people are often not even aware of them. I perceive that my own inability to question my work practices or to articulate explanations for them as being located within that power constituted structure, because I too was educated in a manner such that I was socialized to support power structures. Foucault (1980) draws on Bentham's model of the panopticon, where cells are located around an observation centre in such a manner that the inmates may be observed by the guardians in the observation tower. However the inmates are never sure when they are being observed and so they become self-regulating. This model also assumes that the guardians who occupy the central position in the panopticon are themselves regulating their own behaviours. Foucault describes it as a machine 'in which everyone is caught, those who exercise power just as much as those over whom it is exercised' (Foucault 1980, p.156). Foucault also explains the close alliance that exists between power and knowledge and how those who possess knowledge are those who have power. Even though these ideas appear to describe a dramatic tyrannical type of power, the power wielding according to

Foucault is of a more subtle nature. In *Power/Knowledge* (1980) Foucault talks about the

> ….circulation of power through progressively finer channels, gaining access to individuals themselves, to their bodies, their gestures and all their daily actions. By such power, even faced with ruling a multiplicity of men, could be as efficacious as if it were being exercised over a single one.
>
> Foucault (1980, p. 151-2)

Thus power can be seen, not just as located in a superior external position but existing in the everyday relationships between people. It could be seen that Foucault's ideas around power are kernel not only to our society's unquestioning acceptance, but my own acceptance also, of that which I believed to be normal. If our culture dictates that technicist assumptions underpin people's ways of coming to know, then the trend will be that they may unquestioningly subscribe to that epistemology. I believe that, as I approached my research, I unquestioningly subscribed to technicist assumptions. This emerged as a key concern for me in the course of my research.

Chomsky (2000) also addresses such issues. He says that attempts to control the public mind through education systems are not only located within the academy but begin at an early age:

> …through a socialization process that is also a form of indoctrination that works against independent thought in favour of obedience. Schools function as a mechanism of this socialization. The goal is to keep people from asking questions that matter about important issues that directly affect them and others.
>
> (Chomsky 2000, p.24).

My thinking had been 'indoctrinated' and I was unable initially to question and later to articulate an explanation for my tacit knowledge as an educator. Once I became aware of the power constituted nature of relationships and the complacency of thinking that arises as a result of such relationships within some systems of education, I saw them being exemplified not only in many of the overarching principles of education systems but also in the minutiae of regular school life on a daily basis. Polanyi (1958) talks about how once a person has

made a discovery, they have crossed a gap such that they see and think differently (1958, p.143). I began to see and think differently. For example, I saw how the public's acceptance of state examinations such as the Leaving Certificate as the summative evaluation of a student's learning as an accepted norm might be an example of an uncritical approach to education. The *Irish Times* (Flynn 2005a) tells us how the Minister for Education and Science wants to ensure that public confidence in the public examination system is maintained and that 'any danger of "dumbing down" [the examination is] resisted'. The Minister appears to assume that not only should the public accept state examinations as 'given' but that critical engagement around them should be resisted. To give another example of how I began to see and think differently, I reflect on when educators expect students to wear uniforms and yet do not have to comply to any strict dress code themselves. I perceive that this can be indicative of complacency in their thinking and an acceptance of the power-constituted nature of the teacher-pupil relationship.

Once I began to be able to think in a critical manner, I could see avenues for critical engagement in nearly every aspect of my life. I perceived how I had rarely questioned the syllabus or queried who decides which versions of a story should be told to students. Todorov (1995) explains how stories change depending on the person who is telling them and the context in which they are told. I began to see how my lack of questioning might be indicative of complacency in my thinking and perhaps the thinking of others also. Conway's (2002) paper, which discusses the lack of epistemological critique in educational discourses in Ireland, supports my ideas. Shor and Freire (1987, p.77) explain how the standard transmission-of-knowledge model of curriculum is an authoritarian model which 'implies above all a tremendous lack of confidence in the creativity of students and the ability of teachers'. The lack of confidence in the ability and creativity of teachers and students is especially pertinent to me as I can now see that I was dabbling in creative forms of teaching and learning, despite the influence of a transmission model of curriculum. Instead Feire (1997) emphasises the importance of critical thinking in education and the urgent need for it immediately. He says:

> I must not leave for a random tomorrow something that is part of my task as a progressive educator right now: a critical reading of the world, alongside a critical reading of the word.

Freire leaves me in no doubt: he places a moral imperative on me and on my colleagues in education to cast off our complacent thinking and to engage in more critical and reflective approaches of thought.

Conway (2002) makes the point that educational discourse in Ireland has been 'notable in its inattention to and resistance to problematize curricular concerns' (2002, p.62). My own thinking, based on my own experience and at an anecdotal level, would concur with Conway's views. Imagine what might be the case if the complacent thinking that I experienced myself and can sometimes witness in others, was applicable to the wider body of people who work as educators, and examine the implication, then the consequences are frightening. If only a fraction of educators fall prey to complacency in their thinking, then the influence that they may bring to bear on their students and fellow educators may be quite far reaching. Carr and Kemmis make the point that they want to question 'conformist views in education by questioning some of the beliefs on which it rests' (Carr and Kemmis 1986, p.2). Bearing in mind that educators may hold much influence on how people think and learn, their acceptance of complacency in their thinking and their acceptance that things ought to remain as they are, has enormous implications for the future. It can generate a whole culture of unthinking learners who are unable to question or think critically. The OECD report (1991, p.55) recognises the self-perpetuating nature of complacent thinking: 'The face …Irish schools present to the world is quite recognisably that of previous generations'. I believe that I was a product of that self-perpetuating system and I now believe that much of my own desire to be involved in a practitioner based research programme was motivated by a part of my innate awareness of this 'dumbing-down' process that I was scarcely able to articulate initially; such was my entrapment in it. This initial stage of being 'dumbed-down' was a key context for my research. As part of a system that promoted the 'dumbing down' of critical thinking, I was paralysed, as Freire (1973) suggests, by my inability to be critical and was carried along in the wake of change. Lomax and Whitehead (1996) also echo this idea when they speak about oppression being in the minds of people through 'the imposition of values and practices that disable us from participating as fully as we might in our educational

enterprises and imposed change that alienates us by appearing to devalue our educational values and practices' (cited in Holley 1997, p.2). I believe that I was Foucault's 'prisoner in the panopticon' or Chomsky's 'obedient' teacher; not seeing the need for critique and unable to explain my actions.

In reflecting on that tempestuous time, I find the writing of Derrida (1976, p.162) enlightening. He argues the importance of 'departure' from the familiar, the attempt to get out of the traditional orbit, and suggests that only by such departures can one begin to question the traditional assumptions that underpin a particular field or discipline. In my case, the attempt towards departure was marked by a battle between inner personal knowledge and the external normalised knowledge that constitutes a traditional education system. This was a key concern for me as I embarked on my research process.

In conclusion

Laidlaw (2002, p.52) advocates the following: 'a theory can help us to understand what we are doing in terms of reasons'. I have learned that the process of coming to know and the creation of a theory are closely linked. I believe that at this period of my learning journey, I finally was able to begin to theorise my practice, with specific reference to my inability to articulate my understanding of my practice, in the following manner: I came to understand, through deep and critical engagement with my work, with the literature of critical thinking and with my colleagues, that I was the product of a system which did not encourage questioning (Apple 2004, Freire 1970). I had no explanations because for a long time, and through no direct fault of my own, I had had no questions. This was a key concern for me as I engaged in my research process. But finally, I could now offer a description of my work, and explain why I was unable to explain it. This for me was the kernel of the first stage of creating my living educational theory (Whitehead 1989). Laidlaw (2002, p 52) continues: 'When I understand why I am doing something, this seems to offer me the opportunity to work at improving what I am doing in a way that helps me to evaluate my effectiveness and to imagine.' I could not yet understand why I was working in the way I did, but my understanding of my inability to articulate my explanations, provided me with a creative and firm foothold for continuing on the learning journey which now forms the basis for this thesis. This

journey has now led me not only to resist the imposition of dominant forms of knowledge (Carr and Kemmis 1986) but also to find ways of exercising my own creativity.

In Chapter Two, I will ask, 'Why was I concerned?' and explore my emergent understanding of my practice as my ontological values become clarified through their emergence in the research process (Whitehead 2005a). The chapter explores the injustices which exist in many current technicist approaches to learning and I submit my own living educational theory for examination as I develop opportunities for learning in a dialogical, inclusive and creative manner.

Chapter Two: Why was I concerned? Examining my understanding of my practice as I clarified my ontological values

As I continued on my learning journey, I attempted to develop an understanding of my practice. I examined why I was concerned while gaining clarity around my ontological and epistemological values. I engaged in critical questioning of the form 'What are my concerns?' and 'Why am I concerned?' as outlined by McNiff and Whitehead (2005), as I struggled to develop my emergent living educational theory.

This chapter outlines how I began to gain insight into my work practices and into why I was concerned. As outlined in Chapter One, I was concerned about my inability to offer explanations for my work practices that included internet based collaborative projects, and my inability to explicate why I worked in the way I chose to work. It describes my emergent understanding of the dissonance I experienced between the external world of filling in workbooks and completing textbooks (Riel 1999), my concern with my awaking realisation of the forms of injustice that were inherent in the education system in which I was involved (Lynch 1999) and my new insights into how my embodied values around love and the nurturing of holistic approaches to education (Miller 2000a). I now realise that this sense of dissonance was what Whitehead (1989) describes as 'experiencing oneself as a living contradiction' where my embodied ontological values were being denied in my practice. It was a place of conflict between what I wanted for myself and my students and the reality of the education system in which I was working.

I will also describe in this chapter, how my ontological values underwent a process of clarification as I engaged with my research process (Whitehead 2005a) and as I reflected on my practice as being the living manifestation of my values. I will explain how the clarification of my ontological values in the process of this research allowed me to reach an understanding not only of why I was concerned but also of the underpinning motivation around developing projects for my classes that nurtured connectedness with others and with the environment. I learned that my desire to include technology in teaching and learning and to develop collaborative projects with others was drawn from my ontological values around love (hooks 2003) and interconnectedness (Capra 1997). This learning has been one of the key insights in my research process. I have now learned that my practice

was the articulation of my values. I have learned how my values can then transform into my educational practices with potential for influencing the education of the social formations of teachers and policy makers (see Chapter Seven for more detail about contributing to new practices and theory and to the education of social formations and see Whitehead and McNiff 2006). I will outline in this chapter how my embodied values came to be clarified in this way.

I also outline how I learned that my concerns were also of an epistemological nature and that these concerns were embedded in issues such as 'What is knowledge?' and 'Whose knowledge counts?' and 'Who decides?' I offer explanations around how my emergent epistemology of practice has significance for discourses pertaining to curriculum. To conclude I demonstrate how my concerns have given rise to committed informed action on my part in the form of praxis.

This chapter is organised in the following manner:

Section 1: Why was I concerned?

Section 2: Developing a living theory as my ontological values become clarified in my practice

Section 3: Exploring curriculum as an area of concern as I develop an understanding of my practice

(2.1) Section 1: Why was I concerned?

I came to realise that my concerns were mostly of an epistemological nature, as my ontological values became clearer in the process of my research. Because I had learned to become more critically aware (see Chapter 1), I had come to realise that I was concerned about the perceptions that exist around what knowledge is, how knowledge is transmitted in school and who decides on such matters (Brown 2002). I could now see that I was concerned for two closely related and interdependent reasons. The first reason for my concern lay with my realisation that while technical rational approaches to learning in the form of emphasising

linguistic and logico-mathematical intelligences (Gardner 1993, for example) address the needs of some students, they close down the learning process for many others (see Lynch 1999), which I perceive as a form of injustice. I was concerned secondly, because technical rational epistemologies continue to dominate many discourses in Irish education (see the OECD 1991 review of Irish education) and there appears to be little interest in critiquing or questioning that domination (Conway 2002).

While these may appear to be two distinct concerns, they are connected at their epistemological root as they both pertain to issues around epistemological conflict; around the understanding of knowledge, how knowledge is generated and who decides such issues. I will discuss both reasons for my concerns in the next section of this chapter, but for now, I would like to offer two examples which I have drawn from my practice which go some way towards outlining why I am concerned.

Examples which help to explain the reasons for my concerns

As outlined previously, at the outset of my research, I believed at one level, that technical rational ways of knowing and didactic methodologies (Brown 2002) were the correct and only way of learning. I perceived that I had done 'a good week's work' if a certain number of pages of the class workbooks were completed. Yet, aspects of my work practices (as outlined in Chapter One) belied this belief and came from a different approach to learning and knowledge. For example, I had begun to use technology to create collaborative learning projects for my classes and this new aspect of my work was incongruous with the didactic methodologies I thought I espoused. This apparent conflict, at the outset of my research, between what I thought I believed and what I actually did in my classroom, served to highlight the concerns I developed. The following anecdotes from my classroom help to elucidate my concerns:

Liam, one of my students, was an avid reader; books on soccer and history particularly caught his interest. However, he had difficulties reading aloud, his hand writing was difficult to decipher and his spellings were weak. Diagnostic tests gave no indication of specific learning difficulties and the educational

psychologist suggested working on phonic attack and said he would probably never speak/read in public. The use of assistive software was also suggested.

Having followed a structured phonics programme and having begun to use assistive software, Liam himself suggested using the spell-checker facility on the regular word-processing software the whole class used. Within weeks, the quality of his writing was equal to that of his peers. When printed, there were few spelling errors, and the text was neat and legible because it was generated on a computer. Furthermore, following some practice sessions in class, Liam began to volunteer to read in class gaining confidence daily and culminating in his making the welcome speech for the bishop at his Confirmation.

Another student in another class was Tim, who was a twelve year old who hated Maths. He used to flick his textbook open with disdain, as though this subject was an annoying inconvenience in his life. He could see no connection between Maths and his life at any level. Tim was an excellent artist and his world revolved around drawing, painting, colour and form. One day, I introduced the class to Logo, a child friendly programming language aimed towards children. The software can be programmed to many things, but in this case, I wanted the class to use the programme for drawing. As the lesson progressed, I suggested that those who felt that they were gaining confidence with the software, would attempt to make a programme to draw a set of books on a shelf such in Fig. 2.1.
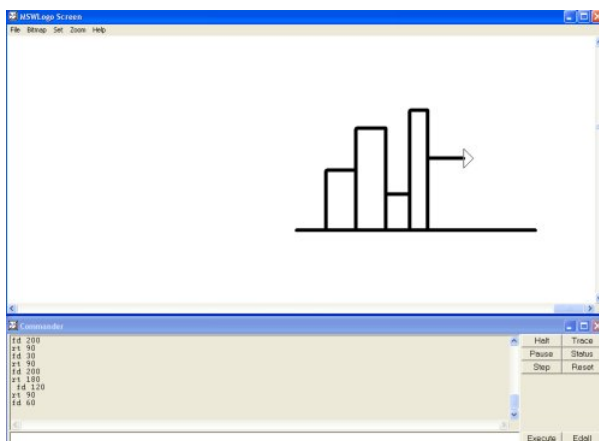
Fig. 2.1: A screen shot of a drawing made using Logo

The programmer has to instruct the pen to draw the line a particular length, to turn a ninety degree angle in a particular direction, to draw a line another length and so

on until the drawing has been made. This is basically a Maths exercise. Tim, who hated Maths with such vengeance, was the first student in the class to create a successful drawing of a set of books on a bookshelf. At the time, I was surprised, because this was an exercise that called on numerous Maths skills and yet Tim had succeeded with speed and confidence. As I reflected on it, I realised that the software had offered a different approach to Maths. It had called for the approach of the artist; the creator and the thinker (see Eisner 1997). This had appealed to Tim so much that he did not 'see' the existence of Maths in his creativity.

As I reflected on this incident, I could see the similarity between it and Liam's experience above. In both cases, at the practical level of classroom teaching, technology had provided both boys with an alternative form of expression and a different way of coming to know (Bentley 1998). Clearly, in both cases, the technology had improved their learning experiences. They had both circumvented their difficulties and engaged in their learning in a way that was positive for them. Yet, in both cases, the freedom afforded to them was fleeting and short-lived because the forms of learning that were meaningful for them are unacceptable in the wider system of education that would include handwritten examinations and grades. As Heppell (2001, p. xvii) observes, '…the possession of a computer in the examination room is still regarded as cheating'.

As I began to theorise these and similar practices, I began to realise that the tension that exists between how people can come to know and how the education system demands that they come to know, is kernel to why I was concerned. Reflecting on these examples, I can now see how I began initially, in an intuitive manner, to exercise what I now know to be my innate values around loving and caring relationships and the nurturing of meaningful ways of coming to know, without stopping to theorise or to question why I was stepping outside the traditional transmission models of teaching (Skinner 1978). I will discuss the process of the clarification of my values in the next part of this chapter. Values according to Whitehead (2005a) are to be understood as 'embodied and ontological, in the sense that they are living energies of action that give meaning and purpose to life' (2005a, p.18). I was, as Whitehead says (1989), experiencing

myself as a living contradiction. I now see how the values around love and nurturing the wholeness of people that underpin how I live my life were being denied in my practice. Looking at the two examples from my class here, I see how pausing to think critically, to create an action plan to improve the situation and to act accordingly proved to be worthwhile. At the time, I was working intuitively because I had not reached a stage of understanding that I was able to articulate my learning in terms of my ontological values. The recognition of the importance of my embodied values as I developed my living educational theory had yet to be uncovered but despite this, my tacit values were being expressed in my practice.

In Liam's case, critical reflection about the situation and then shifting the learning emphasis from the traditional methods that have been passed on and accepted for decades (see Carr and Kemmis, 1986), to experimenting with different approaches (Bentley 1998) was a resounding success. In both cases, doing something different from traditional technicist approaches was of importance in the learning environment. In the UK, the National Advisory Committee on Creative and Cultural Education (NACCCE) (1999, p.89, cited in Craft *et al.* 2001) defines 'teachers using imaginative approaches to make learning more interesting, exciting and effective' as a form of creative teaching. I believe I was drawing on my own creativity as I tried to improve the learning processes for my students. I will discuss the links that exist between creativity, spirituality in education and holistic approaches to learning (Craft *et al.* 2001; Miller 1996; Palmer 1993) in greater detail in Chapter Four. I am not suggesting that the use of technology always helps teachers and learners circumvent difficulties; I am suggesting that there are occasions when technology can be helpful and liberating. I will speak about this in more detail throughout this thesis and in particular in Chapter Five. More importantly, I learned that taking time to critique my practice and to plan different approaches and to experiment with them, can create good learning experiences for my students. These ideas are now kernel to my understanding of action research and developing a living educational theory. They are also kernel to the notion of praxis as outlined by Carr and Kemmis (1986, p.34) as 'thought and action (or theory and practice) are dialectically related [and]…mutually constitutive'.

These examples above, drawn from my practice, help to illuminate how I began to develop an understanding of my practice. I will develop these ideas as I discuss my concerns now under the headings of:

(a) the injustice of closing down learning processes for many and

(b) the unquestioning acceptance of the dominance of technicist approaches to education in current educational discourses.

(a) The injustice of closing down learning processes

The idea of people, children in particular, being discriminated against, being victims of social injustice because their learning strengths are not adequately addressed in our system of education is, in my understanding, a form of social injustice. Griffiths explains the term 'social justice' in terms of, 'the good of the community which respects - depends on - the good of the individuals within it, and the various sectors of society to which they belong' (Griffiths 2001, p.25). She reminds us that in the 1950s and 1960s the term 'social justice' referred to issues of social class, while in the 1970s and 1980s the term included gender and race as areas of discrimination and exclusion. These continue to be the issues that inform much of the dominant theories of social justice (Griffiths 2001). Zappone (2002) suggests that equality is generally understood 'primarily as equality of access to, participation in and benefit from education'. She cites Dunne's (2002) ideas around the understanding of fairness in determining people's chances of getting a job as producing 'not a more equal society but rather the "rise of meritocracy"' (Zappone, 2002, p.17). She maintains that

> Equality of opportunity is a concept that supports the notion that IQ +
> effort = reward, hereby taking our eyes off the structures and systems
> that create and maintain the inequalities across social groups.
> (Zappone 2002, p.17)

Zappone's (2002) main argument is that 'there is a relationship between patterns of inequality in education (for example; literacy inequality) and income inequality' and that such educational disadvantage should be tackled. Her focus is on educational disadvantage in terms of how people from poorer backgrounds are

discriminated against in normative education systems. However, her underpinning argument around IQ + effort = reward is striking because it pinpoints the thinking that IQ alone is the key ingredient for learning.

I perceive that there is yet another issue that can easily be included in an understanding of the various fields of injustice: this is the lack of recognition given by the education system to children's various learning strengths and weaknesses. I believe the neglect of the learning needs and strengths of students, whose intelligences do not fall into a logical/linguistic category, is a serious and generally unacknowledged form of injustice.

The writings of Gardner (1993) and Goleman (1996) illustrate how traditional didactic methods of teaching and learning do not address the learning needs of many. Gardner (1993, p.8) explains how Western society has put linguistic and logical-mathematical intelligences to the forefront of people's thinking, 'figuratively on a pedestal'. He suggests that much of our testing is based on the high value that society places on verbal and mathematical skills:

> If you do well in language and logic, you should do well in IQ tests and SATs, and you may well get into a prestigious college, but whether you do well once you leave is probably going to depend as much on the extent to which you possess and use the other intelligences…
>
> (Gardner 1993, p.8)

While Gardner is critical of a system of education that is overly technical rational in its approaches, he talks instead of the necessity of 'individual-centred' education (1993, p.71) because 'individuals have quite different minds…and we should instead try to ensure that everyone receives an education that maximised his or own intellectual potential'. I perceive that the examples from my own practice, cited above, demonstrate how I adjusted the learning environment so that individual students might learn with greater ease. Had I persisted in teaching in a manner that did not address the learning needs of the students, that had put language and logic on a pedestal, then the pathways towards learning could have been closed down for them, which, to my understanding, is unfair and unjust. As McCarthy (1980) suggests, traditional didactic methodologies do not address the

needs of many students and she asks, 'If 70% of our students learn most comfortably in ways not generally attended to in our schools, then how should we proceed?' (cited in Ginnis 2002, p.38). Issues such as these began to inform my understandings around why I was, and still continue to be concerned, about my own educational practices specifically and some other education practices in general.

Like Darder (2002), I understand the transmission of standardised packages of knowledge with much emphasis on the memorisation of descriptive content to be yet another form of injustice as it can close down the learning process for many. The Irish curriculum, according to Lynch (1999), favours students whose learning strengths lie in linguistic and mathematical areas. As a result, students whose learning strengths lie in a different sphere (visual spatial or bodily kinaesthetic, for example: see Gardner 1993) are seriously disadvantaged (Lynch 1999, p.274). I frequently encounter students who have problems with memorisation, whose test scores are low but whose ability to learn, to create or to design knows few bounds. These are the students whom the education system neglects to educate adequately. Interpretations of education that diminish the wholeness of the individual (see Miller 1996) and that see learning as the delivery of discrete packages of information (Thorndike, cited in Belkin and Gray 1977) give me concern and directly contradict my embodied values around love and holistic approaches to education, which I will explore in the following section. This is not what I perceive education to be about or what Freire visualised when he spoke about knowledge as a process, as something that should be engaged in through dialogue (Freire and Faundez 1989) or developing education as the practice of freedom as opposed to the practice of domination (Freire 1970).

I asked myself how I, as an educator, could persist in sustaining a system that denies or diminishes the learning processes of many of its students. I queried why educators continue to see teaching as a transmission process, as suggested by the report on the evaluation of the implementation of the Primary School Curriculum (Ireland, Department of Education and Science 2005) when frequently, dialogical or creative processes can be equally, if not even more meaningful for students.

These questions form the basis for why I was concerned and are drawn from my ontological values around love and caring relationships which I will outline below.

Perpetuating practices that are a form of injustice is reprehensible in a classroom (O'Hanlon 2003, Lynch 1999 and Zappone 2002) where the victims of the injustice are children, who are often among the most vulnerable in our society. I agree with O'Hanlon (2003) as she explains that in all contemporary societies, there are people who struggle to gain equality of opportunity and social justice in the education system and that such education systems can be key in 'perpetuating or curtailing educational disadvantages' (2003, p.8). The notion that the education system has the power to perpetuate or curtail forms of injustice and that I, as an educator, may have the power to perpetuate or curtail forms of injustice, is an important realisation for me. Students like Tim and Liam above, whose learning strengths were not of a linguistic, logical nature can frequently be perceived as failures, as they score poorly in standardised tests and in similar examinations that are based on technical rationality (see Glenn 2005b). My continuing to work with students like Tim and Liam using traditional didactic methodologies, where the students were the 'empty vessels' waiting to be filled with knowledge (Locke 1690), could have resulted in their perceiving themselves as failures. Morgan (2002) suggests that how students perceive themselves at school can contribute to whether they begin to lead a life in crime as there appears to be a direct link between perceived failure at school and anti-social behaviour. Therefore it is imperative that I, and educators like me, develop an awareness of the forms of injustice that are inherent in the education system (Lynch 1999) and that influence children negatively as they grow up. I have come to realise that the power that I have as a teacher must be used wisely.

Freire equates the transfer of knowledge methodology with sustaining 'elite authority' (Shor and Freire 1987, p.76) which is consistent with 'control from above' which acknowledges the nature of power-constituted relationships that can exist in educational settings. Such links between power (in the form of dominance) and control can be seen in many teacher/student interactions (for example, where students must ask the teacher for permission to go to the bathroom) or in teacher/principal interactions (where the principal insists that the teacher supervise

a class for a colleague during a period allocated for class preparation, for example). Developing an awareness of such 'elite authority' was part of my own awakening and growth in learning. However, as I developed an awareness of these hegemonies, I need not presuppose that they must continue to exist. Bearing Shor and Freire's (1987) ideas around control and power in mind, I believe O'Hanlon's insights are helpful as she pinpoints that the education system, and those who are part of that system, have a choice. As a teacher, I can choose to curtail or perpetuate forms of injustice in the education system. As I develop praxis around my work, I am now aware that my work involves choices between closing down learning processes for people or opening up pathways and opportunities for learning. Lynch's writing is helpful here:

> The cultural hegemonies in education are not only class hegemonies as Bourdieu and Passeron (1977) suggested, there are also gender and racial hegemonies….The gendered (and indeed classist, racist, and ethnocentric) nature of knowledge is …evident in what is omitted from schooling in its entirety, in the forms of knowledge and understanding that are left outside of formal schooling.

> (Lynch 1999, p.279)

While Lynch is talking here about the marginalisation of interpersonal and intrapersonal intelligences (Gardner 1993) as a feminist issue, I believe she has gone some way in extending Griffiths' (2001) understanding of social justice (see above). Lynch (1999) has acknowledged that in the Irish education system forms of knowledge are limited and oriented toward the linguistic and mathematical and that this is a form of injustice because it places many students at a disadvantage. I would suggest then, following on Griffiths (2001) and Lynch (1999), that the cultural hegemonies in education should include 'intelligence hegemonies' because of the marginalised nature of approaches to learning that are not of a linguistic or mathematical nature (Gardner 1993) and the lack of recognition given to holistic and creative approaches to learning.

Russell (1971) talks about how paradoxical it is that education has become an obstacle to freedom of thought and intelligence instead of providing learners with an emergent and creative process of coming to know and developing one's potential. He suggests that a theory of education should be 'to provide opportunities of growth and to remove hampering influences' (1971, p.18). I am

drawn to Russell's ideas as I see the paradox reflected in my own thinking. On one hand I see how education in general, and an over-dependence on technical rational approaches to learning in particular, can be an obstacle for freedom as it can close down the learning process for many, as seen in Liam and Tim's stories above. Yet, I also see education as part of our growth as human beings; our development and our process of growing towards our potential are embedded in my understanding of education. I have learned that engaging in technical approaches in education solely can act as obstacles to freedom and thought, as they tend to discount the uniqueness of students, advocating instead the perception of learners as 'empty vessels' (Locke, cited in Mathis *et al.* 1970, p194) and one-size-fits-all approaches of didactic models of teaching (see Gardner 1993). Such approaches to teaching and learning can be unjust and are at odds with my embodied ontological values around love and connectedness in education. Brown (2002, p.28) explains how the increasing obsession western culture has with measurability and standardisation in education 'limit[s] rather than extend[s] the scope for fruitful educational experiments'. Instead I search for ways of teaching and learning that embrace Russell's (1971) ideas around the provision of emergent and creative processes of coming to know and developing one's potential.

I like Palmer's understanding of education as he says:

> Education at its best - this profound human transaction called teaching and learning - is not just about getting information or getting a job. Education is about healing and wholeness. It is about empowerment, liberation, and transcendence, about renewing the vitality of life.

> (Palmer 1998, p.26)

Palmer's understanding of education embraces education as a holistic and spiritual process. This thinking is commensurate with my own as I develop my theory of practice but I perceive it to be incommensurate with the prevailing system of education in Ireland.

(b) The dominance of technicist approaches to education in educational discourses

Conway (2002) outlines the continuing dominance of 'technical and transmission oriented discourse' in relation to pedagogy in Irish education. He questions, rightly in my opinion, the accepted assumptions that underpin various pedagogical practices. He highlights how, for the past decade in Ireland, there has been little debate or reflection on whose knowledge was considered relevant and how or why it was taught. Such issues concern me also because, as outlined above, I have now come to perceive the sole use of traditional didactic methodologies as closing down learning for people and as a form of injustice, as opposed to the opening up of pathways of learning that educational experiences should provide. I now see that my own unquestioning complacency, as outlined in Chapter One, can be located within the larger picture of generations, perhaps, of teachers who do what they do because that is what is expected of them (see Carr and Kemmis 1986 and Murphy 2004).

I am also concerned because I believe, that as an educator I should always be questioning and searching; looking for better ways of living and being and creating opportunities for a good social order to develop and thrive. I perceive that I was part of an unquestioning 'herd', which Russell (1971, p.52) describes as existing when groups of human beings who are in close proximity develop a certain 'instinctive uniformity of behaviour'. I was part of the 'herd' who chose not to engage in critique or who were unable to critique, as outlined in Chapter One. Only when I began seriously to investigate my practice and to think critically around 'Why am I working in the way I do?', did I begin to understand why I was concerned with my work and the system in which I work. The importance of critique and the questioning of accepted norms has become a key issue in my research and in my everyday work as a teacher. It is interesting to note that Conway's claim about the lack of debate in educational discourse in Ireland around the domination of technical rational approaches to education (see Conway 2002) is happening despite the phased introduction of the Primary School Curriculum (Ireland, Department of Education and Science 1999) since 2000. It is ironic that one of the main tenets of the Primary School Curriculum (1999) is that teachers and schools should take responsibility for drawing up and designing their own school policies and plans. It states that 'within the framework of the curriculum schools are afforded flexibility to plan a programme that is appropriate

to the individual school's circumstances and to the needs, aptitudes and interests of the children' (Ireland, Department of Education and Science, Introduction 1999, p.11). It continues: 'the curriculum assumes that schools, in the process of planning its implementation, will adapt and interpret the curriculum where necessary to meet their own unique requirements' (1999, p.11). There is an inherent recognition within the Primary School Curriculum that educators are capable of devising their own policies and plans. Despite this, I have learned from my own experience at in-service programmes for the implementation of the Primary School Curriculum that many teachers seem to be rejecting this liberating opportunity, preferring instead to be 'told' what the policies ought to be and to be 'given' planning documents. Murphy (2004, p.256) explains how teachers' 'instructional practices appear to be influenced and informed by their personal beliefs and experiences of traditional classroom practice rather than by the child-centred principles of the curriculum'. This idea is also echoed by Archer (1982, cited in Lynch 1999, p276). I acknowledge that many teachers are under considerable pressure from lack of discrete time allocated to issues pertaining to school and classroom planning in schools (see Carr 2003). However, I suggest that some of the problematics that have arisen with respect to the implementation of the Primary School Curriculum (1999) are driven by an epistemological conflict. This conflict has arisen as a result of the introduction of a curriculum which embraces a heuristic epistemology within an education system that continues to perpetuate didactic methodologies as suggested by the findings of the recent report on the evaluation of the Primary School Curriculum (Ireland, Department of Education and Science 2005). I can locate my own learning in this dilemma also. As I began to engage in my research, my understanding of the pervasive hold technical rationality has on my thinking began to emerge. I began to develop an insight into my practices with internet collaborative projects as part of my own intuitive battle against the injustice of a system that was overly dependent on technical rationality.

While acknowledging that I am part of an education system that continues to prioritise didactic methodologies, as outlined in the evaluation of the implementation of the Primary School Curriculum (Ireland, Department of Education and Science 2005) and technical rational approaches to education in an

uncritical manner (Conway 2002), I believe it is important to strive to move beyond these constraints. I have learned through the course of my research that it is important for me and perhaps for others too - both as learners and teachers - to think for myself, to move outside the constraints of a technicist system, to look for better ways of being and to develop relationships that enhance the learning process. I believe that much of my work with technology is guided by these beliefs as my classes and I work together towards a better classroom and a better society, where respect for the other is as important as, and grounded in, respect for oneself. I perceive that technology has the potential for emancipation, provided it is used in a way that realises its generative transformational potential (see Whitehead and McNiff 2006 and see also Chapter Five for more on technology and its potential for emancipation).

Embracing my concerns

Engaging in critical thinking or critique, according to Carr and Kemmis (1986, p.138), could 'emancipate humanity from political oppression and the ways of thinking which legitimated it'. I have learned that neglecting to think critically or to experiment with different approaches to teaching and learning can result in situations such that some students fail to learn (Holt 1970). I suggest that persisting to work towards situations where children can fail to learn is a particularly offensive form of oppression (Giroux 1988), because it can allow children to be cut off from all forms of learning, especially those that might be emancipatory or life-enhancing. If these ideas are explored at an even deeper level, and the ways of thinking which legitimated this oppression are examined, then, as Carr and Kemmis (1986) suggest, one is brought right back to the kernel questions around knowledge and the forms of knowledge which are considered valid and who decides such issues. These epistemological questions animate much of my thinking and have inspired my claim to knowledge as I explore my ideas around interconnectedness in education.

If my aim is to work towards a better society for people (and it is), and I perceive education as a main pathway towards that better society, then I am compelled to be critical and creative in my teaching and in my ways of thinking about education. I

invite other educators to do similarly. I could see, in light of my new understandings around the inadequacies of technicist approaches to learning, why I was inspired to offer other approaches to learning to my classes. In the next section, I will discuss how my developing awareness of my ontological values helped me develop an understanding of my practice.

(2.2) Section 2: Developing my living educational theory as my ontological values become clarified in my practice

As I explain why I was concerned, I want to demonstrate how these concerns have emerged from my ontological and epistemological values.

As I embarked on my research journey, I had only a vague understanding of what my values were. Whitehead (2005a) explains how ontological values can be clarified, as people give accounts for themselves and their learning. He says (2005a, p.18), 'Each living theory is an account of learning in relation to the values used by the individual to give meaning and purpose to their lives'. Whitehead (2005a) continues by explaining how the meanings of the ontological values can be clarified in the course of their emergence in practice and that through this clarification process, ontological values can be transformed into living epistemological standards of judgement that can be used to evaluate the validity of a claim to knowledge. I could only begin to develop my living educational theory as I came to recognise the role the clarification of my ontological values played in the process of developing my living educational theory as well as in establishing the validity of my work. As I began to become aware of my embodied ontological values, to understand them and to be able to articulate them, I saw them transform and re-shape in light of my engagement with the literature and in light of my engagement with my practice. I will discuss how my values began to be clarified in the process of my research in the next section, as I underline the importance of establishing the validity of my work. I will outline in following chapters and especially in Chapter Six, how my ontological values were transformed into the living epistemological standards of critical judgement I used to test the validity of my claim to knowledge. I also will show that I engage with the social criteria of comprehensibility, truth, sincerity and appropriateness which form the basis of

Habermas's (1976) theory of communicative action. Habermas talks about the need to establish the validity of knowledge claims as a core aspect of communicative action.

I have learned to use my embodied ontological values as living standards of judgement against which to gauge if I am living and working in the direction of a good social order, or if, perhaps, I am denying my values in the way I work and the way I am with people. Continuously, I experience myself as a living contradiction (Whitehead 1989) where the values I espouse are not commensurate with the practice in which I am engaging. For me, this contradiction is part of being human. When I hold my work practices up to the light of my values, I rarely expect to experience immediate concurrence between my values and my practice, even though I continuously strive towards good practice. Instead I examine my work carefully, and reflect on how it can be improved. This is part of the living process of generating my living educational theory which enables me to live my values more fully in my practice. I perceive this nearly as a celebratory process, as I see my own imperfections, my own inability to live in the direction of my embodied values as a statement of my own human frailty (Arendt 1998). For me, this research is not an exercise in producing the neatly packaged research outcomes that may be expected in other research paradigms (Cohen *et al.* 2000). Instead this is a deeply considered, yet raw and real engagement between my embodied ontological values around love and how I live my life, and it is given life in my emergent living educational theory.

I have now reached a stage in my research such that I can engage in critical thinking and am continuously clarifying my embodied ontological values in my practice. I believe that I am becoming what McLaren (2003, p.73) calls a 'critical educator' who is interested in Habermas's ideas (1972) around emancipatory knowledge, which 'attempts to reconcile and transcend the opposition between technical and practical knowledge' and can 'help us understand how social relationships are distorted and manipulated by relations of power and privilege' (McLaren 2003, p.73). I can articulate my emergent living educational theory in terms of how it is grounded in an epistemology of practice which is informed by

the fact that my ontological values have been clarified in the research process and have enlightened my understanding of how I have come to practise in this way. I am claiming that I am developing an epistemology of practice that is grounded in dialogical, holistic and inclusional ways of knowing.

As I work towards thinking independently I reflect on my concerns and the reasons for my concerns. Miller's (1996) thinking is helpful as he suggests that education should be about helping students develop a capacity for connectedness and that if education can be aligned with the interconnectedness and dynamism of nature, then 'the possibilities for fulfilment increase greatly' (1996, p.3). I am also thinking of Wenger's (1998) comment that 'Education must strive to open new dimensions for the negotiation of the self. It places students on an outbound trajectory toward a broad field of possible identities' (Wenger 1998, p.263). Both Wenger (1998) and Miller (1996) see education, as I do, as a process of growth and development, where the seed of potential growth is enhanced and where the individuality of people is nurtured.

I value the recognition of the wholeness of the person, because frequently the education system in which I work seems to fragment the very essence of people's lives in its divisions of intellect and spirit (Miller 1996). It appears to pay homage to the linguistic/mathematical abilities of people, while diminishing other skills or qualities they may have (Gardner 1993). McLaren (2003, p.73) explains how a critical educator aims at creating conditions such that dominance and oppression can be conquered and transformed. My living educational theory began to emerge as I learned to espouse critical thinking and creative action in a movement towards praxis and towards nurturing educational growth and as I chose to remove the hampering influences of traditional technicist approaches to education.

Clarifying my values

Throughout my learning journey, my values have undergone a process of clarification. Initially, in an attempt to pinpoint what my values were, I examined carefully what I perceived to be the manifestations of my values in my practice and then proceeded to locate these ideas within varying conceptual frameworks.

As I began to engage critically with the texts within these frameworks I gained clarity around the underpinning values that motivated my work. The following example helps to explain these ideas:

I knew that if a child in my class behaved in an unacceptable manner, for me, it was important to engage with the humanity of the child, to address their misbehaviour in a compassionate manner and to encourage them to explain the misdemeanour and to see how this misdemeanour was perhaps unfair and dismissive of others. This, I knew, was different to the traditional ways of dealing with misbehaviour where the child is reprimanded, punished perhaps, and instructed not to behave like that again. As I sought to gain understanding around why my response was different, I encountered the writings of Nel Noddings who calls such compassionate responses 'confirmation' (1992, p 25). Noddings speaks of the importance of the seeking of a better self and the importance of care in education and suggests that caring in education can enable the revitalisation of schools. I began then to articulate my values in terms of *care* and *openness*. My thinking around my values was animated by Noddings' writings (1992) and I found myself looking for the 'better self' in my students. At this time also I was drawn to the writings of Martin Buber. Buber talked about the importance of the 'I-Thou' relationship, where one person is aware of and open to the presence of the other (see Yoshida 2002). As I became aware of such relationships, I began to work towards creating 'I-Thou' relationships in my classroom and with others. Buber talks about what it means to see the whole person, to see a person as a 'Thou':

> Just as the melody is not made up of notes nor the verse of words
> nor the statue of lines, but these must be tugged and dragged till
> their unity has been scattered into these many pieces, so with the
> man (mensch) to who I say Thou. I can take out from him the color
> of his hair, or of his speech, or of his goodness. I must continually
> do this. But each time he ceases to be Thou.
>
> (Buber 2000, pp.23-4)

When I think about Buber's insights into and his understanding of being aware of the wholeness of others, I am struck by how few examples of 'I-Thou' relationships I had experienced myself in main-stream education. I am struck also

by how infrequently engagement with the human-ness of others, by which I mean an 'I-Thou' interaction and a recognition of the wholeness of the person, is perceived to be a priority in learning contexts.

As I reflected on these writings and located my interest in creating dialogical learning environments for my students as informed by these frameworks, I questioned if the main underpinning value in my work was one of care and openness as suggested above. I questioned the meaning of the terms 'care' and 'openness'. In my understanding, both appeared to be elements of an overarching idea of love. I had to ask myself if my way of working with my students was animated by love and if love was an underpinning value in my work. Initially, I recoiled from the idea of articulating my embodied ontological values in terms of 'love' because of my awareness that talk of caring and open 'love' could easily be misconstrued and confused with the horror that is child sex abuse. I was also inclined to reject 'love' as a value because I suspected that it might infer that my thinking was somehow soft, uncritical and unclear.

Similarly, hooks (2003) discusses how her writings on love in education has been critiqued because it demonstrates a lack of objectivity and of being too emotional. hooks argues that an over-emphasis on objectivity can easily lead on to adversarial relations, domination and disassociation, which, in her view, do not encourage educative relationships. She suggests instead that the basic principles of love are a combination of care, commitment, knowledge, responsibility, respect and trust, and that when these principles 'form the basis of the teacher-pupil interaction, the mutual pursuit of knowledge creates the conditions for optimal learning' (hooks, 2003, p.131). She further argues that teaching with love enables teachers to respond to the concerns of individual students and demands that such a manner of teaching calls for teachers to be flexible and creative around creating the best climate for learning in their classroom.

I found hooks' ideas to be illuminating and they helped me to gain clarity in my own thinking around my values. Her discussion around the roles of objectivity and love further highlighted for me the importance of being courageous in one's commitment to love as a value. I had believed that there was a close link between

loving, caring relationships in the classroom and the recognition of the wholeness of the students and their individual learning strengths and needs. My engagement with hooks' writing served further to convince me of this.

As I drew on hooks' (2003) ideas to inform my own thinking, I began to see that my understanding of the terms 'care' and 'openness' were interchangeable with the term 'love'. As I explored the idea of love as the underpinning value that animated my work, I engaged with Fromm's ideas around love (1957) and was struck by his idea that for society to improve, a person's social loving nature must not be separated from one's social existence. Instead, they should be as one. The language of love is often muted in educational settings today and I concur with Gilligan (2004) as she calls for the silence around love to be broken. Building on hooks' and Fromm's ideas, I came to realise that the main overarching value that underpinned my way of working was indeed one of love. I am aware that Noddings has been critiqued for her overemphasis on caring in the context of formal education as it can present a range of potential conflicts within professional frames of reference and could be possibly interpreted as being patronizing (see Smith 2004). Noddings argues that such arguments are politically and philosophically rooted and have little reference to anything intrinsically problematic about the notion of care. She also argues that reciprocity in caring relationships helps to ensure that they do not become patronising or one sided (see Smith 2004). I agree with Noddings (1997, p.28) as she says :

> In direct opposition to the current emphasis on academic standards, a national curriculum, and national testing, I have argued (Noddings 1992) that our main educational aim should be to encourage the growth of competent, caring, loving, and lovable people.

> (Noddings 1997, p.28)

She argues that society

> …needs to care for its children--to reduce violence, to respect honest work of every kind, to reward excellence at every level, to ensure a place for every child and emerging adult in the economic and social world, to produce people who can care competently for their own families and contribute effectively to their communities
>
> (Noddings 1997, p.29)

For the purposes of my research, I now choose to call this value 'love' and to be aware of the importance of locating it in my social existence and in my work with others. I will discuss in greater detail in Chapter Four how I have developed an understanding of these values as they are transformed into living practice.

The values that underpin my work

As my values became clarified in the process of my research, my concerns around my practice and the reasons for these concern also became clearer. I know now that I value love and enmeshed in that is the recognition of the human-ness of people in terms of experiencing the wholeness of the person (Buber 1958). As part of engaging with of the human-ness of people I locate my value of nurturing dialogical ways of knowing (Bohm 2004) as the flow of learning that occurs between people and the relationality of education to present-day life processes (Crowell 2002). I have learned that technology, in the form of multimedia and internet based communications, can help in the realisation of these values as they can assist communication and learning in a loving and free manner. I will discuss this in greater detail in Chapters Four and Five.

As I developed an understanding of my ontological values and as they became clarified in the process of the research, I realised that my work practices, in particular those practices that involved the creation of collaborative learning spaces using technology, were inspired by these same ontological values. As I asked myself, 'How can I understand my practice?', I perceived that my practice was the manifestation of my once tacit, but now clarified embodied ontological values around love, the interconnectedness of people and their environment. These values are embodied in my practice (Hocking *et al.* 2001), and the way I work is a tentative demonstration of how I am coming to understand and articulate my values (McNiff *et al.* 1996, 2003). I use the word 'tentative' carefully here, not because I am unsure about the importance of living my values in my practice, but because interwoven throughout these values is the recognition of my own humanity and its imperfections. The living of one's values in one's practice does not assume a closure or a final tidy outcome. Instead I live out my values in my practice in a dialectical and ever questioning manner, never fully succeeding and

always unfinished, poised and ready for more questions. I believe that placing confidence in uncertainty is a prerequisite to understanding our humanity. Too often, people's beliefs, their epistemologies and the way people are with others, are grounded in an admiration of certainties and monistic ways of viewing the world (Berlin 1998). These are the assumptions of current dominant perspectives. Very often these certainties are flawed because society has failed to acknowledge the fact that as humans we are unpredictable and un-programmable. People can choose to accept or reject beliefs, and so therefore people have all the potential to respond to 'certainties' as they see fit, and rightly so. Therefore, their freedom to choose makes for very few certainties in life.

Schön (1995) also acknowledges uncertainties and talks about how through reflection, a practitioner can make sense of the uncertainties they may allow themselves to experience. He explains that when educators experience uncertainty 'they tend to be afflicted with a nagging sense of inferiority in relation to those who present themselves as models of technical rigour' (Schön 1995, p.28). Schön continues that such practitioners then choose to act on or accept their dilemma and 'that depending on how people make this choice, their lives unfold differently' (1995, p.28). I believe that the acknowledgement of our humanity must be located in the premise that uncertainty is part of the human condition. I celebrate, as part of my own being human, my acknowledgment of my *inability* fully to live my values through my practices, even though I constantly work in that direction.

'Experiencing oneself as a living contradiction' is the term Whitehead (1989) uses to describe the conflict that can occur between the aspirations of one's values and the reality of one's life and work practices. The experience is an area of tension, where the differences between one's beliefs and one's practices are highlighted. It can be an area of experiencing dissatisfaction and disillusionment, where the practitioner realises the discrepancies between their values and the actions they undertake in their practice. It can also be something quite different. I believe the experience of understanding oneself as a living contradiction can be interpreted as energising, because it draws on the tensions between one's values and one's practice, between an unattainable ideal and human endeavour; in essence it highlights our humanity as a living and imperfect contradiction. Carr and Kemmis

(1986) explain contradiction in terms of how new constructive thinking and action is called upon to transcend the dilemma of the contradiction. Kemmis and Fitzclarence (1986) explain: 'The complementarity of the elements is dynamic: it is a kind of tension, not a static confrontation between two poles' (Kemmis and Fitzclarence 1986, pp. 36-37). These tensions are kernel to what I see as being human. They highlight our freedom to choose and our ability to think for ourselves. They display our imperfections and inadequacies because as humans we are not programmable automatons who can behave and work exactly as we ought to. Sometimes we choose options that are not wise, sometime we make mistakes and sometimes we are unjust. Sometimes we act in direct opposition to our values and beliefs. If we choose to 'forgive and remember' (Shulman 2002), and use our 'mistakes' or personal experiences as living contradictions as a launch pad for improving our practices, then the experience of oneself as a living contradiction should be grounds for celebration and not lamentation. That a place of tension and human frailty can give rise to new creativity and innovative ideas about work practices is a very exciting and productive concept (see the work of McDonagh 2000, Ní Mhurchú 2000 and Roche 2000 for example).

Through the clarification of my values in my practice, I have learned that I was deeply concerned about being part of an education system that disregarded the human-ness of people and which over-emphasised transmission models of teaching (see Conway 2002; and Ireland, Department of Education and Science 2005 for example) despite the fact that such models did not address the learning needs of many students (see NCCA 2005). This awareness ran contrary to my ontological values around love and I perceived how the internet based projects that I established for my classes with others outside the classroom, were the manifestation of my ontological values in my practice. I saw how the education system was embedded in the power-constituted nature of relationships in education, in elitist forms of power and that it divided teaching and learning from the world outside the classroom. I began to work towards a better way of being - albeit at an unconscious, tacit level at first, in an attempt to diminish these negative aspects of the dominant education system in my classroom. As I began to engage in critical thinking and became less 'obedient' and more questioning (Chomsky 2000), I saw a clear connection between my ontological values around love and

the connectedness of learning to life outside the classroom and the educational relationships I was attempting to develop with my classes as we engaged in internet based collaborative projects. As I began to clarify my embodied ontological values in my practice, I began to recognise that my concerns were of an epistemological nature. I began to perceive, like Apple, that education can be a site of conflict about 'the kind of knowledge that is and should be taught, about whose knowledge is "official" and who has the right to decide' (Apple 2004, p.vii). These questions are at the heart of the conflict that inspired me to engage in internet based collaborative projects in the first instance and that encouraged me then to engage in the process of developing my own educational theory of practice.

(2.3) Section 3: Exploring curriculum as an area of concern as I develop my understanding of my practice

If, as Conway (2002) and Lynch (1999) suggest, the current dominant education system is located within a technicist perspective that sees knowledge only as something external and commodified, whereas I see how knowledge as a holistic way of being which can be generated in an emergent dialogical and holistic process (Miller 2000a), then areas of conflict are bound to arise. If I believe that each student is a legitimate knower in his or her own right (Bentley 1998), and the 'system' sees the student as an empty vessel awaiting knowledge transmission (Locke, cited in Mathis *et al.* 1970, p194), then I will also experience conflict. The conflict led me to question such issues as those outlined by Apple (2004) (see above) around what is considered to be legitimate knowledge and who decides this. In attempting to engage with these questions, I have come to see that curriculum and how I, as an educator, perceive curriculum, is key to issues of knowledge and knowers. Schön's (1995) thinking about the need for a new epistemology in institutional settings is pertinent here. Schön explained how 'we cannot avoid questions of epistemology' (1995, p.1) as the new forms of scholarship outlined by Boyer (1990) challenge institutional epistemologies.

I perceive traditional conceptualisations of curriculum to be modelled on Tyler's idea (1949, cited in Carr and Kemmis 1986) that curriculum was the means to a given end, where objectives were established and the teacher implemented these goals. A traditional curriculum is closely aligned to the delivery of knowledge

(Carr and Kemmis 1986). It has discrete subject areas and discrete subject timetabling, schemes of work and text books. As Lynch points out, 'Neither the curricula nor the modes of assessment allow fully for the differences in intelligences between pupils' (Lynch 1999, p.305).

In Ireland, educators in the primary sector have been implementing the newly revised primary curriculum: Primary School Curriculum (Ireland, Department of Education and Science, 1999) since 2000. The underpinning ideas of the Primary School Curriculum are commensurate with my own ideas around curriculum in that it aims to:

> …celebrate the uniqueness of the child, as it is expressed in each child's personality, intelligence and potential for development. It is designed to nurture the child in all dimensions of his or her life - spiritual, moral, cognitive, emotional, imaginative, aesthetic, social and physical.
> (Ireland, Department of Education and Science 1999, Introduction, p.6).

It recognises 'the importance of developing the full potential of the child' (1999, p.7) and it is 'concerned to develop their [children's] capacity for creative expression and response; and it promotes their emotional and physical development' (1999, p.7). It also acknowledges the child as an 'active agent in his or her own learning' (1999, p. 8) and that 'learning is developmental in nature' (1999, p. 8). The Primary School Curriculum also states its 'recognition of the principle that there are different kinds of learning and that individual children learn in different ways' (1999, p.10). I have found each of these ideas and many more besides to be commensurate with my own thinking and values around education. The bodies involved in the drawing up of the curriculum documents seem to have been well informed and creative in their thinking. As a result, one might think that curriculum development in Ireland has been well planned and implemented in a balanced and fair manner, but that does not seem to be the case in reality.

Already, even though the introduction of the Primary School Curriculum (1999) is not yet fully implemented, many teachers and their union (the Irish National Teachers Organisation - INTO) are expressing dissatisfaction about the implementation of the new curriculum (see InTouch 2003) to the extent that the

implementation process was delayed for a year (see Dempsey 2003). Dissatisfaction has been expressed in academic circles also (see Morgan 2002, Murphy 2004**).** The sense of dissatisfaction with this new curriculum is puzzling. The rhetoric of the trade union would lead us to believe that the answer lies in poor funding, poor pupil teacher ratios, curricular overload and poor professional development programmes (see Carr 2003). While these are all reasonable arguments, I believe that the real reason is more deep rooted and lies in the chasm that exists between the ideals of the curriculum statements and the reality of the dominant role technicist rationality holds in our education system. This chasm is indicative of the clash of ideas that may be experienced in our current education system and embedded in issues of epistemology. This chasm is also at the heart of why I am concerned about my practice and about how people learn and I am aware that I have become entangled in a conflict of epistemologies (see Young 1998).

In my own learning journey, I have come to understand, now, that how I perceive curriculum is similar to my perception of knowledge, as they are both interrelated. I see curriculum as Elliott (1998, p.23) does, when he draws on the work of Stenhouse to describe curriculum as a resource 'to help teachers reconstruct their view of knowledge and in its light their pedagogical relations with students in classrooms'. This implies that curriculum is organic, emergent and alive. These ideas inform my understanding of what curriculum is about. This is quite a different understanding to the traditional view of curriculum which is 'aimed at the acquisition of knowledge' and 'designed to support a transmission mode of teaching' (Elliott 1998, p.133). This traditional view of curriculum sees curriculum as a package to be delivered or transmitted: curriculum is of an external, reified nature. Young (1998) also encounters dilemmas around curriculum and describes two models around curriculum as 'curriculum as fact' when referring to what can be loosely aligned with the technicist model, and 'curriculum as practice' when referring to the model which subscribes to the idea that knowledge is produced acting collectively. He points out that the

> curriculum as fact with its underlying view of knowledge as external to knowers, both teachers and students, and embodied in syllabi and text-books, is widely held and has profound implications for our conceptions of teaching and learning

The dilemma that exists between technicist epistemologies and those of the new scholarship (Boyer 1990) is apparent here, although Young is also critical of more fluid forms of curriculum. Earlier, I discussed how the dilemma is located in the locus of practical teaching in the classroom, and it is apparent here now in the wider focus and interpretations of curriculum.

I have come to question the apparent dominance of technicist approaches to education. I query why so many teachers subscribe to it when it is clear (from curriculum documents, if not from common sense) that dialogical and other approaches to teaching and learning are worth exploring. Elliott (1998, p.133) cites Posch (1993) to explain the 'advantage' of technicist models of curriculum:

> …it enables schools to "maintain a close relationship with the outcomes of academic knowledge production". Such outcomes have traditionally constituted the educational "gold standard" in western societies.
>
> (Posch 1993 cited in Elliott 1998, p.133)

The advantage, if it can be called such, then lies in the idea that the knowledge can be stored in textbooks, the success of the transmission process can be measured through examinations, and, as a result, the student can take their place in what is perceived as a static society (Elliott 1998). The wholeness of people, their need for dialogue, the notion of learning as an emergent process and the idea that education is inclusive of all people with all intelligences so that people can develop to their potential, are ideas that are not addressed by a technicist model of education.

Technical rational processes may not best serve all the needs of the learner but it is worth exploring if technical rational processes are responsible for the uncomfortable position the Primary School Curriculum (1999) now holds in this country. The curriculum documents do not appear to promote technicist ideals to any great extent, in fact the opposite appears to be the case, and yet, there are countless examples of technical rational epistemologies shaping and moulding this exciting new curriculum. There is much anecdotal data of school inspectors equating the aims of the Primary School Curriculum with targets which must be

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attained, and inquiring if teachers have in fact attained these targets. Carr and Kemmis (1986) explain how Tyler's (1949) text on curriculum influenced curriculum such that

> the aim of developing the cultivated person was now discarded in favour of developing conformity to an agreed image of the educated person (implied by goals)….and that teaching and curriculum became instrumental – the means of achieving these given ends.
>
> (Carr and Kemmis 1986, p. 14)

Examples of similar interpretations (misinterpretations, in my view) of the Primary School Curriculum appear in the media, which promote the use of technical models of evaluation to measure the success of the implementation of the curriculum (see Kilfeather 2005 for example, who, speaking on behalf of the *Parents Council of Ireland,* is calling for standardised tests to be administered so that people can ascertain where the 'good' schools are).

I believe that changes introduced by the Primary School Curriculum (1999) are being presented as low-key and as building on a previous curriculum (Curaclam na Bunscoile, Ireland, Department of Education and Science 1971), but in fact are demanding of a whole new form of institutional epistemology. In its introductory section, the Primary School Curriculum (Ireland, Department of Education and Science, Introduction 1999, p.2) states that it 'encompasses the philosophical thrust of Curaclam na Bunscoile'. While this may be true, the form of epistemology the Primary School Curriculum embraces is different to that of Curaclam na Bunscoile. The form of epistemology which is called for by the Primary School Curriculum is one which perceives knowledge as being relational :'it…takes cognisance of the changing nature of knowledge and society' (1999, p.7) and is supportive of creative forms of generating knowledge: 'there are different kinds of learning and children learn in different ways' (1999, p.10). It also calls for schools to 'plan a programme that is appropriate to the individual school's circumstances and to the needs, aptitudes and interests of the children' (1999, p.11). The Primary School Curriculum (Ireland, Department of Education and Science, 1999) also promotes the importance of critical thinking and has as one of its specific aims that children be 'enabled to come to an understanding of the world through…the ability to think critically' (1999, p.34). Nurturing a sense

of spirituality is also an important element in the curriculum as it includes 'the spiritual dimension in life' as one of its key issues (1999, p.9). The Primary School Curriculum (1999) is based on these principles outlined above and it underpins how I work with my students as I contribute towards their learning and to the education of social formations as I hope to encourage people to think critically, to query the accepted unquestioned norms and to move towards change for the social good. In my opinion, it reflects, however, a substantially different understanding of knowledge and how knowledge is acquired as perceived by the previous curriculum (*Curaclam na Bunscoile*, Ireland, Department of Education and Science, 1971). I also believe that it communicates a substantial change of perspective and epistemology from traditional interpretations around curriculum. This change needs to be flagged and acknowledged appropriately; its dismissal as being a 'follow on' to the previous curriculum of the 1970s can be misleading.

The role of the 'interpretation of ideas' as outlined by Young (1998) must also be acknowledged in communication processes - specifically in the communication processes around the implementation of the Primary School Curriculum (1999). Young (1998, p.45) talks about how

> … an external structure such as the National Curriculum has to be interpreted by teachers to become a reality in schools and that it is in that process of interpretation that the scope and the need for teachers' professional autonomy can be found.
>
> Young 1998 p.45

However, it is my understanding that if the teachers whose professionalism has been moulded and shaped by ideas that are technical rational in nature, then problems will arise when a curriculum, such as the Primary School Curriculum (1999), that is not dominated by technicist assumptions is introduced. An epistemological conflict will arise. Young's ideas around the interpretation of ideas are relevant here as I explore ideas around the dissatisfaction with the Primary School Curriculum (1999) that many teachers are currently expressing (see Carr 2003; InTouch 2003). If teachers like myself have been immersed in a culture that is dominated by technical rational thinking, then it is difficult to shake off the shackles of such an immersion. Murphy's (2004) paper is also helpful here as he explains how teachers' practices in Ireland appear to be more influenced by

their own beliefs and by traditions that have been passed on than by the introduction of the Primary School Curriculum (1999). Although I believe that educators should be 'afforded flexibility to plan a programme that is appropriate to the individual school's circumstances' and that schools will 'adapt and interpret the curriculum where necessary to meet their own unique requirements' (Introduction, Primary School Curriculum, 1999, p.11), the problem lies in a *lack* of engagement with the ideas of the Primary School Curriculum (Ireland, Department of Education and Science, 1999), as opposed to a well-argued rejection of it. If educators are equipped with and derive their knowledge base from a technical rational way of thinking, and are then presented with a curriculum which is embedded in a different epistemology and calls on hermeneutic, dialogical, personal and creative ways of knowing, then many educators will have difficulties in recognising and interpreting the ideas inherent in this newer model of curriculum.

Perhaps it might be useful to return to the model of Foucault's interpretation of Bentham's panopticon (Foucault 1980) to understand the problematics here and visualise people not only as the prisoners but also as the keepers of their own imprisonment. In such circumstances, prisoners/keepers/educators are unable to interpret ideas from a new or different epistemology, because they are not equipped to do so and because they do not possess the freedom of mind to do so. Many educators are adhering to a system of education with which they are familiar, but in the process they are perpetuating the myth that only technical approaches to education are worthwhile approaches. I now see the dilemma the Primary School Curriculum potentially presents for educators in Ireland as a socially constructed curriculum in a milieu that is structured by technicist beliefs and philosophies. I have also come to see how my own ontological values seemed to be in direct contrast, not to the Primary School Curriculum itself, but more to how the Primary School Curriculum is interpreted (see Young 1998 for more on the problems pertaining to how curriculum might be interpreted).

Generating purposeful concern

Bearing in mind my concerns about education and current perceptions around curriculum as I have outlined above, and how my ontological and epistemological

values are often in conflict with the dominant system of education, I have clarified my thinking around why I was concerned. I now began to perceive my concerns as being with purpose. By this I mean that I reached a stage in my thinking such that I no longer saw my concerns as being tacit or innate or static. I now saw them as giving rise to action, to active critique, to action in a movement towards a good social order, to overcoming the oppression of an over-dependence on technicist thinking (McLaren 2003). For much of my teaching life, I equated being neutral and working quietly alone with my students as being the 'best' approach to education. I now realise that I was acting as the 'obedient' teacher (Chomsky 2000), perpetuating dominant perspectives in education, thinking mainly at the level of technical issues (Apple 2004) and not engaging in critical thinking. I can see now that taking such a neutral stance not only perpetuates an uncritical approach to education, it can also infer a complacent attitude and a support, albeit unspoken, of the dominant ideology, as suggested by Freire (Sterling *et al.*. 1995). I have chosen not to remain neutral, I have chosen instead to 'trespass' (Bourdieu 1990) so as to gain insight and understanding into my work within the education system in which I work. I have chosen to take action against the frequent injustices of technicist approaches to education and to take action towards creating opportunities for learning in a dialogical, inclusive and creative way. I believe that critical thinking, though worthwhile, is not enough on its own as it can remain at the level of rhetoric without some form of movement. I understand critical thinking to imply an action, a journey towards committed, informed, purposeful action or praxis. For me, this movement is about the creation of a better classroom, where relationships are central, where people have respect for one another, where education is seen as a conduit towards a good social order and by contributing to the education of social formations as outlined by Whitehead (2004). Contributing to the education of social formations (see Chapter Seven) calls on people to think critically, to query the accepted unquestioned norms and to move towards changing the status of people's 'own situations in relation to their value commitments' (Mc Niff 2005, p.17).

The unquestioning acceptance of norms, of perceiving norms as 'given', is an inherent part of an uncritical stance (Sachs 2003). I also adopted such a stance as I saw no need to question the 'givens' of teaching practices. Berlin's thinking is

illuminating here as he talks about a belief in determinism, in the acceptance of things, which allows people to evade responsibility and provides people with an excuse for stasis (Cherniss and Hardy 2005). This evasion of responsibility because things are the 'way they are' is an inadequate response to education. Arendt (1958 cited in Coulter and Wiens 2002) warns of the importance of both thinking about what one does and acting accordingly. It was imperative to critical thinkers like Freire (Darder 2002) that educators acknowledge that 'oppression does not exist within a closed world from which there is no exit' and instead that they 'embrace fully this dialectical understanding of our relationship with the world and transform our teaching into… revolutionary praxis' (2002, p.54). I have learned in the process of my research that I have attempted to transform my teaching into 'revolutionary practice'. For me, working towards a good social order is about creating learning environments so that opportunities for people to live out their values abound. I have learned that, frequently, these learning environments are enhanced with the inclusion of technology as it adds to the connections I like to make between the classroom and others in the wider world. I have also learned that technology can also make the engagement with their learning more accessible to all children through the use of word processors and multimedia (see Eisner 1997).

I perceive this commitment to purposeful concern and praxis being manifested in how I embrace a desire to work in a way that is commensurate with my values around love, in a way that sees curriculum as being dynamic and relational and espouses the notion that people can learn for themselves. In Chapter Four, I will explain how I developed the praxis that arose from my understanding around my concerns and why I was concerned. My praxis took the form of developing an understanding of my work that transformed into my claim to knowledge. I am claiming that I have developed an epistemology of practice that is embedded in dialogical and inclusive ways of coming to know. I will show that this epistemology is evident in my learning, in my practice and in how my students learn, and I will produce substantiated evidence to support this claim as I theorise my practice as a thoughtful and critical response to my concerns.

To conclude

In this chapter I have explored the reasons I was concerned with my work practices, and epistemological conflict from which these concerns have emerged. I have explained how I have developed a sense of clarity around my values and have developed an understanding of my practice as the manifestation of these values. I explored issues pertaining to how curriculum and its interpretation can be a source of epistemological conflict as I develop an awareness of my ontological values.

In Chapter Three, I will address the question 'What could I do about my concerns?' and examine issues around methodology. I will explain how, in the process of investigating my practice, I developed an emergent living educational theory from my practice (as defined by Whitehead 1989) in the form of a living epistemology of practice.

Chapter Three: What could I do about my concerns? Examining issues around methodology

As my learning journey continued I gained insight into the concerns I had around the contradictory nature of my work within the educational system; why I was concerned about the dissonance I experienced between the rationalised external world of structured practices such as completing textbooks, and my own internal values around love and caring relationships. I decided to take action. As outlined

in Chapter Two, I began to think critically and I developed an understanding that this critical thinking implied a journey towards committed, purposeful action. The action in which I chose to engage took the form of developing a living theory approach to action research as I investigated my understanding of my practice (Whitehead 1989). This chapter outlines the methodology I employed so as to engage in an ordered enquiry which I am presenting here in the form of this thesis. In the process of investigating my practice, I developed my emergent living educational theory from my practice in the form of a living epistemology of practice, which is informed by the fact that I know what I am doing in my practice and I know how I have come to practise in this way. I am claiming that I am developing an epistemology of practice that is grounded in dialogical, holistic and inclusional ways of knowing. I am thinking here of Bohm's (2004, p.7) ideas around dialogue as 'flow of meaning' out of which new, creative understandings may emerge. Bohm describes this emergent, shared meaning as the 'glue' which holds societies together. I am also drawing on Capra's thinking as he (1997) explains how 'deep ecology' does not separate humans from the natural environment; it is a form of spiritual awareness. In the course of the research I have developed key insights into my understanding of my ontological values and the importance of loving and caring relationships as a basis for sustained forms of learning. Embedded in this is my ever-increasing understanding of the importance of the interconnectedness that exists between education, people and their environment and the wider experiences within the cosmos (Miller 1996; Montessori 1949) and how technology may be a vehicle for encouraging such relatedness (Brown and Duguid 2002).

Whitehead (1989) recommends that researchers can ask questions such as 'How can I improve my practice?' in order to generate and make public their descriptions and explanations of practice as their own living educational theories. I perceive the question 'How can I best understand my practice?' to be embedded in the question 'How can I improve my practice?' As the focus of my research was around developing an understanding of my practice, the research methodology, which informed my investigation, was influenced by my ontological and epistemological assumptions (McNiff and Whitehead 2005b). These assumptions in turn were influenced by my research findings in the form of my own new

learning and insights around my ontological and epistemological commitments. I began to perceive and articulate an interdependent reciprocal dynamic interaction between my ontological and epistemological values and my research methodology, as my values influenced how I did my research and my subsequent learning influenced my ontological and epistemological values. As I began to clarify my research methodology, I am reminded of Said's (1994) explanations around how the intention involved in a new beginning can transform into a methodology. This chapter captures the essence of this transformation. This chapter outlines why I chose a living theory approach (Whitehead 1989) for my investigation and how this approach grew and developed and emerged from the research itself. Even though the research process itself was dynamic and grew in conjunction with my emergent epistemology, the structuring of my research methodology brought order and discipline to the process of my enquiry and the process of communicating the story of my enquiry (see McNiff and Whitehead 2005b). I will outline in this chapter how I perceive this order and discipline in the way I observed good ethical practice, in my data collecting processes and in the way I have generated validated evidence in relation to my living epistemological standards of judgement (see Whitehead and McNiff 2006). I see this rigour (see Winter 1996) in the manner that I have presented my work-in-progress to colleagues, to fellow practitioners (INTO and NCTE 2005) and to others involved in academic work at various educational conferences (see Glenn 2003, 2004, 2005 and 2005a) as I invited them to engage critically with the descriptions and explanations I was offering for my practice.

I have chosen my emergent understanding of the importance of interconnectedness (Miller 1996) as the basis for the methodology for my research; as the foundation on which I create the framework of my methodology. Through my emergent understanding of my new epistemology I have thus moulded the methodology which has framed this research (see Bradley 1993). This chapter demonstrates how my emergent epistemology, my understanding of coming to know as a dialogical and inclusional process, led to the development of my methodology which was embedded in the web of interconnections (O' Donohue 2003) between my learning and that of my students. As I collected data that would eventually be produced in the form of validated evidence for this research, I utilised the web pages, the email

communications and the multimedia presentations that my students had undertaken as they too were involved in building connections as a holistic approach to learning.

I have undertaken this research with the purpose of contributing to the education of social formations also, in terms of inviting educators to engage with my research and to question the accepted norms of their work practices and to exercise their capacity for critical engagement (McNiff 2005c). Huxley (1992 cited in Nakagawa 2000, p.74) explains that education;

> …aims at reconciling the individual with himself [sic], with his fellows, with society as a whole, with the nature of which he and his society are but a part, and with the immanent and transcendent spirit within which nature has its being.
>   (Huxley 1992 cited in Nakagawa 2000, p.74)

I am drawn to these ideas as my own 'reconciling' has to do with a renewed emphasis on embodied and dialogical ways of knowing, within a system where technical rational epistemologies are dominant (see OECD 1991) and fragmented thinking about teaching and learning prevails (Brown 2002). McNiff and Whitehead (2002, p.59) seem to think in a similar manner when they say that what action research stands for is the 'realisation of human needs towards autonomy, loving relationships and productive work; the urge towards freedom, creativity and self-recreation'. I am drawing on Palmer's (1993) and McNiff and Whitehead's (2002) ideas to create my own visions of working towards a good social order, where people are mutually respectful of one another and learning is seen as a process of growth and emergence; as part of the process of living. Like Dewey (1938), I too perceive education as a process, which is life-affirming. The situation that I visualise is of an invitational nature in that I am asking others to listen and to test my claim to knowledge against their critical responses.

In this chapter I will outline how I first encountered action research and how it has since become a life affirming process for me. I will also describe how my initial attempts at action research were paradoxically undertaken while I was subscribing to a technicist epistemology and how I perceived action research as something to be 'done' to people, including myself. I will outline how this epistemological

stance changed and the significance of this change as I acknowledged how I experience myself as a living contradiction (Whitehead 1989). Now, having embarked on a learning journey, I see my process of living theory not just as an approach to research, but more as a way of life. This chapter will describe and explain this epistemological growth and I will outline why I perceived the traditional propositional forms of research to be unsuitable for my work. The chapter is organised in the following manner:

(i)   At the beginning of my research

(ii)   Doing research differently

(iii)   A new understanding of my practice: developing a new epistemology

(iv)   What about traditional approaches to research?

(v)   My living theory approach to research

(vi)   Evolving research questions: evolving epistemologies

(vii)   The research methods of my living educational theory

(3.1) At the beginning of my research

As I embarked on my research programme, initially in the form of an M.Ed (Glenn 2000 and 2005) and moving on to my PhD programme subsequently, I was drawn to the literatures of action research. Action research formed a compulsory module of the diploma stage of my masters programme and I chose to continue with an action research approach for my masters thesis. As I began to write up my thesis and as I read the literatures pertaining to action research, I became aware of certain discrepancies in the literatures around action research. Some texts appeared to approach the ideas around action research differently to others. I read and re-read the textbooks trying to capture what the 'real' action research meant. Carr and Kemmis (1986) appeared to talk about action research in propositional terms whereas other writers such as McNiff *et al.* (1996) seemed to perceive action research in dialectical terms. Some of my course tutors saw action research as an interpretive form of research. I realise now that I was entangled in a maze of interpretations around action research. Many of these interpretations are part of a trend towards what McNiff (2005c, p.4) currently describes as 'linear programming, input-output, the implementation of pre-packaged action plans to ensure a tidy predetermined outcome', designed perhaps to fulfil financed research programmes which demand results and outcomes in classrooms. At the time, it

was confusing for a novice researcher such as myself to differentiate between the various interpretations of action research. In desperation, I emailed Jean McNiff, the author of one my key texts at that time: *You and Your Action Research Project* (McNiff *et al.* 1996), pleading for clarification on the issues which were puzzling me. Jean invited me to a study group meeting in Dublin and that was the beginning of my doctoral studies and a life-enhancing engagement with action research that has continued since.

Action research from a technicist stance?

As outlined in Chapters One and Two, I was a product of a society where technical rational thinking was the dominant epistemology (see OECD 1991). It dominated my childhood learning experiences, my learning and teaching experiences as a young adult and continued thus until recent times. Propositional logic informed much of how I thought about ways of knowing. I perceived knowledge as being external to the knower; it was something separate and to be viewed objectively; something informed by Cartesian logic. I perceived things to be black or white and would adhere to conventions and rules unquestioningly. I respected rules and regulations and expected others and myself to adhere to them. I find this way of being and thinking interesting now as I read Chomsky's (2000, p.24) comments on schools**.** He talks about how the goal of schools is to keep people from asking questions about relevant matters and how as a teacher you learn to be obedient. He explains how the most obedient and unquestioning teachers are frequently perceived as the most committed. I now realise that Chomsky was describing me: the 'me' who did not recognise herself on her initial readings of Chomsky (see Chapter One), the 'me' who existed in a black and white world until she saw that there were other ways of thinking and being.

Yet, despite my technicist tendencies, I was drawn to the writings of action researchers (namely Carr and Kemmis 1986, McNiff 1988, McNiff *et al. 1*996, O'Hanlon 2003 and Whitehead 1989, 1993) and their approaches to research. The notion of teacher as researcher (Stenhouse 1975, 1983) appealed to me greatly as did the idea of taking 'action'. Carr and Kemmis (1986) explain that teachers are drawn to research for many reasons. These reasons, according to Carr and Kemmis (1986), include a desire to reflect on educational practice and to justify it, while

other teachers want to justify innovative practices in which they have engaged, and others still, choose to embrace the autonomy that has been offered to them and choose to engage in educational research. I became involved in research through a combination of Carr and Kemmis' (1986) ideas. I liked the idea of taking charge of and developing my own professionalism. Even though, at a superficial level, I was entrenched in a mode of complacency and obedience, I was at a deeper level dissatisfied with what Whitehead calls 'education theory'. Whitehead (2005) differentiates between the terms 'education theory' and 'educational theory' and explains (2005, p.3) that education theory is drawn from the disciplines of history, philosophy, psychology and sociology, whereas 'educational theory', as Whitehead perceives it, is drawn from educational practice. I will discuss 'educational' theory in greater detail later in this chapter. For now, I would like to describe my learning journey at the stage where I was experiencing a sense of dissatisfaction with education theory. I believed that many of the theories that were considered to be pertinent to the classroom were quite irrelevant. In particular, I questioned Piaget's stages of development (see Piaget 1972), which featured prominently in the teacher education programmes in Ireland at that time (see Conway 2002), and wondered how relevant his theory was to the children I taught. I was frequently struck by the thought that perhaps many education theorists had little connection with a regular classroom and had little comprehension of the messy processes (see Mellor 1998 and Schön 1995) that constitute every day work. As a result, my initial interest in action research was based on the premise that it allowed practitioners to have an opportunity to research their own practice and to theorise their own practice.

However, my understanding of action research at that time was primarily drawn from a technicist perspective. While I was aware of the significance of Whitehead's (1989) question, 'How do I improve my practice?', my understanding of it was quite different to what I now perceive to be kernel to questions of the form 'How do I improve my practice?' I engaged with Whitehead's question at a superficial level and expected that if I investigated my practice by keeping a research journal and observing my class and using the regular research instruments, I would discover areas in my work that needed improvement. While aspects of these assumptions may be true, I also anticipated that I would undertake

steps in that direction and compare the 'before' and 'after' situations. I expected that there would be an improvement in the 'after' observations and I believed that this would 'prove' that my practice had improved. My action research would have 'caused' an improvement in my practice. I had fallen into what Sanger (1996, p.196) calls the 'causality trap'. Few of these assumptions came to fruition but such was my initial understanding of action research. My initial forays into action research were from this perspective, even though I would consider them to be inadequate now.

I now know, as I reflect on that period of my life, that at some deeper level my own personal tacit knowledge (see Polanyi 1958) told me that perhaps I did not fully subscribe to technicist thinking or perhaps that I was a technicist with disobedient intent. This tacit subliminal knowledge informed my thinking and actions such that I was able to develop a commitment to pursuing action research, despite my epistemological difficulties as outlined above. I have given examples in Chapter One of how my journal entries and my work practices from that time were indicative of the conflicting epistemologies that were within me. I have shown there, how on one level I perceived knowledge as something to be transmitted and later on in the same journal entry, I spoke about knowledge as a process. Drawing on McNiff and Whitehead's ideas (2002) around generative transformational processes, I can now see how the dilemmas, which were apparent in my writing, were reflected in my practice and again in my epistemology. My thinking, as was evident from my writing (see Chapter One) was in conflict. My practice consisted of espousing technical rationality in education on one hand and was embracing dialogical ways of knowing on the other while at the same time my epistemology was reflecting these conflicts. This period of knowing while at the same time not knowing, of perceiving knowledge as being external while perceiving it as embodied was similar to what Mellor (1998) describes as 'the struggle'. Mellor explains how his struggle in his practice and in his research was at the heart of the research and became the methodology itself. I believe that my 'struggle' too is what my research is about because it interrogates accepted epistemologies and seeks new and better ways of knowing. Whitehead and McNiff (2006) remind us that one's research methodology is influenced by one's ontological and epistemological assumptions. I can trace how my methodological approach

evolved from that of a spectator standing outside of my research to becoming the focus of the research, as my epistemological understanding evolved in the course of the research.

(3.2) Doing research differently

Dadds and Hart (2001) have written about practitioner enquiries that have diverged from traditional approaches to research and have queried the relevance of traditional methodologies to practitioner enquiry, suggesting that perhaps these methods are sometimes deskilling rather than enabling for the practitioner researcher. As outlined here in this chapter, I too have undertaken to do my research differently. This is not only because I am developing a living educational theory where the focus of my research is myself and my own learning, but also because I am creating a *living* theory approach to my research, and because I have chosen to present a digital version of my thesis in the form of a CD-ROM with live links to video clips of my classes and web pages they have made. These video clips and web pages form much of the evidence to support my claim to knowledge in this thesis as I explore forms of communication not normally used to represent our learning (see Eisner 1997). I perceive my research methodology to be different to traditional social science research methodologies because I am the focus of my own research. I am not undertaking research on other people specifically. Instead, I am researching myself and my practice in relation with others. My research approach differs from traditional approaches as it is closely aligned to my epistemological values around dialogical and inclusional ways of knowing, where the interconnectedness between people and places offers a fluid, vibrant locus for coming to know.

Whitehead (2005a) outlines the difference between living educational theories and the traditional forms of theory with clarity. He says:

> What I want to be clear about are the distinguishing characteristics of living educational theories and their living critical standards of judgement that make them distinct from the traditional disciplines and theories of education. I am thinking of these distinguishing characteristics in terms of:

I. the living critical standards of judgement that can be used to evaluate the validity of claims to educational knowledge that are made from a living theory perspective.
II. the adequacy of the explanations of educational influences in learning
III. using embodied ontological values in accounting for ourselves and our learning
IV. transforming embodied values in living epistemological standards of critical judgement
V. evolving inclusional, responsive and postcolonial forms of educational theorising
VI. creating a new disciplines approach to educational theorising through educational enquiry

(Whitehead 2005a, p.7)

I believe that my approach to living theory demonstrates each of the distinguishing characteristics as outlined by Whitehead (2005a) above. I am developing an inclusional form of educational theorising in the form of offering adequate descriptions and explanations here in this thesis, as I draw on my embodied values around love and connectedness to give an account of my learning. I am transforming these embodied values (see Chapter Six) into living epistemological standards of judgement that can be used to evaluate the validity of my claim.

Despite their enthusiasm for creative approaches to practitioner enquiry, Dadds and Hart (2001, p.8) have expressed reservations about the way practitioner research has become controlled and narrowed by the 'constraints of higher education teaching and criteria', but are exuberant about exciting and unorthodox ways of doing practitioner research that challenge the thinking of the academy. They remind the reader that practitioner enquiries are designed to improve conditions for those in the workplace and that through such inquiry, researchers are willing to open up their professional practices to critical scrutiny. I believe that I am fortunate that my own experience of engaging in practitioner research has not been narrowed by academic criteria. However, I believe that it is important, to question one's claim; to show that one has engaged with the social criteria of comprehensibility, truth, sincerity and appropriateness which Habermas (1973) says are the basis of testing knowledge claims in the process of communicative action. I have shared my emergent thinking around my research with others as I

attempt to show my engagement with Habermas's social criteria and to invite argument through discourse with others as suggested by Habermas (1973). This sharing took the form of conversations with research colleagues and the presentation of papers at academic conferences (see Glenn 2003, 2004, 2004a and 2005) with invitations to people to respond and critique. McNiff (2005b) suggests that the researcher must assess the validity of their practices and evaluate their work in the most stringent terms. I apply these standards to myself as I engage in my research. I may choose to do my research differently, but I am addressing issues of validity and authenticity very seriously. McNiff talks about the importance of demonstrating 'our capacity to engage with issues of articulating our critical standards of judgement' (2005b) that have been moulded by one's ontological and epistemological values. I believe that I am rigorously addressing such issues in my research as I present validated evidence to support my claims and to meet the living standards of judgement required by my claims (see Chapter Five and Six).

Experiencing oneself as a living contradiction

As outlined in the previous chapters, I became critical of the technicist system that had 'produced' me and of myself, also, for having allowed it to 'produce' me. I began to question the norms that formed the everyday structure of my work practices. I began to perceive the education system as being a place of dissonance between what I wanted for my class and what the system was providing for them. I saw that many aspects of the Irish education system closed down the learning process for some children instead of providing them with an opportunity to develop and grow to their potential. I now realise that my own growth in learning emerged as I began to engage in critical thinking about what I was doing and to see how my understanding of my work might be improved. As outlined in Chapter Two, Whitehead talks about education being a value-laden practice (1989). He describes such values as being embodied in practice and explains that their meaning can be articulated throughout one's practice. When one's values are denied in one's practice, Whitehead describes that as 'experiencing oneself as a living contradiction' (1993). I perceived that my ontological and epistemological values were being denied in my practice and this caused me concern. I have addressed what these concerns were and why I was concerned in Chapters One and

Two and here in this chapter, I am addressing these issues in terms of the process of the living theory approach I undertook in response to my concerns.

(3.3) A new understanding of my practice: developing a new epistemology

As my understanding of my practice as a place of contradiction grew, my understanding of a living theory approach to research also developed. I saw that, not only was I experiencing myself as a living contradiction in my epistemology and my practice, I was experiencing myself as a living contradiction in my research approach also. But I was no longer threatened by these multiple contradictions. The 'me', who had held such propositional values in earlier times, was changing slowly into someone who could not only accommodate and embrace contradiction in my thinking and in my practice but embraced it as an energising and life affirming process. I now saw how my desire to engage in projects that involved other people and our environment was born from the embodied values within me and were now being manifested in my research approach.

This new understanding heralded a near reversal of my previous thinking, as I began to engage with living theory. I was now immersed in an epistemology that not only included dialectical forms of logic but also included propositional forms of logic (Whitehead 2005). I delighted in the contradictory nature of such forms of logic; the excitement of espousing both propositional and dialectical possibilities at once within a living logic was invigorating and inspirational after a lifetime of the closed thinking of technical rationality. Polanyi (1958) talks about how discoveries enable one to see the world in a new light; 'to never see the world again as before', such that one's 'eyes have become different' and to see and think differently (Polanyi 1958, p.143). Such was my experience with my engagement with living theory. I explained in Chapter Two how I now perceive experiencing oneself as a living contradiction as energising because it highlights the tensions between one's values and one's practice, between what is and what might be; in essence it highlights our humanity as a living and imperfect contradiction. Whitehead (2005) describes these ideas thus:

> …individuals experience themselves as living contradictions in the
> sense that they experience a tension of holding together the values

that constitute their humanity and the experience of their denial in practice. This stimulates their imagination on action plans that are intended to enable the values to be lived more fully in practice.

<div align="right">(Whitehead 2005, p.4)</div>

Experiencing oneself as a living contradiction, for me, was a locus for creativity and potential. It stimulated my imagination so that I was enabled to come to see how my values were being lived in my practice. This was where I found the life affirming energy I needed to equip me to develop my research approach.

The epistemological change that was manifested in my work practices, in my perceptions around how people learn and in my research approach is significant for two reasons. First, it demonstrates that one can hold multiple epistemologies and perspectives at the same time. I see the conflictual and changing nature of my epistemology and its multiplicity as being at the core of my humanity. It evokes Plato's ideas of humanity being able to hold the one and the many together at the same time (see de Botton 1999), while also demonstrating the emergent and fluid nature of how people come to know (Bohm 2004). The epistemological change is also significant because it demonstrates how dialogue, as a flow of understanding between people, can create new learning and insights. My willingness to be open to change is something that I perceived to happen to me as I engaged with new ways of thinking and being. It is significant because it draws on the idea that dialogical ways of knowing can create something new if people are willing to listen; to 'drop ….old ideas and intentions, and be ready to go on to something different' as explained by Bohm (2004, p.3). I now see living theory existing not only in how I work, but how I am with people, how I perceive learning. It shapes and reshapes my epistemological and ontological values in ongoing processes of engagement. Palmer (1993) describes how the patterns of epistemology can help to make sense of the patterns of our lives. He says (1993, p.21) 'The shape of our knowledge becomes the shape of our living; the relation of the knower to the known becomes the relation of the living self to the larger world'. I like Palmer's ideas but I believe that it is important to interrogate the 'shape of our knowledge' on a continuous basis. Unless I constantly engage with questions of the form 'How can I improve my practice?' (Whitehead 1989) there may be a danger that my thinking would become as entrenched and staid as the practices that caused me

concern at the outset of my research. McNiff (2005c) reminds us that thinking in terms of perfection is usually fundamentalist. She suggests thinking in terms of new beginnings instead, with the intent of finding new and better ways of learning.

(3.4) What about traditional approaches to research?

My emergent living educational theory of practice is drawn from an epistemology of practice that embraces dialectical and dialogical ways of knowing. The word 'theory' has its etymological roots in the Greek word *theoros* meaning 'spectator' (Online Etymology Dictionary 2005) and pertained frequently to looking at and contemplating drama. The Greeks, however, regarded drama as 'integral to life' and as a 'soul-making force' (Palmer 1993, p.23), and did not perceive it with the detachment of many current day spectators. Despite this, ideas around research and theory (including education research and theory) are generally associated with the role of the researcher as observer and spectator, who behaves in an objective and detached manner. Much education theory has been accumulated by theorists who talk about teaching in conceptual and propositional terms and presupposes that valid theory exists in propositional form only (McNiff *et al.* 2003). As an educational researcher who works in a classroom with children on a daily basis, I know that while propositional theory provides me with some valid theories, much of the knowledge that I, and many other teachers, generate as we practise is of a personal or tacit nature (Polanyi 1958). Clandinin and Connelly (1995) also speak about theory and explain how theory produced by scholars is held in little regard by practitioners as teaching needs to be understood as more than the transmission of knowledge and more than something that can be independently assessed and evaluated. They call for a narrative understanding of teacher knowledge instead, where the teachers are authors and characters in their own stories. Elliott (2004) outlines the dilemmas of the theory-practice relationship and explains that many people interpret Elliott's own writings as a 'privileging of practice over theory' (Elliott 2004, p.1). He eschews this idea and suggests that research that privileges practice over theory does not enhance the theory-practice link, it simply excludes the theory. Such privileging, suggests Elliott, is shaped by the same form of educational theorising that privileges theory over practice. He believes, as Clandinin and Connelly do (1995) (see above), that such assumptions 'effectively exclude action research from the domain of public knowledge and confine it to the

domain of private knowledge' and research reports 'are often not deemed to be of sufficient status [for] academic publications' (Elliott 2004, p.1). Elliott suggests that the academic resistance to educational action research might be located in a fear of the potential power over what counts as knowledge that teachers might exert as they become active agents in their situations (Elliott 2004, p.8). It is interesting to note how Elliott locates the theory-practice dilemma in terms of the fear that educational action researchers can instil in academia with their suggestions for new epistemologies.

In my research I believe that I am developing new epistemologies of practice for myself as I become an active agent in my educational situation. Schön, a major proponent of the idea of practitioner as researcher (1983, p viii), describes practitioner knowledge as a 'kind of knowing-in-practice, most of which is tacit'. He has drawn on the work of Boyer (1990) who called for a new scholarship where practitioners could study their own practice, but Schön (1983) has outlined how such a new scholarship demands a new epistemology because such new scholarship challenges traditional epistemologies. Schön's thinking informs my approach to my own research although I am hopeful that my research will not instil fear in any academic circles, including my own. I would prefer instead to invite dialogue and debate around my work as practitioners and academics come together to engage in educational processes.

The writings of Guba and Lincoln (1994) are helpful as I offer here my explanations for choosing an action research approach to my research. Guba and Lincoln (1994) explore the basic beliefs of alternative inquiry paradigms and compare them in terms of ontology, epistemology and methodology. They suggest that a positivist ontology assumes that an 'apprehendable reality is assumed to exist' (1994, p.109) and that epistemologically, the investigator and the investigated are independent entities. The methodology employed in a positivist paradigm is experimental. Questions and hypotheses are 'stated in propositional form and subjected to empirical tests to verify them' (Guba and Lincoln 1994, p.110). In a postpositive paradigm, according to Guba and Lincoln, the ontological stance is such that reality is assumed to exist but it is only 'imperfectly apprehendable because of basically flawed human intellectual mechanisms' (1994,

p.110). (Guba and Lincoln prefer to use the term 'qualitative' to describe types of research methods and perceive that issues pertaining to method are secondary to questions of paradigm. They continue to explain that positivism describes the 'received view' that has dominated 'formal discourse in the physical and social sciences for some 400 years'. Postpositivism, according to Guba and Lincoln, is an attempt in recent times to respond in a 'limited way, that is remaining within essentially the same set of basic beliefs, to the most problematic criticisms of positivism' (1994, p.109)). The postpositivist paradigm assumes an objectivist epistemology also but it is in the methodology, which includes qualitative methods, that Guba and Lincoln see a move towards a more naturalistic approach. They perceive the researcher who is positioned in a postpositivist stance as 'doing inquiry in a more natural setting' (1994, p.110). The researcher collects 'situational information...introducing discovery as an element in the inquiry, soliciting emic viewpoints to assist in determining the meanings that people ascribe to their actions' (Guba and Lincoln 1994, p.110). Those who challenge positivism reject the positivist belief that human behaviour is controlled by universal laws and is exemplified by underpinning consistency (Cohen *et al.* 2000). Researchers in both paradigms above wish to be detached from the object of their research, perceiving that detachment might ensure validity (Candy 1989 cited in Melrose, 1996). In engaging with quantitative methodologies, the observed phenomena are important while in qualitative methodologies, meanings and interpretations are vital (Cohen *et al.* 2000). While adopting a qualitative methodology is characterised by a concern for the individual (Cohen *et al.* 2000), it is important to remember Habermas' observation of the 'double hermeneutic' (Habermas 1984 cited in Cohen 2000, p.28), whereby people attempt to interpret in a world that is already interpreted. A criticism of both of these paradigms is that the issue of voice is rarely addressed and the researcher can be perceived as a 'disinterested scientist' in a value-free epistemology (Guba and Lincoln 1994). Melrose (1996) suggests that the critical world view has emerged as some researchers perceive that neither the positivist nor the postpositivist paradigms go far enough in improving learning for the individual, the education system or the norms of society (Melrose 1996).

My own critique of quantitative and qualitative methodologies lies mainly in the area of an objectivist approach. Polanyi (1958, p.381) talks about the 'crippling mutilations' that objectivist frameworks have imposed on society and I perceive these mutilations existing in the fragmented nature of issues pertaining to knowledge and knowledge generation. Miller (1996) explains how 'fragmentation permeates everything' (1996, p.1). Society has separated itself from its environment which has resulted in 'ecological devastation' (1996, p.1). Miller also explains how people are cut off from their communities as they frequently live in fear and isolation. He expands on this idea of fragmentation in society to include fragmentation within people themselves (Miller 1996). He says (1996, p.1), 'We find ourselves disconnected from our bodies and our hearts. Education specifically has done much to sever the relationship between head and heart'. Miller's thinking is especially pertinent in the field of educational research. I perceive his ideas around fragmentation are reflected in many quantitative and to a lesser extent in qualitative research methodologies, as outlined above. I am critical of research methodologies where thinking, with reference to people and their involvement in human endeavour, is objectified, and findings, sometimes in the form of people, are classified and categorised as though they were inanimate objects. Lynch (1999) makes the point that that the idea of assuming that a social investigation is neutral is problematic. She asks, '…by naming someone else's world for them are we robbing them of a voice? By speaking *for* people, do we misrepresent their point of view?' (Lynch 1999, p.43). I am using the term 'fragmented' here to describe the detachment of the researcher from the research topic, the objectification of the research subjects and the possible reification of the subsequent theory as it is documented in the bound form of theses. Fragmentation according to Bohm (2004, p.56) is when thought 'goes wrong'. He compares it to taking a watch apart by smashing instead of taking it apart and finding the pieces. He explains how things which 'really fit, and belong together, are treated as if they do not' (Bohm 2004, p.56).

Instead, I prefer to take a more holistic approach both to my work practices and to my research. I bear Gage's (1989, p.148) warnings about 'paradigm wars' in mind and take heed of his advice that educational research is 'no mere spectator sport, no mere educational game' and that it has moral obligations in the form of a need

for better education for children and that what happens to children is our concern. I believe that I am concerned about what happens to our children. I also believe that I 'belong' (Bohm 2004) in my classroom, I 'belong' in the theory I am developing and I belong in my research methodology. In other words, I am a 'living I' who is central to the research (Whitehead 1993). I believe that my research will be of value to other practitioners because it is embedded in the everyday activities of the primary school classroom. I am aware of Zuber-Skerrit's critique that action research techniques are embedded in such a small scale investigation that they may be insufficient to lead to new insights or that they may be too small-scale to be valid or that they may be too convoluted to be practical (Zuber-Skerrit 1996, p.17). I am also aware of the opinions of Cohen *et al.* as they point out that giving action researchers a small degree of power to research their own situations 'has little effect on the *real* locus of power and decision making which often lies outside the control of the action researchers' (Cohen *et al.,* 2000, p 33). Bearing this critique in mind, I share my thinking and invite dialogue at both a practical and theoretical level with other practitioners as I engage in the design of professional development courses for primary school teachers (see Chapter Seven). I am also hopeful that my research will not only influence teacher colleagues but that it will also influence future interpretations of curriculum and that it will make a contribution to the education of social formations (see Chapter Seven). I have found that traditional research methodologies do not address my research purposes adequately, therefore, because the perception of people as objects of study directly contradicts my ontological values around loving relationships and the recognition of the human-ness of the person. Instead, I am developing my own approach to my research; one that is commensurate with my ontological and epistemological commitments and one which emerges from the research. Like Senge (1990, p.12), I suggest that at the 'heart of the learning organisation is a shift in mind from seeing ourselves as separate from the world to connected to the world' and I anticipate that my research methodology demonstrates this 'shift in mind'.

I am aware, also, of the power-constituted nature of hierarchical relationships that exist in education. This awareness has reinforced my rationale for choosing to engage with non-traditional forms of research. Lynch (1999) has spoken about how children in educational research often 'occupy the status of the colonised

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"Other"…much is written about them but they rarely speak in their own voice' (Lynch 1999, p.44). In traditional approaches to research, the researcher's role is considered to be separate from and superior to the practitioner's role (Schön 1995). McNiff (2005b) focuses on this superiority and describes how this pedagogical imbalance can also be reflected in similar hierarchical relationships in the classroom. In such cases, the teacher is perceived as the knower and therefore as someone who is superior to the student. The classroom becomes the site for power-constituted hierarchical relationships where power is perceived as a form of dominance. Cohen *et al.* (2000) remind people that doctors' consulting rooms and principals' offices are places where power inequalities can thrive, as ideas are frequently imposed on unequal participants and they are persuaded to accept definitions of situations. They alert their readers that such power struggles exist similarly in educational research. McNiff outlines also how educational research itself is a site for the struggle in epistemological power (2005a). The idea of education being a site for the struggle in epistemological power abhors me because I am not seeking to create a classroom which is based on a hierarchical power structure. Instead, I prefer to engage with ideas around how I use power. I perceive my use of power as a transformational or emancipatory process, and how I conduct myself in the power struggle is indicative of that belief. I am aware of the political implications of subscribing to an epistemology that is perceived to be in conflict with dominant epistemologies. I am drawing here on the idea that in dialogue and dialogical ways of knowing, nobody is trying to be a winner (Bohm 2004, p.7), there is 'no attempt to gain points or to make your particular view prevail'; dialogue infers a 'common participation'. These understandings underpin my commitment to my living action research as I develop dialogical and inclusive epistemologies that are of a non-coercive nature, as I share my claim to knowledge with others. I am convinced of the validity of my claim to knowledge and in Chapter Six I will provide authenticated evidence to support my claim to knowledge.

Instead I am drawn to the ideas of McNiff and Whitehead. (2002) who perceive knowing as a holistic practice. I perceive research also as a holistic practice, where the practice informs the theory and the theory informs the practice as a self-generating spiral which can inspire and promote new educational theory and

practice. This is what I am aiming towards as I outline my research narrative in this thesis.

(3.5) My living theory approach to research

Action research is at its most basic an aspect to research and at its most holistic, a way of life. It has become a way of life for me as well as being the research approach that I undertook in this research. Living theory is recognised as one form of action research (see McNiff and Whitehead 2002 and McNiff *et al.* 2003) and is something that is live and emergent. For me, it has to do with the human-ness of people, in terms of my engagement with the wholeness of the person, with how theory has been drawn from living situations. Whitehead (in McNiff *et al.* 2003, p.165) describes living educational theory thus:

> In living educational theories, the explanatory principles are embodied values that have been transformed in the course of their emergence in practice into communicable standards of practice and judgement ... In living educational theories the explanations are produced by practitioner researchers in enquiries that are focused on living values more fully in the practice of enquiries of the kind 'How do I improve what I am doing here?'

I would like to take this extract and use it to explain how a living theory approach is not only useful as a research methodology and answering questions like 'What can I do about my concerns?' as exemplified by this chapter, but how for me, it shapes how I live my life. I will focus on the following four aspects of Whitehead's description above to help to explicate my interpretation of the methodology of living educational theory:

a) Living educational theory: a methodology,

b) The role of embodied values in my methodology,

c) The importance of communicable standards of judgement in my methodological approach to living educational theory and

d) Asking 'How do I improve what I am doing here?' as I develop a living form of methodology

(a) Living educational theory: a methodology

As outlined earlier, my initial interest in action research was kindled by the idea that teachers could engage in their own research as outlined by Stenhouse (1975). This aspect of action research still engages me, as does McNiff's development of the idea of practitioner as theorist (2002) and teacher as theorist (2005). Schön (1995, p.28) talks about the 'swampy lowlands' of 'messy and confusing' problems that are incapable of technical solution. Many practitioners, such as myself, inhabit the swampy lowlands where the 'problems of greatest human concern lie' (p. 28). Schön (1995) offers a view of an epistemology of practice that assumes that practitioners generally hold a valuable store of tacit knowledge and suggests that reflective practice can have implications not only for the practitioner and their practice, but for the organisation, for future research and practice and for the larger society. These interpretations of action research here are focusing on a living approach to action research and practitioners can use action research to generate what Whitehead (1989) calls 'living educational theory'. In living educational theory, the theory is being created from living experience, from live practice and from the reflective thoughts of living human beings who critically engage with their practice. This is a different interpretation of theory to that outlined by what Whitehead calls 'education theory' as outlined above and has been drawn, for example, from the 'disciplines' of education. Whitehead's idea of living theory does not seek to diminish the relevance of the traditional form of theory either because living theorists organise their thinking in a form of logic that is inclusional and includes both propositional and dialectical possibilities and celebrates open-endedness (Whitehead 2005). In my research here, I am creating a living educational theory because I am drawing the theory from my practice. I offer descriptions and explanations of my practice to test and support my emergent theory as I systematically study what I am doing and I submit my evidence to others for critical examination as I test and hope to validate my claim to knowledge (see Chapter Six).

Living theory is also living because it *is* alive and ever re-forming. My living theory, as I articulate it today in this thesis, is an accurate account of my ideas around education at this moment. When I revisit this writing, my theory may have changed. This is because I am a living person and my engagement through practice is also with living people. As outlined in Chapters One and Two, I perceive that

every moment of every day people can learn and grow towards their potential. Learning and growth imply change and this change in turn implies that my educational theory may have changed. This is because it is always unfolding (Bohm 1980), in processes of living.

My epistemology, as it has emerged in my learning journey, is such that it perceives knowledge as a process, as something created between people and as something tacit while being closely linked also to traditional propositional forms of knowledge. A living theory approach to research also recognises the importance of personal and dialectical ways of knowing (McNiff *et al.* 2003). My understanding of how a living theory approach also informs how I live my life, how I am with people, how I think and how I approach questions about what I can do about the things that concern me. It has also informed my chosen research methodology as an emergent and holistic path towards learning.

(b) The role of embodied values in my methodology

Whitehead (2005a, p.1) talks about 'embodied values that have been transformed in the course of their emergence in practice' as being a key aspect of living theory. The idea of embodiment is investigated by Hocking *et al.* (2001) as they explore the possibilities for education through holistic schools of thought. They explain it thus:

> Embodiment moves us away from the Cartesian legacy of how we view knowing and knowledge not as concrete things that reside in the body or mind but that emerge through our interactions with/in the world.
> (Hocking *et al.* 2001, p xviii)

The connections between values and practice exist in living theory through my interaction with the world. My ontological and epistemological values around love and the recognition of the human-ness of people as outlined in Chapter Two, guide how I work as an educator, how I think about knowledge and knowledge generation and also guide how I live my life. McIntyre explains practice as '…any coherent and complex form of socially established cooperative human activity through which goods internal to that activity are realised…' (McIntyre 1981, p.175). My emergent understanding of my embodied values as guiding my work

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practices has helped me to respond to the questions, 'How can I understand my practice?' I have learned in the course of my research and through the clarification of my values in that process, that my embodied and once unspoken and un-articulated values have informed my work practices. This has been a key insight for me in my research process and it has helped me to understand why I was compelled to work in the manner that involved the creation of collaborative projects and building connections with others outside the classroom and which had puzzled me at the outset of my research. I know now that I am committed to a holistic approach to education, which is 'rooted in an epistemology of wholeness, context and interconnectedness' (see Miller 1997, p.81) and my values around love and nurturing the wholeness of people are manifested in this approach. My embodied values are communicated then in my work practices, in my epistemology and in how I am with people. For me, they take the form of nurturing creative ways of knowing and the relationality of education to present-day life processes. These ontological and epistemological values are embodied in my practice, and the way I work is a tentative demonstration of how I am coming to understand and articulate my values. Again I am using the word 'tentative' carefully here; not because I have a fear of clarifying my embodied values in my practice, but because I want to highlight how rarely my values are fully realised in my practice and yet how continuously I strive towards their realisation. My ontological and epistemological values also underpin my chosen methodological approach to my research and inspire me to create my own living educational theory as I am doing in this thesis.

As my values guide how I live and work, they are not fixed or finite. As I take part in life and as I work with my class, I aim to live in the direction of my values; to live my values more fully in my practice. Sometimes I find that I need to re-visit my values, how I express them and how I understand them because as they are given life through my engagement with others, I am not satisfied with them. Melrose (in Zuber-Skerrit 1996), talks about how a researcher's values may change by their learning during the course of their research. The following example describes such an incident in which my values were re-shaped: In 2001/2 my class of eleven year olds was partaking in a collaborative communications project called 'Learning Circles' which I will describe in greater detail in Chapter

Four. The objective of the project was to share elements of our geography, culture and history with students from other schools throughout the world while exploring their history and culture through their submissions to the project. This programme utilised e-mail and postal mail and my students communicated with students from five other schools around the world and exchanged local stories, recipes, fables and histories as well as local artefacts. This project is accessible online at http://www.inver.org/ceantar/Learning_Circle

Fig. 3.1 Still from videotape of a conversation around *Learning Circles* project

As the project drew to a close, I was pleased with it and felt that the class had had a positive learning experience from it. I held a semi-formal evaluation through discussion with the class, which I videotaped as part of my data collecting process (see Fig. 3.1). The video recording of a section of the conversation around our 'Learning Circles' project can be viewed on the interactive version of this thesis on the CD-ROM that accompanies this thesis. I had correctly anticipated a favourable response from the class; the children did enjoy the dialogue and interaction with children from other countries. However, two of the children had some suggestions to make: one suggested that the communications would have been more pertinent to them had they had individual pen pals to whom they could write or e-mail. The other student suggested that we should have used a videoconference with some of the other classes so that we could hear and see our partners in the project. These were positive, practical suggestions which I will remember for my next experience with a 'Learning Circles' project.

This conversation is significant in that it demonstrates how at one level I appeared to be living in the direction of my ontological values around nurturing dialogical and inclusional ways of knowing and the relationality of education to present-day life processes. I could see this in the way the children had exchanged and received letters, artefacts and reports on various aspects of our culture with the children from the other schools. But at a more important level, I had neglected to live in the direction of my values around experiencing the wholeness of the person as carefully as I could have, in the project. The error lay in the fact that my class communicated with other classes, not with other individual children. My class had no sense of individual people reading their work, only groups or classes. I am thankful to my two young students for being able to articulate their concerns to me because it highlighted for me the importance of recognising that the values I hold for myself can be of importance to others also. I had perceived my values around holistic way of being with others to pertain to how I related to others, in particular to my students; how I would always relate to them in the 'I-Thou' manner as described by Buber (1970) as I nurtured my awareness of their human-ness.

However, in this conversation, the students taught me that that their own 'I-Thou' relationships with others were equally important to them. They had missed out on the sense of 'I-Thou' in their communications with the other classes and were suggesting ways to overcome this by videoconferencing and by arranging pen pal or e-pal partnerships. I had to revisit my values around the recognition of the human-ness of people in terms of experiencing them in a holistic manner as a result of this conversation with my students. I had learned that it was not enough to live out my embodied values in my own relationships with my students, but that I also needed to create learning spaces to give my students opportunities to do likewise.

I believe that this example serves to explain the dynamic nature of my values, about how I express them in my work or how they help to form my living educational theory. I prefer, instead, to be confident in my uncertainty (McNiff 2002) and in my ability to interrogate my ontological values, to see if I am giving life to these embodied values in my everyday living and work. I perceive them as

being ever-growing and changing; as being 'live' as I develop my living theory of education.

Much has been written on the theory-practice divide in education (see Schön 1995; Clandinin and Connelly 1995) which describes how practitioners appear to work at their practice at one level while theorists develop theories about education and appear to engage in research at a more clinical, detached context, at some distance from the locus of the work. I believe that I am attempting to share the story of my learning journey in a narrative form as suggested by Clandinin and Connelly (1995), as I describe and explain the processes of how I have reached my current understanding. McNiff and Whitehead (2005b) perceive action research as a form of narrative inquiry and describe knowing as a holistic practice (McNiff 2002), where the boundaries between theory and practice merge as they interact with one another in a movement towards better education. I am drawn to this idea of theory as a form of practice and practice as a form of theory as they co-exist in a living dialectical relationship. As I make my claim to knowledge here in this thesis, I am aware that I am drawing my living theory from my practice and I see how my practice is the living expression of my theory. My practice gives rise to my theory and this theory, in turn, influences my practice, as both theory and practice interact in a mutually reciprocal manner.

(c) The importance of communicable standards of practice and judgement in my methodological approach to living educational theory

Whitehead (in McNiff *et al.* 2003, p.165) refers also to the importance of 'communicable standards of practice and judgement' above. As I create my living theory, it is important to demonstrate that I have produced evidence to test and support my claim to knowledge so that the theory can be validated and legitimated. I will outline in greater detail how I have worked towards explaining how I am transforming my ontological values into critical epistemological standards of judgement as I assess the validity of my work throughout this thesis and in particular in Chapter Six (see McNiff 2005b). I have collected data to support my claim to knowledge. As I find aspects of this data that is commensurate with the standards of practice that I have established from my value base, I have presented it as evidence. I have shared this evidence with other critical thinkers so as to have

it validated in stringent terms and presented it to the wider public for legitimation purposes. While I will engage in more detail with these issues in Chapter Six and Seven, I would like to focus on one aspect of Whitehead's ideas around 'communicable standards of practice and judgement' here.

Whitehead's use of the word 'communicable' is wisely chosen here. Unless I can communicate my living educational theory, unless I can communicate its standards of practice and judgement with clarity to others, then the theory itself is of little use to others or to myself. I have struggled, with difficulty, at each stage of my research to communicate my thinking in a manner that is adequately clear and I am aware that clarity of communication is key to good research reporting. Much of the data and evidence I have collected myself on my learning journey is of a fleeting nature and is frequently difficult to capture and to communicate. The following extract from my research journal of November 2003 highlights this dilemma:

I have come to know in an embodied way. I have watched the way I work with my class. I have watched the way they are with one another, with others and with me. I have read around the conceptual frameworks that are underpinning my work. I have listened to other practitioners talking. All of these have helped me come to know and yet this does not adequately describe the process. The explanation is too simple and too model-like. The truth is captured in series moments, in single moments and in long time spans. It is captured in the twinkle of an eye, or the defeated shrug of a shoulder. My coming to know is captured in the din of excited students, in the silence of dejection, the tear of frustration, the giggle of friendship, the exuberance of happiness, the frown of irritation and the plea for help. These moments flash through my mind like a film and I know that they have somehow interconnected with one another to inform my thinking on my work and caused me to come to know. That this provides others with an inadequate description is gnawing in my mind and I come to realise that this is Schön's swampy lowland in my living experience.

Research Journal, November 2003

Whitehead talks about such difficulties in his own work as he strives to create communicable living theory and standards of judgement to others (2003). He talks

about the limitations of expressing the meanings of embodied values through words without being able to demonstrate their meanings through their connections to lived experience. He explains how video-clips help him to communicate his understandings of inclusionality, educational conversations and life affirming energy, among other metaphors.

I agree with Whitehead and I believe that my journal extract above helps to clarify the difficulties I have around using 'words' only to teach, to learn and to share meanings. Eisner (1997) suggests that people should not be overly dependent on using text for communicating, that they should explore using different media to represent their thinking. These difficulties in communicating do not exist at the level of sharing living theory alone. For many, these difficulties exist in how people learn, how they teach, how people are expected to express their learning and are, perhaps, part of the Cartesian legacy, where mind and body are perceived as two separate entities (see Hocking *et al.* 2001). In our everyday living people do not leave the responsibility of communicating their human desires and values to words and text alone. They use gestures, body language, physical contact and bodily kinaesthetic knowing, akin to the idea of personal knowledge as outlined by Polanyi (1958). It is considered natural for children to express themselves and their learning in non-verbal ways; they are allowed to throw tantrums, to laugh, to cry or to dance with joy. As adults we are expected to communicate with more restraint. I believe that as I consider learning and living theory to be a fluid, developmental and creative process, then the means with which people can learn and express their learning should also be fluid and creative also. Lomax and Parker (1995, p.302) talk about how educational forms of representation should be 'pluralistic, rather than monolithic, and diverse, rather than constrained, so that they can celebrate the unique, personal and subjective strengths of individual action research and help practitioners display their own personal signatures'. Drama, visual arts, music and video can help self expression and communication, but because of their nature are tied by time and place to a specific performance and are limited to a live audience. Multimedia presentations (and especially multimedia presentations on the web, so that they are freely accessible to many) can enhance how people learn and how they share their learning (Mayer 2001). Such presentations can include text, images, video and film, music, sound, clips of

drama and performance; they include most aspects of what might be needed to narrate a story or to communicate something, and are accessible to many in the western world. Because I believe that technology can enhance learning (see Chapter Five) and the communication of what has been learnt, and the communicable nature of living theory (Whitehead 2003), I am presenting my thesis in a digital format as well as the traditional text based version. Much of the evidence that I am presenting to support my theory, is already in the form of online web pages, video and sound clips. The digital format may not capture the joy, the angst or the excitement that constitutes a regular day in a classroom, but the video-clips, sound files and web pages that my class and myself have collected over the past number of years can help to give live examples of our work and how we work, to support my emergent living educational theory. The following example may help to explicate these ideas.

Fig. 3.2 Screenshot from video as we receive e-mail from e-pals in the United Kingdom

Fig. (3.2) is a snapshot of a video taken when this class was involved in an East/West project with a school near Liverpool, to which I referred in Chapter Two and will discuss in greater detail in forthcoming chapters. One aspect of the project was an e-pal communications programme that spanned two years. This video clip forms part of the evidence that I am presenting to support my claim to knowledge in Chapter Six. In the digital version of this thesis, the reader will be able to click their computer mouse here and see the video file above. For those who are reading the text version of this thesis, they have to suffice with my written descriptions and the photograph above.

This video clip shows the class responding in a spontaneous manner to the email messages they have received from their e-pals in the UK. It depicts a noisy, boisterous group of children reading and responding to their emails. The video clip helps to capture the sense of excitement and joy that the class are expressing in response to their emails. It captures the sense of friendship the class have established with the partners in the UK. It also shows the ease with which the class can talk with one another and with me. This video clip is kernel to the evidence that I am producing in Chapter Six to support my claim that I am developing ways of working that engage with the human-ness of people in a holistic way. As I submit this clip as evidence to support my claim to knowledge in Chapter Six, I am hopeful that it will assist people in assessing the validity of my claim in a way that words alone may not. In Chapter Six I am going to talk about this class's spontaneous response to their e-mail messages, its portrayal on the video-clips and the different layers of learning that I perceive in the video. I am going to explain how I believe the video clip captures the essence of how I engage with the wholeness and human-ness of my class. I am also going to draw on the writing of Fromm (1957) as he describes a commitment to productive work and loving relationships as being kernel to the quality of life people lead. I will explain how having fun at school can be a form of productive work and loving relationships and such metaphors are part of a holistic realisation of education. I believe that watching this video clip will enhance the communicable nature of the standards of practice and judgement as I produce evidence to support my claim to have generated a living educational theory. In chapters Five, Six and Seven, much of the validated evidence that I will produce there, will be in the form of video, sound and web pages as I make my claim to knowledge. I believe that my use of video, sound recordings, multimedia and web pages is strengthening my methodology, not only as a data collection process but is also helping the clarity of how I am communicating my enquiry and the rigour of my methodology. Eisner's (1997) thinking is helpful here as he talks about 'the potential of other forms of representation for illuminating the educational worlds we wish to understand..' so that '…our capacity to wonder is stimulated by the possibilities that new forms of representation suggest' (Eisner 1997, pp.4-8).

(d) Asking 'How do I improve what I am doing here?' as I develop a living form of methodology

In this final segment drawn from Whitehead's quotation above, I am mindful of how Whitehead (in McNiff *et al.* 2003, p.165) refers to how I can live my values more fully in my practice as I ask 'How do I improve what I am doing here?' I interpreted the question as 'How can I best understand my practice?' because that was what emerged as being pertinent for me as I planned my research approach (see 'Evolving research questions: evolving epistemologies' below). I am drawn to questions like these because they have emerged from an epistemology that is commensurate with my own. Much of the current thinking on educational epistemologies promotes the commodification of education (see Apple 2004, Ball 2004, Brown 2002, and Lyotard 1986). The commodification of education refers to the changing perception of education as a commercial product and students as consumers. This perception of education is substantially different to mine. Ball (2004, p.5) suggests that such commodification might imply that pedagogic relationships and values become marginalized and that students become active consumers but passive learners. In an atmosphere that embraces the commodification of education, questions such as 'How do I improve my practice?' are crucial to the ongoing process of education because they are of a different epistemological view, they position ontological values as being kernel to learning and they embed pedagogy in the relationships that we humans create for ourselves. Such questions perceive the knowledge base as 'fluid, developmental, generative and transformational; [where] all people are potential knowers' and it perceives education as a 'creative process which is based in caring relationships' (McNiff and Whitehead 2002, p. 31). As I reflect on these issues as outlined by McNiff and Whitehead (2002), I find that they are closely aligned to my own embodied values. I experience them as being relational, life-affirming and exciting. As I develop a living theory methodology for my research, I delight in the openness and the possibility for creativity that this approach gives me. I experience a sense of at-oneness with educational living theory as a research approach and as a way of life. Hocking *et al.* (2001, p.xxix) seem to capture this well : 'Our journeys into new spaces helped us to reconnect with a world that is passionate, animate and energizing…we yearned for a spirit of aliveness in education that would echo our

connections with the natural world - one full of vibrant, buzzing activity and interaction.'

Questions of the form 'How do I improve my practice?' also assume that there is a purpose to theorising one's practice. For me, the purpose lies not only in the clarification of my understanding of my work as I develop a living educational theory but also in my vision around a better society. I perceive that a better society has to do with human relationships, where people have respect for one another, where education is seen as a pathway towards a good social order and by contributing to the education of social formations as outlined by McNiff and Whitehead (2005a). I hope that my research will influence policy makers and practising teachers to see curriculum as something live and dynamic, to see education as a process and to see learning taking place in environments where dialogue, care and connectedness with others abound.

(3.6) Evolving research questions: evolving epistemologies

As my research evolved, so too did my research question. McNiff (see McNiff and Whitehead 2002) sees the systematic action research cycle of observation, description, planning, acting, reflecting, evaluating and modifying not as a linear, sequential plan (see Fig. 3.3). Instead she sees the action research process of living theory as a 'spontaneous, self-creating system of self-enquiry' (McNiff and Whitehead 2002, p.56) wherein generative transformational evolutionary processes influence and change the original research question such that new, different and exciting channels of enquiry are revealed in the process of the research.
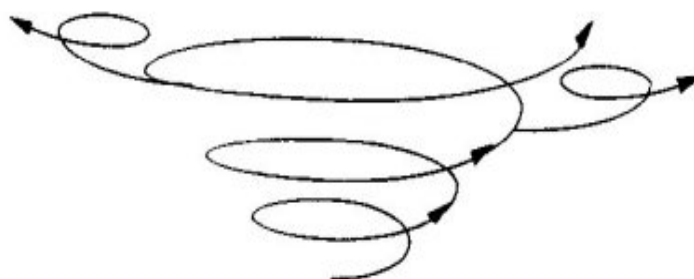
Fig. 3.3 A generative transformational evolutionary process (McNiff *et al.*, 2003a)

As I interrogated my research question, I experienced McNiff's generative transformational processes in my thinking and learning as one question gave rise to another related question, thus opening a whole new vista of learning for myself. My initial research question was about investigating my work in the field of Internet based Collaborative Projects (ICPs). ICPs are about the integration of projects into the curriculum, which allow teachers and pupils the opportunity to exchange ideas, data and multimedia presentations globally on a given theme, using internet communication tools. The investigation that I had envisaged that I would undertake was as a progression from my masters programme (see Glenn 2000, 2005).

The question gradually re-emerged from my learning process as, 'Why am I working in this way?' as outlined in Chapters One and Two. The focus of the research was changing as my epistemology was changing; I was no longer examining aspects of technology in my work, I was thinking critically about why I worked in the way I did, why I was integrating technology into my work practices, what compelled me to do this and how I could best understand it. My epistemology of practice was emerging in the form of my ideas around what I know and my ideas of knowledge acquisition and this in turn was informing my emergent theory of practice. I was stepping out from being in spectator mode and moving into 'living I' mode (see Whitehead 1989). This newfound ability to think critically was part of what I perceive to be the first stage of my own educational growth as I developed my living approach to my research.

As I asked myself the question 'Why am I working in this way?', the question began to re-emerge in a new form. I placed the question 'Why am I working in this way?' against the background of my concerns around the dissonance I was

experiencing between the external world of filling in workbooks and completing textbooks, and my own internal values around love and acknowledging the wholeness of the person. As I began to perceive an epistemological conflict between my thinking around what knowledge is and how it can be acquired or generated and the technical rational norms of the education system of which I was a part, my question gradually changed into a different form such that I now began to ask 'How do I understand my practice?' I perceive that asking 'How do I understand my practice?' to be a more penetrating question than 'Why am I working in this way?' because it recognises the existence of my ontological values and acknowledges their potential influence in my own educational growth. It marks a new spiral in my own learning process, a new spiral in McNiff and Whitehead's (2002) generative transformational evolutionary processes.

As my research process continued, and as the structure of my research methodology became more ordered, my question was reshaped again. As I engaged with ideas around how I could interpret the data and generate evidence in relation to the living critical standards of judgement around my claim to knowledge (Whitehead 2005a), I began to focus on 'How can I explain my educational influence in learning in terms of my claim to knowledge?' My explorations around this question will be outlined in greater detail in the course of this thesis and especially in Chapter Seven.

The final metamorphosis of my research question will be dealt with in the final sections of this thesis as I ask 'What was the significance of this learning journey?' where I outline the reasons why the learning was of value and I explain how I perceive it to be of use for the education of social formations (Whitehead 2004) and how it has the generative transformational potential (McNiff and Whitehead 2002; McNiff *et al.* 2003) for the creation of a good and just society. The question also pre-supposes the generation of new questions, ones which will lead on to more critical engagement and research; in effect the continuation of a living theory approach to life where I begin yet another new action research spiral by asking 'How can I improve my practice here?'

(3.7) The research methods of my living educational theory

The methodology that I employed for this research was a self-study approach to action research. This methodology formed the frame around which I established my research. Whitehead and McNiff (2006) say:

> We value methodology for the order and discipline that it brings to the processes of enquiry, and to the processes of communicating those enquiries as oral, written and visual narratives.
>
> (Whitehead and McNiff, 2006, p 88)

As I began my learning journey, I drew up a research design, which incorporated my best thinking at that time around how I could best investigate my practice. As I had chosen a living theory approach to explain my learning journey, my ideas, the theory that was emerging and my own epistemology, changed and were re-shaped in the ongoing emergent process that frequently constitutes learning. After many re-drafts and much re-thinking, I decided to use a modified form of Whitehead's (1989) model to structure my research process and its writing up:

> What is my concern?
> Why am I concerned?
> How do I gather evidence to show reasons for my concerns?
> What do I do about the situation?
> How will I check whether any conclusions I come to are reasonably fair and accurate?
> How do I evaluate the validity of my account of learning?
> How do I modify my practice in light of my evaluation?
> How do I explain the significance of my work?
>
> (McNiff and Whitehead 2005b, p.3)

These are the questions that informed my learning and formed the framework for this thesis.

Because I believe that there are many ways of coming to know, and that people come to know in dialogical and holistic as well as propositional ways, I have found that this has influenced my own learning. I believe that people can learn using different forms of intelligences (Gardner 1993) and can create their own knowledge through their relationality with other people, with their environment

and the wider cosmos (Miller 1996), as well as using traditional propositional approaches, and I apply these beliefs to myself. I have drawn my methodology from such beliefs.

The following section will detail my research methods, the participants in the research, where the research took place, ethical issues and data gathering processes. I am drawing here on the definition of Cohen *et al.* (2000) as they explain research methods as the range of approaches used to gather data.

The practicalities of engaging in living educational theory

In engaging in a living educational theory approach to research, the chief participant in this research was myself. I was investigating my own practice. The living 'I' according to McNiff *et al.* (2003, p.20) shows how people can take responsibility for 'improving and sustaining themselves and the world they are in'. As I was investigating my practice, the research involved my class of children who were participants in this research. It also involved the children's parents and some members of the wider community. I also convened a validation group to offer critical feedback on my findings. The validation group consisted of one colleague who is a principal from another school and my research colleagues and tutor, who formed our study group in the university (see Chapters One and Six).

The context of my research is a remote four-teacher primary school on the west coast of Ireland. My involvement with online collaborative projects had been motivated by a desire to build connections between my classroom and the world outside. In my previous research I had found the use of the internet to create communications projects with other classes and to structure web based projects went some way to alleviate some aspects of educational disadvantage and was educationally beneficial (Glenn 2000 and 2005). This current phase of my research is part of a developmental programme in which I was initially investigating the use of online projects in school contexts but then began to focus on issues pertaining to my own learning and understanding and critical thinking.

I obtained permission from my Board of Management and my school principal before embarking on my research. They were aware that I was undertaking

research and collecting material from the children and their parents. I also sought and obtained permission from the children themselves and their parents for their involvement in the research. I got permission for the children to access the internet in properly supervised conditions and for their work and group photographs and video clips to be published on the internet. (Samples of permission letters are available at Appendix D).

I made it clear to all the persons involved that I would anonymise the names of all the participants in the writing of this thesis, and that at no time would I divulge the name of our school or its locality. I also reassured my participants that they could withdraw at any stage from the research. (A copy of my ethics statement is available at Appendix E).

I gathered data from my own observations, from my research journal, from the comments of my class, informal interviews with parents, the work my class produced in the form of projects or essays or communications to me, the comments of observers, video footage of the class working together and interviews with my participants. I analysed this data in conjunction with the living standards of judgement I identified as manifesting my ontological, epistemological and pedagogical values in my practice. This analysis and the identification of items of data as evidence will be dealt with in more detail in Chapter Six. These data gradually evolved into evidence, under my own systematic and rigorous scrutiny and that of my validation group. The validation process was ongoing and of extreme ethical importance. It has supported my claim to professional judgement in the process of the realisation of my values. I believe that I am demonstrating methodological rigour, as suggested by Winter (1996), by taking such care around these aspects of my research.

In conclusion

In this chapter I have outlined why I have chosen an action research approach to my research. I have explained how I became interested in action research even though my explicit understanding of my epistemology at that time was of a technicist nature. I have outlined my epistemological growth and explained why

traditional quantitative and qualitative methodologies did not address my research requirements adequately. This chapter has offered explanations of my understanding of living theory and has outlined how my research questions have evolved as my research progressed. I concluded by describing the methods I employed while engaging in my research.

As outlined in greater detail in Chapter Two, I have learned in the course of my research that my ontological values inform how I work. I value love and embedded in my understanding of love is the recognition of the human-ness of people in a holistic way (see Miller 1996). This new learning and the uncovering of my ontological values has been one of the key findings of my research. I have also learned that many aspects of action research are commensurate with my own ontological values and commitments and have now become part of who I am. My research is about the creation of my living educational theory as I offer descriptions and explanations of my practice and my understanding of it. I ask questions that will bring me to a position where my practice is more commensurate with my values, and to where I can begin a new spiral of living theory generation. I am developing my living educational theory in the form of a new epistemology of practice that is grounded in dialogical and inclusional ways of knowing. Some call this a spirituality of education (see hooks 2003, Palmer 1993, Miller 1996) and it is this commitment to spirituality and holism that shapes the form of research I have undertaken as I engage with questions like 'How can I understand my practice?'. Such spirituality does 'not dictate where we must go, but trusts that any path walked with integrity will take us to a place of knowledge' (Palmer, 1993, pxi).

In Chapter Four, I will outline the 'path' I walked as I continued on my learning journey. I will demonstrate with integrity the steps I undertook as I engaged with the question 'How do I understand my practice?' and as I developed my emergent living educational theory and supported it with descriptions and explanations of my practice.

Chapter Four: What did I do about my concerns? Developing key insights around my research in terms of an emergent understanding of my practice

Introduction

As I learned to think in a critical manner and as I began to develop an awareness of my embodied ontological values, I was now prepared to develop an understanding of my practice and this became the focus of my research. In reply to the question in the title of this chapter; 'What did I do about my concerns?' my response was in the form of recognising that my concerns were with purpose and demanded that I take action. Carr and Kemmis (1986) use the term *praxis* to describe remaking 'the conditions of informed actions' and reviewing 'action and the knowledge which informs it' (1986, p.33). The action I chose to take was in the form of developing an understanding of my practice. My concerns, as outlined in Chapter Two, arose from the forms of injustice I perceived around how children were expected to learn in a milieu that did not address their learning needs or potentials (see Lynch, 1999) and wherein technical rational norms were dominant, as stated in the OECD Report on reviews on Irish education policies (1991). Transmission models of teaching, finishing textbooks, filling in the blank spaces in workbooks, learning by rote and the perception of the power-constituted role of the teacher as the 'knower' are all aspects of an education system that embraces technical rationality. These approaches often do not address the learning needs of many of the children I teach. The report on the revision of the Senior Cycle was drawn up by the National Council for Curriculum and Assessment (NCCA 2005), who are the statutory body that advise the Minister for Education and Science on curriculum and assessment, supports such thinking. The (NCCA 2005) states that the Irish education system fails some 40% of our students at Senior Cycle level; 20% of students do not reach the Senior Cycle programme at all while a further 20% score very poorly in their examinations. NCCA also consider that there is an over-emphasis on rote learning in the current system (NCCA 2005). It was against this backdrop of an education system that was proving to be inadequate for the learning needs of many of my own students that I began to address my concerns around the injustice of our system of education and how it was in conflict with my own ontological values around developing an awareness of the wholeness of people and their interconnectedness with one another and their environment.

The action I undertook in response to these concerns took the form of developing an understanding of my work practices. I sought to develop an understanding of practice, especially in relation to the collaborative projects I created for my classes with others and which frequently contained an ICT element because it was through these projects that I expressed much of my sense of 'rebellion' at the static, oppressive aspects of didactic methodologies (Freire, 1970). Much of the energy of educators seems to dwell on 'effectiveness' in teaching 'to the neglect of a more fundamental question: "for what?"' (Brown 2002, p. 27). Brown asks 'Why do we educate? What are the purposes of this enormous enterprise? …What truths and assumptions underpin our educational strategies?' (Brown 2002, p. *ix)*. In this chapter, I hope to address the 'for what?' aspect of my practice and I will explain how my new understanding of my practice emerged in the form of key insights around the role my ontological values have in my work practices. I have become aware of the importance of the interconnectedness of people and their environment as a locus for learning (Palmer 1998). I have also developed a new awareness of dialogical and holistic approaches to learning. I now see how they can enhance the learning process by offering learners different approaches to learning along with traditional didactic approaches (see Bentley 1998). I see that technology can be a vehicle for enhancing such interconnectedness and creativity, although I am aware that much literature supports the belief that technology can inhibit learning (see Postman 1993 and Roszak 1994) (these ideas are developed in Chapter Five). I am aware however that normative thinking in education is deeply embedded in the Cartesian legacy that sees mind and body as separate, and I appreciate that many educators may disagree with my thinking. Yet, I share my thinking with others and see the transformational potential for creative and holistic approaches to education as my ontological values are expressed in my practice and my living educational theory is shared with others (Whitehead and McNiff 2006) (see Chapter Seven).

I am going to organise this chapter in terms of how I chose to respond to my concerns and the key insights that have emerged for me as I developed an understanding of my practice in response to my concerns. The chapter is organised in three sections in the following manner:

Section 1: Theorising my practice as a thoughtful and critical response to my concerns around the forms of injustice that are inherent in the education system in which I work.

Section 2: Developing an understanding of my practice as the transformation of my ontological values as I visualise recurrent patterns in my practice as I explore:

- my understanding of learning as a dialogical way of coming to know that is inclusive of other ways of knowing
- the importance of spirituality and creativity in education
- the role of technology in education

Section 3: Recurrent themes merging into an emergent understanding of my practice as a holistic expression of my ontological values.

From engaging in my research, I now know that I have developed an epistemology of practice that is grounded in dialogical, holistic and inclusional ways of coming to know. I am referring here to Yoshida's (2002) thinking about dialogue. He draws on the writings of Buber as he says:

> Genuine dialogue is a holistic response. The significance of dialogue as response is not limited to the content of what is spoken. What is more important is the fact that it is an encounter of beings as whole persons.
>
> (Yoshida 2002, p.136)

This epistemology has emerged as I clarified my values in the research process and I produce substantiated evidence throughout this thesis to support this claim. Much of this evidence is in the form of video recordings, digital images, web pages and email messages which capture school life in my classroom and I am presenting this evidence in a digital format along with my thesis. I am influenced by Eisner (1988) as he talks about forms of educational research practice. He says:

> I hope we will even learn how to see what we are not able to describe in words…I hope we will be creative enough to invent methods and languages that do justice to what we have seen
>
> (Eisner 1988, p. 20)

In presenting some evidence in digital format, I aim to demonstrate how I assess the quality of my work, with rigour, as outlined by Winter (1989) in terms of reflexive critique, dialectical critique, risk, plural structure, multiple resources and theory practice transformation and by referring to the specific standards of judgement that are drawn from my values in education (see Chapter Six).

In this chapter I will offer descriptions and explanations of how I journeyed towards my claim to knowledge. It will be outlined in terms of the insights outlined above around the interconnectedness of people as a locus for learning and how technology can enhance the process of interconnection. I visualise these insights as patterns or themes that have emerged in different aspects of my work practices. These recurrent themes have now come together and transformed into my living educational theory. McNiff (2000, p.214) explains the importance of such patterns or themes because they 'connect and act as metaphors for interrelated human practices' which help us to understand our realities. McNiff continues to explain that people's understanding of the relationships that we develop as we understand ourselves 'in dynamic relation with one another rather than discrete objects existing in our own time and space' (McNiff 2000, p.214), is kernel to a vision for developing a good social order. The vision I have for my emergent theory of practice has to do with the creation of a better society, where caring relationships between people are essential (Noddings 1992), where people are mutually respectful of one another (hooks 1994), and where learning is a continuous life enhancing process (Wenger 1998). I hope that I am enacting this vision in my work practices and my everyday dealings with others. I will explain here how, even though I perceive the recurrent themes of connectedness and at-oneness as being manifested in different aspects of my life in education such as curriculum (as outlined in Chapter Two), learning, spirituality in education (see the second section (4.2.2) on spirituality and creativity in education later in this chapter) and in the role of technology in education (see Chapter Five), these recurrent themes come together and crystallise as they merge into the formation of my living educational theory (Whitehead 1989). Whitehead (2005a) reminds us that a living theory is an account of learning in relation to the values used by people to give meaning and purpose to their lives. In Chapters One and Two, I outlined the struggles with which I engaged as I tried to give meaning and purpose

to my work. In this chapter, I show how, in my newly awakened awareness of my ontological values, I could now begin to develop my living educational theory by relating my practice to my embodied values.

(4.1) Section 1: Theorising my practice as a thoughtful and critical response to my concerns around the forms of injustice that are inherent in the education system in which I work.

In this chapter I am addressing the processes I undertook in response to my concerns around the forms of injustice that are inherent in the education system in which I work. I perceived that many of the accepted traditional technicist norms that are inherent in the education system closed learning down for many students (see Lynch 1999) and that my work practices around collaborative projects and the use of technology went some way towards ameliorating that injustice (see Chapter Two). Here, in Section 1, I will describe and explain how I developed an understanding of my practice as I sought to address my concerns.

So as to clarify my explanations, I will refer specifically to one project from my practice, that spanned two years, and was typical of the way I chose to work with my class. This project was called 'Ár gCeantar and Beyond'. I am drawing on this example to demonstrate how my ontological commitments to love, creativity and caring relationships in education are manifested in my work practices and how these practices in turn can transform into generative processes as outlined by McNiff (in Whitehead and McNiff 2006). I outlined the work involved in the first year of 'Ár gCeantar' (which means 'our locality') in Chapter One and it can be viewed online at http://www.inver.org/ceantar. The second phase of this project, which is the section I will specifically refer to here in this chapter, was in the form of a communications project under the auspices of 'Learning Circles' (see http://www.iearn.org/circles/); a biannual event where groups of schools from all over the world participate in collaborative projects. We were one of a group of six schools and our objective was to share elements of our geography, culture and history with students from the other schools while exploring their history and culture through their submissions to the project. This programme utilised e-mail and postal mail and my students communicated with students from five other schools around the world and exchanged local stories, recipes, fables and histories

as well as local artefacts. I had been invited to be the co-ordinator of the project; to negotiate and oversee timelines and deadlines with the other schools and to troubleshoot. My class received parcels with local artefacts from other schools while much thought and discussion went into preparing our own parcels for our partner schools. This project is accessible online at http://inver.org/ceantar/Learning_Circle (see Fig. 4.1 for a screenshot from the project).
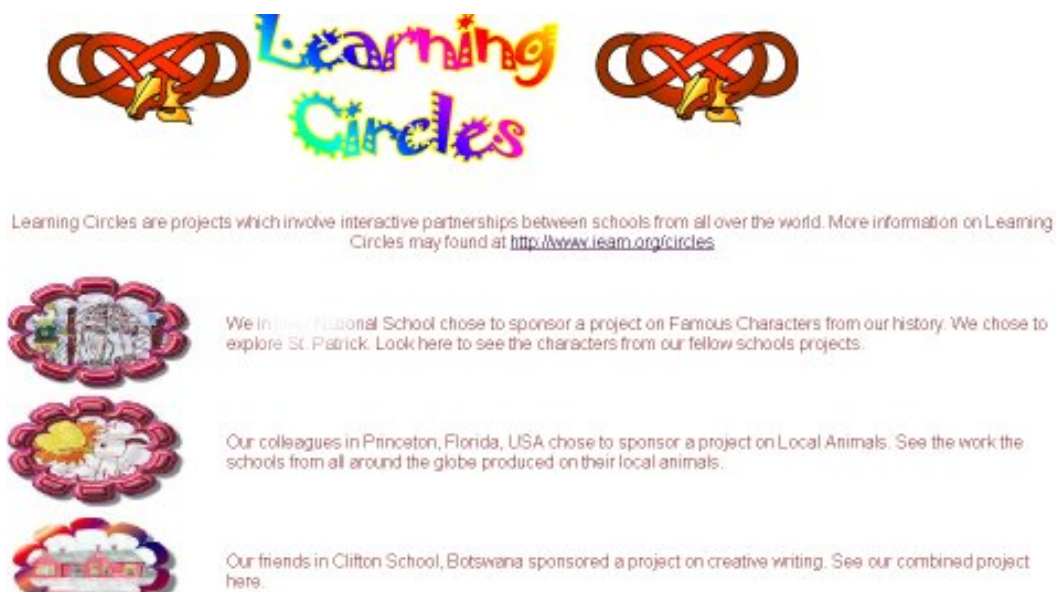
Fig. 4.1 A screenshot of *Learning Circles* project available at
http://inver.org/ceantar/Learning_Circle

As I reflected on this project and this way of working, I saw that while the project drew on a certain amount of the traditional literacy skills around reading and writing, it also drew on 'other' ways of learning (Bentley 1998) such as email communications, the taking of digital photographs, or interviewing local historians. The more traditional sections of the project, such as writing and reading local history books were undertaken, not in the often detached and sometimes meaningless manner of workbook exercises but with the intent of learning for a practical and personal purpose (Riel 1993). Here the purpose was to communicate the students' newfound knowledge to other children in schools in other countries. The digital version of this thesis has a link here to a video clip of the class opening

a package which was posted to them from their partner class in Michigan. The sense of excitement and wonder is palpable on the video as my students peruse the contents of the package.

This project was significant because it demonstrated how I was attempting to live my ontological values in my practice: I knew that I was experiencing curriculum not as Joubert describes (2001, p.24): 'teaching the curriculum instead of teaching children', but more as a place of engagement and interaction (see Stenhouse 1975, Young 1998). I was not 'teaching the curriculum', because the notion of 'curriculum delivery', for me, has behaviourist nuances and technicist implications. Like Hyland, I perceive the use of behaviourist terms to describe the development of knowledge and understanding is 'not just viciously reductionist but also utterly naïve and simplistic' (Hyland 1993, p.61). Instead of engaging in reductionist practices, the practices of this project were embedded in building up relationships between the students in six different countries and in encouraging them to develop their own projects in ways that enhanced their own learning strengths (see Appendix F for a sample of such work). Such practices were commensurate with my values around dialogical ways of knowing as it nurtured Bohm's description of dialogue as the 'stream of meaning flowing among and through us and between us' (Bohm 2004, p.6), which in our case could be reinterpreted as the meanings flowed between the classes and teachers across the continents.

This project was significant on another level also. I believe that this project had what I visualise as a 'seed of potential' embedded in it. This seed, in this case, is in the form of a small project that has the potential to grow and to influence in an educational way. This idea is based on McNiff's ideas around generative transformational processes (Whitehead and McNiff 2006) where McNiff describes how the process of transforming ontological values into real live practice is a manifestation of generative transformation. McNiff visualises the patterns of relationships as a kind of 'elegant fractal, where shapes re-create themselves in a constant process of unfolding' (A short video-clip of a fractal which was created by my class in conjunction with another project can be viewed online at http://www.inver.org/tree2.ram).The notion of how I am exercising my

educational influence is also embedded in what I perceive to be the vision of this research. This vision has to do with the creation of a just society, where caring relationships are central, where people have respect for one another and where learning is perceived to be an open and creative process. This is how I perceive the 'seed of potential' in our 'Ár gCeantar and Beyond' project: At its most basic, this project was a Geography lesson about six locations throughout the world. At a deeper level, this project was a manifestation of my ontological values (Whitehead 2005a) around love and the recognition of the human-ness of people. The project involved real children from other countries, communicating the stories of their reality to the children in my class, to which my class, in turn, responded in a reciprocal manner. It also gave expression to my epistemological values of nurturing dialogical and holistic ways of knowing (Nakagawa 2000) and the relationality of education to present-day life processes as the learning flowed between the classes from real live locations (Steiner, in Kane 2002). Because my practice is undertaken with the vision of working towards a better society, where people have respect for themselves and for one another and where education is seen as movement towards a good social order, I embraced this vision; this 'social intent' as we engaged with the project. The vision is realised in a small way, at the level of the seed, in the way I co-ordinated the project and the way the teachers and children interacted with one another. As this way of working is transformed, I see how this project has the potential to create situations where my class, or perhaps our partner classes from around the world or perhaps the teachers from these classes, would incorporate some of my ideas into their work. I believe that the following extract from e-mail messages from two of the other teachers from the USA demonstrate how my values have been transformed in a generative process as I work with others:

Mairin- You have been wonderful keeping us on track. Having never done this before, you have set a great example for us to follow. You have inspired me to enrol in the professional development class offered by IEARN- the people who support the Learning Circles Projects. I want every class to work on an IEARN project next year. Thanks so much for your inspiration.

E-mail dated: 08/04/2002

and

> Mairin - You have taken so much time to help with the circle, answer my questions, and keep us all involved and informed. We can't wait for the final project presentation when it becomes live on the web! My school has been chosen as a pilot for a technology program to see if computers, etc. make a difference in learning attitudes and possibly test scores. You have been able to do so much with your skill on the computer, I feel "less" than a novice. But just wait until next year! How is your thesis coming? Cara
>
> E-mail dated: 03/05/2002

The 'seed of potential' in this case unfolds from a small idea about learning Geography and is then enfolded in values of love and dialogue and articulated to others through the everyday workings of the project, which has the potential of influencing the emergence of a good social order. Like Wenger (1998) I see how learning is not just located in our school work, it is an integral part of our lives and is embedded in our lives as we live in community with one another.

I am aware that mine is a 'battle of snails' (Schön 1995) and that many who are involved in education will disagree with my thinking. Apple (2004) explains how exclusion is a currency of power and the decision to define some groups' knowledge as being more legitimate than others explains something important about who has power in our society. There are many bodies involved in education who would question the importance of caring relationships and dialogical and personal ways of knowing. For example, The Parents Council of Ireland (see Kilfeather 2005) continuously call for schools in Ireland to present forthcoming standardised test results in the form of league tables so that people can assess the 'good' schools. There is little room in an education system that is locked into a league table process for developing individual learning strengths and encouraging personal growth. (I will discuss these issues in greater detail in the second section (4.2) of this chapter). Yet, I am drawn to Joubert's thinking as she (2001) explains that if only one teacher develops the creative potential of the children in their classroom that it would be a net gain; but the benefits if all teachers did it would be

manifold (2001). I like this idea of how one teacher in their classroom has the potential of having an educative influence on many by teaching creatively and with care and inviting others to do likewise. Zuber-Skerritt (1996a) suggests that action research is one of the most effective ways to achieve organisational change and I am inviting people therefore to experiment with change. If one of my students or colleagues sees learning as an opportunity for freedom and creativity on a pathway towards participating in a just and fair society, then the research leading to my emergent living theory will have had a social purpose. If all teachers and students engage with ideas around love, mutual respect and perceiving learning as an on-going emergent journey, then, to put it simply, we may have better chance of living in a more just and fair society (Melrose 1996).

To conclude this first section, I would like to remind the reader that I have offered descriptions and explanations of my work as I theorise my practice (Schön 1995) as a thoughtful and critical response to my concerns around the injustices of our educational system. In the second section, I will explore some patterns that have emerged as my embodied values are transformed into living practice.

(4.2) Section 2: Developing an understanding of my practice as the transformation of my ontological values as I visualise recurrent patterns in my practice

I sought to address the question 'How do I understand my practice?' as a response to my concerns around how education systems frequently shut down the learning process for children (as outlined in Chapter 2) as opposed to opening up channels of possibilities for them in terms of Freire's (1970) ideas around education as the practice of freedom. As I explored my understanding of my practice, I noticed that many of the projects I undertook with my class, such as the *Learning Circle* project above, frequently drew on the use of multimedia or the internet for their implementation. The projects regularly focused on the local environment or the local community and often were part of collaboration with other schools. In the learning journey that I undertook in my attempt to answer those questions 'How can I improve my practice?' and 'How can I understand my practice?' I experienced a growing sense of understanding around how my ontological values were being transformed into my living practice as I explored ideas pertaining to

- my understanding of learning as a dialogical way of coming to know that is inclusive of other ways of knowing
- the importance of spirituality and creativity in education
- the role of technology in education

I will address the first two of these three ideas in detail in the following section of this chapter, and I devote much of Chapter Five to addressing my understanding of my use of technology. In each of these three aspects of my learning, I perceive how my ontological and epistemological values have transformed into live practice. This process is a manifestation of generative transformation as outlined by McNiff (2000), where 'everything has the potential to be developmental and transformative, moving from closed to open forms in the direction of expanding diversity' (2000, p.11). The sections that follow each address a different aspect of my learning, yet each section shows how my embodied and ontological values were given life in practice as a developing transformative process. These new understandings around my practice have been key findings for my research and I will draw these findings together in the third section of this chapter (4.3) when I explore my thinking around holistic approaches to education.

The following section outlines the key debates in which I engaged as I developed my research process that enabled me to develop an understanding around my practice such that I saw the influence of my ontological values in my practice.

(4.2.1) The transformation of my ontological values into living practice as I explore my understanding of learning as a dialogical and inclusive way of coming to know

Fig. 4.2 Screenshot of our *Trip to Liverpool* web page.

My class was involved in an e-pal project with a school near Liverpool (see Fig. 4.2). This was our long term *East/West Project* which spanned over two years and from which I gathered a substantial amount of data for my research. I will refer to other aspects of this collaboration in forthcoming chapters of this thesis also, but for now I would like to refer specifically to the culmination of the final year of the project which took the form of a trip to Liverpool for both classes. The two classes had previously met in Ireland and now it was our turn to travel.

The children had come to know their e-pals through the weekly e-mail messages and through the project work they had exchanged. Because I had planned the trip well in advance and because we received funding for our project from the East/West partnership programme, we chose to fly to Liverpool (the East West Programme aims to strengthen school partnerships and to encourage friendship and understanding between young people in Ireland and the UK). This trip was the first overseas trip our school had undertaken and the excitement was enormous. As I planned the trip, I thought that it might be an exciting idea for the parents to accompany their children and to share in their learning experience also. When I explored the idea with parents, they were delighted and I organised a savings scheme for everyone, parents and children alike, so that there would be no financial difficulties for anyone (the children's travel was funded by the East West Programme but the adults had to pay for themselves). As part of our preparation

for the trip, we learned the Beatles' 'Let is Be' and presented a vocals arrangement with chime bars on our web site at http://www.iol.ie/~bmullets/karaokeandchimes.html. An atmosphere of excitement, camaraderie and fun permeated the trip while we learned about the history of Liverpool, we visited the Beatles Museum and took a trip on the Mersey. We also visited our partner school and were treated to a warm reception from the staff, the students and the parents. We noted the substantial differences that existed between our two areas and our two schools. Some of the students' writings and photographs from the trip can be accessed at http://www.iol.ie/~bmullets/liv/index.html .

As I reflect on this project and in particular on this trip to Liverpool, I am aware of how my ontological values are clearly reflected in my work practices. I perceive that I am giving life to my values around love by organising the trip; by inviting my class and myself to share a substantial amount of time together and by inviting the children's parents on the trip. In her study on achieving equality in children's education in Ireland, Zappone (2002) outlines how parents call for relationships of equal respect such that 'parents, teachers and other professional work together as a team' (Zappone 2002, p.40). I see how the whole project - the establishing of connections, the sending of email and the sharing of learning - was embedded in my values around creating dialogical learning spaces for my class so that they could learn through the flow of understanding they established with their partner class. Like Palmer (1998) I see 'the recovery of the connection or community at the very core of educational implementation in which the teaching, learning, and living of teacher and students are woven into a communal relationship' (cited in Nakagawa 2000, p.75). I perceive elements of connection and community and the weaving of the lives of the students and myself into one in this project.

If I had been asked at that time, why I engaged in such practices, I would have been unable to articulate an adequate reply. I 'knew' and 'felt' that it was a good way to work and other educators often emailed me to say they liked and used what they saw on the web.

My work was a living example of how I was expressing my values around dialogical ways of knowing and it was also a living example of how technology could enhance creativity, communications and interconnectedness.

I would now like to outline the development of how I began to gain insight into my work practices as an expression of my embodied ontological values. As outlined in Chapter Two, my overarching ontological value is one of love. The project outlined above is an example of how I perceive love and caring relationships to be enacted in the dialogical relationships I establish with and for my class.

> People sometimes say, "All we really need is love." Of course that's true - if there were universal love all would go well. But we don't appear to have it. So we have to find a way that works. Even though there may be frustration and anger and rage and hate and fear, we have to find something which can take all that in.
>
> (Bohm 2004, p.42)

But as Bohm has described with clarity above, our society doesn't have universal love and so I am attempting to 'find a way that works'. He continues; 'Love will go away if we can't communicate and share meanings…However, if we really can communicate, then we will have fellowship, participation, friendship, and love, growing and growing' (Bohm 2004, p.54). The idea that communication and the sharing of meanings can enhance loving relationships animates much of my thinking, especially with regard to education. If I see love as being kernel to educational relationships, and I do, then I am compelled to foster ideas around communication and the sharing of meanings, as suggested by Bohm (2004). But frequently, the idea of communications and the sharing of ideas does not appear as a priority in much of the discourse around education. Instead, there is much emphasis placed on examinations (Callan 1996; Lynch 1999), statistics (McGarr 2003), IQ tests (Gardner 1993) and the economic value of education (Apple 2001). While these issues are important, epistemological issues around how people come to know, and whose knowledge is considered to be of value must also be prioritised (Apple 2004). As I developed an understanding of my practice as the expression of my ontological values in reality, I was influenced internally by my

own dialogical epistemology and externally by the normative technicist epistemologies that dominate our education system (Conway 2002). As outlined in Chapter Two, this became an area of concern for me as I developed my original claim to knowledge. I am increasingly aware of how my ontological commitments around love and nurturing the humanity of people are informing my epistemological commitments to dialogical ways of knowing.

I am using the term 'dialogical' here as something that is embedded in the 'perennial philosophy' of holistic approaches to education (Huxley 1970). The perennial philosophy 'holds that all things are part of an indivisible unity or whole' (Miller 1996, p.20) and these principles are articulated in many spiritual and intellectual traditions (Miller 1996). All life is interconnected in the perennial philosophy and I will discuss it in greater detail in Section 3 of this chapter (4.3). There are many different understandings of the term *dialogue* and dialogical approaches to learning. Gadamer (1979) describes conversation thus: as a way of coming to an understanding, where knowledge is not an external fixed entity awaiting discovery. Gadamer sees conversation as a process where participants have their own prejudices as they enter the conversation and they try to understand the 'horizon of understanding' (1979, p.347) of the other. Burbules (1993) talks about the importance of the social relations that participants in dialogue have which include a number of virtues and emotions (Smith 2001). Some of these virtues include concern, trust, respect, appreciation, affection and hope. Burbules perceives that these mutual feelings are of equal importance in dialogue as is the ability of the participants engaging in dialogue to understand one another. I am also drawn to Bakhtin's (see Holquist 2002) work. Bakhtin also talks about dialogue and how people use language. He suggests that dialogue consists of three elements: a speaker, a listener and the relation between the two, and he maintains that all utterances are aimed towards an answer or response. The listener can only respond from within their own conceptual system or 'conceptual horizon'. Bakhtin maintains that 'discourse lives on the boundary between its own context and another, alien, context' (1981, p.673). His understanding of dialogue is based on a neo-Kantian understanding that reviews thinking to overcome the gap between 'matter' and spirit' (see Holquist 2002). In my work in the classroom, dialogue rarely occurs just between two people. It generally arises between a group of

students and myself, or between two groups of students as something fluid and open-ended occurs. The purpose of dialogue, according to Bohm (Bohm and Peat 1987, p. 241), is 'to reveal the incoherence in our thought' so as to re-establish 'a creative collective consciousness'. Bohm maintains that no rigid rules ought to be applied to dialogue because its 'essence is learning…as part of an unfolding process of creative participation between peers' (Bohm *et al.* 1991, p.45). He also reminds us that dialogical approaches to learning mean that learning outcomes cannot be predicted and that learning arises out of the flow of meaning that occurs in dialogue. This is quite a different interpretation of dialogue to that of Freire, who reminds us that dialogue is not just permissive talk but conversation with a focus and a purpose, an 'encounter between men [sic], mediated by the world, in order to name the world' (Freire 1970, p.76). For the purpose of illuminating my understanding of my practice in the classroom, I am drawn to Bohm's understanding of dialogue as being more commensurate with my own ideas around dialogical ways of knowing and spirituality in education (Keepin 1991). I see Bohm's dialogical approaches to learning clearly reflected in the collaborative projects my classes do with other classes as we engage with our learning in a dynamic and fluid manner. The outcomes of the learning are rarely predicted (although sometimes they are) and there are few rules except those which we, teachers and students, create amongst ourselves to assist the free flow of communications. I also see Burbules' (1993) ideas about social relations being reflected in our projects as we explore ideas around developing respectful relationships with our project partners. Even young children can modify their language as they orient the language of their email messages to communicate Bakhtin's ideas around the 'conceptual horizon' of the listener.

I am aware that dialogical approaches to learning are not without critique. Ellsworth (1997) is critical of the idea of dialogue in education (and Burbules' thinking in particular) because of its overdependence on the social. She suggests that 'dialogue as a "teaching practice" is politically disinterested' and that teachers 'imagine dialogue as a means of "ensuring" open-mindedness' (Ellsworth 1997, p.28 cited in Pinar 2004, p198). She claims that 'dialogue in teaching cannot function as a neutral vehicle conveying speakers' ideas back and forth across a free and open space' (cited in Pinar 2004, p.198). I acknowledge Ellsworth's (1997)

point but argue that dialogue cannot exist in a value-free vacuum. Capra (1997) explains that values are inherent in all of living nature and therefore dialogue will nearly always be informed by the interests and values of its participants.

The writings of Fromm (1979) are helpful here as I develop my understanding of my learning as a dialogical process. Fromm (1979, pp.47-9) talks about two distinct ways of existing; having and being, and their impact on epistemologies, which he describes as 'having knowledge' and 'knowing'. In the first, the 'having' mode, one experiences the world through the motives of possession and ownership. This possession not only includes things, but also people and their environment. He describes having knowledge as the possession of knowledge, and he equates such knowledge with information. Fromm (1979) perceives the second epistemological stance, knowing, as part of the process of thinking. The 'being' stance encapsulates the idea of existing in process, as an aliveness and relatedness. The traditional models of education as the pathway towards knowledge, are located in a propositional model of knowledge, and embrace Fromm's ideas of 'having knowledge' as he perceives education as it tries 'to train people to *have* knowledge as a possession…commensurate with the amount of property or social prestige that they are likely to have in later life' (Fromm 1979, p.48). He sees schools as 'factories in which [these overall] knowledge packages are produced' (1979, p.49). I am drawn to Fromm's second mode, the 'being' mode, where knowledge is fluid and emergent. I see the distinctions that Fromm makes between 'having' and 'being' as helpful in my understanding of epistemological issues, especially with regard to education. Traditional technical rational epistemologies tend towards the 'having' mode; a mode where education has to do with possessing knowledge. While I perceive that the acquisition of information certainly has a place in education, I believe that the 'being' mode, where 'knowing' is a process, is of importance to a world that is trying to re-establish the links between mind and body and our environment (Hocking *et al.* 2001 and O'Donohue 2003). This thinking is commensurate with my own ontological commitments to learning and to my dialogical and holistic epistemology as I engage with ideas around holistic approaches to learning.

Conversely, for many, the notion of learning is still firmly linked to traditional ideas around the importance of textbooks, examinations and rote learning (see Lynch 1999). Dewey (1938) rejected the textbook approach to education some seventy years ago:

> Books, especially textbooks, are the chief representatives of the lore and wisdom of the past, while teachers are the organs through which pupils are brought into effective connection with the material. Teachers are the agents through which knowledge and skills are communicated and rules of conduct enforced.
>
> (Dewey 1938, p.18)

And yet the Irish educational system continues largely to embrace technicist approaches to learning (see the report from the Inspectorate, Ireland, Department of Education and Science 2005). For many teachers, including myself in the past, success was something that could be measured by the completion of text books (see Skinner 1978). As I have since come to understand, education has as much to do with caring (Noddings 1997) and dialectical relationships as it has to with textbooks. It also has to do with making connections with the local physical environment and the local community. I am drawing here on Montessori's (1948) perception of the world of nature as an interdependent and harmonic cosmos. She envisaged a curriculum for primary school levels which she called 'cosmic education'. Here the child was to be given an inspiring vision of the universe and of the importance of their role in connection with that universe. I see the web pages that my classes have produced as outward manifestations of the children's role in connecting with the universe. The e-mail messages they have received from locations worldwide further enhances these connections at a universal level.

To explicate my thinking about the use of textbooks at a practical level, I would like to draw on the example from a section of the *East/West* collaborative project, mentioned earlier in this chapter. My colleague in the UK and I prepared our project carefully. Our aim was to encourage mutual understanding and insight into one another's culture. My partner teacher came to visit my class and stayed with me in my home as we planned our project. Somekh (2000) explains how 'for collaborative projects to be possible between groups of children in two different countries, the two teachers need to plan very carefully so that the project fits the

needs of both environments' (2000, p.26). I learned however that careful planning does not always presume a successful project. Because my colleague's school was near Liverpool and many people from Ireland had emigrated there in the time of the Great Famine in Ireland (1845-8), we both agreed that it might be a valuable exercise for our classes to begin our partnership by undertaking some project work on Famine times and emigration. However, when I located textbooks for children which dealt with the topic of famine times, for the purpose of sharing them with my colleague's students, I realised that our idea was not feasible in its present form for the following reason: While acknowledging that there is much evidence which points to the injustices perpetrated against the Irish during Famine times (for example Ó Suilleabháin 1997; Day *et al.* 1996) the tone of many of the current Irish history textbooks is one which does little to encourage and friendship and understanding between Irish and English people. This tone was not in keeping with the ideals of our collaboration and so, by mutual agreement, we abandoned this section of the project at an early stage. (However, the main thrust of the project proved to be positive and powerful. See Chapters Five, Six and Seven).

When I reflect on how aspects of interpreting events in history can cause strife and close down learning processes, I compare this type of learning to an example described by Veenema and Gardner (1996) where they describe a piece of software used to explore the battle fought at Sharpsburg, Maryland, during the American Civil War. Northerners in the USA, even today, call this battle Antietam, while to southerners it remains the battle of Sharpsburg. In this multimedia CD-ROM, multiple views of the story are presented. Veenema and Gardner (1996) suggest that the common presentation of this battle is via textbooks that may provide an illustration or two and

> …generally convey the impression that there is a single, authoritative view of the battle, and, depending upon the background of the authors, often relate the battle from the perspective of either the North or the South... And such presentations rarely challenge the widespread assumption among students that there is a single objective account of a battle and that the Civil War featured a battle between Right and Wrong.
>
> (Veenema and Gardner 1996)

Veenema and Gardner claim that the CD-ROM version of the story acknowledges the multiple intelligences of the students who utilise the software and encourages students to evaluate the injustices within the battle from multiple perspectives. The CD-ROM also provides students with photographs, newspaper clips from different perspectives, eye-witness accounts and 'virtual reality' replications of the landscape at various battle locations. The goal, according to Veenema and Gardner (1996), was to present the event in all its complexity to the student so that they could engage in richer forms of understanding of the event.

For me, these two contrasting ways of handling sensitive areas in history highlight issues around epistemological conflict and interrogate epistemologies which may be regarded as normative and are embedded within the culture of schools. The first example, on the Great Famine, is located within a technical epistemological approach to education which can be closely aligned with Dewey's comment about the 'lore and wisdom of the past' (1938, p. 18). The second example is located within a more fluid, multifaceted and open-ended approach to learning which I perceive as a dialogical approach to learning. As I now realise, the dominant epistemology within the school system in Ireland is that of technical rational knowledge (see OECD 1991). I was a member of the society which hooks claims is: 'fundamentally anti-intellectual, [where] critical thinking is not encouraged' (hooks 1994, p.202). I realised that I had taught many history classes during my teaching career, never stopping to think that, perhaps, the version in the text I was using might have been biased or a form of inciting and perpetuating racial hatred (see Arendt 1998). I had not engaged in critical thinking, but now that I had begun to be able to think critically, I could see that not only was critical thinking a desirable aspect of education, it was in fact kernel. hooks (1994, p.202) explains how, 'without the capacity to think critically about our selves and our lives, none of us would be able to move forward'. This was a significant experience for me as it demonstrated how my commitment to the development of relational epistemologies challenges and transforms traditional epistemologies that are rooted in a logic of domination (Marcuse 1964). I now know that I do not perceive knowledge and knowledge acquisition solely from a technicist perspective but also from other perspectives. I see knowledge as a process (Dewey 1938), an unfolding and emergent progression. As well as drawing on traditional technical models of

knowledge and knowledge generation, it draws on the human senses, on the relationships between people and their environment; it is within people in an embodied way (Whitehead 1989, Hocking *et al.* 2001) and is ever unfinished (Glenn 2005). I believe that the *Learning Circles* project (discussed in the first section of this chapter) goes some way in addressing these ideas because it adopts knowledge generation as being located not only in the text books, but also in the dialogical approaches that are inherent in the conversations and interviews and creativity of the students.

As I develop an awareness of the transformation of my ontological values into living practice and as I explore my understanding of learning as a dialogical and inclusive way of coming to know, I am also developing an awareness of how I am responding to my concerns around the inadequacies of the system of education of which I am a part (see Chapter Two). I am convinced of the potential of dialogical ways of knowing not only as a more holistic approach to education but also as an approach to a less fragmented society (O'Donohue 2003). Yet, my values around learning as a dialogical and inclusional process seem to be in conflict with the current accepted norms in learning where examinations are often considered to be the summative evaluation of students' learning. I will now discuss these issues.

Dialogical ways of knowing in conflict with an education system that is examination oriented

Examinations are part of the schools system and seem to have existed since the beginning of formal schooling. Until recently here in Ireland, state examinations were undertaken in second level schools, although this policy is currently undergoing change, and it seems as though primary school students will also be subjected to standardised tests from 2007, according to a press release from the Department of Education and Science (Ireland, Department of Education and Science 2004). Many argue the case for formal testing to evaluate standards (see Flynn 2005 for example). The students are marked in these examinations and designated as failures or successes as their scores may indicate, regardless of their potential, their learning strengths (Gardner 1993) or their emotional intelligences (Goleman 1996). The placing of numerical values on human endeavours appears to be a technicist ideal and is one of the accepted norms of our education system.

However, Holt (1971) questions where people got the idea that learning could be measured with numbers. He suggests that when educators grade students' work, they are subscribing to the idea that learning can be measured with numbers. When I first encountered Holt's ideas, I was critical of them. I argued within myself that if students did not receive marks for examinations, then perceived standards of education would drop and the ability to evaluate the progress of students would be lost. I was afraid the system would disintegrate. Only when I reflected more critically on Holt's ideas as I progressed along my learning journey, did I come to the realisation that his thinking was commensurate with my own values around engaging with the individuality and human-ness of students. Postman (1993) echoes Holt's ideas and questions our unquestioning general acceptance of the marking and grading of examination papers. Such marking systems, which according to Postman only came into existence two hundred years ago, are acceptable and normal for us. But Postman questions the idea of a quantitative value being assigned to human thoughts (as happens in the marking of essays and examination papers) and suggests that this is a major step towards constructing a mathematical concept of reality. 'If a number can be given to the quality of a thought', he argues (1993, p.13), 'then a number can be given to the qualities of mercy, love, hate, beauty, creativity, intelligence, even sanity itself'. The notion of attributing a number to love or beauty is abhorrent to me, and now the notion of attributing a number to the thinking of my students is becoming equally questionable. Though Postman (1993) expresses surprise at this system, his real incredulity rests in society's unquestioning acceptance of such a system that allows such testing and marking to persist without critique. The importance of critical thought, of the ability to question the norms, is once again made clear to me because, as Freire (1970) reminds us, 'those who authentically commit themselves to the people must re-examine themselves constantly' (Freire 1970, p.52). I have come to realise the importance of questioning my own complacency about such accepted norms and become more aware of the insidious nature of technicist assumptions in our everyday lives (see Tormey 2003).

I can see how one's epistemological stance is kernel to how learning takes place. Holt's (1971) and Postman's (1993) critique of formal examinations come from an epistemology that perceives knowledge generation as being relational and in

process, whereas technically oriented examinations are frequently located within a technicist perspective, a perspective that is dominant in our current system of education in Ireland. Once again, I experience myself as a living contradiction (Whitehead 1989). As I develop an understanding of my practice as the articulation of my ontological values, I see how these values are being denied in a system of education that reveres the examination as an icon of educational endeavour. I have a strong sense of the injustice of such systems because they close down the learning for so many. Freire (1970, p.60) talks about how teaching to the test functions to 'minimize or annul the students' creative power and stimulate their credulity' so as to reinforce intellectual submissiveness and conformity (see also Darder 2002). I prefer to make the argument that people are deserving of a better approach than the closed models of education that technicist models perpetuate. They deserve a model that embraces hooks' (1994) idea of learning. Learning, according to hooks (1994), is a place where 'paradise can be created', and the classroom, a place where 'with all its limitations remains a location of possibility… where we have the opportunity to labor for freedom…an openness of mind and heart ..as we imagine ways to move beyond boundaries…' (hooks 1994, p.207). I am committed to taking whatever actions are necessary to establish this model in my own class and to share it with others.

While I am critical of the examination system as it exists, I am aware that there is a movement by the National Council for Curriculum and Assessment (NCCA) and others to reform our current examination system. The NCCA have responsibility for advising the Minister for Education and Science on curriculum and assessment for schools in the Republic of Ireland. In response to a perceived need for reform, a remodelling plan for the Leaving Certificate examination is already being examined by the minister (NCCA 2005). The reform includes such ideas as creating a more adult learning culture with more self-directed learning with a wider choice of courses. It perceives the assessment processes as follows:

> A greater variety of assessment components will be employed across subjects and short courses offered at senior cycle. This will build on current experience of the use of written examinations, orals, aurals, projects, portfolios and practical coursework in assessment. In the period September 2005 – June 2007, the use of

> ICT and video technology in assessment will be explored, in particular, the potential of these technologies to contribute to greater variety and improved validity of assessment.
>
> (NCCA 2005, p.52)

While these new developments are laudable and go some way towards addressing a more creative approach to assessment, initial indications show that the minister is not in favour of such radical thinking with regard to the Leaving Certificate Examinations (see Flynn, 2005a) because of her concerns about 'the capacity of the education system to cope with such revolutionary change'.

A more equitable system of assessment is already in place in the primary school sector, where the curriculum guidelines (Ireland, Department of Education and Science, 1999) call for 'strategies that are directed towards the identification of children's needs, and providing experiences that will fulfil these needs' (Introduction 1999, p.15). The English curriculum for example, places particular emphasis on work samples, portfolios and projects to assess children's learning. Initial indications (Ireland, Department of Education and Science 2005, p.56) show that teachers are subscribing to more holistic models of evaluation: 'The findings show that teachers reported greater use of informal assessment tools, e.g. teacher designed tests and tasks, than formal tools, e.g., curriculum profiles'. While I perceive such assessment methods as being more holistic, not everyone agees with me. Interestingly, the National Parents Council (Kilfeather 2005) are demanding information about 'educational outcomes' for children in schools but appear to focus on the importance of being able to compare schools' results and locate 'good' schools rather than looking for assessment to aid learning and to help troubleshoot learning difficulties. McLaren reminds us how standardised tests are 'touted' as the 'means to ensure the educational system is aligned well with the global economy' (McLaren 2003a, p.157) and suggests that efforts towards developing international standardized testing provide a form of surveillance that allows 'nation-states to justify their extended influence' and 'homogenise education' (McLaren 2003a, p.157). McLaren's ideas here are reminiscent of Foucault's (1980) insights into Bentham's model of the panopticon, where inmates and jailers become self-regulating. I am reminded here of my own self-regulating

behaviour before I developed the ability to think critically, as outlined in Chapters One and Two.

The drawing of battle lines between opposing epistemological stances may not be productive. Instead, I prefer to look at ways of holding the one and the many as described by Plato (de Botton 1999) such that I acknowledge and recognise that there are many forms of knowing and coming to know (Gardner 1993; Goleman 1996) and that my role as educator is to allow them merge and blend in a manner that supports learning. My ontological and epistemological commitments are such that while I may frequently disagree with traditional technicist approaches to education, I am not rejecting their importance or popularity. As I choose to engage in dialogical epistemologies, I interrogate how traditional epistemologies can support and help my students and myself as we undertake our learning journeys. For example, I draw on Bohm's (2004) ideas around how communication and the sharing of meanings can enhance loving relationships and this informs how I am developing my epistemology of practice.

It is against this backdrop of debates about the quantification of qualities such as thought and one's capacity for learning (Postman 1993) that I am presenting my claim to knowledge. I am aware that my living educational theory in terms of its emphasis on the role of caring and dialogical relationships in education may appear as a stark contrast to the examination oriented system of which I am part. I am aware of the element of risk that is part of the research process (Winter 1996) as I expose my claims to possible refutation. Yet, I am committed to generating my living educational theory not only because of its epistemological significance but also because of the relevance of the practices it describes for children who need fair and just education systems to support their learning (see Chapter Two). These are the ideas that inform how I perceive the transformation of my ontological values into my living practice.

As I explore my response to my concerns around some inadequacies of the current education system, I am aware that many of my collaborative projects and much of my work with multimedia on the internet have emerged as a reaction to the injustice and inadequacies of a curriculum driven by an over-dependence on

behaviourist principles. Brown (2002) describes the current competence-based curriculum in Britain as the 'reincarnation of behaviourism…that would provide children with the skills identified by an education *élite* as necessary for survival in the culture of enterprise and competition' (2002, p.17). He is concerned that the vocabulary of '"skills" and "competencies" and "learning outcomes"… has replaced not only more traditional descriptions, but also *conceptions* of student achievements' (Brown 2002, p.73). Lynch (1999) talks about the injustice of a system of education that values some forms of knowledge more than others. I have learned that my project work with my classes has been part of my own battle against such 'reincarnation' and systems that values logical/linguistic intelligences more than other intelligences. Here I have discussed the transformation of my embodied values into live practice in the area of learning and specifically in the area of dialogical approaches to learning. I will now explore the transformation of my embodied values into live practice in terms of creativity and spirituality in education.

4.2.2 The transformation of my ontological values into living practice as I explore the importance of spirituality and creativity in education

As I outline my response to my concerns around the inadequacies of the education system for many of the children I teach, I continue to outline here my understanding of how my ontological values were being expressed in various aspects of the projects I undertook with my class. In this section I will examine how my ontological values were being expressed in the area of spirituality and creativity in education. The term 'creativity in education' has been pertinent in educational discourses for many years (for example Craft *et al.* 2001; Elliott 1998; Fryer 1996; and Gardner 1993a) and is perceived as being positive and rewarding (Lucas 2001). In my own experience, I believe that I only began to exercise my own creativity when I had been teaching for a number of years. Joubert's (2001, p.22) ideas are relevant here as she claims that creative teachers have to '...constantly reinvent themselves and adapt their teaching styles and strategies to different situations as required'. She continues that such flexible behaviour can be risky, and she suggests that creative teachers should be prepared to learn from their students also. I am also of the opinion that my technical rational mindset as

outlined in Chapter One, closed down my own capacity for creativity for many of my teaching years. If one believes that completing the school textbook can be equated with the 'transmission' of the curriculum, as I did at one time, then there is very little room for creativity in that mindset. Definitions of 'creativity' can be difficult to pin down and as a result are difficult to include in environments where 'transmission of knowledge' models are the norm and learning 'outcomes' can be ticked as 'done' (Skinner 1978). Lucas (2001) describes creativity in education thus:

> Creativity is a state of mind in which all our intelligences are working together. Although it is often found in the creative arts, creativity can be demonstrated in any subject at school or in any aspect of life.
>
> (Lucas 2001, p.38)

If creativity is a state of mind, then each of us has the potential to be creative, if we so choose. It has very little to do with our skills with a paintbrush or our ability to compose arias; but according to Lucas, has more to do with how we think and how we perceive things. Lucas (2001) continues to describe creative people in the following terms: as (a) questioning, (b) experimental, (c) risk-takers, (d) able to make mistakes and (e) to see connections between things. These descriptions, as outlined by Lucas (2001, p.39), refer to creativity but I believe that they can also refer to anyone who sees learning and growth as creative processes; as a dialogical process that enables people to create meanings as they strive to reach their potential. I perceive myself to be one such person and I see the students with whom I work in a similar light. I believe that all people have the potential for creativity in education, but we must first develop an openness of mind and ability to critique. These ideas are kernel to my research because they are commensurate with my ontological values around the recognition of the human-ness of people and working towards loving relationships. They suggest to me that perhaps love is a creative process in itself. Lucas's (2001) description above shadows much of the journey of my own learning very closely. I have questioned the 'givens' and the norms of my teaching and learning environments. The story of my own learning, which is reported in this thesis, begins with questions (although in my case, my experimentation with new ways of working generated my questions; the questions did not initially generate the experimental ways of working). Having questioned the norms of the system, and experimented with it, I then had the beginnings of a

research cycle that is now being documented in this thesis and invites other educators to question the accepted norms of our education system and to work creatively towards the connections between the various threads of the curriculum, between school and the local community and its environment.

Lucas (2001), in his definition above, also highlights the interconnectedness that exists between our minds and our work, and, through the discrete school subjects, through creativity. I believe that his thinking here is an expression of the spiritual dimension of education. Noddings (1999, p.3) reminds us how 'educators can recognize everyday spirituality through poetry, music, biography, ordinary conversation - and even just slowing things down once in a while and letting the students look out the window'. I believe that the collaborative projects that I undertake with my students in conjunction with others could also be part of the recognition of spirituality. McCarthy (2001) draws even stronger links between spirituality and creativity and suggests that at times the terms are even interchangeable. He believes that the literature of both spirituality and creativity is full of paradox and uncertainty and that both engage in the language of search, the risky journey, the dark, the shade and the illumination. I do believe that creativity and spirituality are closely linked and they are the cornerstones upon which my ontological values around my own work are laid.

Sometimes the idea of spirituality is confused with a particular religious view. Beck (1986) explains how it is possible to be spiritual without being religious while Nino (2000) sees religion as an organised body with its own practices and belief systems whereas spirituality is an engagement with the meaning of life. Others see spirituality as something quite ascetic and separate from ordinary living. Often it is associated with retreating into oneself, in a mystic state and away from people. King (1993, p.56) eschews this idea and maintains that spirituality is not a retreat into

> …the silence of one's own heart and mind, but arising out of the midst and depth of experience, spirituality implies the very point of entry into the fullness of life by bestowing meaning, value and direction to all human concerns.
>
> (King 1993, p.56)

Here, King's thinking is reminiscent of Martin Buber's (see Buber 2000) conversion from mysticism to dialogue. Buber, as a result of a mystical experience he had had, was unable to engage in conversation fully with a young man who visited him. Subsequently the young man was killed in war and Buber greatly regretted his distant behaviour. As a result, he then began to experience spirituality, not through mysticism, but in the experience of living the wholeness of holistic reality through dialogue with people (Yoshida 2002). Like Buber, I perceive spirituality as an engagment with people in an open, aware and holistic manner, being able to see the whole person and engaging with their wholeness. I am drawn to Crowell's ideas (2002, p.14) as he outlines the connectedness of spirituality in education as:

> …an awareness of the inner narratives of our lives and the inherent connectedness to the larger narratives of life. It is a recognition or perhaps remembrance of the origins of our humanity, that special connection that we have to share with each other and with nature itself.
>
> Crowell (2002, p.14)

These ideas are similar to that of Montessori (1948) who was deeply influenced by the harmony of the ecology of the natural world and called her curriculum for primary schools a 'cosmic education', where the student was part of the wondrous universe and connected to its complexity. I embrace many aspects of these theories while establishing my views around spirituality and creativity in education.

For me, spirituality and creativity in education has to with the connectedness of people with one another and with their environment. Wright (2000) reminds us that spirituality is linked to that 'which is vital, effervescent, dynamic and life-giving' (2000, p.7). Miller (1996) explains 'spirituality' in education as a 'sense of awe and reverence for the life that arises from our relatedness to something both wonderful and mysterious' (Miller 1996, p.2). It has to do with a vision of education as being something holistic which involves the creative relationship between the teacher, the individual students, the wider body of students, the environment, the local community, the wider world-community, the recognition of the human-ness of people and the learning process itself. This calls on the teacher to be creative and to strive to diminish the 'egg-crate' system of education (Lortie

1975) where children learn in their isolated cells called classrooms, where teachers have little contact with one another or with anyone else. Kessler (1998/9) explains how educators can educate for spiritual development by 'giving students a rich array of experiences that feed the soul' and 'by supporting activities that allow them to experience deep connection' (1998/9, p.5). I perceive that much of my practical work in the classroom is informed by such thinking.

I think that O'Donohue's (2003 p.132) writing is particularly pertinent to my own work as he talks about the 'web of betweenness' where 'there was a sense that the individual life was deeply woven into the lives of others and the life of nature'. He laments the fact that the web of betweenness is unravelling and needs to be re-awakened:

> As in the rainforest, a dazzling diversity of life-forms complement and sustain each other; there is a secret oxygen with which we unknowingly sustain one another. True community is not produced, it is invoked and awakened.
>
> (O'Donohue 2003, p.133)

I know now that I have developed an understanding around my practice in terms of perceiving it as an attempt to 'invoke community' and to 'weave a web of betweenness'. The relationships that exist between people and their environment are of the utmost relevance and importance to students in the classroom and how they learn. I find O'Donoghue's use of the word 'web' interesting, not only because it conjures up the delicate interweaving of the spider but because the term 'web' also currently refers to the internet. Although this is not a meaning O'Donohue (2003) had attributed to it at the time of writing, it is pertinent to me as much of my work uses the internet to build and enhance connections with others (see Chapter Five for more detail). This is what I have come to understand. This understanding has not reached a conclusion and is not complete, but at this moment, I know I have come to a deeper understanding of why I work in the way I do.

Although O'Donoghue's writing is poetic and draws on classical, medieval and Celtic traditions, he echoes much of the thinking of Fritjov Capra, who writes from a scientific background. Capra (1997) explains how in physics, a profound change has occurred in its worldview from a mechanistic Cartesian worldview to a holistic, ecological view. He calls the new paradigm 'deep ecology', which recognises the 'fundamental interdependence of all phenomena' and as individuals and societies 'we are all embedded in (and ultimately dependent on) the cyclical processes of nature' (Capra 1997, p.6). The world therefore, is not a collection of separate objects, but a 'network of phenomena that are fundamentally interconnected and interdependent' (1997, p.7). Capra continues to outline how deep ecological awareness is spiritual in its nature as the idea of the human spirit is a mode of consciousness where the individual has a sense of belonging and connectedness to the wider cosmos. Bateson and Bateson (1987) explain how Western society seems to have lost its sense of the spiritual:

> The truth that the aborigine and the peasant share is the truth of integration. By contrast, we must be concerned today because, although we can persuade our children to learn a long list of facts about the world, they don't seem to have the capacity to put them together in a single, unified understanding – here is no "pattern that connects".
>
> (Bateson and Bateson 1987, p.196)

I am creating my living educational theory as described by Whitehead (1989 1993), which is grounded in the embodied values I hold and which has emerged from my understanding of my practice as an educator. Whitehead sees one's practice as the living out, or the practical expression of one's embodied values. The idea of embodiment as described by Hocking *et al.* (2001, p. xviii) moves one away from the 'Cartesian legacy' of how one views knowing and knowledge not as concrete things but that surface through their connections with the world. I can see that learning (for that is what I am engaging in here and it is also at the heart of my work with my students) is immersed in the social relations that exist between my students and myself, is at the heart of how I interpret curriculum and learning and how I try always to involve most aspects of my practice as an educator in the wider environment or community.

I now see learning as taking place as connections are created within the classroom between me, the teacher, and my students, between the environment and community and at a local level and ourselves and between all of us right out to the furthest reaches of our planet. I perceive these connections as a spirituality and creativity in education. For me, these connections describe an awareness of the inner narratives of our lives and their connection with the larger narrative of life as outlined by Crowell (2002). Miller (1997, p.5) reminds us that 'spirituality is nourished, not through formal rituals that students practice in school, but by the *quality of relationship* that is developed between person and world'. This is a very different view of education to the traditional technical rational approaches that are inherent in our current system of education (see OECD 1991, Ireland, Department of Education and Science 2005; Lynch 1999) and subscribed to by myself in the past. This has been a sizeable shift in my thinking and I am thankful to the classes of children with whom I have learned for inspiring me in this way. I believe that I am developing a new epistemology of practice, one that is open and embraces people's potential for learning, one that perceives knowledge as being embodied within the individual and can be encouraged to emerge through social relationships.

(4.2.3) The transformation of my ontological values into living practice as I explore the role of technology in education

The third aspect of my explorations into my emergent understanding around how my ontological values transform into living practice examines my use of technology and how it can enhance holistic and spiritual approaches. I will address this issue in detail in Chapter Five where I show how my ontological values around love and caring relationships (hooks 2003; Nodding 1992) in education are transformed into practice and I demonstrate how I can use technology to enhance a dialogical and inclusional epistemology. I explain that the dominant conceptualisations of knowledge are frequently of a technicist nature but that these can be restrictive for many learners (Brown 2002). When these forms of knowledge underpin assumptions about the use of technology, then the technology itself can also be viewed as restrictive. Capra (1997) talks about technology as becoming 'autonomous and totalitarian, redefining our basic concepts and eliminating alternative worldviews' (p.69). He says, '...the spiritual

impoverishment and loss of cultural diversity through excessive use of computers is especially serious in the field of education' (1997, p.69). I argue that conversely, a focus on personal and dialogical ways of knowing, that is inclusive of technical rational ways of knowing also, can encourage approaches to technology that are emancipatory and person-centred. In Chapter Five, I also explore ideas around how my use of technology is an expression of my ontological values around love.

In this chapter, I have outlined so far how I developed a response to my concerns around the inadequacies of our education system in the form of developing my understanding of my practice. I have now outlined how, in developing an understanding of my practice, I saw how my embodied values were being enacted in my practice as a form of creativity and spirituality in education.

(4.3) Section 3: Recurrent themes merging into an emergent new understanding of my practice as a holistic expression of my ontological values

As I examine these re-current themes as outlined above: (i) my understanding of learning as a dialogical way of coming to know that is inclusive of other ways of knowing; (ii) the importance of spirituality and creativity in education and (iii) the role of technology in education, I see them now clearly as being outward expressions of my embodied values. As I develop a response to my concerns around the injustice of an education system that does not address the learning needs of many students (Gardner 1993, Lynch 1999) and fails to question the nature of knowledge, effective learning and the development of the creative and critical faculties of children (Brown 2002), I have developed an emergent understanding of my practice.

I have now outlined the re-current themes which have emerged in the process of this research in terms of an awakening of new understanding of my practice as an expression of and as the living out of my embodied ontological values. These themes can be catalogued in the following manner: (i) in my commitment to imbuing teaching with love and kindness and the recognition of the wholeness of people; (ii) in my commitment to the interconnectedness of learning with the wider world; and (iii) the possibilities for learning in environments where dialogical and

holistic relationships can be enhanced through the judicious use of technology. I am now going to explore how my understanding of working in a caring manner that is informed by a spirituality of education can be interpreted in terms of a holistic approach to education.

As my learning journey continued, I could now begin to articulate my understanding of my practice in terms of developing a holistic approach to education, which was informed by my ontological values around love and caring relationships. Miller (1996) describes holistic education thus:

> Holistic education attempts to bring education into alignment with the fundamental realities of nature. Nature at its core is interrelated and dynamic. We can see this dynamism and connectedness in the atom, organic systems, the biosphere, and the universe itself. Unfortunately, the human world since the industrial revolution has stressed compartmentalization and standardization. The result has been the fragmentation of life.
>
> (Miller 1996, p.1)

Miller (1996) captures the essence of what motivated me to engage in practices that involved connectedness between the classroom and the outside world. At a deeply tacit level, I was attempting to align my work in the classroom with the underlying heartbeat of nature and the intricate relationships outside of the classroom that form community. I was battling against compartmentalised (Lynch 1999) and standardised processes (Skinner 1978) and attempting to work towards a life that was more holistic and less fragmented. I can see this clearly now as I have grown in my learning process. The process of engaging in living educational theory helped to unearth these new understandings from within me.

Miller explains (1996) how fragmentation exists not only in people's attitudes to their environment and to their social existence but also internally as education has done much to 'sever the relationship between head and heart' (p.1 1996). He continues that holistic education focuses on relationships:

> the relationship between linear thinking and intuition, the relationship between mind and body, the relationship between the various domains of knowledge, the relationship between the individual and community, the relationship with the earth, and the relationship between self and Self.

Holistic education can be visualised using three different metaphors: (i) balance, (ii) inclusion and (iii) connection. Miller (1996) reminds us that it is important to balance a child's intellectual development with their emotional, physical, aesthetic and spiritual development. He explains that three educational orientations can be explored in holistic approaches to learning: *the transmission* (or atomism or behaviourist approach)*,* the *transactional* (which can be loosely aligned with pragmatism and the cognitive domain) and the *transformation* which acknowledges the wholeness of the child: the child and curriculum are not seen as separate entities. Miller (1996) outlines how the atomistic world view can be viewed as a 'source of alienation because it promotes fragmentation and compartmentalisation' (1996, p.28). He acknowledges that pragmatism (as discussed by Dewey 1938) offers a 'more optimistic view of experience' but is critical of the narrow understanding of intelligence that pragmatism promotes (for example, an over-emphasis on Gardner's 1993 ideas to do with logical-mathematical intelligences). Miller is also critical of pragmatism because of its lack of unity and because 'it leaves us in a spiritual vacuum' (Miller 1996, p.29). He explains that holism overcomes many of these shortcomings.

Miller says that the 'perennial philosophy' as outlined originally by Huxley, (1970) underpins the holistic curriculum. The basic principles of the perennial philosophy and holism can be identified as follows:

- There is an interconnectedness of reality and a fundamental unity in the universe
- There is an intimate connection between the individual's inner or higher self and this unity
- In order to see this unity we need to cultivate intuition through contemplation and meditation
- Value is derived from seeing and realizing the interconnectedness of reality
- The realization of this unity among human beings leads to social activity designed to counter injustice and human suffering

(Miller 1996, p.20)

As I examine my work with collaborative projects, I can see these principles being articulated repeatedly in them. Holism attempts to confront questions like 'What is

the meaning of life?' and engaging in communications projects can help teachers and students to begin to pose such questions. I believe that, ultimately, the sense of injustice that I perceived to exist in our education system was the motivating factor in my involvement in collaborative projects and indeed in this research.

These new understandings also form the transformational potentials I see in evolutionary processes (see McNiff 2000). These patterns have been established in separate domains (as outlined in this and in other chapters), namely: my own learning, in my understanding of education as a spiritual and creative process and in the role of technology in education. Yet, these patterns are appearing to merge into one. McNiff's writing is helpful here as she says: 'While the patterns of the new science help us to develop metaphors for understanding our realities, our social and educational intent helps us to give our reality meaning' (2000, p.216). These patterns have given me much insight and understanding into my work practices. I see how my once tacit ontological and epistemological values around the human-ness of people and the importance of dialogical ways of knowing are being re-patterned again and again (albeit slightly differently in each instance) in my work practices and my way of living. The patterns have given meaning to what I do and why I do it while I perceive McNiff's 'social intent' as pertaining to the importance of openness in education; it has to do with avoiding closed technicist approaches to education and it has to do with giving people an opportunity to develop to their potential (Bentley 1998). This movement is about the creation of a better society, where people have respect for themselves and for one another, where learning is seen as an open-ended process of growth (Dewey 1938).

While creating an internet based project for eleven year olds, as described earlier in this chapter, may appear at face value to have little to do with the creation of a better society, the links between them are very clear to me. I am developing a living educational theory here that is drawn from my practice and which is illuminated by my values around love and interconnectedness. I am drawing on Young's (1998) ideas here around how learning is linked to the production of knowledge that is not bounded by institutional contexts and perceives learning as social participation. I am reconceptualising my understanding of curriculum as a creative encounter (Elliott 1998) and forming my theory of practice which is

grounded in the interconnectedness of people and their environment (Miller 1996) and in the belief that people can create their own knowledge (Polanyi 1958). I believe that technology can enhance such interconnectedness and creativity. I believe that I am beginning to generate new interpretations of education as a living engagement with others, as a continuous learning process and as something invitational and that this chapter has given some of the background to how these new interpretations came into being. I have outlined by the descriptions and explanations of my practice how my living theory has emerged thus far. I now understand how the act of creating internet based projects for eleven year olds is drawn from my values around love and care in education and my understanding of education as a living engagement so that my students will experience learning as an opportunity for freedom, creativity and working towards their potential, on a journey towards a good social order.

To conclude

In this chapter I have explained how I have theorised my practice as a thoughtful and critical response to my concerns and I have drawn together, from different aspects of my work, the many threads that have now come together in the form of my living educational theory that is grounded in a holistic epistemology. My living theory has emerged as I have developed an understanding of my practice as a response to my concerns around the normative practices in education that are in conflict with my own ontological and epistemological values.

In the following chapter I will explain how I perceive the transformation of my ontological values into living practice as I explore the role of technology in education and how the judicious use of technology can enhance holistic, dialogical and inclusional approaches to learning.

Chapter Five: How do I use technology to enhance a dialogical and inclusional epistemology? Examining how technology and holistic approaches to education can merge.

In this chapter, I wish to outline how I perceive the role of technology in my work practices and how I see it in the articulation of my ontological values into living practice. I have shown in other chapters that I use technology to improve the learning experiences of my students. I would now like to explain and describe my understanding of its role in my educational practices. As I develop an understanding of my practice as the enactment of my ontological values, I am developing a living educational theory that is embedded in my emergent epistemology of practice wherein I perceive knowledge generation as being personal (Polanyi 1958), and holistic (Palmer 1996) while also being inclusional of all the traditional understandings around knowledge (Whitehead 2005). I have aimed to demonstrate the validity of the claim with substantiated evidence throughout this thesis, and show that I engage with the social criteria of comprehensibility, truth, sincerity and appropriateness which form the basis of Habermas's (1976) theory of communicative action. I will discuss these validation processes in greater detail in Chapter Six.

In this chapter, I will outline some of the current debates around technology and its role in society. Drawing on the ideas I have explored in Chapter Four, I will outline how technology can play a role in both perpetuating traditional technicist approaches to learning (Bromley 1998, Loveless 1995) and in liberating learning as a dynamic and exploratory process (Heppell 2001). I will also outline the transformation of my ontological values into living practice as it enhances how I live to my embodied values around spirituality and connectedness in my work. I will explain how I now understand my use of technology as an engagement with open and creative forms of learning and describe how, frequently, some uses of technology in education increase the fragmented nature of our lives (Kraut *et al.*. 1998) and are embedded in the Cartesian mind/body divide. This 'closed' approach with technology is in conflict with my ontological values around love and the recognition of the wholeness and human-ness of the person. (As noted earlier, I use the term 'human-ness' when referring to my engagement with the wholeness of the human being.)

This chapter is organised in the following manner:

Section One: Dominant perceptions of technology:

    (i)   The 'romantic' view of technology in society and in education

    (ii)   A less idyllic view of technology in society and in education

    (iii)   My perception of the role of technology in education: developing an understanding of my practice in terms of its inherent recurrent patterns as the transformation of my ontological values into living practice.

Section Two: Technology as a means of developing holistic approaches to education.

    (i)   'Closed-world' discourses in technology

    (ii)   Technology as a preserver of technical rationality

    (iii)   Technology as an enhancer of my ontological values

    (iv)   Holism and technology

(5.1) Section 1: Dominant perceptions of technologies

I understand technology as something akin to a tool; something fabricated that assists us in our lives, or as Encyclopaedia Britannica (2005) suggests; 'the application of knowledge to the practical aims of human life or to changing and manipulating the human environment'. Encyclopaedia Britannica continues to explain that technology includes the use of materials, tools, techniques, and sources of power to make life easier or more pleasant and work more productive. Bromley (1998) is critical of the metaphor of the 'tool' because while he acknowledges that tools may be flexible, their design favours certain usages and prohibits others. He suggest that ultimately technology calls on human action to activate it and therefore humans make decisions on how it ought be used. Murray (2003, p.195) explains how humans invent new technologies to adapt to new situations to help us 'survive and thrive'. With reference to the use of technology

in education, there is much discourse around the reluctance of educators to include technology (see Becker 2000 and Heppell 2001). Somekh and Davies (1991) explain the role of technology thus: 'It is neither a tutor nor a tool (but instead) …is part of a complex of interactions with learners, sometimes providing ideas, sometimes providing a resource for enquiry, and sometimes supporting creativity' (1991, p.28). I agree with Somekh and Davies that when educators include technology in education, the interactions that can arise are complex and multifaceted. Every culture, according to Postman (1993), has to negotiate with technology, but Postman suggests that they can choose to negotiate intelligently or not. Postman uses the example of Thamus's judgement to explicate his thinking. He outlines Socrates' story of how Thamus once entertained the god Theuth who invented number, calculation, geometry and writing. As Theuth displayed each invention, Thamus either approved or disapproved of each one. Theuth felt that writing would improve the wisdom and memory of the Egyptians but Thamus dismissed writing as something that would encourage forgetfulness and damage memory. Postman points out that Thamus may have been correct in thinking that writing could damage memory but was erroneous in believing that writing would only be a burden to society. He suggests that people might learn from Thamus's judgement; that it is a mistake to assume that technology and innovation have a one-sided effect, and he proposes that every technology can be both a burden and a blessing and that every culture 'must negotiate with technology whether it does so intelligently or not' (Postman, 1993, p.5).

Bearing Postman's thinking in mind, I can appreciate that industrialised modern technology has appeared in most facets of human life of western cultures in the past decade, and society can decide whether it is indeed a blessing or a burden. Mobile phones, satellite dishes, instant news reporting, databases with a plethora of our personal details and twenty-four hour online banking, flight booking and shopping are now the norm (Breen *et al.* 2003). However, conversations around the use of technology in society and especially its inclusion in education tend to be of a polarised nature (see Barlow *et al.*. 1995, Cuban 2001 and Roszak 1994). There appear to be two diverse camps (see Campbell 2003) which I will discuss below: those who believe that technology in education is the long awaited perfect

addition to the twenty-first century and those, on the other hand, who believe that it will destroy human communication and interaction as we know it (see Roszak 1994). In this section I will outline (i) the 'romantic' view of technology in society (see Barlow *et al.* 1995), where technology is embraced as a long-awaited panacea, (ii) the 'negative' view of technology (Cuban 2001) where technology will wreak unknown havoc on our society and (iii) my own view of technology in society. (Please note that in subsequent sections of this chapter, I will use the terms 'technology', 'Information Technology' (IT) and 'Information and Communications Technology' (ICT) interchangeably in reference to the use of computers, electronic media, the internet, digital imaging and video and digital sound recording and reproduction).

5.1.1 (i) The 'romantic' view of technology in education

The 'romantic' viewpoint of modern technology and the internet talks about the 'global village' and the 'information superhighway' (see Riel 1993 and 1999); terms that are now synonymous with internet connectivity and which seem to infer an endless supply of important information and society's re-birth into a cosy but large village. The utopian perspective is perhaps best described by Barlow *et al.* (1995, p.40) who say 'We are in the middle of the most transforming technological event since the capture of fire' – a notion which encapsulates the hysterical excitement of technology. Bell and Gray's (1997), 'By 2047…all information about physical objects, including humans, buildings, processes and organizations, will be online. This is both desirable and inevitable' (cited in Nardi and O'Day 1999, p.21), is of a similar vein. With reference to the role of technology in education, Cuban (2001) cites Gerstner, the Chief Executive Officer at IBM, who explains that public schools are 'low-tech institutions in a high-tech society' (2001, p.13). Gerstner continues that the changes that have improved 'every facet' of business 'can improve the way we teach students and teachers…and the efficiency and effectiveness of our schools'. Microsoft use terms like 'anytime, anywhere learning' and 'learning without limits' and claimed that their products were 'bridging the gap between learning in and beyond the classroom' (see Buckingham *et al.* 2001, p.31). Similar sentiments were echoed here in Ireland in the mid to late 1990s, as the Minister for Education and Science, Micheál Martin, initiated the Schools IT 2000 programme which represented investment of IR£40

million over a period of three years by the Irish Government in the training of teachers, the provision of computers and the development of good models of practice in relation to the inclusion of ICT (see NCCA 2004a). IT 2000 was a policy framework for the integration of new technology in first and second-level schools. The main objective of the policy was to put in place an infrastructure to ensure that: 'pupils in every school should have opportunities to achieve computer literacy and to equip themselves for participation in the information society' (Ireland, Department of Education and Science 1997, pp. 2-3).

Advertising for computers and their peripherals in the media supported this romantic perspective also with persuasive slogans that suggest that one can have access to endless educational opportunities when one buys a computer or acquires internet access. Advertisements such as 'The world at your fingertips' and 'Give them every advantage…Your window to a whole world of interactive education, streaming video and lots more' (PC Live, July 2001, pp.2-34) are samples from that time. Advertisements such as these implied that unless children became computer literate and began to use the internet, their education would be lacking, while those who subscribed to the internet would become more literate and more intelligent. Such advertising continues today. Parents are persuaded of the educational advantages of a ready access to knowledge in the form of computer or internet access. Buckingham *et al.* (2001) explain that such advertisements capitalize on parental anxieties about testing and they identify the ideal reader as a 'concerned parent'. According to Bromley and Apple (1998), one reason why the rhetoric of inclusion of computers in education has been so successful is that parents legitimately want the best for their children and do worry about job prospects for them and therefore are easily convinced by arguments promoting technology in education. However, initial findings by Buckingham *et al.* (2001) show that parents are more likely to purchase software which claims to influence testing and literacy standards than more progressive titles which promote 'discovery' learning.

While people might be easily convinced of the linkage between technology and learning, a similar assumption connects technology, learning and good citizenship. The 1983 *Nation at Risk* report in the United States informed the people that their

'once unchallenged preeminence in commerce, industry, science and technological innovation is being overtaken by competitors throughout the world' (Government Printing Office 1983, p.7), that their future was being threatened, and that dedication to education was now called for, and learning was described as the 'indispensable investment required for success in the information age we are entering' (Government Printing Office 1983, p.7). This report, along with the belief that automation in industry implied efficiency, fuelled the belief that information technologies could accelerate American workers' productivity (Cuban 2001).

The equating of technology with efficient models of productivity has also been reflected in educational discourses (Bromley 1998). Cuban (2001) surmises that there exists a belief that the inclusion of technology in education will provide efficient teaching and learning which in turn gives rise to talented graduates who will, in turn, serve the economy well. For many parents in the United States, computer oriented schooling implies that their children will be ready to attend the best universities and become part of an efficient labour market in the future (Bromley 1998). These sets of assumptions dominate much policymaking in the United States and are embedded in ideas around the commodification of education in the United States where being a good citizen can be equated with being a good consumer (Cuban 2001). The basic message here is this: if educators bring computers into the classroom, then our students will learn better and will enhance the economy when they graduate.

In Ireland, similar utopian ideals appear to have motivated policymakers also. The IT 2000 initiative (a technology in education initiative) was introduced in the late 1990s because:

> Ireland lagged significantly behind its European partners and the US in the integration of information and communication technologies (ICT) into first- and second-level education. Meeting the need to integrate technology into teaching and learning right across the curriculum was seen as a major national challenge that had to be met in the interests of Ireland's future social and economic well-being.
>
> (Ireland, Department of Education and Science 2001, p.19)

It appears therefore that the purpose of including technology in education in Ireland was mainly to play catch-up with other European countries and the US. The catch-up was called for regardless of the plethora of research which shows technology as being of dubious value in education (see Cuban 2001; Collis 1994; Conlon and Simpson 2000; Oppenheimer 1997 and Russell *et al.* 2000). This notion of catch-up appears to feed directly into the idea that technology in education implies a good education which, in turn, implies the production of students who will enhance the economy.

In a similar vein, the OECD report 'Learning to Change: ICT in Schools' (2001) tells us that 'Huge investments are now being made to equip schools with ICT' but warns us that 'Governments want to know the conditions to be satisfied for this to lead to improvements in student attainment' (2001, p.9). The report calls for schools to learn to change in light of the enormous investments being made in computers and internet connectivity for schools. This is an interesting insight as it begs the question, is student learning moulding the use of technology in our schools or is technology shaping how students learn? The language of the OECD report seems to imply that technology might indeed be shaping how and what we should learn. Such questions remind me of Marcuse's (1964) fears that society commits to technology not so that it can help understanding, but more in a manner such that society is controlled and subjugated by the technology. The report (OECD 2001) includes an introductory section entitled 'Why schools *have* to adopt ICT' (my emphasis) which includes 'the perceived need of the economy' and 'the widespread expectation on the global scale that those nations successfully embracing the information age will benefit economically' (OECD 2001, p.10). Here again the idea of the commodification of education creeps in (see Apple 2004, Ball 2004, Brown 2002, and Lyotard 1986); the notion of the student as a product, a thing that will enhance the economy, regardless of their personality, their learning strengths or their interests. Brown (2002, p.3) states the dilemma well: 'Education policy is increasingly dominated by a vocational emphasis that prioritises individual and collective economic efficiency as objectives'.

The BETT (British Education, Training and Technology) Show is a prestigious and large educational trade fair which is held in London each year. Buckingham *et*

al. (2001) outline how one of the recurrent themes of BETT is the idea the technology can present society with 'solutions' while no problems are apparent. There are 'solutions for education', 'solutions for schools' 'hand-held solutions' (2001, p.32) and so on until the technology almost assumes metaphysical dimensions; '…a magical ability to facilitate and expand teaching and learning' (2001, p.32). Solutions are also provided for teachers in the wider aspects ICT, according to LeCourt (2001), as she explains how technology is mooted as a time-saver and agent of change for teachers; something which will make our lives easier. Buckingham *et al.* (2001) point out that technology appears to provide a 'solution' although it is not quite clear what problem it might solve.

Discourses around the *Information Age* seem to imply that benefits will automatically amass (Bromley 1998) and that it will act as catalysts for educational change (Becker 2000). Jaber (1997, cited in Muir-Herzig 2004, p.113) says that when students use computers, they are able to collaborate, use critical thinking and to find alternative solutions to problems. Winner (cited in Bromley and Apple 1998, p.13) sums the fallacy underpinning such thinking succinctly in his aptly entitled essay *Mythinformation* when he says:

> The political arguments of computer romantics draw upon four key assumptions: 1) people are bereft of information; 2) information is knowledge; 3) knowledge is power; and 4) increased access to information enhances democracy and equalizes social power.
>
> (Winner 1986, p.108)

While Winner's ideas may oversimplify the complexities of the integration of technology in society and in education, the key message he imparts is worth considering. His arguments are helpful as I explore ideas pertaining to a less idyllic perception of technology in the next section.

5.1.2 (ii)A less idyllic view of technology in education

In the previous section above, I outlined some of the literatures that perceive the inclusion of technology as a 'good thing'. In this section, I will give a brief overview of some of the literature that adopts a more critical stance towards the inclusion of technology in education. This second and oppositional view of the integration of technology in education is well described by Roszak (1994). He

explains that while Luddites are generally understood to have rallied against progressive new technologies in weaving in the North of England, in fact their grievance was with those who used the machines to lower wages and then questioned how the machines were used and for what purpose. Roszak considers himself to be a neo-Luddite because he embraces Luddite forms of critique and engages in 'measured criticism' himself (1994, p. xviii). Despite Roszak's allegedly measured approach, he says:

> The computer is inherently a Cartesian device embedded in the assumptions of a single intellectual style within a single culture of the modern world. The very metaphors that surround it bespeak a conception of the mind as logical machinery…
>
> (Roszak 1994, p. xxxv).

Cuban states similar ideas: '…there is little hope that new technologies will have more than a minimal impact on teaching and learning' (2001, p.197). These views are from a substantially different perspective to the romantic perspective outlined above. Supporters of these views sometimes see technology and the internet in particular as being the 'devil's playground, wherein children are stalked daily by paedophiles intent on destruction and mayhem' (Breen *et al.* 2003, p.7). Bromley and Apple (1998) describe how some people believe that technology is inherently evil and can only be adequately addressed by total avoidance. While the dangers of internet usage can not be underestimated, especially where children are involved, they must, however, be perceived in perspective.

While I read the literatures outlined above, it becomes clear that a blurring of understanding around 'knowledge' and 'information' has occurred. Issues of epistemology pertain to such understandings and perhaps this is because people have different understandings of 'knowledge' and 'information'. As outlined previously, dominant practice prioritises technicist understandings of knowledge in the form of facts (see Gardner 1993 and Lynch 1999). Roszak explains in the unfolding story of including technology in our society, how the terms 'knowledge' and 'information' have become interchangeable. Roszak talks about how minds that are 'loyal to the empiricist love of fact' (1994, p.103) have grasped the idea of the computer as a model of the mind, 'storing up data, shuffling them about, producing knowledge, and potentially doing it better than its human original'.

Roszak is highly critical of the notion that knowledge be synonymous with information and particularly of the idea that knowledge is being 'mass produced'. Roszak cites Naisbitt's *Megatrends* (1982) thus:

> We now mass-produce information the way we used to mass-produce cars. In the information society, we have systematized the production of knowledge and amplified our brain-power. To use an industrial metaphor, we now mass-produce knowledge and this knowledge is the driving force of our economy.
>
> (Naisbitt 1982 cited in Roszak 1994, p.22)

Roszak queries, quite rightly, that since knowledge is created by individual minds, how can it be related to assembly-line construction? Bromley (1998) grapples with this issue too as he claims that information in the form of raw data and facts does not amount to knowledge until is organised. I will discuss my understanding of the role of technology in the generation of knowledge in greater detail in the second section of this chapter (5.2). While common sense would suggest that information is not knowledge, it perhaps signifies the successful ploys of the technology pundits who promote the 'knowledge' equals 'information' idea, that much of the literature is devoted to arguing the notion that information is or is not synonymous with knowledge.

Brown and Duguid (2002) use the term 'information fetishism' to describe the idea of using technology to replace the social relationships between people, as people appear to become obsessed with acquiring information and with the desire to replace human communications with digital versions. I perceive Brown and Duguid's (2002) idea of 'information fetishism' as something akin to Roszak's 'conception of the mind as logical machinery' (1994, p. xxxv). Brown and Duguid (2002) outline how they perceive that much of the current literature around technology suffers from tunnel vision; where the focus is on information on the one hand and on individuals on the other; both being regarded as separate entities. They continue that they believe that technology alone cannot dictate its own ultimate route; social life and social aspirations remain critical in influencing how technology impacts on our lives. Bromley (1998) and Loveless (2001) echo similar ideas. Bromley compares the use of technology dramatically with the use of guns and reminds the reader that 'guns don't kill people, people kill people' (1998, p.4).

Loveless explains that 'technology doesn't change practice, people do' (2001, p.64). She explains that there is now an 'altered view of knowledge' that educators need to acknowledge and that technology might assist people's understanding of this altered view. However, Heppell (2001, p. xvi) also points out that educators continuously make the 'error of subjugating technology to our present practice rather than allowing it to free us from the tyranny of past mistakes'.

Cordes and Miller (1999) warn that computers can pose serious health problems for children as they encourage a sedentary lifestyle while technology distracts children from making personal bonds with other human beings. They suggest that the 'sheer power of information technologies may actually hamper young children's intellectual growth' (1999, p.3) and lament the decrease in face-to-face conversations that is a 'constant factor' in the use of technology. Cordes and Miller (1999) suggest that the technology used in schools today will be obsolete when the children leave school and that over-use of technology in learning can stunt the imaginative thinking that is a prerequisite for innovative thinking. They warn that an overemphasis on technology can weaken the important bonds between teachers, students and families, and children need 'live' lessons that use their hands, bodies and minds and not computer simulations. While I agree with the concerns of Cordes and Miller (1999) regarding sedentary lifestyles, I disagree with most of their other sentiments. I will explore my own ideas around technology in education in the next section.

5.1.3. (iii) My perceptions of the role of technology in education

My own view of the role of technology does not fall readily into either perspective as outlined in (i) and (ii) above. Roblyer, (2005) makes the point that there has not been enough quality research into the role of technology in education and that more needs to be done to establish what impact technology has, if any, on education. But, as Heppell (2001, p. xvii) points out, 'the problem with genuine steps forward is that it is so hard to reference them against a criteria from the past, thus providing evidence that a step forward has really been made'. Therefore, research about the inclusion of technology in education is difficult to undertake as the questions that need to be asked are as yet, being formulated. While concurring with Roszak's interpretation of Luddite critique (Roszak 1994), I too am drawn to

questions about how machines are used, by whom and for whose benefit. These are questions that have informed my research and my practices. Yet, I am concerned that Roszak (1994) may be taking an exclusional stance. Even though his rhetoric is of an inclusional nature in that he purports to have an open but critical attitude to technology, the tone throughout his book, though informative and engaging, is dismissive of most forms of technology. Despite questioning Roszak's thinking, I agree with Roszak's concerns around the danger that human understanding and knowledge may be confused with the quest for information and data that information fetishism can imply. Sharry and McDarby (2003) use the term 'information view' to explain a narrow view of human understanding, which expects people to find the answers to human dilemmas on a search engine and perceives people as becoming 'passive recipients rather active learners in knowledge creation' (2003, p.122). I believe that Sharry and McDarby are echoing Roszak's fears as outlined above. These fears are located in the Cartesian view that perceives mind and body as separate entities and understand knowledge as something external; something to be had (Fromm 1979).

While the above arguments are interesting, I subscribe instead to Sharry and McDarby's (2003) ideas where human values are kernel to how we teach and how we learn and as Sharry and McDarby point out, human values are central to their aim to make technology 'sensitive to our individual and collective needs' (2003, p.117). I am drawn to Sharry and McDarby's (2003) idea of using technology in a manner that is driven by my values and is sensitive to individual and collective needs. I see coming to know as a process and as something emergent and I also agree with the idea that practice (whether in technology or education or both) should be values driven.

Brown and Duguid (2002) quite rightly point out that videophones and video conferencing tools will never capture the essence of 'a firm handshake or a straight look in the eye' (2002, p.4). Technology will never be able to replace human, face-to-face contact, to capture the essential meaning of facial expressions or to reconstruct the magic of communications as humans engage with one another. In my view, the debate ought not to be about computer-based communications versus face-to-face communications; it should be more about how computers can

complement human communication, as Brown and Duguid (2002) points out. I am drawn to Putnam's ideas because they are from an inclusional perspective. In my work practices, I am not attempting to replace human connectedness with e-mail or web pages. Instead I am attempting to enhance open-ended and dynamic relationships between people with my use of technology and thus enhance learning. This is a critical factor of my research because I believe that I am developing a theory of practice that locates the possibility of learning in the relationships that are created between people. Somekh (2000) explains how the presence of technology in the classroom has the potential 'to change the culture of the classroom and the relationship between that teacher and students…since traditional classrooms are not ideal learning environments' (Somekh 2000, p.25). While I am not sure that the introduction of technology in itself changed the culture of my classroom, I acknowledge that the relationship between my students and myself has changed. Miller (1996) reminds his reader that

> Holism acknowledges the individual part and that things are in process; however, underlying the process and connecting the parts is a fundamental unity. This unity, however is not monistic; instead the emphasis is in the relationships between the whole and the part.
>
> (Miller 1996, p.21)

These are ideas that are repeated frequently in the projects in which my class and myself engage and are also elements of how I use technology. I will develop this idea below with a sample from my practice (see Fig. 5.1).
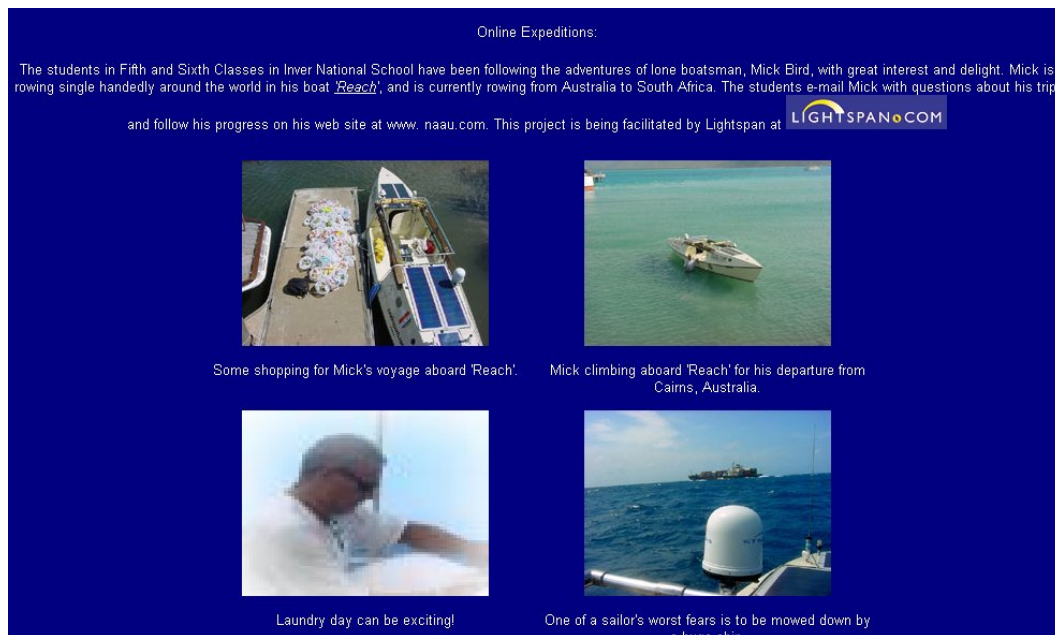
Fig. 5.1 Screenshot of our *Online Expedition* at
http://www.iol.ie/~bmullets/mick.html

The *Online Expeditions* project was undertaken with my class of eleven and twelve year olds under the auspices of Globalschoolnet.org. In this project, the class followed the progress of a lone oarsman as he attempted to row single-handedly across the ocean from Australia to Indonesia. Each day, he would update his web site, give his location and describe the adventures that had befallen him in the previous twenty-four hours. The children had the opportunity to email questions to him, which he invariably answered. The class discussions gave rise to some blood-curdling creative writing and some creative turtle artwork. The highlight of the project was when the oarsman used his satellite phone to call the class and have a conversation with them.

I believe that this project is an example of how technology can enhance education in an open and dialogical process. The class learned about the climate, the marine life and the geography of the southern hemisphere, not because they had to learn it by rote, but because they wanted to find out how the oarsman was surviving and what his challenges were. Through dialogue with him over e-mail, they empathised and imagined the loneliness and the possible horrors that could befall

him. They expressed their learning through creative writing and artwork and presented it on the web so that others could engage with their learning too.

This sample of my work with my class shows how technology can transform my embodied values around spirituality and connectedness in education into living practice and give opportunities to students to develop and express their own learning. As outlined in Chapters One and Two, my ontological values around love are enmeshed in the recognition of the humanity of people in terms of experiencing the wholeness of the person (Crowell 2002). The project outlined above is embedded in a dialogical process, a flow of understanding (Bohm 2004), in a sense of connectedness between the lone oarsman and the class as they conversed with the aid of technology and learned from one another (see http://www.goals.com/transrow/laterprtbr2.asp). This understanding of how technology can act as a catalyst in the development of spirituality and connectedness in education is substantially different to the 'information view' as outlined by Sharry and McDarby (2003) above. This difference is of an epistemological nature as it reflects yet again the epistemological conflict in which I find myself enmeshed. The 'information view' reflects a technicist epistemology, one where knowledge is objectified, reified and transmitted and the teacher's task is to 'fill the students with the contents of his [sic] narration - contents which are detached from reality, disconnected from the totality that engendered them and could give them significance' (Freire, 1970, p 57). Like Bohm (2004), my epistemological understanding is one of knowledge generation as existing in the flow of understanding between people. The flow in this particular project may have been further continued when others read the reports that my class produced on the internet about the project and perhaps these educational conversations have continued in other spheres of learning, as yet unknown to me (see Chapter Six for samples of projects where the flow of learning continued towards other people). I believe that projects such as this can be significant for developing new epistemologies in education and opening up learning as an enriching and engaging process. I could have taught my class about the Indian Ocean in a more traditional manner; they could have looked up their atlases and located the Indian Ocean, read their geography books and found out about the climate, the sea creatures and the islands that are located in the area. However, through engaging in this project, the

class developed an empathy with the oarsman (see Burbules 1993). His adventurous trip was real and the class rushed in every morning to see how he had survived the previous twenty-four hours. Their learning took place against a background of empathy and connectedness (Noddings 1997). The connections that were made between the communications by email and the web page creation created the opportunity for an enriching and creative form of learning.

I return here again to Postman's (1993) ideas from the introductory section of this chapter where he suggests that one might learn from Thamus's judgement; that it is a mistake to assume that technology and innovation have a one-sided effect, and that one's interaction with the technology is kernel to the role that the technology plays in one's culture. Bearing Postman's warning in mind, I remind myself that I must be careful not to become smug in thinking that this is the only and the correct way of being and working. Such thinking in itself would be as fundamentalist as the technicist thinking that motivated me to work in this way initially (McNiff 2005a). I need to check that my claims are accurate and justifiable and I need to produce evidence to show the validity of my claims. These issues around accuracy and validity will be discussed in detail in Chapter Six but I know that at all times I must always ask myself and my students if my work opens up learning for them or if it is a form of closing learning for some. Every now and then, I get a reminder, that my ideas may not be the best for everyone. For example, one student looked at me balefully one evening as I gave him the school digital camera to take home to help him with his project work. He explained that his mother hated when he took school equipment home because it made her anxious in case it got damaged. I had not considered this possibility previously in my enthusiasm to use the technology. I then suggested that a drawing would be equally as useful for the project. My learning was substantial. I should never assume that my ideas suit everyone and be aware that there is always room for modification.

(5.2) Section 2: Technology as a means of developing holistic approaches to education

As outlined in Chapter Four, I learned in the process of my research that my work practices were the live articulation of my embodied and once tacit (Polanyi 1958)

values. Now recognising that I valued connectedness and holism as spirituality in learning, in this section I would like to explore how technology can help the transformation of these values into practice. First, I will give a snapshot of the current status of technology in education and then outline how diverse epistemologies are reflected in technology. I will describe how, frequently, some uses of technology in education can be perceived as a dispiriting and diminishing process for many learners and that this 'closed' approach to technology can be linked with closed-world discourses of war (see King 2001) and to closed theories of learning (see below). I will outline how these perceptions are in conflict with my ontological values around love and the recognition of the wholeness and human-ness of the person and in conflict with my epistemology of practice as an articulation of love at work (see also Lohr 2006). I will conclude with descriptions and explanations around how I perceive technology as a catalyst for connectedness and spirituality in education.

(5.2.1) (i) Closed-world discourses

Edwards (1989, cited in Bromley and Apple, 1998, p.21) uses the term 'closed-world discourses' to describe 'military concern with control, the treatment of humans as machines, the shift to a formalized, structural mode of social organization' which views the world mechanistically. He describes how the Pentagon 'came to view Vietnam as a token in a political game played between two superpowers' (1989, p.152), using systems engineering and thus developed an abstract conception of war, such that the understanding of the human element of war was diminished in favour of a perception that the war was about machines and technology. The link between such 'closed-world discourses' as outlined by Edwards and the role of technology in education is traced by Bromley. Bromley (1998) reminds us that 90% of university funding in the top university computer science departments in the US (MIT, Stanford, Carnegie-Mellon and others) came from the Department of Defence in the late 1980s and how a convergence between computing and the military can easily be traced. He reminds us that whenever closed-world discourse is mentioned, it has the 'computer at its core' (1998, p.21) and equates integrated learning systems (ILS) with such discourses.

King (2001) also talks about power and the role of technology in wider society. He draws on the idea of Bentham's panopticon, and describes how it has become an electronic panopticon in today's society. King (2001) describes how today, given our advancement in electronic forms of banking and communications, it is possible for the activities of any individual to be traced at any given time and that we are always visible. King reminds us that Bentham's original panopticon was designed for administering prisons. The building was to be circular in shape and the occupants of each cell were always visible to the keeper but the keeper was not visible to them. The inmates were always visible to the inspection tower and believed they were under constant surveillance and thus the inmates in their isolation and vulnerability became self-regulating. Bentham's original model was to be profit-making and to be used in many institutions such as schools, hospitals and asylums for the purposes of discipline. Foucault (1980) reawakened interest in the panopticon in more recent times when he described how the panoptic mechanisms 'such as isolation, classification and observation have become de-institutionalised and circulate freely in modern society' (King 2001, p.43). Foucault (1980) saw similarities in the power-constituted nature of the relationships between people in our society and the mechanisms of the panopticon. Robins and Webster (1988) perceive that technology has made us permanently visible as we use bank machines, book hotels with credit cards, log on to the internet or use our mobile phones. King (2001) suggests that now, as in Bentham's panopticon, people can be isolated into groups where they can be observed and classified. Drawing from my own experiences, I frequently buy books from the online bookshop Amazon. Because of Amazon's ability to track my purchases and to log my browsing through their website, it makes suggestions, based on my browsing and purchasing habits, about what books I might like to examine on each visit to its web site. There is a sense that the site can 'see' what I am thinking as frequently Amazon email me and makes suggestions as to what I might like to buy. Although I find Amazon useful, I am aware that it forms part of a larger body of unseen 'watchers' who possess a substantial amount of information about me and many others like me. King continues (2001, p.49): 'The electronic panopticon is not a prison that locks up its inmates; it is an idea that has been effectively applied to explain how technological advancements have been employed in capitalist society to exploit power relations'. It is a cause for concern

that such power can be invested in unseen bodies of people who exist at the click of a mouse button.

Issues of power and control are causing concern in educational discourses too. Robbins and Webster (1989) make the case that learning theories that see the mind as an information processor are engaging in discourses about control in closed worlds and they draw parallels between closed-world discourses in military and education milieus. Van Nieuwenhove (2003) reminds readers that Heidegger warned of the dangers of technology in how 'calculative thinking becomes the only way of relating to the world' (2003, p.186). Bromley (1998) claims that when computers are introduced into schools, they bring with them closed-world discourses. He draws on Edwards's metaphors of 'symbols of power' and 'scientific precision' to explicate the centrality of the computer in closed-world discourses. Much research in education (see Sandholtz *et al.* 1997 and Kulik 1994, for example) points to our understanding of the inclusion of technology in terms of closed-world discourses also; where the student's role is seen as the receptacle of knowledge, success is measured by standardised testing (Freire 1970) and mechanistic ontologies are dominant (Lynch 1999). Similarly, Heppell (2001) talks about 'worksheet teachers' and students whose 'adept creativity or oracy does not quickly enough translate into notational form and is discounted' (2001, p. xvii). My understanding of such discourses is that closed-world discourses, those that de-humanise the learner, that perceive learning as the transmission of information or knowledge, can close down learning processes.

Constraints and Resources and Technology
As a teacher, because I believe that education should be liberating and not oppressive (Freire 1970), I need to ensure that the learning process for my students is open-ended. As I engage with ideas pertaining to technology and education, Brown and Duguid's (2002) insights prove to be illuminating. They talk about 'constraints' and 'resources' with regard to the implementation of technology in our culture. They understand 'constraints' as something that stop progress and 'resources' as something that enhance progress. They make the point that people should examine both the constraints and the resources that technology can offer before disregarding it, acknowledging that '…separating constraints from

resources can be specially difficult with familiar objects ..' (Brown and Duguid 2002, p.7). They continue that constraints need not always be in the form of objects but can also include such things as social groups and institutions. They also maintain that constraints can sometimes transform from being constraints into resources. Frequently, according to Brown and Duguid (2002), there are good reasons to change social groups and new technologies can give us the means to do this. (In Chapter Seven, I will be discussing more about social groups in the manner of social formations and I will be making the suggestion that my research will hopefully be of significance for the education of social formations (Whitehead and McNiff 2006), as I invite groups of educators and policy makers to engage in critical reflection and to experiment with different approaches). Often, according to Brown and Duguid (2002), the resourcefulness of social groups can be overlooked in favour of their inherent constraints but sometimes 'once understood, such constraints may not block the way ahead, but rather point it out' (Brown and Duguid 2002, p.245).

My understanding of Brown and Duguid's (2002) suggestions here is that they are saying that technology can harness societal constraints and somehow enhance them. I perceive that Brown and Duguid's (2002) insights link in to my work and my understanding of how I use technology with my classes: I look at my classroom which is a normal, under-resourced, undersized classroom, typical of classrooms which were built in the 1880s and I see many constraints within it. But drawing on Brown and Duguid's thinking, the constraints are not blocking the way ahead, in fact they 'rather point it out' (2002, p.245). I am thinking here of my school's geographical isolation and seeing that the form of the projects I undertake with my class has gone some way in turning this perceived constraint into freedoms. I explained at the outset of this thesis how my sense of geographical isolation in the school was one of the key issues for me as a teacher and that much of the inspiration for my research has come from a desire to somehow diminish this isolation (see Glenn 2000, 2005). While working on projects with people and schools from diverse locations around the world will not physically alter our geographical location, they do help to diminish the sense of remoteness we feel as we make connections between ourselves and people in other schools and locations around the world. Brown and Duguid (2002) remind us that, 'communications

technology…has not so much replaced the need for person-to-person encounters as rendered geography less coercive' (Brown and Duguid 2002, p.xix).

I believe that Brown and Duguid (2002) have gone some way in unravelling the dilemmas of Postman (1993) and Roszak (1994); they have acknowledged that technology can be both a blessing and a burden (Postman 1993) and have examined closely how technology is used and for what purpose (Roszak 1994). I have found their insights to be helpful as I try to make sense of my own work practices and develop my own living educational theory and as I develop an awareness of the role technical rationality has in the educational use of technology.

5.2.2. (ii) The role of computers in technical rational approaches to learning

Clandinin and Connelly (2000) compare the roles of Dewey and Thorndike in the history of education. They describe the battle for the supremacy of their thinking as a competition and citing Lagemann, they say 'Edward L. Thorndike won and John Dewey lost' (Lagemann 1986, cited in Clandinin and Connelly 2000, p. xxv). Thorndike is often perceived as a leading behaviourist who devised the 'Law of Effect' that has come to dominate many education systems with ideas around reward, punishment, promotion and incentives. Clandinin and Connelly (2000) see the competition between Dewey and Thorndike as a competition between two stories of how to do social science, whereas I see it as symbolic of an epistemological clash that is reflected not only in our approaches to education but in how people think about technology and its role in education. Gagne (1987), in his book on the foundations of instructional technology, describes early industrial technology as the confluence of the scientific study of human learning practised by Thorndike and his followers and the availability of new technologies. The links between Thorndike and behaviorist approaches to technology and education are still apparent today.

Much research on technology and learning and much thinking around the use of technology is from a technicist perspective. For example, one can find Kulik's (1994) study where he found that students who used computer based instruction scored at the 64th percentile on achievement tests compared to students who

studied without computers and achieved a ranking at the 50th percentile. Sivin-Kachala (1998) found that students who used technology experienced positive effects on achievement in all major subject areas. Wenglinsky (1998) examined the impact of simulation and higher order thinking technology on mathematics achievement in the United States. He found that the eighth-grade students who used the technologies attained scores of fifteen weeks above their grade level as measured by the standardised tests. He also had similar findings for the fourth graders.

The research cited in the preceding paragraph cites raised standardised test scores as indicating favourable outcomes for the inclusion of technology in education. While a raised test score is admirable it is perhaps symbolic of a perception of education that is, in my view, inadequate or diminished. Equating standardised tests score with effective education (with or without the inclusion of technology) can serve to reduce our understanding of education to its narrowest meaning. Darder (2002, p 58) describes 'teaching to the test' as a 'sterile and enfeebling' pedagogical approach which reinforces conformity to the state's prescribed definition of legitimate knowledge and academic endeavour. Freire (1970) also condemns such processes and explains how standardised testing and teaching to the test perpetuates the myth that students exist 'abstract, isolated, independent and unattached to the world, that the world exists as a reality apart' (Freire 1970, p.60). Yet, much of our current research and thinking with regard to the inclusion of technology in education seems to be from a technicist perspective and predominantly based on the results of standardised testing; the perspective which sees children as 'human capital' and who are likely to be economically productive (Kane 1995).

Gibson (2001) asks more searching questions. He questions the definition of the 'effective use' of technology and suggests that the term 'effective' can be open to interpretation. He acknowledges that the inclusion of technology in learning has an effect, but that whether the effect is 'good' or not depends on many variables, including one's interpretation of what is 'good'. It appears that the learning environments that exist within schools impact seriously on how technology is used according to Gibson (2001). He describes two over-simplified scenarios; teacher

centred and student centred environments, and explains how in a teacher centred environment, the focus of power is on the teacher, and teaching methods include lectures, drill and practice exercises from workbooks with a dependence on rote learning and the memorisation of facts. Technology in this situation is the 'patient, non-threatening tutor' (Dwyer 1996, p.18). The second scenario that Gibson describes is a student centred, collaborative environment. The teacher here does not 'deliver' knowledge, the teacher's role is more as a facilitator, someone who helps students to become independent learners. The students collaborate and converse, solve problems using trial and error, and share information and critically review one another's ideas (Gibson 2001). In this student centred environment, technology is a tool which provides learners with opportunities to access information, to collaborate and engage in creative thought and expression.

While acknowledging that the models Gibson (2001) has outlined in his paper are over-simplified for the purpose of explanation, I also acknowledge that they do exist. He continues that there is a very real need for educators, whether engaging with issues of technology or not, to consider the importance of the learner, their learning needs and their context at the outset of any learning process and that these considerations should influence the appropriate use of technology. He suggests that the two models of learning need not be incompatible; rather they may be viewed as different positions on a continuum. He concludes that the most effective learning environment is one where the teacher, either as guide or as instructor, selects the most appropriate strategy to benefit the individual learner and to address their learning needs (Gibson 2001).

While agreeing with Gibson (2001) on most aspects of his paper and particularly with his inclusional approaches to transmission and constructivist models of learning, I query his thinking around learning objectives. Gibson rightly maintains that the most important issue in learning is the learner and 'the learning objective that is to be accomplished… and to select the most appropriate learning strategies and applications of technology that best accomplish those tasks' (2001, p.58). Here, my thinking diverges from Gibson's, not because I disregard the importance of goals and objectives for teaching or selecting appropriate teaching strategies. Conversely, I consider them to be very important, because unless I as an educator

ask myself why I do what I do, then my work is purposeless. Noddings (2003, pp.76-7) suggests that educators should ask themselves questions like: 'What are we trying to accomplish…? Who benefits? Should our efforts be designed to enhance society… or should they be directed as benefits for the individual?' I believe my research was motivated by such questions and that critical thinking can serve to improve educational theory. Returning to Gibson's ideas about accomplishing educational tasks, I disagree with his thinking about learning generally, and about learning with technology specifically. I believe that his thinking around learning (and learning with technology) stops short of what I understand learning to be. My understanding of learning is that it is a dialogical (Burbules 1993) holistic process; a never-ending and always organic process (Bentley 1998). Gibson (2001) appears to think that education can be reduced to a series of attainable tasks. He seems to have missed out on the open-ended, spontaneous and creative aspects of learning that are part of life in the everyday classroom. These aspects often occur when the teacher has specific tasks that they want to complete and aims they want to achieve, but in the actual learning process, the learning either supersedes those initial aims, or perhaps takes a different direction entirely.
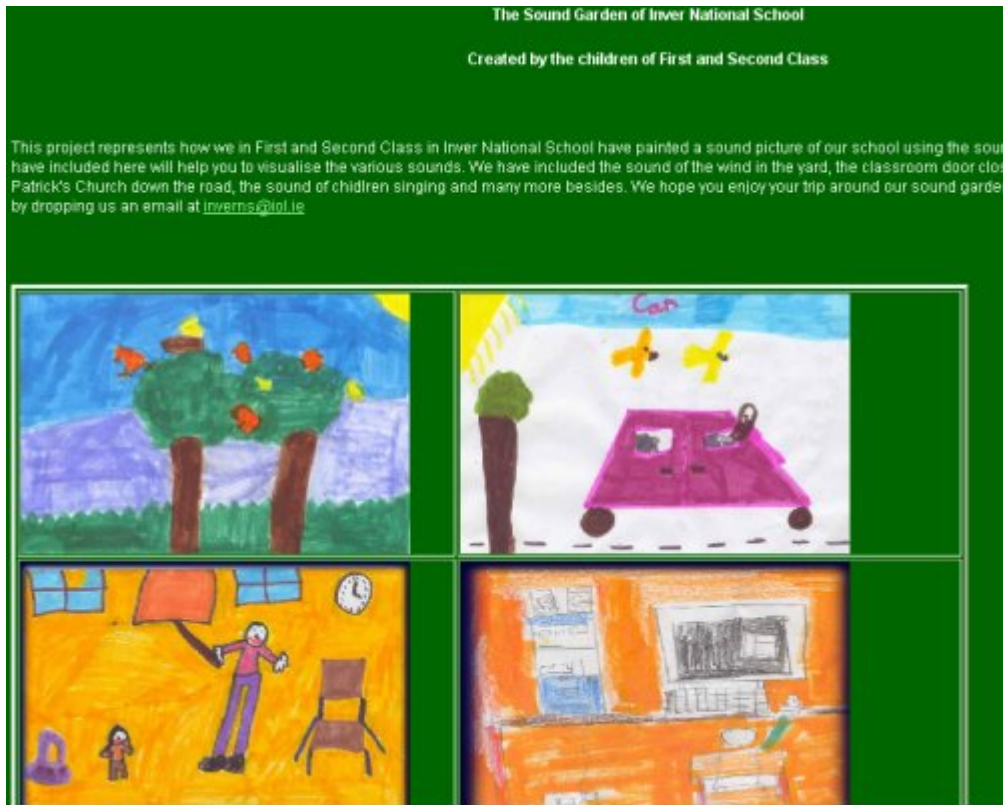
Fig. 5.2 A screen shot of the *Sound Garden* project

I will explicate this thinking with an example from my own work (see Fig. 5.2): Some time ago I had a class of six year olds who needed help with their reading skills. I noticed that their listening skills needed extending, so I devised games for the classroom that might help enhance their listening skills and auditory discrimination. One of the activities I devised involved us going around to different parts of the school and its environs, and recording sounds. We recorded the sound of the school bell ringing, the gate opening, the printer printing, the toilet flushing, a bird singing and so on. Each student then drew a picture of the sound they had recorded. The exercise then involved playing the sound and matching the picture to the sound. It was a simple basic exercise and I achieved the aims that I had established at the outset, as it sharpened the children's listening skills. I noted the children commenting about sounds around them as they became more aware of sounds in the environment and listened more carefully in class generally. Because I had experienced difficulties locating recordings of sounds from the environment on the internet at the outset of the project, I decided to publish the children's recordings and pictures on our website so that other

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educators who needed the recording of sounds from the environment could access them. I published them in a manner such that when one clicked on the picture, you would hear the sound (see http://www.iol.ie/~bmullets/sound_garden). When I published the project, three unforeseeable learning outcomes also occurred. Firstly, when I showed the children their work, their sense of pride was evident in their smiles and their requests to hear 'their' sound repeated. Then, the project also received special mention on the Scoilnet website (see http://www.scoilnet.ie), which is the national educational portal website in Ireland. Thirdly, it was also included as part of the in-service training for primary teachers in music as a sample of listening to sounds in our environment. These were three aspects of learning that the project generated that I had not anticipated. They had not been in my initial plan and they were unforeseen. Frequently, learning takes that form; while goals and aims need to be achieved, the potential for learning in each learning experience is a 'wild card' that cannot be predicted. Sometimes these 'wild card' learning experiences can be the most enriching and exciting occasions of learning that people may have. Like Bohm (2004), I also perceive that dialogue can generate a stream of meaning out of which some new understanding may emerge.

Technology can sometimes enhance such learning processes. Becker (2000, p.300) seems to recognise such potential as he points out that it is important to clarify how computer use is limited by teacher beliefs but in turn, 'under particular circumstances [technology] helps to change teachers' approaches to instruction and curriculum and their basic underlying pedagogical beliefs', and he talks about the 'possibly valuable role of computers as catalysts for instructional change'. Becker's (2000) ideas here are similar to Brown and Duguid's (2002) ideas around how technology can sometimes transform constraints into resources, as outlined above. As I understand these issues, the transforming of constraints into resources and the unpredictable nature of learning outcomes, come together in my thinking to form a new epistemology of practice. This is the epistemology that I am developing here as I share my thinking with others. I do not perceive knowledge as a reified, external object alone. Instead, I see knowledge as being personal (Polanyi 1958), embodied (Hocking *et al.* 2001) and holistic (Nakagawa 2000) while also being inclusional of all the traditional understandings around

knowledge (Whitehead 2005). My epistemology of practice has been drawn from my work practices with my classes and is being theorised as I engage with my research. I do not see learning as limited to attaining adequate standardised test scores alone, nor do I see learning as the attainment of goals alone either, although it does embrace these perceptions as part of its inclusiveness. Instead it is embedded in Miller's (1996) ideas around spirituality and holism as a 'living sense of one's connectedness within a greater whole' (Kesson 2002, p.43). I believe that it is in this way that technology can enhance learning.

5.2.3 (iii) The values-based role of technology in my practice

As I develop an understanding of my practice as I engage with my research, I realise that I now use technology in my work to enable me to live my values in my practice. My values merge into an understanding of my practice as a holistic and spiritual endeavour. These are the values that I attempt to live in my practice although I seldom fully succeed. As I attempt to give them life in my work, I find that I can use technology to help me work towards these values. This is quite a different approach to the use of technology than that outlined in the previous section, where the technology is considered to be helpful when it helps to raise test scores. It is also different to approaches which perceive technology solely as a tool to help fulfil learning goals. While these are pertinent issues in education and while technology may well assist in these cases, my own understanding of the educational nature and use of technology in education is when it helps people to make connections with someone or something, perhaps outside of the classroom, for the purpose of learning. In some cases, it enhances the flow of learning for people as outlined in the communications with the lone oarsman above. Sometimes, it helps people whose writing skills or speaking skills are weak to communicate with others in a dignified manner. Sometimes, technology becomes a catalyst in the learning process and it allows learning to soar into unimagined places, to open up the learning process and to give people an opportunity to grow in their learning. Wenger (1998) talks about the importance of striving to open new dimensions for the negotiation of the self in education. It should place students on an 'outbound trajectory toward a broad field of possible identities' and should be seen as not just being formative, but transformative as well (1998, p.263). Although Wenger is not referring to the role of technology in education,

his ideas can easily be applied to my understanding of it. He perceives learning as being something social and is critical of systems that assume that 'learning is an individual process, that has a beginning and end and is best separated from the rest of our activities' (1998, p.3). He asks: 'What if we assumed that learning is as much a part of our human nature as eating or sleeping, that it is both life-sustaining and inevitable, and that - given a chance - we are quite good at it?' He suggests that education cannot be a closed system that encloses well-established training processes. Instead it must aim to offer 'dense connections to communities outside its setting'. Learning communities must 'use the world around them as a learning resource and be a learning resource for the world' (Wenger 1998, p.275). While not talking about technology in education, and instead talking about education itself, Wenger seems to have captured the sense of potential that learning experiences with technology can offer. I am drawn to Wenger's ideas because I see how learning, especially learning that is supported with technology, can be a launch pad for creativity and a flow of learning. As explained in Chapter Four, I call my understanding of this sense of creativity and flow of learning a 'spirituality in education'. I now discuss how technology can support a holistic approach to learning in the next section.

5.2.4 Technology and holism in education

As my research journey continues and as I develop a sense of understanding around my once-tacit desire to include collaborative technology-based projects in my work, I learned how my new epistemology was drawn from an acknowledgement of the importance of personal ways of knowing (Polanyi 1958) and a connectedness or spirituality in education (Miller 1996). For many, ideas around spirituality and technology in education can be incommensurate. Dreyfus (2001) points out that technology can deprive users of the embodied experience that is kernel to human interactions and that rather than encouraging people to become involved in social causes, it can encourage voyeurism or social apathy. Kane (2002, p.245), while writing on spirituality in education, sees technology as something that encourages people to become 'effective processors of information' but that as a result of the inclusion of technology in our lives 'we have diminished the capacity to see into and appreciate the world, ourselves and one another in such

a way as to give us a sense of purpose, connection and commitment in our lives'. I understand my commitment to spirituality and holism in education to be enhanced by technology. My understanding of spirituality in education (as outlined in Chapter Four) is that it exists in the relationships and connections between the person and other people (Yoshida 2002), both locally and at a distance (Conway 2003), and with the environment (Steiner 1995) and with the wider cosmos (Montessori 1949). It is embedded in holistic ways of knowing that acknowledges the human-ness of each person and enables people to be mutually respectful of one another and of their beliefs. It is rooted in an epistemology of wholeness, context and interconnectedness (Miller 1997). My understanding of technology in education is such that it can enhance and supplement holistic and spiritual approaches to education.

Bohm (1980) talks about fragmentation in people's thinking and ways of being and ways of learning and suggests that such fragmentation interferes with our clarity of thought to such an extent that we are unable to solve the endless series of problems that fragmented thinking presents. He continues that our attempts to live life in a fragmented way has brought 'pollution, destruction of the balance of nature, over-population, world-wide economic and political disorder' and an environment on the brink of destruction (1980, p.2). He concedes that division and fragmentation were useful for practical activities such as the division of land, but when this way of thinking is applied to 'man's [sic] notion of himself and the whole world in which he lives…he begins to see and experience himself and his world as actually constituted of separately existent fragments' (1980, p.2). Bohm warns that our fragmentary way of thinking and being has implications for every aspect of human life and suggests that because fragmented ways of thinking and being have become the norm, then 'fragmentation seems to be the one thing in our way of life which is universal' (1980, p.16). He offers his reader no easy solution to this dilemma and warns that even as people try to tackle the problem of fragmentation, their own fragmented thinking is so embedded in their lives that their thinking can cause further fragmentation unintentionally. These are the dilemmas I see in my own work every day, but against which I continuously battle as I engage with the various projects with my class. Palmer (1993) also sees the implications of such fragmented thinking in an educational context and describes

how the education system is further fragmented by its subdivision into disciplines, with the result that people involved in education understand themselves as having 'no more coherence than the fragmented world itself' (1993, p.13).

This incoherence is manifested in the proliferation of new subjects that are being introduced in the Primary School Curriculum here in Ireland. According to Morgan (2002), the number of discrete school subjects has almost doubled since the 1971 *Curaclam na Bunscoile* (Ireland, Department of Education and Science 1971). Apple and Jungck (1998) also talk about the inadequacy of a curriculum which has been expanded. Morgan (2002) points out that, now, children are expected to learn too many subjects, within which there are too many topics and which impacts negatively on the depth of the learning for children. While agreeing with Morgan, I perceive that the creation of projects, and the use of technology, that draw on the multiple learning strengths of students, can also go some way in drawing on multiple aspects of the curriculum, thus diminishing the sense of overload experienced by many teachers. In my work I try to demolish the walls of the classroom, in a figurative manner, and encourage the class to enter into dialogue with members of the community both locally and at a distance (see http:/www.iol.ie/~bmullets/). I also attempt to integrate the discrete curriculum subjects so that they are less fragmented and I try to keep the natural pulse of nature as an undercurrent heartbeat in our everyday work. I am suggesting here that, instead of focusing on the divisions that exist between the myriad of school subjects and their supporting strands and strand units, sometimes, it might be helpful to examine how the subjects could be interlinked and show how they might support one another. I believe that many of the projects I have implemented with my class have demonstrated this. Miller talks about 'subject/subject connections' as an aspect of holistic curriculum, where connections between discrete curriculum areas are made (Miller 1996, p.125). My *Working as a Historian* project, for example, was simply a history project, but it drew heavily on other aspects of the curriculum such as English, Geography, Visual Arts and Social Personal and Health Education (see Chapters Six and Seven for more on our 'Working as a Historian' project).

It is interesting to note, at a local level here in Ireland, that even though educators are still in the process of implementing a new set of curriculum guidelines, there is little reference to the inclusion of technology within the curriculum documents. An ICT working group was formed in the National Council for Curriculum and Assessment (NCCA) in 1998 with the view of examining issues regarding ICT in the Primary School Curriculum (1999), but the curriculum was nearing the completion of its design phase at the time. Since then, ICT has been perceived as an 'add-on' to the curriculum and not as an integral part of it. Sometimes, I believe that while the role of ICT in education in Ireland has been marginalized, this marginalisation has also been a great source of freedom. Because there are few guidelines or objectives with regard to ICT, teachers are free to use technology as they so wish and how they so wish. In the United States, teachers must undergo a more prescriptive regime when including technology in education. For example, in the United States in certain states, at the K2 level, it is expected that the child achieves the following benchmarks 'Knows that the keyboard and mouse are computer hardware…knows that the keyboard and mouse are computer hardware… knows that the keyboard and mouse are computer hardware and knows hard and floppy disks and their use…' (McRel 2005). Our programme of technology inclusion here in Ireland is, as yet, of a more malleable and flexible nature and is seen more in terms of guidelines and suggestions (NCCA 2004) than standards and attainments. This flexibility has supported me in my work with technology as I develop my holistic and inclusional epistemology of practice.

It also interesting to note that while few of the writers who are at the forefront of holistic approaches to education (for example Crowell 2002, Kane 2002 and Miller 2000) address how technology can be combined with holistic approaches to education, some have approached this issue. Among those is Ron Miller whose understanding is quite different to mine. In his *Creating Learning Communities*, a book edited by Miller (2000), his understanding of how technology can assist holistic approaches to learning seems to focus solely on how technology can provide access to a large range of information. He points out that technology cannot replace face-to-face human interaction (an issue with which I have already dealt in this chapter). Heller (2000), another contributor to the Miller (2000) book, talks about the computer revolution in schools. He describes how in netschools (or

what might also be termed 'e-learning' situations), 'hundred of colleges and universities have "packaged" college and secondary classes to independent learners around the world' (2000, p.182), and uses terms such as 'the delivery of educational content' (2000, p.182), 'mastery ', ' 'training' and 'attainment of education objectives' (2000, p.183) to describe his vision of community learning. I perceive such interpretations of the use of technology and such language to run contrary to my understanding of how technology can be used to enhance holistic approaches to learning. The 'packaging' of classes and the 'training' for the attainment of objectives can be closely aligned with the language of closed-world discourses and the concept of perceiving people as a public resource for the future of the state. These perceptions are akin to what Kane describes as a 'distorted view of the child and the nature of education' (1995, p.61) and they run contrary to my values around love and the recognition of the wholeness and human-ness of people. As Miller states elsewhere:

> Holistic education aims to call forth from young people an intrinsic reverence for life and a passionate love of learning. This is done not though an academic 'curriculum' that condenses the world into instructional packages, but through direct engagement with the environment. Holistic education nurtures a sense of wonder.
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> (Miller 2000a, p.206)

Here, I agree with Miller, and these ideas permeate much of my own thinking around education. However, I also see how technology can assist and sometimes inspire such holistic, creative and spiritual approaches to education.

Palmer (1993) suggests that an education in transcendence can help to step beyond the fragmentation and explains that transcendence is not an outward escape from the world but more of a 'breaking-in, a breathing, …a literal in-spiration that allows us to regard ourselves and our world with more trust and hope that ever before' (1993, p.13). I perceive this 'in-spiration' in how my class engage with the local environment, and with the local community, and can be seen in many of the projects I undertake with my class. The following is an example of a project (see Fig. 5.3) which demonstrates how technology can enhance a spirituality and a holistic sense of connectedness in my work:

Fig. 5.3 A screenshot from our *People in our Community* project

This project, entitled *People in our Community* (see Fig. 5.3), was undertaken with my class of six and seven year olds. Its aim was to engage with local people in the community and to find out about their work in a professional or in a voluntary capacity. I wrote to the parents of the children in my class looking for volunteers and for suggestions as to other members of the community who might be willing to participate. Eventually we got eight people who were willing to come in to the classroom to talk to the class. They agreed to being photographed, videotaped and audio-recorded. The children in the class took turns at being the 'technicians'; as sound recorder, filmmaker and cameraperson. Before the interview began we prepared a rough set of questions that might elicit the information the children wanted to hear. The interviews took place over a period of three weeks and after each interview the children wrote short descriptions using pictures and text about what they had seen and learned. When the interviews were finished and the children had completed their art and written work, I published their work on the internet at http://www.iol.ie/~bmullets/community where the video and sound files can be accessed using streaming media.

The learning for the children here was significant; they gained insight and understanding into the work the people do, they tried on handcuffs and held a truncheon when Gary and Amanda, the gardaí, came to visit. They learned about the work of a nurse from Eibhlín and learned how to take a pulse. They also

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learned the value of voluntary work as James talked about how he trains the local soccer team. These lessons could easily have been 'covered' using a textbook or a workbook, but for those of us who were present at the interviews, the magic of the flow of dialogue between the class and the interviewees was spectacular. The video clips help us to re-capture the sparkle of the interviews, which were often in the form of a raised eyebrow or the twinkle of an eye; this being especially true of the postman, John, who nearly convinced us all that he was Santa Claus's special helper!

This project is important to my research because it is rooted in what Capra (1997) calls a 'holistic worldview which sees the world as an integrated whole rather than a dissociated collection of parts' (1997, p.6). For me, I see the class as part of school which is part of the community and its environment as part of the greater world and its cosmos. In this project, I was attempting to make connections with the community members and parents as, together with the children, we created a flow of understanding (Bohm 2004). Like Iannone and Obenauf (1999) I see spirituality in education in how we become aware of the world and its inhabitants and recognise social needs and injustices. Negroponte (1995, p.230) talks about how 'digital technology can be a natural force drawing people into greater world harmony'. When Palmer talks about spirituality in education he means 'the diverse ways we answer the heart's longing to be connected with the largeness of life' (1998, p.5), and I perceive that this project went someway in meeting with the largeness of life. Conway (2003, p.228) explains that when interrogating ideas pertaining to technology and holism, the 'key question seems to be whether or not we have the inner freedom, or can develop the inner freedom, to engage with…technologies in such a way that they facilitate rather than frustrate the risky adventure into the heart of what it is to be human'. Like Conway (2003), I see how the internet and technology can be used to facilitate and strengthen holistic, dialogical and inclusional approaches to education. I perceive technology in this manner in its implementation in the project outlined above. The children used technology in the form of a video camera, a digital stills camera and an audio mini-disk recorder to record the interviews. They developed a sense of ownership of the work as they made decisions around when and how to record the various clips; these clips were theirs. Kahn and Friedman (1998) explain that children

construct meanings more fully when engaged with issues that capture their interest while Karolides (1997) points out that, when people take ownership of their own learning, it becomes more meaningful for them. The use of the recorders and cameras here also ensured that all the children were able to participate fully in the project because it was not dependent on the written word (although some of the follow up activities involved a little writing). Writing for many six and seven year olds can be a laborious chore and for many, the recording of these interviews in written format would have been nearly impossible. Street (1998) talks about a 'new communicative action' which emphasises a mixture of text and images and the communicative choices that are now open to people. Using multimedia afforded every child the opportunity to participate fully in the project, regardless of their reading or writing strengths. The media clips that we recorded are now stored at our school web site to remind us of the interviews, to recall our learning, to re-engage with the flow of understanding that emerged during the interviews when we wish to re-visit them at a later date. They provide us with an opportunity to engage in further learning at a future date as perhaps our insights may change as time goes on. The recordings also connect our learning back into the community, as some members of the community may wish to engage with our learning process by visiting the web site. It may further enhance our sense of connectedness when others, from further afield, visit the site and learn from our learning. These multiple layers of learning are closely interconnected and interdependent. They go some way in demonstrating how learning can be a dialogical process, how education can be a holistic experience and how technology can enhance the sense of spirituality and connectedness that permeates my epistemology of practice.

To conclude

Frequently I am asked if the use of technology in educational settings is the focus of my research. Despite my obvious commitment to the use of technology in education, my answer is vehemently negative. Instead I reply that my research is about developing a dialogical and inclusional living theory of educational practice. However, I acknowledge that at the outset of this phase of my research, my initial research question was around the inclusion of technology in education. Drawing on the research I initiated in my masters programme, I began this phase of my research by querying the value of internet based collaborative projects in my work

(see Chapter One). I have since learned, as I have developed my living theory of practice, that as my new epistemology evolved, so too did the focus of my research. As I asked questions like 'Why am I working in this way?' with regard to my work with technology, I realised that the technology was not what was important. What became important for me were epistemological questions like 'How do we come to know?', 'What knowledge is important?' and 'Who decides?' and methodological questions like 'How can I best understand my practice?'. As I gained clarity around my ontological values and their emergence in my practice (Whitehead 2005), I realised that I used technology to enhance and strengthen the holistic and dialogical ways of knowing that were emerging in my research. Sometimes the technology was a tool to help communications, sometimes it was a springboard for unforeseen 'wildcard' learning experiences, but always its aim was emancipatory and life-enhancing.

I perceive these key ideas as being significant for future understandings of curriculum as an open-ended creative conversation (see Elliott 1998) between the student, the teacher, the topic of learning, the environment and other relevant bodies and I will discuss these ideas in greater detail in Chapter Seven. For now, I would like to trace the generative transformative movement of my values around holistic approaches to learning and how they transformed into live practice in the projects I engage in with my class. The transformation has been further generated frequently, as other educators explore my work and interpret their own understandings of it through exploring my work on the internet or through professional development programmes in which I engage (see Chapter Seven).

I am committed to holistic approaches to education, to spirituality and creativity and I perceive the interconnectedness of people and their environment as a locus for learning. I believe that people can develop their own learning potential and create their own knowledge. I believe that technology can be a vehicle for enhancing such interconnectedness and creativity. I no longer perceive technology as an 'add-on' to learning or as yet another discrete subject in the curriculum. Bohm (1980) and Palmer (1993) talk about how our world and our thinking is overly fragmented already and I perceive the addition of yet another fragment that we call 'technology' as perpetuating this fragmentation. Instead I see the role of

technology as that of an aid to connectedness, creativity and self-expression. In the fragmented world we live in, technology may be a 'glue' to connect disparate parts of our curriculum, to connect the classroom with the outside world and to connect learning with the real world.

In this chapter I have explored how I perceive technology as a support to spirituality and connectedness in learning. I have outlined some of the current debate about the role of technology and framed it in the epistemological conflict between technical rational and personal and dialogical ways of knowing. In Chapter Six, I will discuss issues pertaining to the validation processes I undertook to test and validate my research claim that I am using technology to enhance dialogical encounters by showing how the form of communication I used to communicate my claim was comprehensible, true, sincere and appropriate (Habermas 1976).

Chapter Six: How do I evaluate my work? Developing epistemological justification – demonstrating validity

As I communicate my epistemology of practice to others, I want to demonstrate in this chapter how I assess the quality of my work, with rigour, as outlined by Winter (1996), in terms of reflexive critique, dialectical critique, collaboration, risk, plural structure and theory practice transformation and by referring to the specific standards of judgement that are drawn from my values in education. I will support the validity of these claims with substantiated evidence from my practice and I offer my claim to others for public scrutiny because as Mc Taggart (1997, p.12) explains, validation is an 'explicit process of dialogue'. I have outlined already in Chapter Three how my ontological values around love and my awareness of the human-ness of people inform, not only how I work, how I learn and how I teach, but also how I approach my research as I address the wholeness of people in terms of Buber's sense of 'I-Thou' (1958). As I work towards my understanding of how I give these values life in my work and my research, I show how I am developing a theory from my practice in the form of an emergent epistemology that embraces dialogical, holistic and inclusional ways of knowing. I am also thinking of Nakagawa's (2000) ideas around the holistic curriculum as an effort to make connections. In this chapter, I will produce evidence to support these claims and I will draw on my critical living standards of judgement (Whitehead 2005) as I validate them. The new criteria in the United Kingdom for the UK 2008 Research Assessment Exercise stipulate that research should demonstrate quality in terms of originality, significance and rigour (see http://www.rae.ac.uk/pubs/2005/04/). In this chapter, I hope to articulate the standards of judgement I identify to test the validity of my claim to knowledge and explicate them with supporting evidence from my practice.

The living standards of judgement that I have established in order to assess the originality, validity and rigour of my research are drawn from my ontological and epistemological values. This innovative process of testing the validity of action research has been developed by Jack Whitehead (see Whitehead and McNiff 2006) and I will explain its implications throughout this chapter. The latter part of this chapter is divided into two sections: Section One where I will also outline what my

living standards of judgement are and produce evidence to support my claim to knowledge; and Section Two where I describe my understanding of the validation processes that I have undertaken so as to ensure the rigour of my research. In these sections I will show that I am testing my ideas within the field of the new scholarship (Boyer 1990), so that my theory can be seen as sufficiently robust to withstand critique yet is flexible enough to continue to grow and develop.

How do I validate my claims to knowledge?

'Knowing cannot be isolated from a sense of self or from a sense of meaning and purpose'.

(Crowell 2002, p.14)

Traditional positivist research demands criteria such as controllability, replicability, and observability (among others) to test the validity of the theory (see Cohen *et al. 20*00). Cohen *et al.* (2000) maintain that 'validity is the touchstone of all types of educational research' (2000, p.106). They also point out that it is important for a researcher to locate discussions of validity within the research paradigm that is being used by the researcher, but not to become paradigm-bound. For example, they perceive that positivist research ought to be faithful to its positivist principles, such as controllability, replicability and predictability and so on. They suggest that for naturalistic research the concept that 'the natural setting is the principal source of the data… the researcher is part of the researched world…the data are descriptive…' are among its research principles (Cohen *et al.* 2000, p.106). McTaggart (1997) recommends that action researchers can look to the methodological literatures of interpretive inquiry to locate validation processes that are suitable for action research, while others believe that 'qualitative and constructivist philosophies require their own assessment criteria, distinct from those that characterise quantitative research' (Dick 2000). Maxwell (1992) advises that qualitative researchers should not work within the positivist paradigm nor search for criteria of replicability and observabilty and suggests that 'understanding' replace the notion of validity in qualitative research. Winter (1982) pinpointed a validation flaw in action research (albeit over twenty years ago) as 'The action research/case study does have methodology for the *creation* of

data, but not (as yet) for the interpretation of data' (Winter 1982, p.6). Despite the lively debate around validation issues, a need seems to have arisen in certain research programmes to break from 'official academic genres' (Ely *et al.* 1997 cited in Dadds and Hart 2001, p3), and Elliott reminds us that 'One of the biggest constraints on one's development as a researcher, is the presumption that there is a right method or a set of techniques for doing educational research' (1990, p.5). Whitehead (see Whitehead and McNiff 2006) has developed an innovative but rigorous response to these dilemmas which now refute Winter's (1982) earlier comments. Whitehead and McNiff suggest that the values researchers hold come to act as 'the explanatory principles and living standards by which we judge our practice' as well as the theory that has emerged from that practice (2006, p.85). As I engage with the process of validating my research claim, I therefore look to my values as they become the living standards of judgement which inform the criteria by which I test my claim. As I learn from these creative interpretations of how I might validate my research claim, I bear in mind Winter's (1996) six principles which are central to the action research process. He cites them thus: 'i) reflexive critique, ii) dialectic critique, iii) collaboration, iv) risking disturbance, v) creating plural structures and vi) theory and practice internalised' (1996, p.13). He explains how the ideas underpinning reflexivity assume complex interpersonally negotiated processes of interpretation, in the form of dialogue between writers and readers. He suggests that dialectical critique assumes that social relations are structured as a series of contradictions and that its influence can never be unambiguous or final. Winter sees the researcher treating all viewpoints as a collaborative resource and risking a threat to all 'taken-for-granted' processes while they submit their ideas to critique. The subsequent report should be seen as a discussion document wherein theory and practice comprise 'mutually indispensable phases of a unified change process' (Winter 1996, p.25). I check that I attempt to address Winter's principles as I engaged with my research process.

As I generate my own living theory, I have gathered data to enable me to make judgements on the effectiveness of my work (McNiff *et al.* 2003). I evaluate my actions in relation to my values and understandings (Whitehead 1999) and modify my practice in the light of these evaluations. These evaluations are embodied in my practice in a holistic manner and the way I work is an outward manifestation of

how I am coming to understand and articulate my values in my life. Here, in this chapter, I am aiming to show the rigorous validation processes I undertook in order to present my original claim to knowledge, supported by substantiated evidence drawn from the data I have collected. This evidence exists not only in the form of printed text, but also in the form of multimedia presentations, web pages, film clips and email messages reminiscent of Street's (1998) 'new communicative order' which suggests that communication should have a mixture of text and images.

Stages of validation

For me, as I undertake my validation processes, I have come to see that there are two inter-dependent levels of validation; the personal or 'I' validation (drawing on Polanyi's 1958 ideas of personal knowledge) and social or 'we' validation, which draws on Habermas's (1987) ideas of truthfulness, comprehensibility, sincerity and appropriateness. Cohen *et al.* (2000) call these levels 'internal' and 'external' validation. I believe that the internal validation process is as important for me as the external process and provides the foundation for the rigorous external validation process I have undertaken in this research. My internal validation processes involve looking to my claims to knowledge and ascertaining if they are valid and if they are demonstrating whether I am living in the direction of my ontological and epistemological values. The social process takes place when I share my claim with others for their approval and validation. Like Hughes (2003, p.39), I understand dissemination as a beginning point of my research as a 'reflexive and on-going conversation that one has with others as much as oneself' as I attempt to clarify and validate my research.

As a researcher I am seeking to understand my embodied values as I give them life in my everyday work practices and living. Whitehead (2002a, 2005a) describes this as a 'clarifying' process. I am examining this understanding at the levels of theory and practice. As I am gradually developing an understanding around my practice, I can see how my ontological and epistemological values are being re-generated in a series of generative transformational patterns (McNiff *et al.*. 2003, and Whitehead and McNiff 2006) which are inherent not only in my claim to knowledge but also in how I have undertaken my research (see Chapter Three) and

how I have chosen to validate it. These values inform my research in the following manner: because I value dynamic, fluid and inclusional ways of knowing, I have generated my own learning process from a multiplicity of sources, that is, from my practice, from my engagement with the literature, through dialogue with research colleagues, in conversation with my classes and so on. I have then attempted to validate my claim to knowledge in a similar manner, acknowledging multiple ways of knowing also. This chapter will reflect these recurrent themes as outlined previously in Chapters Four and Five and demonstrate how my embodied values are being given life not only in my knowledge claim but also in how my validation processes have emerged from my methodology (see Chapter Three).

Developing an epistemology of practice and of validation

In traditional forms of research, methodology and validation processes are considered to be of a linear nature (see Usher 1996). They draw on the propositional logic of cause and effect such that if the researcher experimented with something, then they would expect a specific outcome. The research claim could then be validated by witnessing if the effect did indeed occur. My research is part of a new epistemology (Schön 1995). My epistemological stance underlies not just how I am presenting my claim to knowledge and undertaking my research, it reflects my views on learning and teaching also. Usher (1996) reminds us that traditional positivist epistemologies demand that the researcher is 'objective' and value neutral. Usher outlines the approaches that the assumptions of a positivist epistemology emphasise thus:

> …*determinacy* (that there is a certain truth that can be known), *rationality* (that there can be no contradictory explanations, that there must be a convergence on a single explanation), *impersonality* (the more objective and the less subjective the better) and *prediction* (that research is the making of knowledge claims in the form of generalisations from which predictions can be made and events and phenomena controlled).
>
> (Usher 1996, p.13)

Contrary to the linear processes outlined by Usher (1996) above, I would prefer to invite people instead to engage and experiment with my ideas and not to try to replicate them as positivist assumptions might require. My research has been undertaken with subjectivity as its basis because I am the focus of my research

(see McNiff and Whitehead 2005c) and I am offering many explanations for my work. To the best of my knowledge, here and now, I am making this claim to knowledge that honestly reflects my best thinking (see McNiff 1993). I am also aware of the complex nature of how people come to know and that I may need to change my claim to knowledge as my own journey of learning gains more clarity. Like Winter (1996), I see how a dialectical approach perceives individuals as a product of their social world which is continuously changing. This change has an influence on people that is 'both conflicting and varying, and so can never be unambiguous or final' (1996, p.21).

I see my new epistemology emerging as I engage with my research. The theory that has emerged for me is in a living form (Whitehead 1989) and is based on the idea that knowledge can be generated in the relationality that exists between people such as teachers and children (see Palmer 1993 and Yoshida 2002) and in the relationality between people and their environment and with the wider cosmos (Miller 2002). This way of knowing acknowledges the essence of what I perceive to be the human-ness of people and for each human being there are multiple ways of coming to know (Bentley 1998) and multiple ways of expressing that knowledge (Eisner 1997). I perceive this to be underpinning my living theory approach to research and practice (see Chapter Three). I also perceive that these same values underpin much of my validation process (McNiff 2005a).

Establishing living standards of judgement

Whitehead and McNiff (2006) remind researchers that we can assess the quality of our work by identifying specific standards of judgement that are linked with our educational values. Drawing on Whitehead and McNiff's thinking, I am aware that it is important for me to communicate the standards of judgement around research adequately. I hope to communicate my standards of judgement, and to demonstrate in the next two sections of this chapter that I have established standards of judgement by which my research might be evaluated and that I am transparent about the validation processes that I undertook.

There are two separate forms of standards by which this research may be judged. The first set of standards is set out by the University of Limerick. The regulations (University of Limerick 1999, p.59) state: 'A doctoral thesis must show evidence of independent enquiry, originality in the methods used and/or in the conclusions drawn and must make an appreciable new contribution to knowledge or thinking in the candidate's field.' The second set of standards, by which my work may be evaluated, has been established by myself, in conjunction with my research colleagues and my tutor (see below).

While these standards of judgement are located in two different contexts, it is important to realise that they are continuously overlapping and interweaving throughout the writing of my thesis. The first set of standards is of an external institutional nature, because I did not create them myself; the university demands them. Even though they are external, they are by their nature intrinsically important to my own work at an internal level. As a result, I continuously check that my thinking is of a critical nature and that I am making a contribution to new knowledge as I develop and share my emergent living theory with others.

The second set of standards has emerged from my own value-base through discussion with my research colleagues and my tutor. I have established these standards so that I can evaluate whether my embodied values are being lived in my practice. Whitehead (2005a) describes how one's embodied ontological values are transformed through the process of clarification into the living epistemological standards of critical judgement that can be used to test the validity of one's claim to educational knowledge. These are the same ontological values that give meaning to my work as described in Chapter One and Two, and give meaning to my methodological approaches in this research, as described in Chapter Three. In my case, these ontological values are around love and caring relationships in education. I agree with Raz (2001) as he points out that the concept of a value is meaningless unless it is enacted in human practice. I value love and as part of that love, I value the recognition of the human-ness of people in terms of experiencing the wholeness of the person. As I clarify the meanings of these ontological values in my practice, I am producing 'living epistemological, or critical standards of judgement, that can be used to evaluate the validity of the knowledge claims'

(Whitehead 2005a, p.3). In my research, I have learned how my ontological values transform into my educational commitment (McNiff and Whitehead 2005b); into my epistemological values.

In Section 1 below, I will outline the critical living standards of judgement that have emerged from my epistemological values. In Section 2, I will describe the validation processes that I undertook so as to establish the validity of my claim to knowledge.

(6.1) Section 1: My living epistemological critical standards of judgement

The following are the critical living standards of judgement which have emerged from my ontological and epistemological values and the realisation of which, for me, would demonstrate that I am developing an understanding of my work practices, or clarifying the meanings of my values in my practice. As I evaluate my work and create my own theory of practice, I collect data to generate evidence that my work is moving in the direction of my values as I develop an understanding of my work. The following are the living epistemological standards of judgement that I have identified, which are directly linked with my values as outlined above. In the next section, I will show how the enactment of these standards of judgement can lend ethical validity to my research.

Living epistemological critical standard of judgement No.1: I know how and why I engage with the human-ness of the people with whom I work.

Living epistemological critical standard of judgement No 2: I know how and why I embrace dialogical, holistic and inclusional ways of knowing.

Living epistemological critical standard of judgement No 3: I know how and why I develop ways of working that nurture the connections between learning and the natural environment and the outside world beyond the classroom.

Data collection and the generation of evidence to support my claims to knowledge

As I collected my data, I kept an audit trail so that the research will be enabled to 'address the issue of confirmability of results' (Guba and Lincoln 1989, p.109). Much of this audit trail can be located in my data archive, in the artefacts my classes have produced, in the web pages they have created and in the evidence I am presenting in this thesis. I have drawn my evidence from the data I have collected. I have set myself standards of judgement by which I can judge the effectiveness of how I am working (see above). I have checked the data for instances when my living standards of judgement are being realised in my practice (McNiff 2002). When these instances occur, then my data can become formal evidence, by which I make judgements about my practice and against which I can test my claim to knowledge.

I have drawn some examples of evidence from my data collection which communicate how I believe my practice is an articulation of my ontological values. I am clarifying these embodied values in the course of their emergence, as they become living standards of judgement (Whitehead 2005a). I have established the following examples from my work, which demonstrate that I am developing an understanding of my practice as the living enactment of my embodied values. I have chosen to represent some of the data in video format, as web pages and as multimedia presentations, and these are in the form of live links in the digital form of this thesis which accompanies this thesis on CD-ROM (see also Whitehead 2002). I have outlined what I believe the practical and theoretical implications of this evidence are. I have also chosen to present some evidence in the form of web pages that my students have created and these web pages are live links which are accessible to readers with an internet connection.

Examples of evidence I have generated from my data to support my claim to knowledge

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Fig. 6.1 A still from video clip of children reading email

The example I have chosen here is a video clip of my students expressing their excitement at receiving e-mail messages from their e-pals in Liverpool as part of their *East/West Project* (see Fig. 6.1). This was taken during a two-year project in which the students exchanged e-mail regularly, partook in shared projects and had two meetings with a partner class from Prescot, near Liverpool in the United Kingdom. (For more details about this project see http://www.iol.ie/~bmullets/email). This video clip is an extract from living practice. It is authentic and has not been rehearsed or stage-managed. It is also noisy, spontaneous and exuberant. I believe that it is significant not only at the level of practice but also at the level of theory, which I will explain below. The video-clip is noisy because the students are chattering excitedly about the messages they have received from their e-pals in the UK. An easy banter emerges as the students read the email messages and chat among themselves and with me about their email from their e-pals. The video demonstrates the shared sense of pleasure, the sense of communication, the joie-de-vivre the students have, which I believe is indicative of the relationship of care, trust and mutual respect that I have nurtured with the class. The video clip is an example of an occasion which I believe demonstrates the warmth of the relationship I have developed with my students and which they have developed with one another. It demonstrates how I believe I am realising my ontological values around love by addressing the

wholeness and human-ness of the children with whom I work in terms of Buber's (1958) sense of 'I-Thou' relationships. I believe the confident, relaxed, comfortable interaction on the video clip captures the essence of the warm secure relationships that exist within my class. I believe that such relationships are enabled by my engagement with each child's human-ness in terms of engaging with their wholeness as human beings and these relationships are evident on the video clip. This engagement encompasses not what Berlin (1990) refers to as a western Utopia, wherein people experience 'a society [which] lives in a state of pure harmony, in which all its members live in peace… [they] experience no injustice or violence [and] live in perpetual, even light' (Berlin 1990 p.20) but more the real life imperfections that make up my understanding of the human condition. I see imperfection as a key part of human nature and therefore my engagement with others (and hopefully their engagement with me) will acknowledge and embrace such imperfections.

I will now outline how I see this video clip as an articulation of, and expression of months of developing loving and respectful relationships within the classroom that show how, like Miller (1996), I am fully present with my students as 'to be holistically authentic is to care…teachers should simply learn to be with students. In being with students I am fully present' (Miller 1996, p. 179).

At the beginning of the school year, before our *East/West* collaboration began, we (the class and I) began the school year by having a brainstorming session to establish rules that would allow us to enjoy our time together in a productive manner. The outcome of the brainstorming session was condensed into a motto which read 'Respect for myself and respect for others'. I believe that this motto set the timbre of our relationship for the following two years, informing how the students and I dealt with any conflict that arose within the class, and was reflected in the way we conducted our relationship during our two years together. The following incident helps to explain the mutually respectful relationship that emerged for both the children and myself wherein I was engaging with the human-ness of my students: A mother of one of my students rang me one afternoon explaining that her son, B., was being bullied. She explained that his demeanour had changed from being a happy and cheerful child to being a sad and tearful one.

He had not divulged the cause of his unhappiness to her but to his older sister, who had then told her mother. B's mother named the bullies and asked me to help but asked me to be subtle because B. was sensitive about the situation. As I reflected, I was surprised at the account because the atmosphere in the classroom was generally one of care and mutual respect, but I also knew that B's mother's concerns were authentic. I also felt that the alleged bullies were basically kind children but that I had to act on B's pain and fears. I adopted a stance of what Noddings (1992) calls 'confirmation', that is empathising with the 'wrong-doer' so as to develop an understanding around what motivated the bullying. The next day at school, I invited the two alleged bullies to help me with a chore, so that we would have a quiet, private time together. As we worked and chatted, I asked them if they had noticed anything amiss with B. They shrugged their shoulders and said they hadn't. I then explained how I had heard that he was very upset every evening at home and that he cried himself to sleep. I also told them that this was a confidential conversation. I explained that B. was hurt because people were calling him names and that he was saddened by it. The boys began to react. They both explained that they were 'having fun' by calling one another names. I reminded them of B's hurt and asked them if they thought they were showing respect to themselves and to B. I reminded myself of how I needed to be aware of their human-ness even if they were 'wrong-doers'. I thought of Buber's writing on 'I-Thou' relationships. Hodes (1972) explains Buber's thinking thus:

> What concerned him [Buber] was the why; how to give the pupil a sense of his [sic] identity, of his organic unity, how to show him the way to responsibility and love.
>
> (Hodes 1972, p136)

I try to give all pupils a sense of their identity, and so live in the direction of my values around love. I attempted to do so on this occasion also. The boys became tearful as they explained that they hadn't realised the extent of the hurt they had caused and resolved to be more careful in their future dealings with B, and others. B's mother rang me the next day to thank me for 'whatever magic wand' I had used because B was now back to his old self.

I believe this incident demonstrates not only how I had acknowledged the humanness of B. and his mother here, but also of his bullies. I treated them with respect and gentleness, even though I could feel my displeasure at the boys' mis-behaviour simmering inside me. I believe that they developed their own awareness of 'I-Thou' (Buber 1958) relationships as they thought about how B. felt and how they had hurt him and how they might amend the situation. This was a sample of one incident that was typical of the relationship of mutual respect that I tried to nurture in the class.

Fig. 6.2 A collage of photos of one of my students engaging with me

The collage above (see Fig. 6.2) is a collection of stills which capture another moment of such engagement. The collage shows me talking with my student while she is painting her picture of a scene from a local legend. This collage goes some

way in depicting how I engaged with her human-ness as we discuss her painting. In one of the pictures we are looking at one another as we talk about her work, in another R. is looking at her painting and talking about it and in another picture, I am looking at her painting. In all cases we are smiling and we are absorbed in our work. I believe that collage shows the living engagement between R. and myself as we both delight in her work and as I engage with R's human-ness. We are laughing as we discuss the part of the local legend (where the chieftain gives his wife a poisoned chalice) that her picture depicts. The collage captures the respect I have for R. and her painting and I believe that a sense of my engagement with her human-ness emanates from this collage.
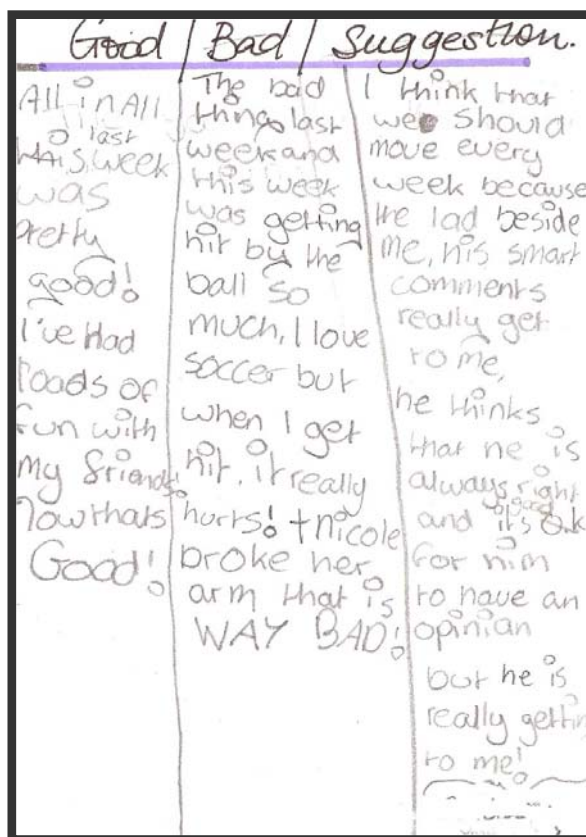
Fig. 6.3 An example from our *Suggestion Box*

Our *Suggestion Box* (see Fig. 6.3), wherein the children would write anonymously about something good and something bad that had happened to them throughout the week, was another example which demonstrates how I nurtured caring relationships with my students. Their anonymous weekly input also included a suggestion about something they would like to be improved in the class (see the second section of this chapter for more detail). The *Suggestion Box* was helpful not

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only because it gave practical directions about how I might work in a more positive way with my class, but also because it developed my own awareness of the human-ness of my students. I believe that the *Suggestion Box* helps to demonstrate how I enable my students to develop their own identity and to celebrate their capacity to create an environment that addresses their learning needs and strengths. I see these aspects of my work as steps in the process of engaging with the human-ness of my students.

To return to the video clip above again, I am presenting it as a statement of how I engage with the human-ness of the children in my class because I believe it captures the sense of warmth and conviviality that is indicative of the caring, respectful environment that exists within the class. It is also indicative of how I engage with the human-ness of the children with whom I work as they express themselves freely and uninhibitedly yet in a mutually respectful manner.

When I reflect on this noisy, spontaneous video-clip, I am struck by the different layers of learning that I perceive. I perceive that these different layers are part of my engagement with the human-ness of my students in terms of their wholeness as human beings. At an obvious level, it is easy to see how the children are learning from the intercultural connections they are making with other children in other parts of the world. They are reading and writing about other countries not only in the traditional way but also through the connections they are making with other children in other countries. There also exists a sub-text within these video-clips that draws my attention to the idea that the children delight in the existence of other real human beings who are like themselves but who live in a different culture. Pat, one of my students commented, 'Doing these projects is great fun. We learn things about different schools and different places' (data archive 11 June 2003). In watching these video-clips I am deeply aware of the importance of the connections that exist between real human beings in their mutual attempts to enhance their learning. Riel (1993) talks about the importance of learning being real and meaningful for children as opposed to the often meaningless process of filling in workbooks. While the clip shows children reading from texts, it is the context of the text, the origin of the text, the messages sent from far-flung fellow learners and engagement between the holistic 'human-ness' that add the magic to

the experience. Sarah, another student said 'It's lovely to learn different things about different countries' (data archive, 6 March 2004) while Paul said 'I loved looking at the beautiful feathers from Botswana' (data archive, 14 June 2003). David said, 'We learn more when they send us pictures because we can see what things look like' (Data archive 17 February 2004). The video clip shows how the children are reacting to and engaging with other members of humanity in an open, joyous and responsive manner as suggested by Doolittle and Camp (1999) when they recommend that learning should take place in real-world environments. I believe that such experiences are rooted in a holistic understanding of human development such as that outlined by Miller (1996) and Purpel (1989)

My own learning around the importance of engaging with the human-ness of people is quite clear here in this example also. The children are obviously comfortable and relaxed in their desire to share their learning with one another and with me, their teacher, and I believe that my own reactions to the students are similarly respectful and joyous. One of the students Nessa commented 'I feel free to question anything because my teacher will listen to you. I feel I can experiment with different ways of learning especially in maths and my teacher will accept it' (data archive 17/02/2004). I believe that this demonstrates their acceptance of how I acknowledge their wholeness, their need to be excited and joyous. Kris said, 'I feel that I am allowed to be creative because we aren't ignored and our ideas aren't put to waste' (data archive 17/02/2004). Fromm (1957) describes a commitment to productive work and loving relationships as being kernel to the quality of life people lead. For me, having fun and delighting in such moments would be a key element of productive work and loving relationships and how I address the human-ness of the students with whom I work and how they in turn experience the human-ness of their colleagues within the class and the students with whom they have established e-mail correspondence.

I know, drawing in the writings of Skinner (1968), Gagne (1987) and others, that there was a time in my teaching career where I would have expressed disapproval of such glee and mayhem in my classroom because I felt that such behaviour was inappropriate. I have now come to learn that such moments highlight the magic of what education encompasses and that they are indicative of how I come to engage

with the human-ness and the wholeness of my students. I have learned to empathise with my students as best I can, to acknowledge and empathise with their human-ness and to share moments of joy such as this with them as we engage in our mutual journey of learning. Noddings suggests: 'What I must do is to be totally and nonselectively present to the student - to each student - as he addresses me. The time interval may be brief but the encounter is total' (1984, p.180). The acknowledgement of my change in attitude from engaging in a technicist objectivist epistemology to working towards being 'non-selectively present' with my students reflects my ontological and epistemological change. This change has been gradual, as outlined in Chapters One and Two, and can be described in terms of a gradual epistemological shift from a technical rational perspective to one which embraces organic, personal and dynamic ways of coming to know. Purkey and Novak (1984, p.3) call this 'invitational education'; 'the process by which people are cordially summoned to realize their relatively boundless potential', where students and teachers feel a commitment to their school and where teachers care for their students so that students feel part of the school community. Miller (1996) reminds us that to be holistically authentic is to care, because 'if we see the connectedness to others, then inevitably we care for them as well' (1996, p.179).

My own ideas around connectedness and caring relationships have emerged against a background that is somewhat alien to such ideas. There have been strong trends in many countries including Ireland, in the direction of the commodification of education (see Apple 2004, Ball 2004, Brown 2002, and Lyotard 1986), where education serves the purpose of 'converting children into public property' (Rudolph 1965, p.17) and who will perform their parts properly in the 'great machine of the government of the state'. *A Nation at Risk,* the 1983 report on education in the United States subscribes to such thinking there. As Kane (1993) points out, ironically there is little or no reference to children and their educational growth, their intelligence or their sense of identity, in this report. The report discusses issues in education without addressing the wholeness of children in any great depth. Such commodification is permeating current Irish education discourses also as the conception of the individual child's educational rights are repudiated on the grounds of collective social and economic efficiency. For

example the NCCA's *Report on Curriculum Assessment and ICT in the Irish Context: A discussion document* (2004) states the following

> Additionally, it is claimed that in this *knowledge (-based) society*, the most valuable asset is investment in intangible human and social capital, and that the key factors in economic and social development are knowledge and creativity.
>
> (NCCA 2004, p.7)

The definition of children as human capital or 'human resources' (Greene 2003) infers that children are a public resource for the purposes of economic and political development while Valarassan-Toomey (1988) describes education here in Ireland as an industry or production line. As outlined in Chapters One and Two, I perceive that such approaches to learning can be a form of injustice against children whose learning strengths do not conform to the logical and mathematical intelligences that are revered by our education systems (see Gardner 1993). The values that are manifested in such thinking are in direct conflict with my ontological values around love and the recognition of the human-ness of people. I believe instead that education should be more akin to Palmer's ideas around knowledge generation that originates in compassion and love (1993). Palmer says:

> The goal of a knowledge arising from love is the reunification of our broken selves and worlds. A knowledge born of compassion aims not at exploiting and manipulating creation but at reconciling the world to itself. The mind motivated by compassion reaches out to know as the heart reaches out to love. Here, the act of knowing *is* an act of love…
>
> (Palmer 1993, p.8)

My ontological values are based on these ideas. My practice, as outlined in the examples above, is an attempt to live these values in my practice; to work in a manner that is attempting to be commensurate with my values. I believe that the example outlined above goes some way in articulating the communicable standards of living judgement to support my claim to knowledge and that I am demonstrating that I am working in the direction of my engagement with the human-ness of the people with whom I work.

> <u>Living epistemological critical standard of judgement No.2:</u> The living epistemological standard of judgement to test my claim that I know how and why I embrace dialogical and inclusional ways of knowing.

I will use the following two examples here in the form of a video clip and a digital slideshow to indicate how my epistemological values around dialogical and inclusional ways of knowing are being realised in my practice and are thus transformed into one of my living critical standards of judgement.

Example 1:

Fig. 6.4 A still from a video clip from a presentation about our *East/West* Project

The first example here is a video clip (see Fig. 6.4) where I have combined different aspects of the first year of our *East/West* project into one piece of video, in an attempt to capture the essence of the project. The video clip is a presentation I produced for a parents' information evening, as I tried to communicate the content of our project to the parents of the children with whom I work. The presentation outlines the aims of the *East/West* project and shows examples of the children's emails to one another, their poetry exchange and how they themselves are engaging in dialogical ways of knowing in their work also. Ciarán, one of the students involved in the project said, 'We can say what we think to other people in other countries' while Alan explained 'They [our partner class] get to know what

kind of sports we do like Gaelic [football] and we get to know about… cricket'
(Data archive 06/03/2003).The children are responding here to other living
members of the human race, not to a text-based lesson from a book. When asked
about their thinking around such projects, Rosy commented: 'It's really good to do
e-pal projects because (a) it's easy to write on the computer and (b) it's really good
fun to talk to people you don't know and see what their interests are' while Annie
said 'It's not only that I enjoy it [the project] but you get to make new friends and
they get to meet your friends' (Data archive 06/03/2003). Alan's comment was:
'You're learning but you don't know you are learning because you are on the
computer. You're having great fun…but you're learning while you are having fun'
(Data archive 06/03/2003). (Some examples of the children's work in this project
are available online at http://www.iol.ie/~bmullets/email)

The clip is the realisation of one of the living standards of judgement that I have
established such that I encourage dialogical and inclusional ways of knowing in
my work. The video clip shows how I as a teacher am trying to share with parents
the knowledge my students have generated while highlighting the fact that the
students feel that they can express themselves freely to their e-pals and have a
productive flow of dialogue with them. Brown (2002) reminds us of the
importance of including family in the learning process. Support for family learning
would 'help heal the divisions between home and school which have led so many
parents to relinquish all responsibility for their children's education to an ever
more inscrutable and managerially convoluted system' (2002, p.172). In this
project a connection between learning and family is made as I acknowledge
learning as a social phenomenon that reflects 'the deeply social nature of human
beings capable of knowing' (Wenger 1998, p.3).

Example 2:

My favourite photo

This picture was took on my uncles bird farm, it is of two of his turkeys.

My Achievement

- My achievement is learning how to overcome my fear of water. I was very afraid of being pulled underwater. I was afraid to swim because I thought I would sink.
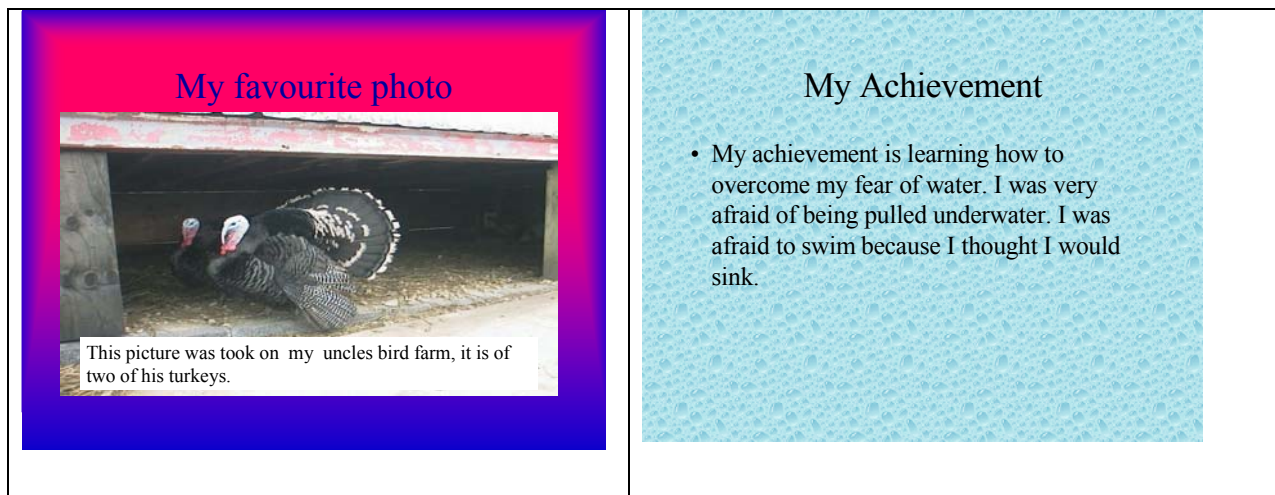
Fig. 6.5 An excerpt from a digital portfolio by children in Fifth Class

This second example draws on a programme of digital portfolios (see Fig. 6.5) that my class created. I devised a programme for my class, based on the ideas of Ni Mhurchú (2000), which involved building a portfolio about themselves based on the Social and Personal Health Education (SPHE) curriculum guidelines using PowerPoint and multimedia. The curriculum strands for SPHE outline the following key areas for teaching SPHE: (i) Myself, (ii) Myself and others and (iii) Myself and the wider world (see Ireland, Department of Education and Science 1999). The strands provided me with a general structure for the portfolios. Each of the children in the class, who were eleven years of age, worked on their own personal portfolio, building and adding to it gradually throughout the year. It allowed the students to draw on their own embodied knowledge and to utilise images, video clips, scanned images, sound clips and other forms of multimedia to build on their knowledge and create new representations of their learning in an attempt to allow them to come to realise their 'own true nature' (Miller 1996, p.9). While I suggested general headings for the project, such as 'My Family' or 'My Favourite Day', the content was chosen by each student and created by them. I believe that these portfolios show an ongoing learning process (Dewey 1938), where the learning is dynamic (Stoll *et al. 20*03), and where the students are building on and generating their own knowledge (Bentley 1998), drawing both on the traditional transmission models of learning and the dialogical and holistic approaches that I was now embracing.

Examining the video clip above, Shulman's (1999) ideas around dialogue as a means of learning appear to be pertinent. He suggests that learning can best occur when people become involved in a dual process whereby they articulate what they know, share it, modify it by consideration of other people's ideas, and then internalise their transformed knowledge. This, says Shulman (1999), is a dialectical process of knowledge generation. The process is evident from the children's comments which can be heard on these video clips. This is the practical realisation of these ideas because it serves to invite parents and members of the wider community to engage with and enhance our learning experiences.

While drawing on Shulman's ideas above I am also engaging with Michael Young's (1998) critical theory of learning here to assist my understanding of my own learning. Young (1998) talks about how learning is linked to the production of knowledge that is not bounded by institutional contexts and instead calls for learning as social participation where the social process underlies successful learning processes. I see my own desire to include members of the community on our learning journey as an example of Young's critical theory of learning and I see the children's digital portfolios as being 'not bounded by institutional contexts' as the children take their cameras and recorders out of the classroom. Bohm's (2004) image of dialogical ways of knowing as a stream of meaning flowing among and through us and between us is pertinent here also as one can nearly visualise the flow in the video clip as the children from both communities try surfing together in the ocean. The digital portfolios seem to carry the flow of learning from home, to leisure pursuits, to personal thoughts and back to traditional academic endeavour as the children create their story of learning. In Chapters Four and Five I have already explored the transformational processes of how my ontological values were being enacted in my practice and here, the sense of flow, the notion of ideas is re-patterned again and again as was seen in the fractal in Chapter Four. The generative transformative nature of such ideas and such values is further discussed in Chapter Seven, where I engage in ideas pertaining to the significance of my research.

These ideas are important in current discourses around education because frequently, despite the introduction of a new primary school curriculum in this

country (Ireland, Department of Education and Science 1999) that embraces heuristic approaches to learning, transmission models of teaching and technicist approaches to learning appear to continue be dominant (see Murphy 2004). My thinking, as I develop an epistemology of practice that incorporates holistic and dialogical relationships also embraces inclusionality. I am drawing on Whitehead's thinking (2005a) as he develops the notion of living educational theory such that it includes insights from the traditional disciplines of education and has emerged as an inclusional form of educational theorising. This approach to living educational theory has insights from both propositional and dialectical theorising. I believe that these inclusional approaches to education are being demonstrated in the projects my class undertake and also in the development of my epistemology of practice. The children in my class engage in traditional learning processes throughout their project: for example they learn grammar, spelling and punctuation. They also take on non-traditional forms of learning such as the dialogical processes that emerge when children become e-pals and go surfing in the Atlantic Ocean together. Both forms of learning can complement and enhance one another. As I develop my own living theory, I draw on the traditional forms of education theory to inform my learning, but I also draw on non-traditional, dialogical and holistic ways of learning as I engage in creative teaching processes and dialectical conversations with research colleagues and my tutor (see Section 2 of this chapter). Again, both epistemologies can complement one another as both dialectical and propositional processes can come together to form inclusional ways of knowing. I believe that the examples from my practice that are shown in the video clip and portfolio above provide evidence to support the living critical standard of judgement such that I am embracing dialogical and inclusional ways of knowing both.

Living epistemological critical standard of judgement   No.3:The living epistemological standard of judgement to test my claim that I know how and why I develop ways of working that nurtures the relationality of education to the natural world and to the world beyond the classroom.

The following three examples, which are accessible on the internet, draw on my epistemological values around nurturing the relationality of education to the natural, aesthetic and intellectual environments and are transformed into the living epistemological standards of judgement by which I am testing my claim to knowledge.

Example 1

Fig. 6.6 An extract from the web site the children made about the local landslide

I am showing in the first example a web site my class made while reporting on a landslide that occurred in the locality in September 2003. This example can be seen here: http://www.iol.ie/~bmullets/lanslide or as Appendix G (see Fig. 6.6). This mini-project took place in response to the devastation caused locally by a landslide. Because of the nature of the event, our project was not pre-planned or organised; it seemed to be an appropriate response to the devastation caused at that time. The class and I took a field trip to the site of the landslide and examined the damage that was done. We took photographs and witnessed the destruction. When we returned to the classroom, we talked about the scenes we had witnessed and discussed how the events had impacted on various members of the class and their families and neighbours. The children then sat down and wrote about their

experiences on the night of the landslide, in the form of web pages. We subsequently had an interesting experience when the project was uploaded to the internet, as we found ourselves being one of the few sources of information on the internet with details of the landslide. This was especially pertinent for people who had emigrated from the area and were living in places like the United States. We got many email messages from people who accessed the children's writing. The following is one such example:

> My name is Theresa M and I'm from Chicago. My dad, Martin is from A. I am a 3rd grade teacher (8 and 9 yr. olds) and wanted to show my students pictures of the horrible event last week. I was telling my students about the old graveyard, as my grandfather is buried there. I came across your website in my search for more photos of the landslide. I loved it!! Your stories and photos were amazing. My dad loved it, too! These first hand accounts will help my students understand what happened that night. Thank God no one was injured.
>
>   I want to thank you for the information you have provided. I also want to let you know that your website is wonderful! Your school projects sound really interesting. How lucky you all are to be able to have a nice school website! Thank you for allowing me the opportunity to read about all that is going on over there. I loved reading about all the local villages as I have been through those villages many times.   (E-mail dated 23/09/2003)

This, and the other messages we received were exciting because they showed the interest that children's writing and photographs could spark around the world, while at the same time demonstrating the importance and relevance and worth of their writing to the children.

Example 2:

The second example is one web page a student created from his response to the beauty of an icy morning from January 2001 (see Fig. 6.7).

Fig. 6.7 A photograph taken by a student on his way to school

This example includes the student's own photographs and a short piece of creative writing and can be accessed at http://www.inver.org/ceantar/kevinmorn.htm or as Appendix C. Kian, one of the students in my class, had taken the school digital camera home to take some photographs of some new born lambs on his farm. On his way to school the next morning, he was struck by the beauty of the icy dawn at the lakeside, and asked his mother to stop the car while he took some photographs (see Fig.6.7). As he came into the classroom, he asked for permission to do some writing, which he did. I believe his writing, which is still in its raw unedited state as it appears on the web site, captures what was for him a spiritual moment. Kian's own innate sense of wonder at the beauty he experienced can provide similar experiences for others as they read his account on the internet and share in his sense of awe.

Example 3

Fig. 6.8 A photograph from our *Working as a Historian* project

Working as a Historian was the chosen theme for the second year in our East West collaboration with our partner school in the United Kingdom (see above for details of the first year of the programme). I decided that our contribution would be in the form of a project involving stories and reminiscences from older members of the community. This project, entitled 'Working as a Historian' which can be seen and heard online at http://www.iol.ie/~bmullets/starai/ (see Fig. 6.8) is a collection of interviews my class did with members of the community about life and times in the past. Our project commenced with a brainstorming session around the themes which might be most suitable for our project as well as a discussion around who the most suitable candidates might be for it. The second stage of the project involved getting parental permission to take part in the project and to decide on interviewers and interviewees. The preparation here took the form of deciding what questions might be asked and what interview methods would be employed. The children were free to choose between informal conversations, videotaping, sound recording, pen and pencil note taking; whatever was most suitable for both themselves and their interviewee. As the children brought in their contributions to the project, some decided to edit their video and sound recordings themselves while others left the editing process to me. Many wrote reports on their interviews and when all the presentations were assembled, each child gave a presentation to the class on their interview and on what they had learned. These projects were

shared with our colleagues in the UK as a CD ROM and with many unknown others on the internet. I believe that this is another example from my practice which demonstrates the connectedness between education to the natural world beyond the classroom. I am thinking here of Orr's (1994, p.12) comment that 'all education is environmental education'. For example, when you log on to the 'Working as Historian' project web site above, you will hear or see the interviews the children did with members of the community. Listening to the young eager voices of my students interviewing the reminiscent older voices is for me a spiritual experience. The connection between past and present, between young and old, between local and wider communities, between inside the classroom and between human-ness and education are very apparent to me. Capra (1997) reminds us that in his holistic understanding, humans are not separate from the natural environment. The world is 'a network of phenomena that are fundamentally interconnected and interdependent…ecological awareness is spiritual in its deepest sense' (1997, p.7). I believe that these web pages can help to demonstrate how multimedia and the internet can help to draw the physical and spiritual together in a seamless manner (see Chapters Four and Five). I believe that it further enhances this sense of connectedness that my students received many e-mail messages from all over the world congratulating them on their work, thus further extending the web of connectedness. See Appendix H for some examples of these e-mails.

I believe that the examples above demonstrate how I have developed ways of working that nurture the relationality of education to natural and learning environments. They are the living expression of my ontological values around love as they are transformed into my epistemological values around the connections that can be nurtured between the community, both locally and afar, the environment and learning. Nakagawa (2000) reminds us that the term 'holistic' can often be interchanged with 'ecological' and that it focuses on 'the principle of interconnectedness of all beings in nature, life and the universe' (2000, p.80). These ideas help to form my living epistemological standards of judgement (Whitehead 2005a) to test the validity of my claim to educational knowledge.

I am committed to these values and their transformation as critical living standards of judgement because I am concerned about how fragmented people's lives and

particularly people's lives in education have become. I am drawn instead to Steiner's (1995) thinking around how the physical world is of a spiritual nature and that people cannot take apart their spiritual perceptions as they try to understand the world (see Kane 2002). I have a vision of education that draws on Palmer's ideas (1993, p.8) around 'the reunification of our broken selves and worlds' and this vision is deeply rooted in a spirituality of education (as outlined in Chapters Four and Five); in a mode of interconnectedness where people engage with one another and their environment in a holistic and respectful manner. I perceive that my living standards of judgement, in the form of my epistemological commitments to critical judgement, are being exemplified, to a certain extent at least, in my practice.

I have now outlined the living epistemological standards of judgement that I am using to test the validity of my critical claim to educational knowledge. I am claiming that I am developing an epistemology of practice that draws on dialogical, holistic and inclusional ways of knowing and which is exemplified in the relationships that I nurture with and for my class and is enacted in the projects we undertake. In Section 2 below, I will describe the personal and social validation processes that I have undertaken and that I continue to undertake in order to establish the validity of this claim.

(6.2) Section 2: Personal and Social Validation Processes
The procedures that I undertook in order to validate my claim to knowledge took the following formats: (1) Personal Validation which is a form of internal or self-validation, and (2) Social or External Validation which includes elements such as (i) peer-validation, (ii) academic validation and (iii) client-validation (McNiff *et al.* 2003). These processes will be outlined in the following section of this chapter.

(6.2.1.) (1) Personal Validation

As I engage with my own research, personal or self-validation has not only become necessary, it is also become kernel to all further forms of validation for me (see Cohen *et al.* 1990). As I progress through my research, I engage in Winter's dialectic critique (1996, p.13) and check continuously in a reflective manner that I

am doing what I am claiming to do; that I am developing an understanding of my practice and living in the direction of my values; that my ontological values are being transformed into living practices and have the potential to transform into critical living epistemological standards of judgement (McNiff 2005a). I am constantly checking that my work and my way of being with people is moving towards being more commensurate with my ontological values around love and holistic relationships. Self-validation, for me, is a quiet, reflective process that I write about in my reflective journal. The suggestion of Bullough and Pinnegar (2001) that the identity of the researcher and the values they hold are kernel to what the researcher does, resonates through my mind. I am aware that, for me, this stage of the validation process, though barely perceptible to an external observer, forms the basis for all my other processes of validation. Once I have engaged in personal validation, I have moved on to a newer level of my own learning such that I can now share my thinking with others.

While the account here tells of my current best understanding (McNiff 1993), I am aware that individual accounts and interpretations of truth are somewhat inadequate also. Distinct truths 'kept like beetles in boxes' (Wittgenstein 1953 cited in Midgely 1984, p.35) are of little value in any kind of social situation. Instead, I am drawing here on Habermas's (1987) criteria of social validity in terms of comprehensibility, truthfulness, sincerity and appropriateness to test my capacity to communicate my claim in a public forum. This is also reiterated in Lincoln and Guba's (1985) definition of validity as trustworthiness. As I make my claim to knowledge in this thesis, I am looking to my values to support this claim and I am demonstrating with evidence that my claim is meaningful, true, justified and sincere. For me, self-validation is part of the process of understanding my claim to knowledge and how it is based on my values. It is an important part of the validation process, but is insufficient unless the claim is shared with others as the sharing of knowledge (see Schostak 2003).

The following is an example, drawn from my research diary that illuminates my understanding of the texture of the relationship between self-validation and peer-validation. It was written after a difficult study meeting with one of my research colleagues P.

> June 2002
>
> Thoughts while driving home from a study meeting with my research colleague P.
>
> I know I am right! At least I think I know I am right. And yet I just cannot explain it to P. I just don't have the right words. Yet, she keeps asking, 'Why do you have to have your children involved in internet based communication projects? What motivates you to do this? I know no-one else who feels this compulsion. Why makes you work in this way?' I can show samples of children's work that demonstrates that this way of working is good. I can show how the children themselves think that internet based collaborative projects are stimulating. What more does she want? Surely the facts speak for themselves?

Reflecting on that period, I can still recall the angst and discomfort I experienced at that time. However, this was one critical moment among others throughout the research process, because it made me realise the importance of clarifying my claim to knowledge for myself and articulating my standards of judgement so that P. and others would understand it. The first tentative step was the clarification of my own thinking and the need for clear self-validation. Whitehead talks about the educational researcher who clarifies their embodied ontological values in the course of their emergence through the research process (2005a). He describes how the values that give meaning to our lives as researchers are clarified as they emerge in the practice of enquiry. As I examine my thinking in the extract from my diary above, I realise now that this was a key moment in my research. I needed to re-examine my work in a deeply critical manner, to engage with the literatures around my work, to develop my conceptual frameworks, to think about my values, to restate my claim to knowledge in light of my new learning and to check my self-validation processes. I was not engaging with Habermas's (1987) social criteria of validity as no-one, including myself, had a clear understanding around why I needed to engage in working with collaborative projects. Neither was I engaging adequately with Winter's (1996) criterion of reflexive critique as I had not yet engaged critically with ideas pertaining to my work practices. This particular incident, and the questions P. posed around 'Why do you do what you do?', proved to be kernel to my own learning as well as being critical to the validation process (see Chapters Two and Three).

This was one of many such painful, yet productive periods of critical questioning about my need for establishing clarity around my ontological values that I had during my research process. In the light of my learning since that time, I can see how neither my ontological values nor personal validation processes were adequately clarified in my own mind. In Chapter One, I have described the difficulties I had in articulating dialogical or inclusional ways of knowing in any way except through my work practices while my conscious thinking was located within a more technicist epistemology. The confusion was more alarming as I had approached this research assuming I knew 'the answers'. In the subsequent journey of my learning, I succeeded in clarifying my embodied ontological values in the course of their emergence in my work practices (see Whitehead 2005a) to such an extent that not only was I able to articulate my claim to knowledge for myself, but I was also able to share it with others (see Glenn 2003, 2004, 2004a and 2005). I am continuing the process here as I write this chapter because I am articulating the living standards of critical judgement that I am using to test my living theory, which have emerged from the clarification of my ontological values, with others (Whitehead 2005a). While I articulate my claim to knowledge, I am provisional in its articulation; I am aware that I may be mistaken (Polanyi 1958), and look forward to engaging with others and gaining further clarification as I live my educational life. In my research, I have learned that I was unable to articulate my ontological values or my claim to knowledge. I learned that the facts do not 'speak for themselves' (McNiff 2003), they need to be described, subjected to critical thinking and explained to people.

Schostak (2003, p.147) talks about how the researcher's claim has to be recognisable by others, in the 'stickiness, the inertia of the everyday realities being portrayed'. He continues that truth seems to be implicit in inter-subjective agreement. I have learned over a period of years, that for me 'stickiness' outlined here by Schostak must be initiated in rigorous self-validation procedures, in critical engagement with my ontological values and how they transform into the epistemologies that inform my way of being.

The learning that occurred for me, subsequent to the process of self-validation outlined above, enabled me to see this internal process as crucial to the overall validation process. For me now, it involves interrogating my ontological values and their articulation in my practice. It also involves the clarification of my values as I engage in a scholarly manner with the literatures around my work and with the data I collect in relation to my values. I am aware that I must then ensure that I have evidence to support my claim to knowledge (as provided in Section 1 of this chapter) and that I myself am satisfied that I am doing what I am claiming to do. The next stage of my personal validation procedure is the preparing to articulate, describe and explain my emergent theory of practice to others so that I can move on to the next stage of the validation of my claim to knowledge. This is what I have learned throughout these processes. I see this internal validation process as a period of preparation so as to enhance the texture of the relationship between self-validation and external validation; a preparation before I can externalise my claim and share it with others for their validation

McNiff (2002, p.108) reminds us that validation is not the end of the research but a step in the process of realisation: 'Validation is not the summative point in a programme that has led to closure, but a formative engagement in an experience which contains emergent property for the realisation of new potentialities'. Dialectical, reflexive, questioning and collaborative forms of enquiry will create what Winter (1996) calls a 'plural structure' not with conclusions but with questions and possibilities that are relevant (1996, p.23). After that period of internal validation outlined above and after each subsequent period, there followed also a phase of understanding, of new learning and a sense of taking one more step on the journey of my learning.

(6.2.2) (2) Social validation

My social validation process took the form of presenting my emergent theory to critical friends, colleagues and validation groups. It drew on Habermas's theory of communicative action (Habermas 1987) wherein the social criteria of comprehensibility, truth, sincerity and appropriateness formed the basis of the validation process.

(i) Peer validation: face to face and online

My research colleagues in the university, our tutor Jean and I formed a peer-validation group. Its purpose was to allow my colleagues and myself the opportunity to share our claims to knowledge, to critique our thinking and to validate our claims to knowledge. These meetings were occasions where we doctoral students met with our tutor, Jean, and where we discussed and argued out issues and claims around our research. Each participant had an equal voice and experienced a safety within the group as we expressed our beliefs in a supportive and non-threatening environment. Though at these meetings, colleagues were respectful of the thinking of another, they were also occasions where critique and animated discussion would arise. This worked well but frequently our meetings were too short and sometimes some of the issues around our research were not adequately addressed because our study weekends were over. Because many of us lived at great distances from one another, our time for validation and critical engagement was too short. As a result, I created an online private space for the group. In this web space, we were able to chat online, post messages to one another, to upload papers for scrutiny and discussion and to e-mail one another. We called our space the *Half-Baked Site* because it was a place for introducing emergent ideas in the safety of an enclosed and private setting. While the web space was not designed to replace our face-to-face dialogue, it did help to further our engagement with one another as we presented our work to one another for critical feedback.

This web space, which I designed to support my colleagues and me in our learning and to extend our validation processes, is inspired by my ontological values which inform how I live my life. I see it as a natural extension of who I am because it is a space wherein I engage with the human-ness of the people with whom I study and as a facility for establishing dialogical and inclusional ways of knowing. It also calls on the connections between learning and the world beyond the university classroom. Even though the creation of this web space was not intended specifically as a focus for my research, it is a natural expression for me of who I am and how I live my embodied values in my life.

The following example serves to demonstrate how my validation processes involved the input and critique of peers:

Excerpt from an e-mail to my research colleagues, 31/03/2002 :

In Jean's last letter she mentioned 'multiple epistemologies' and I fear the phrase has me slightly perplexed. Can anyone explain it to me please? Is it referring to multiple ways of knowing..is this connected to multiple intelligences? How might we tie this into to our research? Does self study have roots in multiple epistemologies?

I'd really appreciate any help here!

Thank you,
Máirín

Reply via e-mail, 01/04/2002:

It makes sense to see it as multiple theories of knowing or multiple knowledge bases....I am not sure though how they are tied in with Gardner per se....ok theories of knowing could be 'ways of knowing', I suppose, so perhaps we all understand the theories in different ways? Or we all interpret/apply the theories in ways that make sense to us....could that be it?

You've stirred up something!
Mary

and another reply via e-mail, 07/02/2002

Multiple intelligences did not strike me as a synonym for multiple epistemologies at first. Epistemology, I think, means a way of viewing knowledge. For example knowledge can be viewed as a box full of wisdom to be passed on, or as growing in wisdom by sharing /dialoguing with others, or as something which changes as we grow in it. All of these views (epistemological stances) can inform our choice of methodology.… But I think the multiple intelligences theory is about

knowledge from different perspectives. So if my strengths lie in one or more of the intelligences that could be my preferred stance on knowledge (or epistemology). But I think to have an epistemology; I must become consciously aware of my values or stance around knowledge … I have found that my self study also has connections to multiple epistemologies… I have to look at knowledge as the wisdom gained from years of practice (teacher craft) and the prior knowledge brought to every situation by the participants (the pupils and me). So in fact I use a multiple epistemological approach to my work and this will also have to be the case in my research.

Good thinking to ask such relevant questions

Caitriona

I think these e-mails illuminate the idea of support and critique in the research group. These examples are from the initial stages of our research and they demonstrate the grappling with ideas, the mutual respect and critical thinking that was that was present in our dialogue as I struggled to make my claim to knowledge.

Habermas (1972) describes an ideal speech situation where validity can be established through the process of critical discussion or argument. In an ideal speech situation all relevant evidence is presented to support the claim and where all participants have an equal opportunity to contribute to the conversation (see Carr and Kemmis 1986). I consider this to be the second phase of the validation process; where my understanding of my work is shared with others in an open and democratic manner. The 'ideal speech situation' illuminates for me the importance of dialogue and intersubjective agreement in the validation of a claim to knowledge. In the process of my own research, I am acknowledging the sense of the unattainable of the 'ideal' and suffice with what might be termed a 'pretty reasonable speech situation'. Each step of my research process, as my claims were argued, discussed and eventually validated, was the gradual unfolding of my knowledge process. Even now, as I seek the final validation of the academic community before presenting my claim to the general public, I am still in the process of listening to others and adjusting my claim to knowledge.

The following examples from our research group chat room exemplify my understanding of a 'pretty reasonable speech situation'. The language here is casual as is often the case in an online conversation between colleagues, but the content of the conversation demonstrates not only my own critical engagement through dialogue as I seek validation and the articulation of my personal validation process but that of my research colleagues also:

Máirín: (02/02/03)How do we know we're not wrong in our claims to knowledge? OK so we kinda know in our heads..but how do we prove it to others? How do we check it out? ...sorry this question has been rattling around in my head for the past few days..any ideas anyone?

Bernie: 6th Máirín, I don't know how we know we're not wrong, but I presume that if we're acting with integrity, with respect for others and allow others their opinions too, then we can be reasonably satisfied that we are doing the right thing. I don't think we can ever be certain that we're not wrong so I think we'll just have to be happy that our efforts are compatible with our values of honesty, integrity, justice etc.

Máirín: I suppose it's a bit like the 'slightly improved 'idea from Jean's book

Mary: think I agree with Bernie's interpretation. I know that if we were to nit pick we could also ask 'how do we know that what we mean by integrity and respect' is what others also mean by these values. This is tricky! But if we were to agonise to the extent that we did nothing in case we were wrong then there would be stasis. Everything we do is linked to action following reflection and reflection following the action....and if we have informed our conscience and looked at as many views as possible and still feel sure enough that we are right....what else is there? Other than get others to validate, of course. And how do we know then that we haven't picked people that we are sure agree with us?'

> (09/04/03)
>
> Mary: I'd be curious, Mairin, to see what people think about our teaching obligations....good idea for a discussion!
>
> Mairin: I wonder if we're all tweaking within our systems. You remember D. talked about Huberman and 'professional tinkering' within the curriculum..remember his ideas about the oval circuit being the curriculum and maybe the best we can do is professionally tinker with what's there?
>
> Mary: Good point Mairin. I think we are very fortunate to be in such a relatively free situation too! Tinkering with the curriculum would have you fired in Texas.
>
> Máirín: Maybe if people didn't do some professional tinkering we'd never move on in our thinking. How about this Mary? I'm reading Holt at the moment and he talks about walls in education and says if we don't push the walls out they will push us in. If we do not try to improve our life space with more freedom of choice and action then we will surely end up with less. I believe that this is what is happening with the new curriculum as well. We're given huge freedom but we don't use it. We're looking for the text books and the work books and so on.

The discussions above were part of the informal peer-validation process and part of the process of testing emergent ideas. A greater degree of clarity emerged from the discussion, the disagreement and the negotiation of inter-subjective agreement with the group. Webb (1996), drawing on Habermas's ideas, talks about speech as a form of communication, 'to test counter positions and to gain understanding' (1996, p.143). My fellow researchers and I were careful not to offer agreement simply because we were friends; it was more because we were mutually respectful of one another's research that it was incumbent on us to try to disagree and to critique. This idea is also echoed by McNiff *et al*. (2003) who reject collusion and consensus and instead emphasise the importance of difference and dialogue in validating a claim to knowledge. They remind us that in the validation process, researchers are not seeking consensus; they are seeking feedback about whether

their claim is justified or not. The importance of including others and allowing them an equal voice in the validation process cannot be overestimated.

Our group also engaged in formal validation sessions where we stated our claims to knowledge and then tested these claims with evidence from our practice. We frequently tape recorded these sessions so as to analyse them further if we so wished. A sample of one such occasion, where my claim to knowledge is validated by my peers is detailed in McNiff and Whitehead (2005b, p.163). My data archive contains these recordings as well as formal letters of validations from the group. The following is an example of such a letter where C. is formally validating my claim to knowledge:

(E-mail from C. 24/11/2004)

24/11/2004

Within the metaphor of a web of on going, relational ways of coming to know you have demonstrated a new understanding of knowledge acquisition.

You have contributed to new educational thinking in that you have positioned learning and knowledge generation as verbs, which form a process in which epistemology and knowledge (nouns) are the products. You have critically engaged with theories of knowledge.

You have contributed to new educational practice through engaging with the spirituality and creativity of your work with your pupils. I have witnessed how you have extended this beyond your classroom to the larger world in the East West project and in the local community. From your practice you have reached the understanding that knowledge cannot be reified. In your research, which you represent as a learning journey, your holistic perspectives have focused on an inclusive, relational epistemology. As you have engaged in your research your values have shifted.

(ii) Academic validation

As I write this thesis, I am aware that a powerful form of validation will be the acceptance of my claim to knowledge by the university. According to Shulman *et*

al. (2006), 'the highest professional degree in education deserves to be a doctorate' (2006, p.28). As I establish the prior validation processes, I am aware that I am a member of a group who receives outstanding support from their tutor, Jean. As Jean is a professor in the university, the rigour of her validation is both of institutional and academic status. However it is her continuous critical engagement with my knowledge claims and support for me in my research at our study meetings, via e-mail, postal mail and phone that makes both my learning situation and validation process unique.

The following example is an extract from an e-mail conversation between Jean and myself :

> Máirín: (Extract from draft paper entitled 'Fear around the fragmentation of human nature on the eve of the World Cup Final') 29/06/2002'
>
> Therefore, let us destabilise both quantitative and qualitative research paradigms from their lofty pedestals in social research and seriously question their value. Let us rejoice in our unpredictability as human beings and cheer for both Germany and Brazil, the teams who are a collection of unpredictable humans. They have proven that one cannot predict the outcome of a football tournament, even when one has accumulated all possible data. Let us also cheer for human nature in all its glory, as that will be the winner on the day.'

> Jean: (extract from e-mail) 30/06/2002
> …It's a real joy to hear how you are showing your own understanding of different forms of knowledge, and how you are able critically to engage with their underlying assumptions. I'd be careful not to diminish the worth of technical rational knowledge. I don't think you do, but I know that I used to have that tendency and I've had to learn to discipline it carefully. Technical rational knowledge plays a major part in scientific enquiry, though in my opinion scientific enquiry also needs to be located within the personal enquiries of scientists. 'A Beautiful Mind' is a good example. You do show how you have thought through

different forms of knowledge and how you feel they contribute to human flourishing…

Máirín: (extract from e-mail) 30/06/2002

Hello Jean

Thank you for your response. I appreciate your advice about technical rational knowledge, but I'm not sure that it has a role to play in human enquiry or worse still, predictions about human behaviour...though I have to concede that Brazil DID win!..

Jean: (extract from e-mail 01/07/2002

Hello, Máirín, technical rational knowledge definitely has a role to play in human inquiry. The libraries are full of it, and it influences decisions made by researchers about what methodologies to espouse. Whether it has a place in your own theories of human development is another matter and one for you to investigate. It's good being part of your investigation…

When I read this conversation now I am humbled and embarrassed by my naivety; at the time I was quite adamant that technical rational knowledge held no place in our lives. I had embarked on my professional career as a teacher embracing technical rational ways of knowing as being the *only* way of knowing. Through the course of my life, I gradually began to engage in practices that were not determined solely by technical rationality as explained in Chapters One and Two. Throughout the process of my research, I had discovered the unerring grip that technical rationality and objectivity has on our thinking in western culture (see Polanyi 1958) and in my enthusiasm for exploring personal and dialogical ways of knowing, I chose to abandon my support of technical rationality entirely. Jean thought otherwise. The quality of the response from Jean, however, was such that while she could not agree with my claim, she encouraged me to see for myself that technical rational knowledge does have a role in our society, even though I was reluctant to see this. She was living to her values that are grounded in a

commitment to the ideas that people can exercise their own inherent potentials for creativity and originality of mind and critical judgement (McNiff 2003a). She communicated this through her e-mail to me so that I could come to re-evaluate my own thinking and to restructure it accordingly.

I am reminded of McTaggart's (1997) emphasis on the importance of dialogue in the validation process: 'Validation in participatory action research can only be achieved if there are appropriate communicative structures in place throughout the research and action…' (1997, p.13). I believe that I have established appropriate communicative structures such that self-validation and peer validation processes can be achieved.

*(iii) Client-validation: Never ending validation processes*

Every day brings a new insight into my own learning and offers both new critique and new support to my claim to knowledge (see Glenn 2004). I am aware that I will probably never reach the stage of acquiring all possible knowledge about my work, simply because my new epistemology sees learning as a dialectical relational process that is organic and always in process. The following example illuminates this idea:

For two years, my class were involved in an e-mail communications project as part of an *East/West* initiative with a school in the United Kingdom (see the earlier sections of this chapter for more details). While this was a highly engaging project, frequently my class were frustrated with the quality and quantity of text they received from their partners in the UK. I explained that their partners were younger than they were and that time to access computers was also an issue for them. I asked my class to be patient and understanding and to make allowances for the quality of writing that they received in their email messages. This became a frequent conversation in the class. I believed I was engaging in Noddings' idea that '..to teach involves a giving of self and a receiving of others' (1984, p.113). I believed that my thinking was commensurate with my values around love and seeing the human-ness in other people and I perceived that I was encouraging my

class to see others in a similar manner and that I was exercising my educational influence in an invitational and non-coercive manner.

At that time I also had established a pattern of spending time re-drafting formal essays with the class. It usually took the form of the children writing a first draft, then having a conversation with me about their work and how they might improve on it, and then writing a second improved draft some days later. I usually began the editorial conversations with 'What do you think of your work yourself?' I perceived that this way of working was also value driven as it respected the children as valid knowledge creators. However, on one particular occasion, I spoke to Pauline about her essay. Pauline was an avid reader and an imaginative writer.

This particular essay was not as well written as her usual work and I suggested this to her. She was non-committal in her response but agreed to edit her work. I felt I had been fair to her and was respectful of her needs and supportive of her learning. Some days later I found the contrary to be true. I accidentally discovered a note Pauline had written to vent her feelings, a note written to me but not meant to be read by me (see Fig. 6.9).
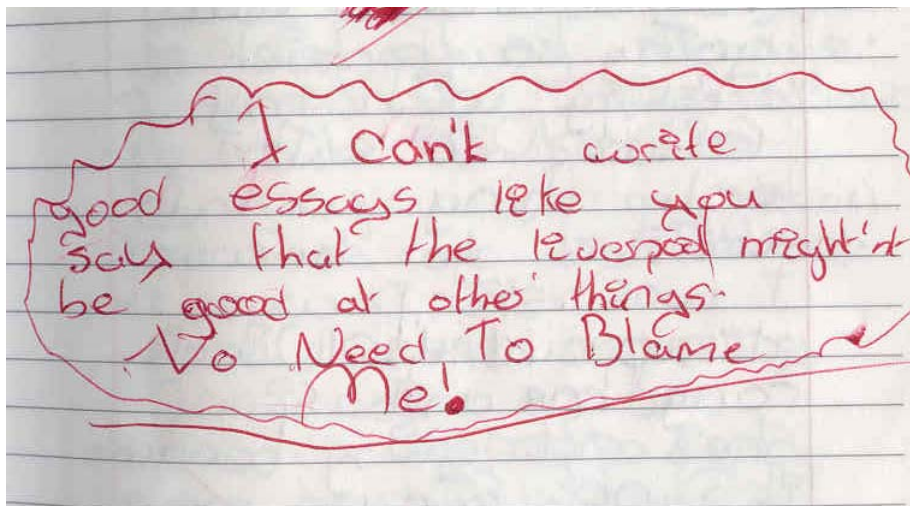
Fig. 6.9 A note written by Pauline

I perceive that the incoherence of the note demonstrates Pauline's anger with me. She was saying that I expected too much from her, that I asked her and other members of the class to be patient and understanding with the difficulties of other children but that I was not extending the same patience and understanding to her.

This incident exemplified how a certain amount of complacency had crept into my living theory process and around my validation processes and led me to become slipshod and careless. Because I value love and tried to establish caring relationships between the class and myself, and encouraged them also to do likewise, I felt that I had made an adequate effort. However, Pauline's note demonstrated otherwise. McNiff *et al.* (2003) describe 'client validation' as demonstrating that the people whom the researcher supports (in this case it was Pauline and her colleagues) agree that the researcher has acted in their interests and that the quality of their life is better as a result of the researcher's interventions. Pauline's note would provide evidence that vehemently disputes this was the case for my class and me. I learned that complacency can be obstructive to rigorous validation processes. I must thank Pauline for shaking me out of my complacency, for giving me reason for reflection and re-establishing the validity of my research as I claim to live my embodied values in my practice.

When I talked to Pauline about the note she had written, she had nearly forgotten writing it and explained that Thursdays were not the best day for essay writing for her as she had to visit her grandmother and therefore did not have as much time as she would have liked. As a result I made sure that essays were given for homework on other evenings. I subsequently created a suggestion-box for the class wherein they could express (anonymously if they so chose) reason for celebration and causes for dis-engagement in the class as well as suggestions for improvement (see Appendix I for a sample). While this did not ensure that I might not become complacent again, it did go some way to remind me to be ever vigilant in my attempts to live and understand my values in my practice. Freire (1973) has written about the importance of people being paralysed by an inability to be critical; being carried along in the wake of change. Frequently it is easier to become cocooned into thinking that such paralysis only happens to 'other' people and not to oneself. Sometimes it takes timely reminders like Pauline's note to awaken me to the uncomfortable realisation that complacency around my work is always close to hand.

The paradox of intellectual responsibility

Chomsky (2000) tells us that it is the intellectual responsibility of teachers to find out and tell the truth as best they can about things that matter. I believe that I have told what I consider to be true here and that I have exposed this truth to rigorous validation processes. I have produced evidence by showing its relationship to my critical living standards of judgement to support my living educational theory around what I see as dialogical and inclusional epistemologies in education.

Paradoxically, O'Donohue (2003) reminds us that the quality of words a person uses reveals the range and depth of a person's soul. When chosen with care, words not only describe what one is saying but suggest what cannot be said. Explanations that are beyond words, according to O'Donohue, are what make the soul rich; 'the inexpressible depth in us is our true treasure' (2003, p.55). I am hoping that I have told the truth here and demonstrated its validity in a manner that shows that I have chosen my words with care and that the inexpressible depth may be seen in my work practices and educative relationships.

To conclude

In this chapter, I have described and explained the processes I have undertaken to help to ensure that my claim to knowledge can be examined against a background of rigour, transparency, honesty and professionalism. I have attempted to communicate the validity of my research to the reader as I invite them to continue the meaning-making conversation with me in a process of sharing knowledge and generating understanding (O'Hanlon 2003). I am aware that as I submit my claim to knowledge to readers for validation purposes that I am not presenting a thesis that has proved a particular hypothesis, but has instead provided the reader 'with questions and possibilities intended to be relevant in various ways for different readers' (Winter 1996, p.23).

In the next chapter, I will discuss how I believe I am contributing to new practices and new thinking in my own contexts of primary education, which will give further social and theoretical validity to my own developing theories and practice. I will also explore issues pertaining to my educational influence (i) in my own learning, (ii) in the learning of others and (iii) in the education of social formations.

Chapter Seven: How do I contribute to new practices and theory and to the education of social formations? Examining how I show the significance and potentials of my work

I have learned that I changed my epistemological stance from a technicist perspective at the outset of my research, to my current perspective which is that I perceive how coming to know can be fluid and organic in nature (Bentley 1998) as well as being inclusive of more traditional forms of learning (Skinner 1978; Piaget 1972). I have developed my claim to knowledge through engaging in educational research that is grounded in my practice and my understanding of my practice. I am claiming that I am developing an epistemology of practice that draws on dialogical, holistic and inclusional ways of knowing and which is exemplified in the relationships that I nurture with and for my class and is enacted in the projects we undertake. In this chapter I will outline what I perceive to be the significance of my work and its potential implications for education. Whitehead (2005a) talks about his understanding of living educational theory such that people can offer explanations for their educational influence in their own learning, in the learning of others and in the education of social formations. Here I am offering explanations of my educational influences and these explanations form the basis for this chapter. I believe that I am contributing to new practices and new theory, and this claim could lend strength to the validity of my claim as outlined already in Chapter Six. This chapter will be organised into three sections as follows:

1. The potential significance of my learning in relation to myself in terms of

> (i)   my epistemological development
>
> (ii)   clarifying my ontological values in the research process
>
> (iii)   critical thinking
>
> (iv)   implications of my research for my praxis

2. The potential significance of my learning pertaining to the learning of others in terms of

> (i)   influencing the learning of children
>
> (ii)   influencing the learning of colleagues

3. The potential significance of my learning pertaining to the education of social formations.

I will produce examples to show how I am contributing to new pedagogical practices, which in turn have implications for how children learn. I will outline how I am contributing to professional learning, and I will produce examples of how teachers are developing new ways of understanding their practices and have the opportunity to try these new practices out for themselves. I believe that I am contributing to the education of the social formation (Whitehead 2005a) of the teaching profession, by offering teachers new ways of understanding curriculum and their relationships with children and one another and showing how their accounts have the potential to influence policy debates. I am attempting to fulfil my own hopes for a better society through education as I contribute to new theories and new practices.

(7.1) Section 1: The significance of my research in relation to my own learning
According to McNiff and Whitehead (2005b p.233), the significance of action research is 'in relation to its capacity to generate and test theory to improve learning in order to improve practice'. In this section, I will examine what I have learned in the course of my research and its significance for my own learning. Whitehead (2005a) explains how practitioner researchers explain their educational influence in their own learning in terms of the values and understandings that carry their hope for the future of humanity and their own. In the following section, I will outline how I perceive my learning in terms of my values and understandings and their social intent. I will address the significance of my learning in terms of (i) the emergence of my own epistemological development, (ii) how I have clarified my values in the process of my research, (iii) how I have become a critical thinker and (iv) how these have influenced my practice so that it has now become a form of praxis which has the potential of carrying my hopes for education and the future of humanity.

(i) My epistemological development

This thesis tells the story of how I am developing a new epistemology of practice. My emergent living educational theory is grounded in an epistemology of practice which is informed by my understanding that I know what I am doing in my practice and I know how I have come to practise in this way (Whitehead and McNiff 2006). I am claiming that I am developing an epistemology of practice that is grounded in dialogical, holistic and inclusional ways of knowing. I am experiencing this for myself as I theorise my practice (see Chapter Four). I perceive the interconnectedness of people and their environment as a locus that can enhance learning and I believe that people can develop their own learning potential and generate their own personal ways of knowing (Polanyi 1958). I believe that technology can enrich such interconnectedness and creativity. I can see that this new epistemology is significant not only for my own learning, but for others also. However, at the outset of my research programme, and drawing on the work of Skinner (1978) and other behaviourist thinkers, I believed that a technicist approach to teaching was not only the best but was the only way to teach and learn. I have now changed my epistemology and this change is not only what informs my research but also informs what I see as the life-enhancing process of learning. Yet, as described in Chapters One and Two, my work practices in the form of the projects that I was undertaking with my class were informed by different epistemological approaches. As I interrogated these 'different' approaches in my research, I began to recognise my own internal values around love and holistic approaches to education in them. As I experienced myself as a living contradiction (Whitehead 1989), and as my values were clarified in the process of my research (Whitehead 2005a), I realised that I experienced epistemological conflicts in my practice such that I could perceive a new form of epistemology emerging that was quite different from the epistemology that had informed my understanding of knowledge until then.

This epistemological change is located in how my thinking around knowledge has changed. Once, I used to engage in a Cartesian form of logic such that I perceived knowledge as being mainly external, reified, objectified and transferable (see Hocking *et al.* 2001). Now, I see that knowledge can be also created in the relationships that are created between people (Nakagawa 2000), in the flow of understanding that can occur between people and their environment (Steiner in

Kane 2002); I see that it can be of a tacit, personal nature (Polanyi 1958), that it can be fluid and dynamic (Bentley 1998), while at the same time being inclusive and still acknowledging the relevance of traditional ways of knowing (Gibson 2001).

(ii) Clarifying my values in the process of my research

I believe that I can track my epistemological development as it emerged from my ontological values, as they were being clarified in the research process. As outlined in Chapter Two, I gained some clarity around my values as I engaged in my living educational research. Whitehead talks about how the practitioner-researcher 'clarifies, in the course of their emergence, in the practice of educational enquiry, the embodied ontological values to which they hold themselves accountable in their professional practice' (2005a, p.1). I experienced much difficulty as I sought to gain clarity around my ontological values initially; I discovered that I was nearly inarticulate around both my work and my values. I was part of a system that Chomsky describes as 'a form of indoctrination, that works against independent thought in favour of obedience… that keep(s) people from asking questions that matter about important issues' (Chomsky 2000, p.24). As I gradually learned to shake off the shackles of my inability to express my values (see Chapters 1 and 2 for more detail), I began to articulate them in terms of compassion and care, such as outlined by Noddings (1992). I developed this thinking as I engaged with the writings of Martin Buber (1958) and Yoshida (2002). Yoshida (2002) says,

> In modern education, we have forgotten to perceive the child as a whole. We analyse the body, feelings and intelligence, and tend to think that each segment can be developed separately.
>
> (Yoshida 2002, p.133)

We need instead to develop an awareness to 'experience the child as a whole, the wholeness of the child' (Yoshida 2002, p.133). As I reflected on these ideas, I began to explore the idea that terms like 'care' and 'compassion' were somehow inadequate in capturing the essence of what I valued most in my educational relationships. I engaged with the writings of hooks (2003), where she talks about the role of love in education and highlights the importance of responding to the concerns of individual students in a flexible and creative manner. Like Palmer,

(1993, p. xxv) 'my quest for a holistic way of knowing [had to] be translated into practical ways to teach and to learn'. I realised that my ontological values pertained to love and productive relationships (Fromm 1979). I gained courage from hooks's writings as I began to acknowledge that love was an overarching value for me, wherein I located my other values of care, compassion, and the recognition of the human-ness of the person in a holistic manner.

The narrative of how I am gaining clarity around my values is always emergent, the story will never be quite complete (Winter 1996). However, the clarity I have gained as I have developed my living educational theory is of significance, because it links how my ontological values are expressed in the projects that I create with my class and how these are further linked to my vision of a good society, where people exist in a way that is mutually respectful of one another and of their environment. Raz (2001) describes how despite the abstract nature of a value, when it informs an action or a process, it shows that the process is worthwhile. Abstract concepts such as ontological values have little influence unless the concept is acted out in real life situations, although I am arguing in this thesis for the importance of developing an awareness of these values. I act out my ontological values with my class in our everyday engagement and in the projects we do. I perceive that this way of working enhances loving relationships and builds on the dialogue in which we engage with others and our empathy with the natural environment. McNiff (2000) explains that our understanding of the relationships that we develop as we understand ourselves 'in dynamic relation with one another rather than discrete objects existing in our own time and space', is kernel to a vision for developing a good social order (2000, p.214). My vision for a good social order, is located in the microcosm of the relationships I try to nurture with my class, is expressed in the relationships my class and I build with others locally and afar, and with the environment as we engage in various projects together. In these projects I encourage the class to engage with one another and with others involved in the project in a mutually respectful manner (Noddings 1992). Like Palmer (1998) I see how relationships people have with one another are key to their own lives and the lives of others. I see how mutually respectful relationships have the potential for helping to heal the ills that are pervading our current culture. Like Bohm (1980) I see how the way people have separated

themselves from their environment has had many destructive and negative results because people have lost their awareness of what they were doing. As Bohm says, 'we have to find a way that works' (2004, p.42). I am suggesting here that if educators work with their classes in a way that is mutually respectful, if they model respect and caring relationships with their class, then through generative transformative processes (McNiff and Whitehead 1992), those caring relationships may influence how we might 'find a way that works'. Webb (1996) describes Habermas's 'ideal speech situation' (wherein all participants can speak in a non-coercive manner) as a model for a rational society. He sees it as a blueprint for a just society. Similarly, I imagine, if, for example, people live their lives in a manner that is respectful of both themselves and others, then conflictual situations such as anti-social behaviour, gangland thuggery, the attacks on the elderly who live alone and many of the other ills that are symptomatic of modern life, might be diminished. At a global level, and at an ambitious level, if our world leaders chose to think about how they could act in a respectful manner towards others, world hunger, the threat of nuclear attack and war could be diminished.

(iii) Critical thinking

As I engaged with living educational theory (Whitehead 1989), I unearthed from a lifetime of much uncritical thinking (Apple 2004) and a near absence of reflective practice, a new understanding of my ontological and epistemological values. The move from thinking in an uncritical, complacent manner to engaging in critical thinking was significant for me because it led me to question the norms of my work and to query the norms of the system of which I was part. The 1991 OECD report on educational policy in Ireland (OECD 1991) refers specifically to how, in Ireland, the education system is exhibiting an over-dependence on transmission models of learning and perpetuating a system lacking in reflection and critical engagement (Conway 2002). In retrospect, I can see how I was a typical product of the system; I was unreflective and uncritical. Carr and Kemmis (1986) equate uncritical thinking in education with a form of oppression, and suggest, drawing on Marxist thinking, that critical thinking could 'emancipate humanity from political oppression and the ways of thinking which legitimated it' (1986, p.138). As I began to engage in the practice of living educational theory (Whitehead 1989), I also began to perceive my work and my role in the education system in a

more critical light (Carr and Kemmis 1986). I began to see that frequently education closes down learning for people, teachers and learners alike, and that part of that closing down process was embedded in the accepted norms of our culture. Apple (2004) calls for increased critical awareness among educators because he perceives educational institutions as one of the 'major mechanisms through which power is maintained' (2004, p vii). He describes how 'schools often act to distribute knowledge and values through both overt and hidden curriculum' and unconsciously educators allow values which are not their own to 'unconsciously flow through them' (Apple 2004, p.120). He also critiques the forms of thought inherent in many systems of education because they do not do justice to the complexity of human thinking, and he berates behaviourist approaches in education as being limiting and inaccurate. Carr and Kemmis (1986) echo Apple's ideas, as they suggest that educators are conformist in their thinking as they succumb to a system that offers a template approach to teaching and learning, and enmesh them in consumerist activities and encourage them to attain 'standards' that are perhaps themselves conformist.

My own critical awareness began with questions like 'How can I improve my practice?' and 'How do I improve my understanding of my practice?' and they helped to highlight the inadequacies I began to perceive not only in my work but also in the system of which I was part (see Chapters One and Two). As I came to experience myself as a living contradiction (Whitehead 1989), as I began to recognise the dissonance between my values around love and the recognition of the human-ness of people, and the expectations of our education system, I began to be able to think critically. I had developed a sense of unease around, what I perceived to be, the 'finish-the-textbook' approach to education in which I had engaged for over twenty years of my teaching life. From my own experience as a novice teacher, I had learned to equate good teaching with the completion of workbooks and this view now existed in my formative years as a teacher. As I gained confidence in my own ability, I developed a niggling sense of uncertainty around the usefulness of 'finish-the-textbook' and rote learning approaches to learning (Freire 1970). As I embarked on my current research programme, I learned that even though I still subscribed to technicist approaches to learning on many levels, I saw that I also was developing different approaches to learning in

other areas. I had been developing projects for my class that involved communications with other classes and utilised technology in the form of web page creation, e-mail communications and multimedia (see http://www.iol.ie/~bmullets/). I had begun to involve people from outside the school in my work and I began to explore the local environment as a regular part of my schoolwork. These new approaches to teaching and learning were what I now recognise as the initial stages of my research, how I began to develop my living educational theory; how I began to ask questions like 'How can I improve my practice?' (Whitehead 1989) and 'How can I understand my practice?' and were indicative of how I was developing critical awareness.

My learning to be able to think critically holds much significance for me. At a practical level, I developed a sense of professional adequacy and felt empowered to abandon workbooks as I so chose. I began to see how my blinkered vision had closed down possibilities for the learning of my students and for my own professional development. My practices, at that time, were not aimed at addressing the individual learning needs and strengths of my students as I now perceive to befit a professional educator (Lynch 1999). Instead, I was channelling my energies in developing 'one-size-fits-all' models of learning (Gardner 1993) which implied that every student should 'finish-the-textbook'. As my ability to think critically improved, I began to see how such practices diminished learning for students whose learning strengths were not of a logical-mathematical nature (Gardner 1993), and for whom rote-learning was anathema. I saw the injustice inherent in many aspects of transmission models of learning, of the perception of the child as an empty vessel waiting to be filled and of the lure of standardisation. Like Brown (2002, p.28), I saw the trend of perceiving educational development as 'the acquisition of arbitrarily pre-specified intellectual skills to serve putative vocational ends'. Brown (2002, p.28) continues: 'our obsession with measurability and its requirement for standardisation also limit rather than extend the scope for fruitful educational experiment…'. I became aware of the dissonance I experienced between my work practices and my ontological values around love and care. I perceived that children who are expected to conform to a standardised system, to sit meekly while knowledge is transferred into them, who are voiceless objects in a system that values them for their potential to improve an economy of

the future, are victims of an unjust system. Darder *et al.* (2003) explore ideas pertaining to Gramsci's (1971) thoughts on hegemony as the 'asymmetrical power relations and social arrangements that sustain the interest of the ruling class' (2003, p.13). As a result, Darder *et al.* suggest that teachers are challenged to 'recognize their responsibility to critique and transform those classroom conditions ties to hegemonic processes that perpetuate the economic and cultural marginalisation of subordinate groups'. I have learned to engage in critical thinking and this has been a significant learning for me as it has emerged in the process of my living educational research. I have learned to see differently like Polanyi: 'Having made a discovery, I shall never see the world again as before. My eyes have become different; I have made myself into a person seeing and thinking differently' (Polanyi 1958, p.143). As a result I have begun to understand my practice in terms of a holistic approach to learning, locating education in an 'epistemology of wholeness, context and interconnectedness' (Miller 1996, p.8).

At a theoretical level, I believe that the ideas developed by Bohm's ideas about a stream of understanding (2004) began to flow between my class and myself as we engaged in dialogical approaches to learning. I began to see learning as a dynamic, organic and fluid process (Bentley 1998) and continue to do still. The classroom became an 'integral, interactive part of reality, not a place apart' (Palmer 1993, p.35). I have learned from my engagement with my practice and with living educational theory that my emergent ontological values provide me with underpinning explanations and purposes, for education and for how I live my life. I express these living ontological values in my work and in the educational relationships I establish with and for people, as they become enacted in living practice (McNiff 2005a). I have not taken this learning lightly because I am aware of the serious implications of the communicative actions I have undertaken; I assume in acting communicatively that I must speak in ways that are comprehensible, truthful, sincere and appropriate for the context (Habermas 1987). I believe that I have spoken in this manner as I share my theory of practice with others and as I demonstrate academic rigour as outlined by Winter's (1989) criteria of reflexive critique, dialectical critique, risk, plural structure, multiple resources and theory practice transformation (see Chapter Six for more detail around demonstrating the validity of my theory of practice).

(iv) Implications of my research for my praxis

Praxis, according to Carr and Kemmis (1986, p.33) is 'informed action which, by reflection on its character and consequences, reflexively changes the 'knowledge-base' which informs it…praxis is 'doing-action' …it remakes the conditions of informed action and constantly reviews action and the knowledge which informs it'. I am drawn to this notion of praxis as an action that is taken as a result of reflection. The action is then reflected upon and this reflection then influences the original thinking that informed the action so that future actions may be altered accordingly. Further action may be modified in light of the new thinking. In praxis, 'thought and action (or theory and practice), are dialectically related. They are …in a process of interaction, which is a continual reconstruction of thought and action…' (Carr and Kemmis 1986, p.34). McNiff and Whitehead (2005) talk about the interaction between theory and practice too where practice and theory are interdependent and integrated. They are distinct but not discrete (McNiff and Whitehead 2005).

This sense of interaction between theory and practice is pertinent to my research in the following manner: As I examine the significance of my research in terms of my own learning, I see how my values and my ability to think critically have informed my learning (as outlined above). These new learnings come together and have been transformed into committed informed actions in living practice and are thus transformed into praxis. This, to me, is a holistic way of being as it draws on the interconnectedness of my values and my critical thoughts and merges them into one form of thinking that then influence my practice. I find that it is a seamless way of working; I inform my action in light of my values and in light of my emergent theory. Miller (1996) reminds us that values are derived from seeing and realising the interconnectedness of the world. As I engage in this dialectical process I am aware that my own human frailty (Arendt 1998), my own inability to live my values fully in my practice, causes disruption in the connecting flow between my theory, practice and values. Such is the nature of experiencing oneself as a living contradiction, as outlined by Whitehead (1989), but I perceive this too

to be part of the natural flow that connects human living with the thinking that people create around their lives; that connects practice and theory.

This cyclical notion of how theory can inform practice and how the practice can in turn generate new theory was one of the key areas of new learning for me. As outlined above, I was educated in and still work in what was prevalently a technicist system (see Conway 2002) that held theory and practice as separate entities; where the practitioners worked and the theorist theorised. Theorists would create a theory so as to assist with the problems of practitioners while the practitioners would supply the problems and test the theorists' theories. Zeichner (1995) explains: 'For the most part educational researchers ignore teachers and teachers ignore the researchers right back' (1995, p.154). Schön (1995) has described the practitioners as occupying the swampy lowlands of practice while the theorists occupy lofty high ground that may have little bearing on the reality of the lives of the practitioners. He denounces such systems and calls for a new epistemology that assumes that the practitioner can hold a store of tacit knowledge which can be realised as social practice (Schön 1995). McNiff takes this idea a step further and calls for the practitioner as theorist (see McNiff and Whitehead 2002) and teacher as theorist (McNiff and Whitehead 2005). Schön (1995) predicted that the epistemological battle that would ensue as a result of his call for a new epistemology would be a long slow process, in the form of 'a battle of snails'. I have learned that I am a practitioner and that I am also a theorist. I now see little conflict in these ideas as I live my life. I perceive them to be complementary: the theory informs practice and practice informs theory. I develop my learning journey in this way, while acknowledging the complexity of experiencing myself as a living contradiction at the same time. I am comfortable in the knowledge that I am a practitioner who can theorise while also being a theorist who engages in practice.

My new learning is in the form of the realisation that I am a theorist who engages in practice and a practitioner who is able to theorise my practice. I have found this to be an emancipatory life-affirming experience as I have developed a confidence around my ability to engage in critical thinking (Freire 1973), to learn to clarify my values in the course of my practice (Whitehead 2005a) and to develop a sense

of connectedness, spirituality and creativity in my work (Miller 1996). As I offer my living educational theory to others for scrutiny, I am also offering these explanations for my educational influence in my own learning.

(7. 2) Section 2: The potential significance of my research in relation to the learning of others

According to McNiff and Whitehead (2005b), one of the most significant aspects of one's research is in showing how the development of new epistemologies can influence the creation of new social orders. As I generate my theory of practice, I am aware that it is embedded in an epistemology which has been drawn from my practice that locates learning in dialogical, holistic and inclusional ways of knowing. This is a new epistemology for me and I have outlined its emergence in the course of my research. In this section of the chapter, I will discuss how this new epistemology has the potential to influence others and has the potential to influence the creation of new social orders. I will discuss the potential significance of my research in relation to (i) the learning of children and (ii) the learning of colleagues.

(i) Influencing the learning of children

My initial forays into developing creative ways of learning for children, as explained previously in Chapter Two, were inspired by the sense of injustice I experienced around how traditional technicist approaches often closed down learning for so many children (see Brown 2002; Freire 1973; hooks 2003). Gardner talks about how society has put linguistic and logical-mathematical intelligences 'on a pedestal' (1993, p.8) and is critical of the 'uniform school where there is a core curriculum, a set of facts everybody should know' (1993, p.6). As a teacher with over twenty years experience, I have seen how 'uniform schools' and 'core curriculum' and an over-emphasis on linguistic and logical-mathematical skills can close down learning opportunities for people. I began to try to create learning situations for my class, generally in the form of projects and frequently using technology to assist us, such that the children's different learning strengths and styles could be nurtured. I now know that I was making efforts to

adjust my work practices so that they were more commensurate with my values around engaging with the wholeness and human-ness of my students.

Fig. 7.1 Screenshot from the *Working as a Historian* project web site

Our *Working as a Historian* project (see Fig. 7.1) goes some way towards explaining my thinking. I believe that my living educational theory has significance for the learning of my students in terms of acknowledging them as potential knowledge creators in their own right. I would like to draw on extracts of our *Working as a Historian* project (which is available online at http://www.iol.ie/~bmullets/starai) to support this claim. As outlined in greater detail in Chapter Four and Six and in a later section of this chapter, this project was part of a collaboration between my class and a class in England. Our chosen topic for study was local history.

My opening thoughts around the project were that it was important that the children utilised their own learning strengths to create the project and that they would investigate topics that were of interest to themselves, not topics that I suggested. I also wanted the children to learn through their engagement with the people they interviewed, in a dialogical manner, and to share their learning and enthusiasm with the rest of the class in the form of class presentations. Our initial step was to brainstorm ideas around what topics we might investigate and whom we could interview (see Fig. 7.2).
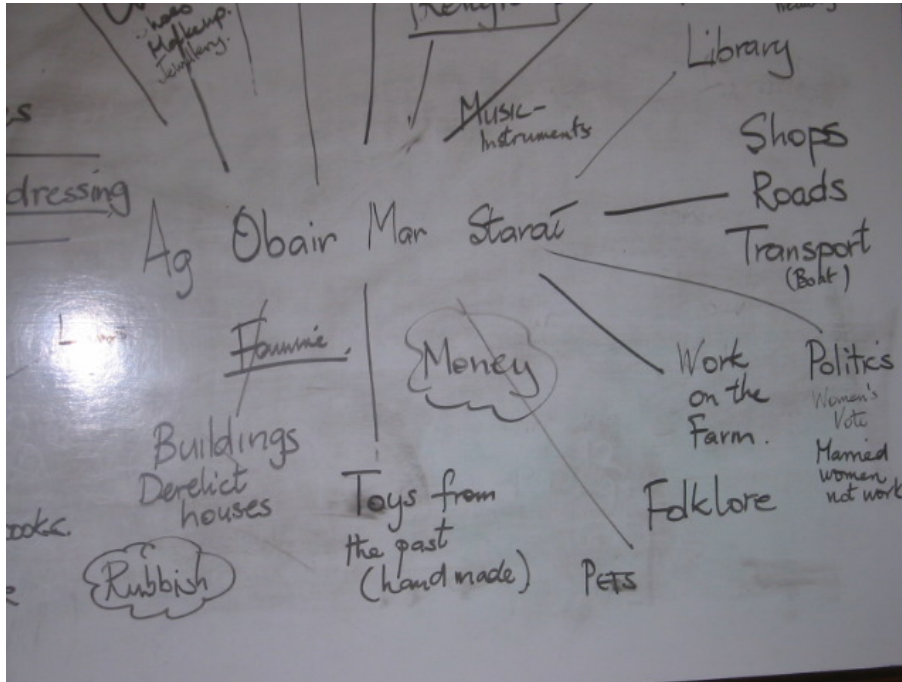
Fig. 7.2 Brainstorm session for *Working as a Historian* project

As we gained some insights into the themes that were emerging, I gave the class the opportunity to choose their own topic, their own method of interviewing and their own choice of working alone or in groups. Some children chose to use pen and paper interviews, some chose to video record, some chose to sound record, some chose to take photographs and many chose a mixture of approaches. One boy chose to research a historical topic of his own that interested him that was not strictly local history. Many wrote lengthy reports on their interviews, some wrote a few short lines, some used a digital projector to present their work to the others while others just told their story verbally (see Appendix J for an example).

At a practical level, I believe that the children took charge of their own knowledge generation process as they chose their topics and methods of learning. They explored learning in a creative manner as they engaged with their topics using their imaginations as they so chose. The children used the technology to help them to access and to articulate their work in their own way. Pauline, one of the students involved in the project, commented 'It's really good to interview people who are elderly. You learn lots from them' (Data archive 3/06/04). The class enjoyed interviewing the older people and talking to them and this was evident in the demeanour of the children as they spoke about the project and in the written

feedback I have from the class, in my data archives. At a theoretical level, I believe that I was engaging with the children in a manner that acknowledged their individuality (Gardner 1993) and their human-ness (Nakagawa 2000). They developed ways of learning that were commensurate with their own learning styles and strengths while engaging in creative and inclusive ways of knowing.

This way of working has potential for how the children might approach projects, problems and challenges in the future. They now know what it is like to generate their own knowledge and I believe that this may give them a confidence around their knowledge generating abilities in the future. Duncan made the comment, 'We do great stuff in this class and we are allowed to be creative. We do things like electronics, PE and communicating with others from different countries' (Data archive, 02/02/04). They may now have learned that sometimes using a video camera to record an event can make the event more real and make it easier to investigate, or that talking and listening to people is an interesting way of learning, or perhaps they may have learned that writing using a computer makes for a neater presentation. They may even have learned that transmission forms of teaching and learning are not the only way to learn and that there are other ways.

(ii) Influencing the learning of colleagues

Recently I was invited to teach a module about digital technology and its implications for learning at postgraduate level in a third level institution. At a meeting of the course tutors, one of the course leaders warned that in their written assignments, the participants, who were mainly teachers, ought not refer to themselves as 'I', except in rare cases when they could refer to themselves as 'the author'. I queried this practice, to which the course leader replied, 'The people who are doing our course are mainly teachers in the classroom; they are not experts'. As I pondered this reply, I wondered who, or where the expert was, if the teacher was not? I suspect that the course leader's reply above inferred that not only was the teacher not the expert, but their students also could be similarly disregarded.

McNiff and Whitehead (2005a), in their presentation to the British Educational Research Association 2005 Annual Conference problematise this issue. They point out that despite the literatures of the new scholarship (Boyer 1990) and teacher professional development in the United Kingdom (Stoll and Fink 1996), and the acceptance of the role of practitioner action research in informing good practice, it is generally accepted that action research may not generate quality theory. McNiff and Whitehead ask 'If teachers are recognised as researchers, why are they not also recognised as theorists?' (2005a, p.2). They remind us that since education enables people to control their own discourses, 'it must be informed by a model of democracy that promotes participative and inclusional values' (2005, p.2) that implies that all should be acknowledged as capable of generating knowledge and participating in debates.

My understanding of this debate is that the argument exists at two separate but interrelated levels. The first question arises as to why teachers' research is not considered as theory, and at the second level the question arises around what kind of knowledge is considered to be valid in the academy. These ideas can be rephrased in terms of Apple's critique of education as a site of conflict about 'whose knowledge is "official" and about who has the right to decide what is to be taught' (Apple 2004, p.vii). I perceive these dilemmas to have their roots in epistemological issues which can be located in questions such as 'How do people understand knowledge?', 'How do people share knowledge?', and 'Who is a valid knower?'

In undertaking my research I have developed an epistemology that is located in my new understanding that knowledge can be generated through dialogical and holistic ways of knowing. This is embedded in a belief that people can come to know while in respectful engagement with one another, in an open and creative manner and while in engagement with their environment. However, my epistemology is also inclusional in that I also acknowledge the relevance of traditional ways of knowing (see Whitehead 2005a). I see how both epistemologies can complement one another in an inclusional and holistic manner. Many of the projects that I have undertaken have embraced propositional epistemologies, such as those outlined by Skinner, Thorndike and other

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behaviourists (where I would teach in a traditional didactic manner and the children would engage in traditional learning practices such as reading and writing) alongside dialogical and creative epistemologies such as those outlined by Craft *et al.* (2001) (where, for example, the children would engage with members of the community to discover some new information, where they would submit their new learning in the form of a multimedia presentation). I have demonstrated this process with practical examples throughout this thesis.

My growing awareness of the importance of holistic and inclusional ways of knowing has had substantial influence on my learning. I have given an account of it in this thesis in the form of descriptions and explanations and I believe that I have demonstrated the rigour throughout and have referred specifically to the validity of my claim in Chapter Six (Winter 1996). I believe that this epistemology can have possibilities for learning for other people also. I am aware of the difficulties that exist in persuading people of the importance of dialogical, holistic and inclusional ways of knowing when their ontology is of a technical propositional perspective. The Cartesian legacy that holds mind and body as separate entities (see Hocking *et al.* 2001), that perceives knowledge as objective and reified, has been embedded in our culture to such an extent that it is assumed to be the norm. Polanyi is also aware of such difficulties and talks about how "once men [sic] have been made to realize the crippling mutilations imposed by an objectivist framework - once the veil of ambiguities covering up these mutilations has been definitively dissolved - many fresh minds will turn to the task of reinterpreting the world as it is' (Polanyi 1958, p.381).

Yet while acknowledging that such 'dissolving' may be a difficult task, and remembering my opening comments about my experience teaching in the third level institute, I bear in mind the relevance and sense of hope in Whitehead and McNiff's (2006) ideas around generative transformational change. They talk about how, by reproducing our stories as practitioner researchers; we are potentially contributing to new practices (Whitehead and McNiff 2006). They explain how they visualise the patterns of relationships as

> …an elegant fractal, where certain shapes re-create themselves in a constant process of unfolding. Each relationship in enfolded within the

other, and unfolds in its own unique way, with its own potentials for creating new relationships…

(Whitehead and McNiff 2006, p.55).

They see, as I do myself, the process of generative transformation in the way their ontological values have transformed into their real life practices. They also see how the stories I tell as a practitioner researcher can and must show transformational potential, if they are to be perceived as being about learning.

Therefore, as I share my ideas about theory and practice with others, the potential for growth and understanding lies at the heart of each sharing. At a theoretical level, I have already shared my thinking by presenting papers at such conferences as the British Education Research Association (BERA) conference in 2004 (Glenn 2004a), the Discourse, Power and Resistance (DPR) Conference in 2004 (Glenn 2004), the Educational Studies Association of Ireland (ESAI) conference in 2005 (Glenn 2005a), and the Critical Debates Seminar in the University of Limerick in 2003 (Glenn 2003), as well as in this thesis. As I presented my papers at these conferences, the bulk of my presentation was around theoretical issues. However, I was careful to demonstrate on each occasion that my living theory was drawn from my practice, that I was not expressing a propositional abstract theory, but instead I was developing a living educational theory, based on my practice. In each paper, I shared my emergent living educational theory; I explained how my embodied ontological values were emerging in the course of my research (Whitehead 2005a). I showed how my ontological values were transformed into the living epistemological standards of judgement by which I demonstrated the validity of my claim to knowledge. I attempted to show my academic rigour as outlined by Winter's (1989) criteria of reflexive critique, dialectical critique, risk, plural structure, multiple resources and theory practice transformation and in terms of acknowledging Habermas's (1987) criteria of social validity of comprehensibility, truth, rightness and authenticity in the communication of my knowledge claims. I supported these claims with evidence in the form of video-clips and web pages which were drawn from my work with my class.

For example in the paper I presented at the BERA conference in 2004, I spoke about how I perceived my ontological values:

O'Donoghue (2003) talks about the 'web of betweenness' that exists in the relationships between people and with their world. He describes this as the secret oxygen with which people sustain one another, but in order to preserve such a web, we must work at nurturing it and awakening it. I find O'Donoghue's insights helpful as I clarify my own embodied values in my work practices. The term 'web of betweenness' also holds significance for me not only because it evokes the intricate magical beauty of the natural world and how we can reflect this in our educative relationships in learning but because it also conjures up, for me, the educative relationships that can be nurtured through the world wide web and through technology in general.

(Glenn 2004a)

At BERA and at the other conferences at which I presented papers, I invited those who listened to me to develop new epistemologies that were dialogical and inclusional also. These presentations were offering an explanation of my potential educational influence in the learning of others as part of my living educational theory (Whitehead 2005b) as they chose whether to engage with my presentations and my ideas.

At a practical level, I have designed five modules of the Irish National Teachers' Organisation (INTO) Professional Development Unit's summer course programme for primary school teachers entitled 'Practical Projects with ICT' (INTO/ NCTE 2005, pp. 18-111), which over one thousand primary teachers did from 2003-5. While much of the text of the manual is of a practical nature, when writing it I chose to include elements of my living educational theory, which underpin my practice, in an attempt to invite others to engage with my thinking. For example, I state in one section of the manual that 'the project incorporates many aspects of the Primary Curriculum …and interweaves the use of technology so as to enhance the learning environment and to integrate and connect various strands of the curriculum' (INTO/NCTE 2005, p.32). In a section on electronic media, I talk about how the project can give students an opportunity to use multiple forms of media to express their learning, and how ' technology can enhance connections between the classroom and the wider community and how these connections can help to make learning a real and living process for children' (INTO/NCTE 2005, p.100). In these and other modules of the manual, I am showing how my living

theory informs my practice and how I am inviting other teachers to try such projects and to work in a similar manner. (See extracts from this manual in Appendix K).

I have also presented much of my project work with my class in a practical manner on the internet at http://www.iol.ie/~bmullets and http://www.inver.org. The TG4 television documentary entitled 'An Tuath Nua' filmed my class and interviewed them about our work also (see enclosed DVD – *An Tuath Nua*). On the television programme, the commentator makes the point that the school has received international acclaim for my work on its web site and for making connections with others around the world. He also points out that while technology is used to present the children's work, the inspiration for the projects themselves come frequently from the natural environment and away from the computer screen. He also says that even though our school is geographically isolated, the children have made links with others in a way that shows that they are not separate from the world but are in fact connected with it (An Tuath Nua 2003).

While these latter publications were focused more on my practical work, I strove to share my thinking, my theory of practice, as I offered descriptions and explanations around my work. In each of these instances of sharing my story with others, the potential for learning for others was inherent in the sharing process. Whitehead (2005a) draws on the work of Said (1994) to explain how the influence that one person attempts to exercise on another is mediated by the other's originality of mind and capacity for creative critique. As I invite others to listen to me, to engage with ideas at both a practical and theoretical level, I acknowledge the freedom of others to choose to engage with ideas or not. If they do decide to engage, I see the generative transformational potential of dialogical ways of knowing being re-patterned again and again as people continue to engage. Frequently, I do not know the nature of the responses people have to my work, but sometimes people are moved to respond to my work and to give me an idea of how my work has influenced them. The following extracts from e-mails from may help to explicate this thinking:

E-mail 31/01/2004 (an ICT consultant in primary schools in the UK who also works with OfSTED):

I like to demonstrate how creative ICT can be and I use your web pages to help show this because:

You use ICT for different kinds of purposes across a very varied curriculum

Your site is very readable - not glitzy but friendly and easy to navigate

Your enjoyment of using ICT comes across very plainly

You make everyday events (the hen writing) funny

Your site is an excellent example of how ICT helps you to learn.

E-mail 11/10/2005:

Hi everybody!

My name is C and I'm a student teacher in my final year in St. Pat's College, Drumcondra. I just visited your website this morning in our computers class and I really enjoyed reading about all of your work and updates, particularly from Mick on the expeditions one! I wish I could have been part of that! It sounds so cool!

Anyway, this is just a little note to say hi and to congratulate you and your teacher on such a fantastic site.

C :)

In both cases here the potential significance of my research is reflected in the thinking of a teacher educator and a student of teacher education, both of whom are unknown to me. As they examine my projects and engage with the ideas inherent in my work, I am unknowingly exercising potential influence on their learning and on the learning of those who listen to them. Just as a pond ripples when a stone is thrown in, the potential of my influence has rippling and unknown influences.

Whitehead and McNiff (2006) talk about the importance of enabling people to be independent, to be able to think for themselves and to make their own choices.

While I invite others to engage with my living theory and to explore my practice, I am aware as Whitehead and McNiff (2006) point out that people may choose to make decisions that are contrary to what I may wish for myself. I must be prepared also for this eventuality, even though I may not like it.

I have issued an invitation, through dissemination of my ideas at conferences, through professional development courses, through the presentation of my class's work on the internet, and through the television programme, to others involved in education, to engage with my ideas, to try these projects for themselves. I hope that I have sowed a potential seed of learning for them; that they may become critically aware; that they may come to view learning as a creative and inclusional process; that they may encourage mutually respectful relationships and be aware of the human-ness of others.

Snow (2001) and Hiebert, Gallimore and Stigler (2002) have called for the development of a knowledge base as a resource of the practical knowledge that teachers generate from their research. I believe that my research can make a contribution to such a knowledge base, not only from a practical aspect but also from a theoretical aspect.

(7.3) Section 3: My educational influence in the education of social formations
The notion of social formations is drawn from the works of philosophers such as Bourdieu (1990) and pertains to a group who work together with a specific intent. In most groups, there are rules, some of which are written and recognised; some of which are hidden and unspoken. McNiff (2005c) describes how these unspoken rules are not always recognised by the social formation: they are unspoken and have become normative. She explains how people in such social formations rarely question the rules either because they are unaware of them or unable to think critically about them. The idea of contributing to the education of social formations according to Whitehead (2005b, p.9), has to do with 'a social formation's learning to live values that carry hope for the future of humanity more fully in the rules and processes that govern its social organisation'. McNiff (2005c, p.17) explains how the term 'contributing to the education of social formations' suggests that people in social formations 'can be encouraged to begin to exercise

their capacity for critical engagement by reviewing what they are doing and deciding to do things differently and better'.

I can outline how the writings of McNiff and Whitehead have contributed to my learning, how I have learned to think critically, to reflect on my practice, to allow my values to be clarified in the course of my research (Whitehead 2005). I can state how many of my unwritten and written rules, both at a personal level and at an institutional level, have been changed as I attempt to give life to my values in my practice.

I need now to describe and explain the potential significance of my learning on the education of social formations in my own context. I will focus in particular on curriculum and how my living educational theory might contribute to the education of social formations in terms of curriculum. I will refer specifically to the thinking of Michael F. D. Young (1998) to support my thinking in this section.

Curriculum: Influencing some interpretations of curriculum as I make a contribution to the education of social formations

Curriculum is frequently perceived in terms of being the rulebook, a delivery system (Carr and Kemmis 1986), or a timetable for teachers (see Primary School Curriculum, Introduction, Ireland, Department of Education and Science, 1999, pp.67-70). Greene (1971, p.21) talks about the dominant interpretation of curriculum as 'a structure of socially prescribed knowledge external to the knower, there to be mastered'. As I take steps to share my theory and practice with those who are involved in curriculum implementation, I perceive that a potential exists in my work for looking at curriculum differently; for querying the traditional transmission models of learning and for querying the traditional interpretations of curriculum implementation. This basic idea lies in how I work with my class and in my interpretation of curriculum, but I perceive its potential in how this idea can be transformed through generative transformational processes (McNiff 2005) into making a justifiable contribution to the education of social formations. In the current model of implementing the Primary School Curriculum, schools are invited to develop their own curriculum plans and to work to their own strengths. The

purpose of the Primary Curriculum Support Programme (PCSP 2005) is to complement the principles of the Primary School Curriculum (1999), through the:

> promotion of ownership of the curriculum by schools so that each child's educational experience is enriching, meaningful and relevant to his or her life
>
> adoption of a partnership approach to planning the support programme at national, regional and local level …
>
> encouragement for the development of school clusters and networks towards sharing best practice and developing learning communities…

<div align="center">

PCSP 2005 (online at http://www.curaclam.net)

</div>

It is clear therefore that educators are encouraged to develop their own programmes for their own classes, to adopt diverse learning strategies and to harness their own teaching strengths. Yet, according to Murphy (2004) few teachers are accepting this challenge. I know from my own attendance at professional development training seminars that many teachers still want to purchase the textbook so as to 'adequately' address how they transmit knowledge to their students. They seem to prefer to perpetuate the model of knowledge transmission (Murphy 2004) that has been in existence for hundreds of years. My intuitive understanding is that this appears to be happening for two reasons mainly: first, teachers do not have the confidence in their ability to theorise and develop their own school or class planning and second, it is sometimes easier to take a template and follow a tried and tested model than to create a whole new learning programme (Murphy 2004). In my understanding, this is an inadequate response to what appears to be a creative and dynamic form of curriculum although I am aware that many teachers are persuaded to believe the dominant stories from the literature that they are not capable of theorising (see McNiff and Whitehead 2005a). It appears that educators are being handed the golden egg of potential creativity and flexibility and autonomy, but they are rejecting it in favour of a mass-produced plastic egg in the form of the templates for teaching that Carr and Kemmis talk about (1986). I hope that as I share my living educational theory with others that it might encourage them to re-interpret curriculum as being fluid and dynamic.

I have already outlined in Chapter Two how curriculum can be perceived as a preserver of technical rational knowledge. In Ireland, educators have been undertaking the implementation of a new curriculum, the Primary School Curriculum Ireland, Department of Education and Science, 1999), and I have already outlined how I see its ideas as being commensurate with my values around the recognition of the human-ness of the children with whom I work and the connections between learning and the natural and human environments outside the school. It recognises the fluidity of the 'learning process that is developmental in nature' (1999, p.8) and that 'individual children learn in different ways' (1999, p.10). However, there is a growing sense of unease around the implementation of the curriculum and the Irish National Teachers' Organisation suggestion that inadequate funding, inequitable pupil teacher ratios, inadequate professional development and curriculum overload are key features of this sense of unease (see Carr 2003). My own belief is that while such arguments are valid, the chief source of the sense of unease among teachers pertains to how people view knowledge and how knowledge is acquired; in other words, the interpretation of curriculum in Ireland has become a location for a conflict of epistemologies.

The recent evaluation by the Inspectorate at the Department of Education and Science (Ireland, Department of Education and Science 2005) on the implementation of the new curriculum appears to support my thinking as it reports how teachers continue to depend to a large extent on textbooks, teaching styles tend to be of a didactic nature and there is little emphasis on higher order thinking skills or creativity. Despite the laudable rhetoric of the curriculum guidelines, this report implies that traditional technicist epistemologies continue to inform how teachers teach and their understanding of curriculum.

I have developed my own understanding of curriculum as I theorise my practice and, from the writings of Stenhouse (1975), Elliott (1998) and Young (1998) and others, and I perceive curriculum as being organic, emergent and alive; a creative conversation between the teacher, the student and their context. I believe that it is here, in my interpretation of curriculum, that the greatest potential for making a

contribution to the education of social formations lies. I see how a dilemma arises between a perception of knowledge as a reified transmissible object and a perception of knowledge as existing in the flow of understanding that exists through dialogue. I believe that my emergent claim to knowledge has the potential to enable people to question the accepted norms of curriculum and their own thinking, to think critically about what is done in schools, to question why teachers engage in such practices and to establish new understandings of curriculum such that curriculum can be viewed as a creative encounter that embraces dialogical, holistic and inclusional ways of knowing.

Young's models of 'curriculum as practice' and 'curriculum as fact'

The writings of M.F.D. Young (1998) are helpful here. Young describes two distinct interpretations of curriculum: the 'curriculum as practice' and the 'curriculum as fact'. He perceives 'curriculum as fact' as a given, it is neither for understanding nor for changing. He describes how with regard to the 'curriculum as fact' much research describes curriculum as a topic and as an external reality; the language of cause and effect are applied to it. He explains that in the view of 'curriculum as fact', knowledge is external to the knower, and is embodied in text books and syllabi, that teaching is understood to be the transfer of knowledge from the teacher to the pupil, which has significant implications for students who are considered not to be 'academic'. Young also explains the power relations between teachers and students as exacerbated by the notion of 'curriculum as fact' and outlines how educators who subscribe to 'curriculum as fact' do not become aware of the possibility of change or gaining understanding of their own practice.

From a different understanding of curriculum, Young (1998) describes the 'curriculum as practice' as assuming that knowledge is produced by people acting collectively and teachers' practice is kernel in providing critique of prevailing views. The 'curriculum as practice' is not separate from the practical activities of the teacher. Young is critical of both interpretations of curriculum; 'curriculum as fact' because of its dehumanising assumptions and 'curriculum as practice' because 'it denies its external reality and over-emphasizes the subjective intentions and actions of the teachers and pupils as if they were not always acting on a curriculum that is in part external to and preceding them' (Young 1998, p.24). He

suggests that the concept of 'curriculum as practice' is misleading because it locates the possibility for curriculum change in the interactions of teachers and students and gives teachers a 'spurious sense of their own power' (1998, p.24). Young is particularly critical of the notion of curriculum as a site for the collaborative production of history (as opposed to the transmission of historical facts) and suggests that such possibilities may be only realised 'in theory'. He concludes the chapter by stating that a theory that can provide for the possibilities of curriculum change does not emerge from either perception. (While I am critiquing here some of Young's ideas, I also agree with other aspects of his thinking. For example, I agree with Young (1998) when he talks about how learning is linked to the production of knowledge that is not bounded by institutional contexts and instead calls for learning as social participation where the social process underlies successful learning processes. I see my own desire to include members of the community on our learning journey as grounded in my understanding of Young's critical theory of learning.)

My question here is around why Young (1998) feels compelled to choose either 'curriculum as practice' or 'curriculum as fact'? It is my belief that opportunities might arise for real curriculum change if one took an inclusive approach to interpreting curriculum; this would involve including the best aspects of 'curriculum as practice' while acknowledging the many positive aspects of 'curriculum as fact'. My own understanding of curriculum embraces many aspects of both of Young's interpretations. Drawing on this understanding and on the writings of Elliott (1998) and Stenhouse (1975), I see it as a creative conversation between the teacher, the students, and their context while acknowledging the relevance of the many important aspects of the traditional interpretations of curriculum.

I am perplexed by Young's derisive attack on the idea of 'curriculum as practice' with particular reference to his condemnation of the collaborative possibilities embedded in the teaching of history. For centuries, teachers' understanding of the past has tended towards a monistic (Berlin 1998), mono-cultural and mono-ethnic interpretation and our teaching of history could be interpreted as re-enforcing that monistic view. In Chapter Four, I have outlined in greater detail my own

experiences of attempting to negotiate understanding around the Great Famine here in Ireland with our partner school in the United Kingdom, as part of our *East/West Project.* My partner teacher in the UK and myself had planned to share some of our History textbooks, but I found that the texts presented the role of the English at the time of the Famine in such a bad light that I could not present the textbooks to children from England. As I clarified in Chapter Four, my partner in the UK and I decided to terminate the sharing of textbooks, not because we condoned the injustice inherent in the Great Famine, but because of the lack of respect and understanding of each others' culture that emanated from the texts. Our collaboration had been aimed toward gaining intercultural insight and understanding but the tone of the textbooks was such that gaining insight and understanding would prove to be difficult.

My learning here was such that even though I had been teaching history for many years, I had never seriously questioned the underpinning messages that were inherent in the textbooks. I had, as Young points out, been thinking 'of teaching as the transmission of historical or scientific knowledge' (1998, p.24). Young is supportive of transmission models of teaching in the teaching of history and science and decries a collaborative approach. Yet, in my case here, my own awareness of the underlying messages in the transmission of knowledge would have remained dormant had I not undertaken a collaborative approach to the teaching of history. As outlined in Chapter Four, Veenema and Gardner (1996) describe the traditional textbook approach to the teaching of history in terms of one single, authoritative view that is dependent on the author's perspective and that in most battles there is a 'right' side and a 'wrong' side. I have learned that I agree with Veenema and Gardner, but I had to experience a collaborative project with a school from the 'wrong' side for me to see this. My learning here provides the basis for questioning Young's (1998) critique of collaborative approaches to the teaching of history.

Making a contribution to the education of social formations
I will further critique Young's ideas as I describe how I believe that my emergent living theory of practice has already gone some way in making a contribution to the education of social formations.

As outlined in Chapter Four, my colleague in the UK and I continued on our collaborative programme, despite our shaky start with the Famine project, described previously. We continued on to create projects on local history; my colleague made a video about a local industry that was now defunct and my class made a website using interviews with older members of the community to get a snapshot of life in the past. We called it *Working as a Historian* (see http://www.iol.ie/~bmullets/starai), a project to which I have referred previously. I believe that this project is a good example of how both 'curriculum as practice' and 'curriculum as fact' approaches can be employed together, as traditional and dialogical approaches come together. I also perceive that particularly in the teaching of history, it is important to engage in practices that will diminish monistic views (see Berlin 1998) and instead give eclectic and multiple perspectives of events in the past. Again I perceive that this project goes some way in achieving these aims as it engages in collaborative and dialogical approaches while being inclusive of traditional didactic methodologies. I perceive that a close connection can be traced between my own embodied values around dialogical ways of knowing and how they are enacted through generative transformational processes (McNiff *et al.* 2003) in my work in class and are transformed yet again as other educators engage with my work practices when they explore my ideas as presented on the web for themselves.

Some of the implementation of the new Primary School Curriculum is in the form of seminars, whereby curriculum consultants provide input on the key elements of each of the discrete curriculum subjects to groups of teachers. My class's project above, *Working as a Historian* is used as an exemplar at these seminars. It is used to demonstrate how collaborative project work in history within a community can provide a rich and creative learning experience for children. In other words, the Primary Curriculum Support Programme (PCSP), whose purpose is to mediate the Primary School Curriculum for teachers, not only see that my interpretation of curriculum is acceptable, they suggest it as model for others to pursue (see PCSP 2005a, p.10).

I am also making a contribution to the forthcoming 'Framework for ICT in Curriculum and Assessment' (NCCA, forthcoming) in conjunction with the National Council for Curriculum and Assessment (NCCA). NCCA are the statutory body that advise the Minister for Education and Science on curriculum and assessment and are currently developing the 'Framework for ICT in Curriculum and Assessment' to guide and support schools in planning for the integration of ICT across the curriculum. While my contribution is in the form of some exemplars from my practice (see http://www.iol.ie/~bmullets/community), I provide descriptions and explanations for my practice thus:

> The purpose of the project was to develop our sense of community and to strengthen links between the children, the community and the school. It also provided children with an opportunity to engage in dialogue with people from their community and to engage in depth with the various aspects of the professions we encountered.

and

> This project was worthwhile and meaningful for both the class and myself. The children had an opportunity to get to know members of the community while learning about their work in a natural, dialogical way at the same time. They were wildly enthusiastic about their work and looked forward to each interview. They listened very carefully to the speakers and had wonderful conversations with them.
>
> (NCCA, forthcoming)

These exemplars are of a practical nature but my descriptions and explanations refer specifically to my emergent living educational theory of practice. I believe that it is significant that my work is already being integrated by PCSP to demonstrate examples of good practice because through the support of PCSP, they are confirming that they concur that there are ways in which teachers might interact with learning in a fluid, dynamic, dialogical and inclusional manner. While these are small steps towards influencing about educational change, they are being mooted in areas of curriculum implementation. As Whitehead points out, making a contribution to the education of social formations has to do with 'learning to live values that carry hope for the future of humanity more fully in the rules and processes that govern its social organisation' (Whitehead 2005a, p.8). I perceive that I am making a contribution to the education of the social formations of the teaching profession in terms of developing alternative interpretations of

curriculum, in terms of encouraging people to engage in new forms of practice and in new forms of theory. I believe that I am beginning to sow seeds that may lead people to exercise their capacity for critical engagement as I share my living educational theory and my practice with them. These seeds are small, but given the right conditions for growth, they may generate the potential for transformation and growth (McNiff 2005), so that one day people will recognise the importance of developing caring relationships in education that support dialogical and inclusional ways of knowing.

Legitimation processes

As I present my claim to knowledge to the University of Limerick, in the form of this thesis, I am taking a step in the process of legitimating my living theory of practice. I am seeking acceptance of my thinking in the public sphere (see McNiff and Whitehead 2005). While I am aware that my input into how I have developed and adhered to strict validation processes (see Chapter Six) may influence the validity of my research, I am equally aware that I have little influence over how my research might be legitimated. I believe that I have worked towards having my work legitimated in both the fields of practice and theory as I have submitted my thinking to others in the form of presentations at educational conferences and in various fields of professional development (as outlined earlier). These papers and presentations were the first stage of my legitimation process and I am now moving into a second phase of legitimation as I submit my thesis to the academy for approval. The forms of theory that have generally been legitimated by the academy in the past have been of a propositional nature. As my emergent theory is of a living form, then like Schön (1995), I too seek a new epistemology and delight in the knowledge that the university is open to fluid, dynamic, personal and social ways of coming to know.

In conclusion

As I reach the conclusion of this thesis, I am reminded of Winter's (1996) acknowledgement that the writing of research reports is an attempt 'to do justice to the always frustrating relationship between the linear sequence of words on a page, the infinite complexities of experience, and the desire to elucidate a wider significance from particular events' (1996, p.25). I have tried to circumvent the

inadequacy of this 'frustrating relationship' by using live evidence in the form of web pages and the presentation of my work in digital format to support my claim to knowledge. I am also aware that Zuber-Skerrit is critical of action research techniques that can be 'accused of being too minimal to be valid or too elaborate to be feasible' (1996, p.17). I am hopeful that my research will not be considered to be too minimal because it has been undertaken over a considerable number of years and demonstrates critical engagement with the literature. I am hopeful that my research will not be considered to be too elaborate because it is based on my everyday practice as a regular classroom teacher, and teaching by its nature can not be over elaborate. I prefer instead, like Senge (1990), to consider school in particular and education in general, as a living evolving organism and change as organic. I am hopeful therefore that my research will influence change in an organic and dynamic manner.

I have reached the end of the first cycle of my research process. I have gained a considerable amount of insight into questions of the form 'How can I understand my practice?' I am now ready to begin my next cycle as I ask questions like 'How can I improve my practice?'

This is an exciting time to be a teacher researcher. I, and, I imagine, other practitioners like me, know that the practical knowledge that we have gathered during our years of teaching is of importance. Snow (2001) has called for a resource bank of teacher knowledge to be created so that other practitioners may tap into it and gain from the experiences of others. I believe that I am making a practical contribution to such a resource bank. It is invigorating to think that other practitioners might learn from my experiences and transform them in such a way that are of use to them. It is equally exciting now that my story of practice as it is narrated in the form of my living educational theory is also being submitted for legitimation in the university. My living educational theory, which has been drawn from my practice, is being put forward for legitimation as I present this thesis for approval to the academy and, provided it is accepted, it, too, will become part of the new resource bank of teacher knowledge as called for by Snow (2001). It is exciting to be part of a movement and part of a university that is beginning to

reconceptualise practice as a source of theory and theory as a form of creative practice.

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Appendix A: Travel Buddy web page

From: ~~~~~ N.S.

To: St. ~~~~~~ School, Mackay, Australia.

Subject: email from Ireland

Date: Wednesday, March 18th.

My name is I. I am eight years old.I live in P.and I am in First Class. In the morning I see the sea I put on my clothes. And my Daddy brings me in the car . I see My best friend Sarah's house is on the way . I go to Inver N.S. At eight the morning I get up. I see cousins house .Her name is Edel. I can see the church and some times I see the lifeboat in the water .I also see my neigbours. The county is Mayo in Ireland .

From Mackay to ~~~~~

Subject: Grade One E-Mail

Date: Thursday, March 26, 1998 12:03 PM

Hello friends!

We are in Grade One at St ~~~~~ School. We live in Mackay which is in Queensland, Australia. Mackay is right on the coast and the Great Barrier Reef and Whitsunday Islands are very close by. There are about 250 children in our school and there are 30 children in our class. We are all five or six years old and this is our first year at school. We are learning to read and write. Our teacher has been to visit Ireland and she is going to show us some of her photographs. We are looking forward to writing letters and finding out about you and where you live. From Grade One.

Here's the one from Sarah. Hello, my name is Sarah. I live in Mackay. I like to go shopping with my Mum. I read books with my Dad. I'm five years old. My little brother Stephen is only 1. He throws wobblies when he wants his bottle and can't have it. My house number is 19. Do you have numbers on your houses? I liked your letter Imelda. Can you swim in the sea near your house? We can swim in the sea here but you have to be careful and watch out for Box Jellyfish, they are very dangerous. It is very hot here, is it hot in Ireland? Goodbye, from Sarah

----

From: ~~~~N.S.

To: St. ~~~~~~

Subject: Message from First Class.

Date: Friday, March 27, 1998

My name is S. I am six years old. I live in I. I am in first class.I see my nannys house on my way to school. I am in ~~~~~ National School. Sometimes I go to school with my brothers. I see the sea when I go to school. I see the church my way to school. Thank you for your email Sarah. We can swim in our sea, but it is too cold yet. We swim in Summer, in July and August. It is Spring here now.We have daffodils. Do you have sharks?

From St. ~~~~~

To ~~~~~ NS

Hello my name is Amy . I am 6 years old, I live at Sarina. I have 8 birds, 3 dogs and 5 cats. Sometimes I go to gymnastics and I have one sister called Demi, she is 2 years old. My favourite food is carrots. Do you have lemon trees in Ireland ? Yes Siobhan we do have sharks - they live near the Great Barrier Reef which is close to us. Some of the sharks we have are Shovelnosed Sharks, Hammerhead Sharks and Wobbeygongs.

Hello, I'm Hannah. I live in Mackay. Do you have houses? I have stairs in my house, I have a bed with a ladder to get down. My baby sister is named Michelle. I have a cat, his name is Burr. My mum is called Jill, my dad is called Jo. What is your teacher's name Siobhan? We like to make towers and palaces with our blocks. Do you have blocks to play with?

From: ~~~~~ N.S.

To: St ~~~~~

Date: Thursday, April 02, 1998 12:22 PM

My name is E. Thank you to Hannah and Amy for your letters. My Mammys name is G. and my Daddys name is T. Do you have cinemas in your town? We have no lemon trees . The photo is lovely. Why do you wear hats ? it is Springtime here There are lots of lambs in the fields. We live in the Country. Do you? Bye for now.

Appendix B: Research proposal

<div align="center">

University of Limerick

Outline of proposed PhD programme

Máirín Glenn

</div>

<u>An Investigation into the Critical Use of Internet based Collaborative Projects in the Primary School</u>

Area of interest

In my proposed doctoral research programme I intend to undertake a self-study into my practice as primary school teacher with special reference to technology. In this study I aim to investigate my work in the field of Internet based Collaborative Projects (ICPs). By ICPs, I mean the integration of projects into the curriculum, which allow teachers and pupils the opportunity to exchange ideas, data and multimedia presentations globally on a given theme, using internet communication tools. (Web links to practical examples of ICPs in Appendix 2.)

Context of the proposed research

I teach in a five-teacher primary school on the west coast of Ireland. My school is located in a remote region, which suffers from high unemployment. My pupils' involvement in online collaborative projects has always been motivated by a desire to help overcome these disadvantages. In my previous research I have found the use of the internet to create communications projects with other classes and to structure web based projects satisfying and educationally beneficial (Glenn 2000). This current phase of my research is part of developmental programme in which I will critically investigate the use of online projects in school contexts.

Few policy initiatives affect my research area. In the new revised Primary Curriculum (Government of Ireland, 1999) there were few references to the integration of ICT throughout the text. There is a now a draft publication entitled *Information and Communication Technology* (NCCA 2000), which attempts to address the omissions of

the main body of the original policy document. Throughout future drafts of the document I would assume that ICPs would be examined for their educational value. My proposed research may contribute to these policies.

Aims of the proposed research

To date, there has been little critical questioning of the value or the impact of the inclusion of online projects in education in Ireland. That ICT is now commonplace is accepted, but it must be asked if the reasons and purposes of the integration of online projects in education have been given proper consideration.

Perhaps students would learn as well, if not better, without the inclusion of technology in their learning. Roszak (1994) asks, who creates the 'information' on the internet, and how valid is it? He reminds us that volumes of information do not necessarily lead to sound thinking. It must be asked if the internet is a source of knowledge, and who creates this knowledge?

In doing this research I aim to question the inclusion of online technology, and in particular the value of ICPs in the primary curriculum. I aim to change my practice from being uninformed, and unquestioning, to being more enlightened.

I wish to explore my understanding around how I can encourage the development of online projects for my class in a critical manner. I will try to understand the nature of my work with technology as a result of my investigation and to create my own theory of practice of how I can integrate technology, particularly online projects into my teaching.

Difference between this current research and previous research

This proposed research will differ from previously published works by its location in my practice. I aim to undertake a self-study to investigate issues surrounding the critical use of ICPs in my work. Much contemporary research in this field is located in the United States of America or Australia (Berenfeld 1996, Cummins and Sayers 1995, Harris 1995,

Levin 1997, Oliver 1997, Riel 1996). Little research is devoted to either the critical use of ICPs, or to their use in Ireland.

Concepts and Theories relevant to my research

Current Literature

Contemporary literature on ICT and ICPs is available in online and published journals. While many articles promote the view that ICT is a positive force in educational milieu, voices of critique are also to be heard. The writings of Roszak (1994), Postman (1996) and Cuban (2001) offer a critical view of technology. (My indicative bibliography is in Appendix 1.) I intend to engage with both the positive and critical fields of literature to help to inform my knowledge base. Building on this existing research, and my own proposed research, I hope to make a contribution to contemporary thinking in the area of ICPs.

Methodology

I intend to engage in a programme of systematic self-study. In undertaking this methodological approach, I wish to realise my own values of social justice and ethical enquiry. My epistemological stance is based in the knowledge base of my work and therefore, I intend to investigate my practice and to explore my understanding around the inclusion of ICPs in my work. I believe that my values inform my practice. I value that education takes place in an authentic milieu, not in one promoted by technology trends, but driven by the need for good pedagogy. I am concerned that my use of internet based projects may be promoted more by the technology itself than by the need for good pedagogy. This is causing a contradiction between my values and my practice and I aim to explore these issues so as to resolve this contradiction. My epistemology of practice is underpinned by the belief that knowledge is not fixed propositonal entity. A dialectical form of enquiry will inform my research, and I hope to problematise possible solutions in the

process of my self-study. This research will be an investigation where my pupils and colleagues will be participants in my research.

Research Participants

In engaging in self-study, the chief participant in this research will be myself. I will be investigating my practice. This practice involves my class of children who will also be participants in this research. I may also involve the children's parents in the research and perhaps members of the wider community. Some colleagues on my staff may be involved also. I also hope to convene a validation group to verify my findings.

Access and Permissions

I will obtain permission from my Board of Management and my school principal before embarking on my research. They will be aware that I am doing research and that I will be collecting material from the children and their parents. I will also look for permission from the children themselves and their parents for their involvement in the research. I will also need permission for the children to access the internet in properly supervised conditions and for their work and group photographs to be published on the internet.

I will make it clear to all the persons involved that I will anonymise the names of all the participants in the paper, and that at no time will I divulge the name of our school or its locality. I will also reassure my participants that they may withdraw at any stage from the research.

Data gathering, presentation and analysis.

I intend to gather data from my own observations, from the comments of my class, informal interviews with parents, the work my class produce, the comments of observers, video footage of the class working together and interviews with my participants. I will

analyse this data in conjunction with the criteria I identify as showing improvement in my practice.

My criteria will be based directly on my values. These data will gradually evolve into evidence, under the systematic and rigorous scrutiny of my validation group. The validation process will be ongoing and of extreme ethical importance. It will verify my claims to professional judgement in the process of the realisation of my values.

Dissemination

I am aware of the potential significance of my research as I am generating my theory of working with ICT out of my practice. I plan to show how this research impacts on my own professional development, when I will have clearer understanding and insight into my practice. I imagine this research will impact also on my colleagues in school and also perhaps in the wider community.

I would also aim towards using this research as contribution towards the wider body of knowledge and to make my work public, through submission to the relevant journals and conferences.

<u>**Research Plan**</u>

I will organise my research programme into three interdependent cycles. The conclusions of each phase will present further problematic areas for investigation and thus transform each previous cycle into a new cycle. The following diagram (Fig.1) is a draft of my proposed timetable. It catalogues the various projects I intend to pursue in my attempts to collate data for my research. I will begin my work with senior primary classes, then continue with junior classes and finally rework areas that emerge as being in need of further investigation. I would be actively writing my reflections throughout these phases, and gradually building towards a systematic report.

(Fig.1)

September to Christmas 2001	Online Expeditions (http://www.lightspan.com) with senior students.	Accessing literature, reflecting on practice and theory formation will be ongoing.
January to Easter 2002	CyberFair 2002 (http://www.lightspan.com) and Comenius Project Communications (http://www.leargas.ie)with senior students	
Easter to Summer 2001	Virtual Field Trip or Make a Difference (http://www.lightspan. com) with senior pupils.	
September to Christmas 2002	Travel Buddy Project with junior pupils.(http://rite.ed.qut.edu.au/oz-teachernet)	
January to Easter 2003	Online Expedition with junior Pupils http://www.lightspan.com	
Easter to Summer 2003	A collaboration with the other schools in Ireland who are involved with VSAT, perhaps culminating in a party where the children meet one another. (For Junior Pupils)	
September to Christmas 2003	During this period, I would like to revisit relevant areas and critically evaluate my findings. I hope to document the theory which will have arisen from my practice.	
January to Easter 2004		

Easter to Summer 2004		

Why undertake my research at the University of Limerick?

I wish to undertake my research programme in the University of Limerick because of its open and inclusive policies. My area of interest is be best situated in the learning arena of a modern and progressive university such as the University of Limerick. My previous degree is from the University of Limerick (MIC), and continuity with this university will ensure seamless continuity in my developmental programme.

I am aware that Dr. Jean McNiff has developed an initiative with the Department of Education and Professional Studies in the area of self study and action research. This would give me an opportunity to pursue my own self study and to investigate the critical use of internet based collaborative projects in the primary school. I would like to have Dr. Jean McNiff as well as another member of the faculty of the Department of Education and Professional Studies as my academic supervisors.

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Appendix C: *Ice at dawn* **web page**

On My Way to School

On my way to school I saw a beautiful sight and decided to capture it on my camera the sun shinning down on the ice it was just amazing and I wanted to show the world how beautiful our environment can be.

The waves were frozen they stood perplexed and just waiting for the sun to melt the ice away so it could be free again and no longer be still to crash against the rocks once more. I stood and looked and stared through the ice barrier and slowly looked up and watched the sun slowly move over the horizon. The End

Appendix D: Permission for research letters

Dear~~~~,

Permission to undertake research

As part of my postgraduate research programme, I am conducting a piece of action research into studying how I might use technology to enhance learning. I would be grateful if you would give your permission for [name of child] to take part.

My data collection methods will include audio and videotape recording the children and myself in conversation, photographs, diary recordings, field notes, and reports. I guarantee that I will observe good ethical conduct throughout. I promise that I will not reveal the name of the school, colleagues, parents or children at any time. If you wish I will keep you informed of progress throughout. My research report will be available at school for scrutiny before it is published.

I would be grateful if you would sign and return the slip below at your earliest convenience.

I enclose two copies of this letter, one of which is a copy for my files and one of which is a copy for your files.

Yours sincerely,

Máirín Glenn

_____

_____

To Máirín Glenn,

I, [parent's name]_____, give my permission for_____
[child's name] to take part in your research.

Signed ....

[Parent's name]

Permission Form for #######

Please review the attached school Internet Acceptable Use Policy, sign and return this permission form to the Principal.

Name of Pupil: _____

Class/Year: _____

Pupil
I agree to follow the school's Acceptable Use Policy on the use of the Internet. I will use the Internet in a responsible way and obey all the rules explained to me by the school.

Pupil's Signature: _____   Date: _____

Parent/Guardian
As the parent or legal guardian of the above pupil, I have read the Acceptable Use Policy and grant permission for my son or daughter or the child in my care to access the Internet. I understand that Internet access is intended for educational purposes. I also understand that every reasonable precaution has been taken by the school to provide for online safety but the school cannot be held responsible if pupils access unsuitable websites.

In relation to the school website, I accept that, if the school considers it appropriate, my child's schoolwork may be chosen for inclusion on the website. I understand and accept the terms of the Acceptable Use Policy relating to publishing children's work on the school website.

I accept the above paragraph:

Parent/Guardian's Signature: _____   Date:

-

Appendix E: Ethics Statement

As part of my postgraduate research programme I am undertaking an action research project to study my own practice as a teacher of integrating computer based projects into the curriculum. This ethics statement is to assure you that I will observe good ethical practice throughout the research.

This means that

- the permission of my Principal and Board of Management will be secured before the research commences;
- the permission of the children and their written consent will be secured before the research commences;
- confidentiality will be observed at all times, and no names will be revealed of the school, children or staff;
- participants will be kept informed of progress at all times;
- participants will have access to the research report before it is published;
- all participants have the right to withdraw from the research at any time and all data relating to them will be destroyed.

Appendix F: *Learning Circles* **Page**

Click on this drawing to download a Power Point version of the story of St. Patrick

Appendix G: Extract from *Landslide* web page

<u>*The Day The Earth Moved.*</u>

One night I was sitting in my sitting room watching the Dunphy show when I fell asleep, it was about 9:30 p.m and it was raining heavily. An hour had passed and at 10:30 p.m I awoke and I walked to the kitchenand to my amazement, my dad was holding the door whilst my mum, sister and brother were putting newspaper on the porch to soak up the water because it was threatening to engulf us. It transformed the road to a river that would swallow anyone that tried to gaze at it. My sister and I gasped as an old mans mobile home and everything he held close to his heart was destroyed. As the villagers tried to persuade him to leave and that everything was going to be ok, water was finding it way around under the table and under the lino. Everything was ok until....... ... ..

My neighbours shed was destroyed and a pool table, and a dart board went missing. It was still raining at 11:00 p.m and I headed to the snoozer (bed).

In the morning all the men in the village were trying to repair the damage and talking, the women were ringing everyone to make sure they were all ok.

In Glengad there were landslides and head stones were knocked off and six coffins went in the sea and people had to hold on to branches. Helicopters and the news crews were and still are surrounding Glengad.

And that's the day the earth moved.

Landslide Terror

Friday the nineteenth of September was terror time for the residents of

Glengad, Pollathomas and Gorthbrack which once three really beautiful spots in the county of Mayo.

As earth came tumbling down Doon Carton mountain the rain was falling from the clouds with hail stones as big as snow balls.
Windows were shaking and tea cups breaking as bridges cracked and fell in. Inside residents shook and shuddered while they wondered if this was goin to be the last moments of their lives. Thankfully no one was injured. So much damage was caused on the night of 19/9/03.

The End. by R

Appendix H: Email messages about our *Working as a Historian* project

Hello Pupils and Staff,

It is always refreshing to visit your pages on the Internet. I work as an ICT consultant in primary schools in Newbury, Berkshire, UK and do much teacher training in ICT. I am an ex-headteacher and when I'm not training teachers then I'm doing the dreaded OfSTED school inspections. I travel abroad too and am about to visit Thailand. School's are just beginning to use ICT in a creative way and part of my training is to demonstrate to teachers just how creative ICT can be - and believe me they need showing. I use your pages to help demonstrate and here's why:

You use ICT for all different kinds of purposes across a very varied curriculum

Your site is very readable - not glitzy but friendly and easy to navigate

Your enjoyment of using ICT comes across very plainly

You make everyday events (the hen writing) funny

Your site is an excellent example of how ICT helps you to learn.

I'd love to hear from you. If you could just let me know all those different ways you use ICT (I'm sure there's lots you don't put onto the Internet?) I could then tell all those teachers just what they're missing!

Bye for now

P

Dear pupils at Inver School

My husband and I visited Barnatra in July 2004 to visit my husband's aunt (who is Sarah's grandmother). I just wanted to let you know how interesting, and well designed, your web site is. It was wonderful to come back home to Nottingham (in the UK) and be able to listen to your interviews and see the pictures of Ceide Fields.

Well done and carry on the good work

Teresa and Anthony Williams

Hello,

I wanted to let you know that my two boys (Sean age 6 and Riley age 10) and I have enjoyed

your school website. We first found it on a Google search while looking for information on the

Spainish Armada. They we read all the e-pal notes, looked at all the pictures, and learned about

your special projects and trips. It makes us want to come and visit!

We live in Santa Rosa, California, USA. It is an hour drive north of San Francisco and is mostly

an agricultural area. The area grows wine grapes, has many wineries, a beautiful river and the

redwood trees. There are also dairies with both cows and goats. The boys school is named

Riebli and it has grades kindergarden to 6th. There are probably about 400 kids at the school.

I hope your new school year is going well. Please write back if you have time. Thank you!

- S

Appendix I: Sample of notes from suggestion box

Good / Bad / Suggestion.

I thought I didn't Like football but I played it a couple of times this week and I found out I Like it more than I thought I did.

In Class I think we should do more debates and they shold be about things that could happen in our every day Lives.

Good / Bad / Suggestion.

All in All last this week was pretty good! I've Had loads of fun with my friends Jow thats Good!

The bad things last week and this week was getting hit by the ball so much, I love soccer but when I get hit, it really hurts! +nicole broke her arm that is WAY BAD!

I think that we should move every week because the lad beside me, his smart comments really get to me, he thinks that he is always right and it's Ok for him to have an opinian but he is really getten to me!

Appendix J: Example of a report from the *Working as Historian* project

The Inver Races

Introduction

My name is Rebecca C., I have been asked to complete a project on local history. As I live in Inver I have decided to do my project on the last horse race to take place here, on the banks of Inver, on the 5th of August 1968.

Contents

- Introduction
- Setting the Scene
- Research
- Letter to The Western People
- Answer from The Western People
- Western People Headlines
- Maps
- The Inver Races song
- Interview No.1 Interview No. 2
- Conclusion

Setting the Scene

Historical Moments of the Year 1968.

World Wide

- Martin Luther King was assassinated.
- Ronald Regan says he will run for US President.
- Soviet tanks cross Czechoslovak frontier from the east.
- Earthquake kills 11,000 people in Iran.
- Arther Ashe became the first black man to win the US open tennis championship.
- 19th Olympic games open in Mexico City.
- London Bridge is sold to a US oil company.
- The first civil rights march takes place in Derry.

Ireland in 1968.

- President: Eamon De Valera

- Taoiseach: Jack Lynch
- Party in Government: Fianna Fail
- GAA Champions   Football: Down
  Hurling :
  Tipperary
- Currency used: Pounds, shillings and pence.
  Cost of Western People: 9d
- Parish Priest: Father John Devany
- Curate at Inver: Father Lavin
- Head Master of Inver National School: Thomas McGarry
- Ireland came 4th in the Eurovision Song Contest with ?Chance of a Lifetime? by Pat McGeegan.
    The winners were Spain with ?La La La?.
    Second was the UK?s Cliff Richard with
    ?Congratulations?.

Research

I started my research by writing to the *Western People* newspaper asking for information on the Inver races. They told me to contact Castlebar library and that I would receive the information I wanted on microfilm.

My second aim was to draw a map of how Inver looks now and how it looked in 1968, in this map I have also drawn the racetrack.

I obtained the words, to the *Inver Races* song from Father Sean Noone's book *Where the sun sets.*

I used the Internet to find out about other events in 1968.

Letter to the Western People   **Reply from the Western People**

9 November 2003

A chara

My name is Rebecca. I am eleven years old. I go to Scoil Náisiúnta An Inbhir. We are doing a project on local history. As I live on the Inver banks I have decided to do my project on the last horse race here in Inver on the 5th August 1968. The project will be sent to a school in Prescot (Liverpool) and it will be displayed on the Internet.
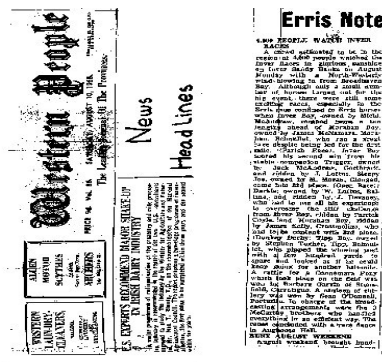
I would appreciate it if you would be so kind as to send me a copy of the coverage you did on the Inver Races. There has been a song written on the Inver Races, if you have a copy of this song would you please send that to me too.

I look forward to hearing from you.

Yours sincerely
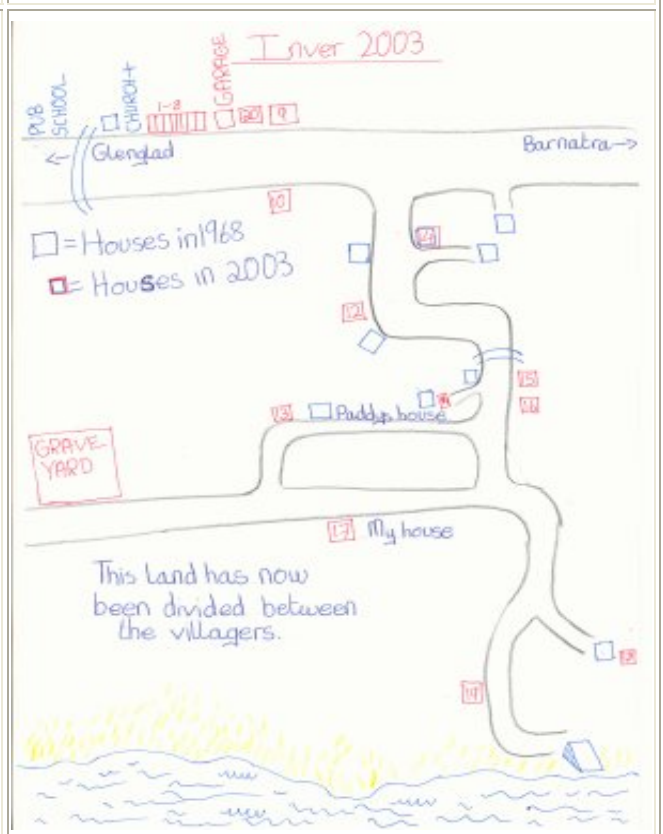Rebecca C

Rebecca,

Thank you for your letter.

Your research...

Erris Notes

Extracts from the Western People of 1968. Click on the image to enlarge it.

Map of Inver from 1968	Map of Inver 2003

The Inver Races: Song Lyrics

As the sun was hovering in the West the place was all aglow,

It shone down with all its glory on Inver in Mayo.

As I was young and airy a rambling I did go,

To the lovely banks of Inver that evening long ago.

The Inver banks are lovely by nature well laid out

They are far ahead of Aintree that we hear so much about,

or Punchestown or Dollymount or the Curragh of Kildare

In all my travels here and there nothing with Inver can compare.

It being the 5th of August in the year of sixty eight

From far and near the people came to win the Inver plate

There was Morahan Lad and Inver Boy, Trigger and Sleepy Joe

They were longing for the starter to give the signal "go".

Inver Boy got in the lead with Trigger by his side

Morahan Lad was coming close but sleepy Joe went wide

Now the people got excited and ran for higher ground

It was like the stormy desert with sand flying all around.

The bookies they were busy as the money was flowing free

They were filling up their money bags and were in much aglee

High up on the grand stand the judges were in place

They declared Inver Boy the winner of that famous Inver Race.

Interview No.1.

On November 30th 2003 I interviewed my father, Seamus C

How old were you and what are your memories of the races that took place in 1968?

I was ten, I was saving money for the twelve months before and I had three shillings saved.

I remember the summer being very good; everybody had the hay saved early that year.

I couldn?t wait for the 5th of August to come. Eventually when the day did come, I could not believe the number of people or the number of cars and vans that were here.

Did your family own a car?

No my family did not own a car, at that time the only people that had cars were business people and the priest.

You say there was a big crowd, so could you actually see the races?

There were thousands of people there and I could see bits of the races. Even though I couldn?t see all of the races it didn?t stop me enjoying the day.

I remember having plenty of sweets and minerals and still having change home with me.

Do you have any other memories of the races?

I remember one particular race that was won by a neighbours horse called ?Inver Boy?. Everyone was talking about it for weeks afterwards.

Interview No.2.

On November 27th 2003, I interviewed my neighbour Mr Paddy Conway.
[Click here to download the audio of the interview](#)

What are your memories of the last horse races held here in Inver?

They took place on the 5th of August 1968. For a full week before, we were in the banks marking out the races and everyone was all geared up and very excited waiting for the people and the horses to arrive.

There were at least 10,000 people, the biggest crowd I have ever seen in one place. There were five races, two open races, a Parish race, an Erris race and a ?confined race?, this was confined to horses from the local villages.

I watched two races and everything was going well and my father was down having a drink at the refreshment stand. My name was called to go the commentory box, I was told my father was very, very ill we took him back to the house, first a priest and secondly a doctor was called for. Dr Kilcoyne and Father Levin came back up from the races and Dr Kelly was called out from Belmullet.

Dr Kelly sent for an ambulance to take my father to Castlebar hospital. The guards were called to stop the traffic, to allow the ambulance to get through and then again to let the ambulance out to go to the hospital.

He had an emergency operation at 1am the following morning. Thank God he survived and lived another thirteen years.

For me, that was the end of my day at the races.

Do you know who rode Inver Boy?

Pat Coyle.

Do you know who owned the horse?

Michael McAndrew, Gorthmellia.

Does he still live in the area?

Yes he is still living, he is 81 years.

Do you know the song written about the races? if yes, do you remember the tune?

No I don?t.

Why did the races not continue?

The banks were divided between the villagers and they were all wired off.

Were there refreshments?

Yes there was plenty, whiskey, porter or whatever you wanted.

Who gave out the prizes?

Father Michael Lavin he was C.C. at the time.

How would you describe to someone today, where the races took place?

There is a graveyard in the banks, in the graveyard is where the starting post was and it went back through a place called Gobhain-na-gcoinin. All that today is wired. In the very same year the graveyard was started on the 13th September 1968.

Who was the first person buried there?

Martin Doherty, Gorthmellia Strand he was buried in October 1971.

Thank you Paddy for allowing me to interview you.

Conclusion

I found this very interesting because as I said in the introduction I live on the banks of Inver it was interesting to find out what happened beside my house all those years ago.

To help me find some more information on the Inver Races I wrote to The Western People, I received a letter from them Informing me that to find the information I wanted, I would have to go to Castlebar library as all the different papers were kept there. I received a great amount of information from the library.

My main sources of information were my interviews with Paddy Conway and my dad, Seamus Conway. I learnt that there were at least 4,000 people on the banks that day. It just doesn?t seem possible. While talking to Paddy I found out that there was a traffic jam and the guardai had to be called so that people could get through. There has never been a traffic jam since.

There is now an annual sports day held on the football pitch behind the Lighthouse Tavern on the August bank holiday weekend, but I wonder if we will ever see anything like the Inver Races again?

Appendix K: An extract from *Practical Projects with ICT* (2005) INTO and NCTE

Modules 9 & 10

Classroom Publishing- Electronic media
Introduction
Module Overview:
In these modules we will examine how we can use pictures and sounds to make multimedia projects. In particular, we will focus on the use of PowerPoint and how we can link pictures and sounds to make interesting projects. We can manipulate images as outlined in Modules 3 and 4 and in this module we learn how to record sound. We will look at how we put them together in a PowerPoint presentation. We will make at least one sound file and collect one image and then link them together using a hyperlink.

Exemplar Theme: 'Working as a Historian' PowerPoint presentation

In this project, the students interviewed older members of the local community and gained insight into how life was and how it has changed in the past seventy years. They wrote the interviews, taped them and video recorded them as they chose themselves. They also took digital photographs or produced their own images as was appropriate. The students then produced this project on PowerPoint and presented it to the rest of the class using a data projector.

The project gives the students an opportunity to use multiple forms of media to express their learning also.

The ideas here highlight how technology can enhance connections between the classroom and the wider community and how these connections can help to make

learning a real and living experience for children. The online version of the project is accessible at http://www.iol.ie/~bmullets/starai.

Curricular links for this Exemplar:

Subject	Strand	Strand Units	Skills and Concepts
History			Working as a Historian
	Local Studies	My locality through the ages	
	Story	Stories from the lives of people in the past	
	Life, society, work and culture in the past	Life in Ireland since the 1950's	
	Continuity and change over time	Homes, housing, food and farming, clothes, communications, schools and education, barter, trade and money.	
SPHE	Myself	Self Awareness Developing self-confidence	
	Myself and Others	Myself and my family My Friends and other people Relating to others	
	Myself and the Wider World	DevelopingCitizenship Media Education	
English:	Receptiveness to language	Oral: Developing receptiveness to oral language through interviews Writing: Creating and fostering the impulse to write	
	Competence and confidence in using language	Oral: Discuss and present project findings Reading: for information Writing: Developing an ability to write independently and for a varied audience	
	Developing cognitive abilities	Oral: Developing cognitive abilities Reading: Developing information retrieval skills Writing: Clarifying thought and write for a purpose	
	Emotional and Imaginative development through writing	Oral: Developing reactions to historical events Reading: Relate personal experiences to ideas in texts Writing: Express in writing their reaction to interviews	

Implementation of exemplar project:

Step 1:

Have a brainstorming session in the classroom to determine possible themes for the project. Allocate possible sections to students to undertake and get permissions from parents for interviews.

Step.2:

Prepare interview questions and determine the technology to be used; pen and paper, tape recordings or video tapes. Encourage students to choose their own preferred method of interview.

Step 3:

Record the interviews. Write up the reports if necessary. Gather images (see Module 3).

Step 4:

Make a presentation of the project using PowerPoint.

This module will address Step 4 specifically.

Suggestions for Addressing Individual Learning Needs

This project allows students who have difficulties with writing to present work in a medium that suits their learning style.

The children are encouraged to work at their own pace, adding to the work as they choose themselves.

They become active participants in their own learning and develop a sense of ownership of their work. The project utilises multimedia to allow students to be creative and to draw on their own individual strengths and intelligences, without being overly dependent on text books or high literacy levels.

Participant Theme:

While working through this module, bear in mind your chosen theme for the week, if suitable.

2. Presentation and Task:

A multimedia project such as this can be done on any topic that can be addressed using a mixture of **pictures or video**

sound or texts

To facilitate the creation of a multimedia project, we must take four steps

Step 1.Collect Pictures

Step 2. Collect Sounds

Step 3. Put them on PowerPoint

Step 4. Link the sound with the picture using a Hyperlink