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The Impact of Action Research on Practitioners' Thinking:

**A Supporting Case for Action Research as a Method of
Professional Development**

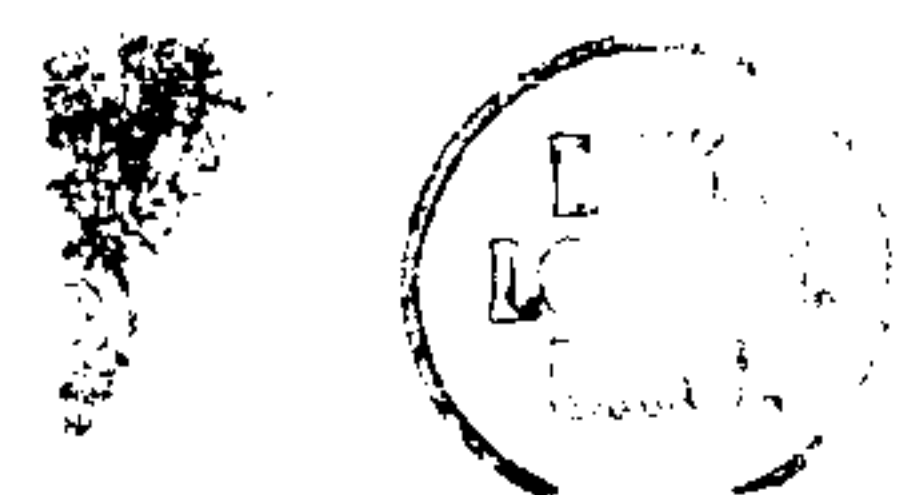
by

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For Cameron and Katrina

May your teachers be great thinkers

**It is teachers who, in the end, will change the world of the school
by understanding it.**

(Epitaph to Stenhouse)

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ABSTRACT

This thesis considers the role of action research in the development of practitioners' thinking. An empirical and theoretical evaluation is made of the way in which the conduct of action research affected the reflexive thought processes of twenty-five early years practitioners who undertook this form of professional development as part of the Principles into Practice Research Project based at Goldsmiths' College. In particular, this study aims to provide a clearer indication of action research's acclaimed capacity for extending practitioners' critical analysis of their practice and to help narrow the empirical gap between the idealistic assumptions of action research and the reality of its transformatory power.

The importance of practitioners' thinking in determining quality of practice is highlighted and the potential for action research to influence and develop this thinking is considered. The thesis establishes a theoretical rationale of the thinking process and critical reflection within action research. Key characteristics are traced and grounded within various conceptual models of cognition and critical thinking drawn from a variety of sources within the fields of cognitive science and adult development. The theoretical framework is also utilised as an exploratory and explanatory mechanism with which to interrogate the research data. The major themes that emerged from the codification process of the data analysis are demonstrated with supporting evidence. These are linked to major theoretical constructs in the broader literature so that the full significance of action research's impact is ascertained and any critical facets determined.

The findings reveal action research's capacity to influence practitioners' thinking by providing a coherent structure with which to organise their thinking and by sharpening and deepening their levels of consciousness. It provides a means of affirming good practice, but more importantly, of challenging misguided practice so that more valid interpretations of reality emerge. It stimulates a more critical and questioning frame of mind which helps to unearth ingrained assumptions about practice and generate more worthwhile educational provision. It also gives rise to an emotionally empowering process which imbues practitioners with a more critical disposition. The emancipatory

potential of action research is also highlighted, as is its role in contributing to social justice.

The thesis is premised upon the belief that the key to educational quality centres around the individual practitioner. The research presented here offers a compelling case for action research as a favourable strategy for professional development. It bolsters the assertions made by advocates of action research's potential to bring about improved quality of educational practice by improving the quality of practitioners' thinking and generating a more critical orientation towards practice.

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PART ONE

INTRODUCTION

CHAPTER ONE

THE QUEST FOR QUALITY THROUGH ACTION RESEARCH

A Quest for Quality

Recently I was confronted with the prospect of selecting a school for my young son. Faced with a choice of three different settings, I visited each site and attempted to evaluate which of the schools might offer him the best kind of quality early years education. As an experienced teacher with specialist training and tertiary studies in early years education, I was able to draw upon the guidance and collective wisdom of theoretical and empirical accounts which suggest what a quality early years education ought to be. As I attempted to compare and correlate each setting to my exacting criteria, I was struck by one pivotal factor that prevailed over all other considerations, namely the *character of the individual teachers*. I found that important matters such as child:adult ratios, educational philosophy or curricular activities were overridden by my choice of a school that had early years practitioners whom I perceived to be most likely to offer day-to-day high quality experiences for my son in the first crucial years of his education.

This cardinal criterion given to the quality of the teachers is based upon a strongly held conviction that attempts to ensure a quality education should *centre around the practitioner*. This personal view is extensively supported by a wide spectrum of sources within the literature on education. Hargreaves & Goodson, for example, contend that 'it is the *teachers who ultimately hold the key* to the success of the educational enterprise' (1996: 24, own emphasis). Nias et al's study of primary schools showed how teachers' learning is 'the main way to improve the quality of children's education' (1992: 72). Government papers have also acknowledged that 'the teaching force ... is the major single determinant of the quality of education' (DES, 1983: 1). In their review of research on what makes a school an effective agent of pupils' learning and development,

Reid et al maintain that 'the quality of the teaching staff is perhaps the single most important factor' (1987: 30). This is reiterated by Kelly:

There is massive evidence in support of the fact that the teacher's role is central and crucial to effective education, that the quality of education any pupil receives will depend to a very large extent on the quality of his or her teachers (1990: 103).

No doubt a whole multitude of factors play crucial roles in developing education such as curriculum, infrastructure, policies and procedures. Wide-scale mandatory reform is often a requisite part of this process. However, whilst acknowledging that 'top-down' strategies (Fullan, 1993) may be necessary for educational change, this dissertation supports the contention that if 'educational improvement efforts ... are to result in significant and enduring positive change' then 'high-quality professional development will be essential' (Guskey & Huberman, 1995: 4).

This research study therefore concerns itself with the nucleus of the education process - the professional world of the practitioner in his/her classroom. The intrinsic and parallel importance of social and institutional factors on teacher development and educational change are acceded. However, this dissertation effectively adopts a stance in which (paraphrasing Woods et al, 1997) the individual growth factor is given precedence over cooperative learning, personal voice takes precedence over group vision, trust is placed with people rather than processes, and cultural changes in people rather than structural changes in systems are given prominence. It shifts attention away from macro, organisational initiatives to reform and improve education to what Andy Hargreaves (1994) calls 'microcultural restructuring'. This places trust 'in the qualities and conduct of individuals' rather than trust in 'the expertise and performance of abstract systems' (op.cit.: 252). Whilst it shares a common quest for quality education with other styles of innovation, its mission is to investigate the particular professional development strategy of *action research* as a potential vehicle for enhancing the calibre of professionals' practice and thereby children's educational experiences.

Without delving into a distracting discussion on the meaning of quality, it is acknowledged that usage of such a term in association with specific perspectives on education and its improvement is subjective, value-based and invariably 'ideologically partisan' (O'Hanlon, 1996b; Stones, 1992; Carr, 1989; Winter, 1989b). I am therefore

conscious that any claims made about improving the quality of education through the practice of action research are problematic and open to conjecture. Thus in this introductory chapter, I outline the conceptual grounds upon which my perspective of educational change, professional development and quality advancement is derived. In doing so, I draw upon various sources within educational literature that openly or indirectly advocate an action research style of educational improvement.

This chapter essentially lauds the value of action research as a professional development strategy that seeks quality transformations of practice through self-critique and a deepened understanding of the educational process. It highlights the way in which it is mindful of the many challenges to change and its recognition of the intrinsic importance of investigating habitual practice and re-evaluating provision through critical reflection. In my attempt to provide a positive (but accountable) argument for action research, I have omitted some of the criticisms and pitfalls of conducting action research (some of these are considered in chapter ten). This deliberate deification of action research is intended to provide a basis from which to look more closely at the promising possibilities of action research in terms of the way in which it impacts upon practitioners' *thinking*.

What follows is a brief review of some of the main issues involved in the process of improving educational practice with attendant complexities and problems. These sections consider the method of action research in this light and portray some of the reasoning behind the choice of action research as an appropriate mechanism by which practitioners might investigate the quality of their provision. Since the main focus of this study concerns practitioners' thinking, particular attention is given to the *significance of teachers' thought processes* in relation to developing educational practice. Aspects of this rationale for action research closely echo the justifications propounded within the Principles into Practice (PiP) Research Project team's selection of action research (Blenkin & Kelly, 1997). The PiP Research Project provided opportunities for practitioners to undertake action research in order to evaluate the effectiveness of their practice; and it is from this Project that my own research study is drawn.

The Challenge of Improving the Quality of Practice

Changing practice is 'notoriously difficult' (Stoll & Myers, 1998b: 9). Differing, and often conflicting, beliefs about what is considered to be a quality education and how it might be developed has lain at the heart of most political and academic debates about education. A scan of the wide ranging literature on improving educational practice reveals no easy, definitive nor guaranteed way of ensuring effective improvement (for example, Mortimore, 1998; Slee et al, 1998; Bell, 1995; Hargreaves, 1994; Fullan, 1993; Blenkin et al, 1992; Fullan & Hargreaves, 1992a; Reynolds, 1992; West-Burnham, 1992; Reid et al, 1987; Wideen & Andrews, 1987; Rowan et al, 1983). Instead, what emerges are a number of key issues about the nature of educational change and all that it entails, which various authors suggest ought to be considered by innovators seeking to transform educational practice. One incipient factor includes an awareness of the many, often covert, barriers that can hinder change processes.

One inherent obstacle is the apparent 'dynamic conservatism' that renders many practitioners territorially resistant to change (Schon, 1971). When threatened with change, practitioners may seek security in their own 'tried and tested' practice, retreating to the 'sanctuary' of their classroom (Bullough, 1987). Attempts to intrude upon this are often perceived as a kind of 'attack' or 'invasion' (Schon, 1971) and are either directly repelled or ignored, or else accommodated so that innovations are 'assimilated into ... prevailing structures of meaning, rather than being allowed to pose a fundamental challenge' (Blenkin et al, 1992: 57). Even when change is voluntary it is still likely to involve 'anxiety and struggle' and 'uncertainty' (Fullan, 1991). Practitioners tend to protect their self-identity and self-esteem from apparent threats and fears of failure.

Andy Hargreaves agrees that when teachers are exposed to or trained in new knowledge and skills they 'often resist or reject them, select only the bits that suit them, or delay until other innovations supersede them' (1995a: 13). He notes that teachers invariably reject attempts for innovation when they are imposed, are packaged 'off-site', when reforms are multiple and overwhelming, when they are invariably filled with 'false certainties' as well as 'badly communicated and disseminated' (op.cit.: 13-14). Similarly, David Hargreaves has written that 'teacher cultures and structures are highly resistant to change' and posits that reforms and innovations 'frequently become shaped, transformed or resisted in ways

that were unintended or unanticipated' (1994: 425). This view is reiterated by Kemmis who asserts that 'when schools ... are forced to change on the basis of outside evaluations and the crude coercive powers of the state ... they frequently resist, passively if not actively' (1993: 48). Moreover, Woods et al cite evidence that suggests 'teachers filter the policies of change through their existing professional ideologies, perspectives and identities ... This produces a variety of adaptations ... ranging from compliance with the new policy through mediation and accommodation to resistance and rejection' (1997: 11). The test boycotts of the early nineties are an example of such 'resistance and rejection' (D.H. Hargreaves, 1994).

No doubt such 'resistance and rejection' is often a considered professional response rather than blind defiance for the sake of it. The intention here is not to dwell on the motives behind such opposition, but to draw attention to the central place given by these warnings from the literature to teachers' responses to change (particularly, it seems, when it is imposed upon them). As Hargreaves & Fullan declare 'the seeds of development will not grow if they are cast on stony ground' (1992: 13). It seems that 'people learn more effectively if the context and content of what they learn is meaningful to them' (Jarvis, 1987: 131). Not only do practitioners hold the key to quality practice, they ultimately open the door to its successful improvement. Kemmis clarifies this point:

Changing schools means changing people, and people do not change easily. Given the resources and encouragement to become more open-eyed and open-minded about their role in schooling and society - as they can be when they use an approach like that of educational action research .. - they will make heroic efforts to remake schools and curricula to meet changing needs and circumstances as they interpret them (1993: 48).

Indeed, Clark maintains research on teacher thinking shows teachers to be 'more active than passive, more ready to learn than resistant, more wise and knowledgeable than deficient' (1992: 76-77) suggesting that teachers are conducive to change if the circumstances are considered appropriate. Hargreaves & Fullan make the salient point that the problem with 'top-down' or 'outside-in' approaches to educational reform is that they treat teacher development 'as a matter of non-negotiable technical *skill*, rather than as an issue of professional *will*' (1992: 6, original emphasis). What is valuable about the method of action research as a means of transforming practice is the way in which it intends to empower education professionals to effect change directly in their own practice and on

their own terms thereby circumventing many of the potential hurdles encountered by centre-periphery reform (Schon, 1971).

Several other key factors within change processes have been illuminated by various authors (notably Fullan, 1993, 1991, 1982). The way in which action research appears to heed these further adds to its credence as a suitable mechanism for bringing about quality changes in practice.

Action research's *raison d'être* is to transform practice 'with a view to improving the quality of action within it' (Elliott, 1991a: 69) and the promise of quality practice is facilitated by action research's concordance with and accommodation of the complexities involved in the change process. Fullan writes that the change process is a 'neverending proposition under conditions of dynamic complexity' (1993: 24) and it is for this reason he maintains that 'controlling strategies don't work' (op.cit.: 199). Effective innovation appears to need to recognise that change is 'associated with chaos, complexity, confusion and uncertainty' (Doll, 1989: 249) and 'inherently unpredictable' (Fullan, 1993: 19). This is hardly surprising given that educational practice itself takes place in an uncertain and ambiguous context. Various authors (Doll, 1993; Fullan, 1993; Kincheloe, 1991; Smyth, 1991; Grundy, 1989; Carr & Kemmis, 1986) testify to the instability of classroom conditions which thrive on 'the unpredictable, the unnoticed, the unplanned' (Cuban, 1984). Clark also shows how 'research on teacher thinking has made an empirical case that the practice of teaching is complex, uncertain, and dilemma-riddled' (1988: 10).

Action research readily confronts the volatile nature of the educational environment and acknowledges it as a 'spontaneously changing and evolving drama' (Carr & Kemmis, 1986: 37). At the same time action research recognises the 'enormous complexity and unpredictability of a learning effort' (Candy, 1991: 172). Supporters of the action research method highlight its flexible and adaptable nature which accommodates itself to the personal situation and unique circumstances of each practitioner along with the 'ambiguities or uncertainties of the social and educational world' (Kincheloe, 1991: 113).

'Top-down' strategies of remodelling also challenge 'professional experience, judgement and expertise' and can 'lead to low morale, dissatisfaction and reduced commitment' (Sikes, 1992: 49). Although there are some signs that the reform movement of the past

two decades has had some beneficial impact on professional development such as encouraging a more collaborative culture and increasing skills (D.H. Hargreaves, 1994; Woods et al, 1997), there is now growing evidence that teacher professionalism and status has been steadily assaulted and eroded. This has created conditions of 'poor self-respect' and a 'weakened professional confidence', a sense of 'discontent', 'disempowerment' and 'disenfranchisement', a feeling of being 'undermined' and 'oppressed' and a rise in 'teacher stress and burn-out' (Woods et al, 1997; Jeffrey & Woods, 1996; Bell, 1995; Nixon, 1995; Aspland & Brown, 1993; Day, 1993a; Gold & Roth, 1993; Apple & Jungck, 1992; Campbell et al, 1992; Gilroy, 1991; Smyth, 1991; Kelly, 1990). Under such circumstances, change is likely to be superficial or short-lived and invariably beset with aggravation (Fullan, 1993). In this context of 'deprofessionalism', action research is offered as a means by which practitioners might regain 'professional integrity and enhanced self-esteem' (Burgess-Macey & Rose, 1997: 62) and restore professional confidence and self-respect (Vulliamy & Webb, 1991; Nias, 1989b). Kincheloe considers that

when critical action researchers develop a system of meaning that helps them design research, select research methods, interpret their research, and act on the basis of their research, their way of seeing, their way of constructing their professional self-identity, is forever changed (1993a: 177).

Fullan & Hargreaves have also highlighted recent research which shows that 'age, stage of career, life experiences, and gender factors - things that make up the total person - affect people's interest in and response to innovation and their motivation to seek improvement' (1992b: 5). They suggest that 'most strategies fail to take these differences into account, and consequently fail to be effective for many teachers' (ibid.). Huberman (1988) and Oja & Ham (1984) have likewise drawn attention to the need for innovation to take into account diverse phases in professional life cycles and stages of development. The need for 'those responsible for promoting effective schools ...[to] provide learning opportunities which match career and life stage development needs' has been illustrated by Day (1993c: 130). Since action research can adjust itself to the 'learning readiness' of each practitioner, Oja & Ham contend

the probability of success is increased [since] ... the challenge and support factors in the environment are matched with the challenge and support needed by the individual at a certain stage of development (1984: 189-190).

Advocates of action research also note how it appreciates that

if there is one cardinal rule of change in human condition, it is that you cannot *make* people change. You cannot force them to think differently or compel them to develop new skills (Fullan, 1993: 23, original emphasis).

Action research recognises the need to ensure practitioners' comprehension, conviction and cooperation without which change can effectively become obsolete. It endorses the principle that 'the best and most effective change comes from within' (Graham, 1993: 143). With action research, practitioners can find 'meaning in and for change' (Fullan, 1991; 1982) and with such understanding they are more likely to accept and implement changes. Miller & Pine, citing various studies, claim that

sustained educational improvement is accomplished most successfully through action research (1990: 60).

Fundamentally, it appears that effective change essentially becomes a question of ownership for 'teachers need to feel in "control of change" rather than to feel "controlled by change"' (Blenkin et al, 1992: 60; also Clark, 1992; Rudduck, 1988). In this way, action research adopts what Fullan (1993) would call a 'reconstructionist' perspective of educational change (as opposed to a 'centralist' policy). Not only does action research champion autonomy, it fosters the 'deep ownership' Fullan claims can come about 'through the learning that arises from full engagement in solving problems' (1993: 31). Holly writes of action research:

Action research transfers *ownership of the change process* to the teachers ... The question of ownership is a vital one. The word *ownership* has two meanings: (1) belonging to, identifying with, and commitment to; *and* (2) arising from this psychological affiliation, a readiness to confess, to recognise/acknowledge something, to be self-confronting. Action research has an impact on both these levels ... Action-researching teachers have to face head-on the psychological barriers inhibiting teachers from subjecting their own practice to critical scrutiny ... The change process - with all its emotional undertow - is internalised and personalised to the point where the teacher action research becomes "hooked" on his or her change agenda (1991: 153, original emphasis).

Action research persuasively places the change process right at the heart of the action, directly in the classroom, and gives the pivotal players the responsibility to transform

themselves along with their practice. Thus practitioners 'become agents, rather than victims, of change' (Fullan, 1993: ix).

Action Research as Personal Professional Development

As agents of change, practitioners are steered to take charge of their own professional development. It was this central factor that led the PiP Research Project to adopt action research as a potentially powerful tool by which practitioners might advance their professional development and practice. With a firm belief in the principle that 'the only route to continuous and lasting improvement in educational quality is via the professional development of teachers' (Blenkin et al, 1992: 154), the PiP Project team selected action research for its

more personal approach, one which empowers the practitioner by offering scope for taking ownership of his or her own professional practice ... a personal and interpersonal approach .. which offers practitioners ample opportunities to take on the role of spectators in their professional lives ... For this spectator role entails the making of stories, reflecting critically and creatively on these stories and sharing them with colleagues in a supportive professional context. And this is a process which aims to give space and time for reflection on the full implications of what often turn out to be muddled ideas or myths, and to reconstruct more useful and genuinely "true to experience" hypotheses to explain and guide professional practice (Blenkin & Kelly, 1997: 90).

The Teacher Training Agency (TTA) has also come to recognise the potential of practitioner research as a policy for professional development with its acknowledgement that such research can 'create opportunities for teachers to develop effective classroom practice', and that engagement in research 'can support fundamental improvements in teaching and learning processes on a sustained basis' (TTA, 1999a). Zeichner elaborates upon this idea:

In the end, the quality of learning for students in our schools will depend to no small extent on the quality of learning and opportunities for professional development that we provide for our teachers. While it is appropriate and necessary at times for policy makers ... to set directions for reforms and to provide teachers with the skills and content that they need to carry them out, there must also be a place in teachers' lives for the kind

of professional development ... that respects and nurtures the intellectual and leadership capacity of teachers (1998: 47).

With teacher-based research, a practitioner can 'cast himself (sic) in the role of the learner ... so that his life in his classroom extends ... his intellectual horizons' (Stenhouse, 1975: 37). Practitioners are effectively provided with an opportunity to become self-critical inquirers into their own practice. Action research operates on the principle that the 'process of improvement can be nothing other than a research process in which teachers reflect on their practice' (Carr, 1989: 11). Zeichner says much the same thing with his claim that understanding and improving teaching 'must start from reflection upon one's own experiences' (1994: 10). Dadds reiterates this point:

No one has simple, tidy solutions to the complex challenges and demands of teaching and management ... But at the centre of professional development there has to be the nurturing of inner wisdom and critical judgement about what can be provided for each child in each situation ... This is why the inner voice must be cultivated (2001: 52).

Stenhouse recognised the value of an 'inner voice' when he suggested that a teacher can strengthen his (sic) practice by 'systematically and thoughtfully testing ideas' (1975: 25). In Stenhouse's vision of teacher research these ideas are 'tested in form by practice. Exploration and interpretation lead to revision and adjustment of idea and of practice' (Rudduck & Hopkins, 1985: 97). Grundy (1987) maintains the action research cycle interconnects theory and practice in a continuous and dialectical relationship in which the two are 'mutually interdependent'. It recognises that the relationship between theory and practice is 'reciprocal' (Clark & Peterson, 1986), 'interactive and multifaceted' (Calderhead, 1993: 17), 'complementary and interdependent' (Winter, 1996), by creating a 'deliberate movement between action and discourse' (Louden, 1991: 172). It helps to disclose 'discrepancies between intentions and practices' and 'to help move these closer together' (Day, 1985: 134).

The emphasis action research gives to both thought and action endorses Fullan's maxim that

educational change depends on what teachers *do and think* - it's as simple and as complex as that (1991: 117, own emphasis).

The Importance of Practitioners' Thinking for Educational Improvement

Admittedly, this dissertation sidesteps the complex issue of the relationship between thinking and practice, mediating factors that may influence the process and the tension between the concrete and the abstract. Nisbet & Ross write of the field of cognitive psychology's 'inability to bridge the gap between cognition and behavior' (1980: 11). Little seems to be known about how teachers make decisions based on reflection or how they judge the quality of those decisions in action, leading Day to declare that '*we do not know how reflection leads to change*' (1993a: 137, original emphasis). There appears to be no doubt that a link exists between thought and action since 'teacher behavior and teacher thinking are inseparable and part of the same event' (Zeichner et al, 1987: 32). Yinger & Hendricks-Lee add that 'human thought and action ... operate as integrated and holistic systems' (1993: 104).

However, it is with teachers' internal theorising, rather than their external practice, that this study is concerned. Drawing on supportive, often empirically grounded, statements from within the literature, this dissertation is premised upon four assumptions. Firstly, that teachers' thinking (their values, beliefs, knowledge and attitudes) invariably guides their practical actions in the classroom; secondly (and consequentially) that this ultimately affects the standard of children's educational experiences; thirdly that strategies aimed at advancing excellence in education should thus hinge upon improving the quality of practitioners' thinking; and fourthly that action research is an eminently well qualified medium for seeking such enhancement.

The substantial role teachers' thought processes play in the educational process is becoming increasingly acknowledged and a number of sources emphasise its significance. Erikson, for example, draws attention to the importance of practitioners' thinking when he writes that 'the mental life of teachers and learners has ... become crucially significant for the study of teaching' (1986: 127). Calderhead likewise accentuates the primary place of teacher cognition in professional practice with this statement:

Research on teachers' thought processes has grown rapidly over the past decade, as it has become increasingly recognised that much of teachers' professional activity is cognitive in nature, and that a large proportion of teachers' classroom behaviour is the product or accompaniment of some form of thinking. Within a framework of organisational and curricular constraints, teachers make decisions about what to teach and how; they plan work; and they identify and find solutions or compromises to a regular flow of classroom problems. Any adequate account of teaching processes must clearly encompass such cognitive acts (1987: 183).

Clark & Peterson's major review of research on teacher thinking also affirms how educational practice is 'substantially influenced and even determined by teachers' underlying thinking' (1986: 255) and that 'teachers' mental constructs can have significant pedagogical consequences' (op.cit.: 256). This research has shown how educational practice is based upon teachers' system of beliefs, values, principles that inform their decision-making. In other words, their 'theoretical orientations ... in effect organise and trigger their instructional behaviours' (Fang, 1996: 51; also Isenberg, 1990; Mitchell & Marland, 1989). It is believed that 'all practical activities, such as teaching, are guided by some theory' (Ross et al, 1992b: 3), and Spodek reviews a number of studies which demonstrate that 'teachers' thought processes determined the actions that were taken in the classroom' (1988: 165; also Borko & Putnam, 1995). Fullan's earlier statement is echoed by Hargreaves:

It is what teachers think, what teachers believe and what teachers do at the level of the classroom that ultimately shapes the kind of learning that young people get (1995b: vii).

Thus the literature supports the contention that 'every teacher possesses a "practical theory" of teaching which is subjectively *the* strongest determining factor in her educational practice' (Handal & Lauvas, 1987: 9, original emphasis). Fullan (1991) also believes that it is transformation in pedagogical beliefs and understanding that lies at the heart of change. In a similar vein, Hargreaves & Goodson point to research that suggests how 'the persistence ... of unexamined practical knowledge of what teaching is, is one of the most serious barriers to improvement in teaching' (1996: 13). Spodek adds that one of the reasons reformers have such difficulty 'modifying classroom practices' is that educational practice is largely driven by 'value-orientated implicit theories [that] are not easily modified' (1988: 167). This phenomenon is summarised well by Clark:

Research on teacher thinking has documented the fact that teachers develop and hold implicit theories about their students, about the subject matter that they teach and about their roles and responsibilities and how they should act. These implicit theories are not neat and complete reproductions of the educational psychology found in textbooks or lecture notes. Rather, teachers' implicit theories tend to be eclectic aggregations of cause-effect propositions from many sources, rules of thumb, generalisations drawn from personal experience, beliefs, values, biases, and prejudices. Teachers are subject to the full range of insights and errors in human judgement ... when faced with complex, fast-paced, consequential, and occasionally emotion-laden social judgments and action situations. And teachers' implicit theories about themselves and their work are thought to play an important part in the judgments and interpretations that teachers make every day (1988: 6).

The composite professional knowledge that guides teachers' decision-making appears to encompass far more than operational procedures and subject expertise. From the beginning, teachers enter the profession with 'a strong sense of personal identity and of personal values' (Pollard & Tann, 1987: 38). The personalised, value-based nature of teachers' 'personal practical knowledge' is seen to comprise 'a moral, affective and aesthetic way of knowing life's educational situations' (Connelly & Clandinin, 1988: 59). Similarly, Schon points out that professional knowledge comprises 'a set of values, preferences and norms in terms of which [teachers] make sense of practical situations, formulate goals and direction for action and determine what constitutes acceptable professional conduct' (1987: 33).

The work of Spodek & Saracho (1988) on the practical knowledge of early childhood practitioners also accentuates the value driven nature of teachers' practical knowledge. They note a 'moral' dimension within such knowledge 'based upon differing notions of the good, the true, and the beautiful, which cannot be derived from childhood development theory' (op.cit.: 71). The thought processes of early childhood teachers, for example, comprise both 'scientific concepts' related to the processes of education (such as learning theories) and 'value beliefs' which are concerned with the products of education and are based upon 'moral judgements and social expectations' (ibid.). Moreover, teachers' implicit theories are more often 'opportunistic' and 'rooted in a form of personal practical knowledge' rather than being 'grounded in reliable knowledge of child development and learning theory' (Spodek, 1988: 168).

Elliott proposes that the

problem of standards in our schools might be at least partially due to the persistence of well-established, highly routinised and unquestioned “common sense” approaches which are deeply rooted in the traditional “craft culture” of teachers (1993a: 35).

Some of the early research on teacher thinking bears this out. This research indicates that teachers tend to 'routinise' practice, are guided by unconscious processes and entrenched assumptions, and are mainly propelled to conscious decision making only when under threat, with issue of maintenance and management being their primary concern (Clark & Peterson, 1986; Shavelson & Stern, 1981; Clark & Yinger, 1979, 1977). The routinisation process is apparently prevalent enough for researchers in this field to describe interactive teaching primarily as 'carrying out a routine' (Shavelson & Stern, 1981: 484). If teachers feel compelled to alter this routine during a teaching activity, research reveals that teachers apparently tend 'not to critically evaluate the alternatives; rather they sought confirmation for their choice' (op.cit.: 487). Mitchell & Marland also highlight evidence which shows that much of teachers' interactive thinking appears to be 'unplanned' and an 'automatic, routine response' (1989: 127).

Traditional research on teacher thinking has also drawn attention to the role attributions and heuristics play in teacher cognition. Due to 'information-processing limitations' teachers employ attributions and heuristics to assist them in the decision-making process (Shavelson & Stern, 1981). Shavelson & Stern explain that 'information is selected and integrated by teachers to reach a judgment or make a decision, in part, on the basis of a few heuristics and their attributions' (op.cit.: 473). Researchers have suggested that 'the most important beliefs that teachers have about students are those that deal with teachers' perceptions of the causes of students' behavior or, in other words, teachers' attributions for the causes of students' performance' (Clark & Peterson, 1986: 281). Teachers also employ heuristics which are 'implicit rules that people are unaware of and use in complex tasks in order to select information, classify objects or persons, or revise their knowledge' (Shavelson & Stern, 1981: 469). The 'representativeness heuristic', for example, may involve pupil categorisation 'by judging the similarity between the attributes of the person ... and the attributes of the category' (op.cit.: 473). Thus, 'when a description of a student matches the stereotype of a slow learner even if the description is unreliable, incomplete or outdated, people often predict with high certainty that the student is a slow learner' (ibid.). The causal inferences that

practitioners make in their practice and the well-known evidence of teachers' mismatching task with ability (Gipps, 1992) indicate serious misdirections in teacher's everyday thinking.

Overall, the research literature implies that practitioners need to question their personal practical knowledge base and expose unreflective, habitual practice. There is also evidence of inconsistencies between espoused beliefs and actual practice which gives further credence for teachers to examine the thinking behind their actions (Fang, 1996; Argyris & Schon, 1980). Hargreaves & Fullan support a method of teacher development that can 'establish opportunities for teachers to confront the assumptions and beliefs underlying their practices' (1992: 5). With Goodson, Hargreaves also warns of the danger of practical knowledge becoming 'parochial knowledge' and propose that teachers 'review, renew and reflect on it' (Hargreaves & Goodson, 1996: 13). In a similar fashion, a research review by Isenberg has led her to claim that 'teachers' ability to make conscious, interactive decisions; to articulate their theories and beliefs about practice; and to reflect on their practice is an important determinant of exemplary teaching' (1990: 325). Such a process is not unfamiliar to teachers since research on teacher thinking reveals that practitioners are already 'researchers on their own teaching effectiveness' (Clark & Peterson, 1986: 293) as they look back on their practice and reflect upon its success or otherwise.

The Reflective Practitioner

The idea of a 'reflective practitioner' is now 'firmly embedded in the discourse of professional educators' (Edwards, 1994), although Zeichner warns that some traditions of reflective teaching 'uncritically advocate reflection for the sake of reflection' (1994: 17). Elsewhere, he writes that reflection has become something of an 'educational slogan' that 'lacks sufficient conceptual elaboration and programmatic strength' (Liston & Zeichner, 1987: 2). Edwards (1994) makes the important point that reflection 'cannot be assumed to happen automatically' nor 'left to chance'. It is necessary that such practice should be 'planned or and enacted in a conscious and deliberate manner' (ibid.). It has been proposed that 'regular systematic reflection ... following an active experience serves to facilitate the cognitive restructuring process needed to integrate new learnings with old

patterns of thought' (Oja, 1991: 51). Boud & Walker further note that 'learning from experience' can be 'prompted by systematic reflection' (1993: 85). Action research is offered as a means by which reflection can acquire the focus and direction it needs.

Dewey (1933) said that reflective thinking 'impels' us into inquiry and action research can provide the context for this inquiry. It can carry the reflection process a step further into an active and deeper level, providing it with sufficient strength, structure and purpose, beyond mere contemplation into an active investigation. It provides a practical agenda as Liston & Zeichner describe:

It is ... important to recognise that the self-reflective cycles of plan, act, observe, and reflect, occur naturally in the work of teachers. The difference is that in action research teachers conduct these activities more carefully and systematically than they normally would, and with somewhat more of a focus on particular issues over a period of time (1990: 246).

Tripp also distinguishes between casual reflection and action research in that the latter is 'conscious and deliberate, a characteristic that leads to "strategic action"' (1990: 159). Action research can make reflective teaching a meaningful and realistic practice. It turns what is otherwise an overwhelming multitude of thoughts and feelings about a myriad of educational acts into something that is both purposeful and perhaps more importantly, manageable, for the harried teacher. Since learning is considered to be 'goal-orientated' and incorporates the organisation of experience (Shuell, 1986), the focus and design action research can bring suggests it to be almost a natural learning process for practitioners. Clark's work on teacher thinking has led him to believe that adult development is more likely to succeed if it offers a context in which teachers can 'become designers of their own personal programmes of self-directed professional development' (1992: 75).

Action research may provide such a programme for reflection but Zeichner also argues that we still need to 'focus our attention on what kind of reflection teachers are engaging in' (1994: 18). Practitioners may adopt the practice of systematic reflection through action research, but the reflective process would need to be sufficiently robust and penetrating to ensure ingrained convictions and entrenched practices deemed inappropriate are uprooted successfully. Critical thinking, therefore, is widely promoted in the literature as the most effective means of ensuring quality practice. The next

section draws attention to the notion of *critical thinking* and posits the idea that in order to develop effective education, critically reflective practitioners are required.

Cultivating a Critical Mind

Candy writes that ‘historically, critical thinking is one of the most highly esteemed goals in education’ (1991: 328). Whilst critical thinking might be a ‘valued educational ideal’ (Candy, *op.cit.*), there is less agreement as to what this might entail. This debate is explored more extensively in chapter five. At this point it is sufficient to note that many different forms or levels of reflective thinking have been identified within the literature (for example, Morrison, 1995; Louden, 1991; Liston & Zeichner, 1990; Pollard & Tann, 1987; Schon, 1983; van Manen, 1977). Gore’s (1987) review differentiates between the ‘technocratic orientation’ and the ‘critical orientation’. She notes, for example, Cruikshank’s more technical approach which restricts the focus of reflection upon pre-specified goals, whilst Zeichner offers a more ‘robust interpretation’ that does not limit itself to the immediate setting and simple proficiency, but also looks at the wider context of practice and ethical and political issues. The literature on reflection mostly cautions for the need to ensure that critical reflective practice is promoted and not ‘mere’ reflection.

Similar warnings abound in the writing on action research. There is a ‘common assumption that action research involves teachers inquiring in order to develop a richer understanding an improved practice’ (Noffke, 1997: 309). However, there are widespread differences in the purposes, nature and conduct of the research. McTaggart writes that it is sometimes difficult to ‘distinguish authentic action research from the miscellaneous array of research types that fall under the descriptor “action research”’ (1997b: 1). Moreover, a variety of epistemology and philosophical traditions have been drawn upon by different authors to locate action research in a theoretical context such as Aristotelian ethics (Carr & Kemmis, 1986); critical social science (Kincheloe, 1993a); Deweyian philosophy (Ross, 1992); personal construct theory (Zuber-Skerritt, 1992) and Gadamer’s hermeneutics (Elliott, 1993b). Within various conceptions, distinctions have been drawn between the style, depth and character of action research, essentially between technical, practical and emancipatory levels (Zuber-Skerritt, 1996; Carr & Kemmis, 1986; Grundy, 1982).

This study is mostly concerned with the practical and emancipatory forms of action research which supposedly imbue practitioners with a more *critical* consciousness. It is interested in discovering how action research might answer the call for practitioners to question their thinking about their practice and to transform an 'individual's deeper structures of sedimented knowledge' (Sanger, 1990: 175) bringing about an

awakening into a stream of consciousness where suddenly the familiar daily routines of professional practice become discordant symbols of the conflicts that exist between articulated (surface) and unarticulated (deep) levels of knowing (ibid.).

In order to disturb a practitioner's 'bedrock of calcified experience and understanding' (ibid.), critical thinking is called upon through the generation of questions, analyses and evaluations. According to Apple, critical thinking 'seeks to illuminate the problematic character of the common-sense reality most of us take for granted' (quoted in Smyth, 1991: 44). For the reflection process to truly challenge, it needs to 'raise doubts about what, under ordinary circumstances, appears to be effective or wise practice' (Tom, 1985: 35). It demands that there be an element of experimentation. It moves beyond technical concerns of productivity and proficiency to consider the process and outcome and the means and the ends (Elliott, 1983). The intention is not only to seek finite answers or solutions but also to deepen awareness and understanding of the educational process. Instead of simple problem-solving, it becomes a question of problem-setting or 'problematizing' as Smyth (1991) calls it. It is a process by which the educational setting is considered problematic and therefore needs to be questioned. Moreover, 'reflection, critical awareness, or enlightenment on its own is insufficient - it must be accompanied by action' (Smyth, 1984: 63).

It is claimed that action research can help practitioners to 'critically ... [appraise] ... the adequacy of the concepts, beliefs, assumptions and values incorporated in prevailing theories' (Carr & Kemmis, 1986: 115). It provides a context for the practitioner to confront habitual practice that is guided by 'theories of control' or 'rules of action' that have become routinely established and go unchallenged (Day, 1984). Action research is intended to be a deeply questioning process which 'improves practice by developing the practitioner's capacity for discrimination and judgement in particular, complex, human situations ... [informing] professional judgement' (Elliott, 1991a: 52). Effectively, it is a

process of 'wise and prudent deliberation' (Carr & Kemmis, 1986: 31) leading to the development of 'practical wisdom' (Elliott, 1991a).

It is this 'practical wisdom' or the process of what Carr & Kemmis (1986) refer to as 'becoming critical' with which this dissertation is ultimately concerned. Not only is it interested in evaluating the impact of action research on practitioners' thinking, but it is also intent on discovering the ways in which action research fosters more critical thinkers. This study's investigation of the *cognitive consequences of action research* hopes to make an important contribution to both the fields of teacher thinking and action research.

Research on Teacher Thinking and Action Research

In this chapter I have proposed that action research is a suitable vehicle for 'high quality' professional development and one that is most likely to succeed given its compatibility with those traits deemed necessary to ensure meaningful and worthwhile change. Within this framework of rationale, I have drawn particular attention to the importance of practitioner thinking in determining the quality of practice and noted the potential of action research to influence and develop this thinking, and in particular to promote critical reflection, thereby modifying misguided practice and inaugurating more worthwhile educational provision. Here I locate my own research study within the wider literature and the contribution it can make to our understanding of how teachers think in practice and how this thinking might be transformed through action research.

It is suggested that action research is 'now established as an important and influential movement' (Elliott & Sarland, 1995: 384) and 'action research for professional development is a frequently heard maxim' (Cohen et al, 2000: 228). Much of the published works on action research comprise practical guides (for example, Altrichter et al, 1993; Elliott, 1991a; McKernan, 1991; McNiff, 1988) or encompass epistemological issues, philosophical accounts and debates on issues arising from its conduct (for example, Johnston & Proudford, 1994; Winter, 1987; Carr & Kemmis, 1986; Elliott, 1985b; Holly, 1984). Cochran-Smith & Lytle (1993) refer to this literature as 'conceptual research'. They locate a second category of 'empirical research' which comprises actual accounts of action research. These include official research projects

(for example, Somekh, 1991a; Webb, 1990; Ebbutt & Elliott, 1985) and compilations of increasingly 'rich and detailed accounts' (Noffke & Stevenson, 1995) drawn from an international base (for example, Atweh et al, 1998; Carson & Sumara, 1997; Hollingsworth 1997; O'Hanlon, 1996a; Noffke & Stevenson, 1995).

Opinions differ in the literature about whether the empirical accounts that exist are sufficient to support the grandiose claims made in action research's name. Grundy & Kemmis have maintained that there is 'plenty of evidence in print and in people to justify a claim for action research based on performance rather than promise' (1988: 331). Zeichner adds that 'the evidence overwhelmingly indicates that action research has been successful [in the] development of individual practitioners' and that 'there is little doubt that teachers find it enormously valuable intellectually and that they feel it enhances the quality of their teaching' (1993b: 203). Elliott & Sarland (1995), however, consider that relatively few wholly empirical accounts exist. Their views are shared by King & Lonquist (1994) who maintain that the research base, albeit growing, is still 'fairly small', and Huberman who contends that 'the claims made in the [action research] literature go well beyond the evidence' (1996: 127). The quality of the case study material available has also been questioned by Adelman (1989).

Moreover, Zeichner warns that 'much of the references in the literature to the value of teacher research are anecdotal and are not the result of systematic and intentional exploration of teachers' experiences' (1998: 6). He also points out that 'there are relatively few cases where the professional development aspects of teachers research have been systematically studied by those other than the persons conducting the research' (op.cit.: 13). Interestingly, he quotes the work of the PiP Project as an example of research studies that have addressed these issues. Like the PiP Project, this study is an attempt to 'systematically and intentionally explore' teachers' research.

Noffke & Zeichner also report that 'in almost every report of an action research project, claims are made by researchers and/or facilitators about the value of action research in promoting changes in teacher thinking' (quoted in King & Lonquist, 1994: 12). Yet King & Lonquist make the pertinent point that 'what this process looks like ... is not well documented' (1992: 19). *This study seeks to clarify what these changes in thinking might be.* In this way it hopes to fill a gap in the action research literature of the

qualitative transformations action research can bring about in practitioners' thinking. Publications that relate to the critical reflective process of action research are largely philosophical accounts (for example, Kincheloe, 1991; Nias, 1991; van Manen, 1990; Carr & Kemmis, 1986). Most of the reported studies on action research tend only to discuss the impact of action research on practitioner's thinking in generic terms. Blanket references are usually made, for example, to the way in which action researchers have developed a critical perspective towards their practice (for example, Vulliamy & Webb, 1991; Kemmis, 1987) with only minor details as to what this encompasses. For example, some of Dadds' research refers to the 'cognitive' impact of action research as 'perceptions, understanding and attitudes took on a new shape and form' (1993a: 240); whilst Ovens refers to the 'intellectual' impact of action research in terms of 'changes in thought and action' involving 'change in a large number of interrelated items of belief, knowledge, action, perception, value and awareness' (1993: 226). Those accounts that do specifically address the relationship between action research and teacher thinking (for example, Liston & Zeichner, 1990; Noffke & Zeichner, 1987; Oja & Pine, 1987; Day, 1984; Oja & Ham, 1984) are not extensive studies and there is undoubtedly a place for further work in this area.

Furthermore, a review of the literature suggests few attempts have been made to relate practitioner research to the work being done in the field of adult development. This research study draws upon some of the leading theories that have been generated in an attempt to understand adult development more clearly. At the same time it hopes to make some empirical contribution to the work on adult learning. Merriam & Caffarella (1991) note that there is very little evidence for most of the theories on adult learning such as Mezirow's work. Mezirow (1991a) himself refers to the wide gap between theories of adult learning and the realities of practice. There may also be useful lessons to be learned from recent scientific advances in our understanding of how the mind works and how this research might relate to the way action research impacts upon cognition. This study therefore pursues *some of the links between its findings and theories of adult development and cognitive science.*

The research presented here moves away from much of the early work on teacher thinking that was derived from information processing traditions. This initial research on teacher thinking used mostly experimental, process-product psychological research

models based in laboratory settings. This has led to criticisms for being 'cybernetic', for being merely 'descriptive' and 'unproductive', for ignoring the social and institutional contexts of teaching, for providing a 'restricted and partial account' of teacher thinking and for viewing teacher thinking as linear and rational rather than as creative, interactive and complex, and for seeing teachers as 'decision-makers' rather than 'sense-makers' (Day & Hadfield, 1996; Calderhead, 1993; Ross et al, 1992a; Buchmann, 1990; Lowyck, 1990; Mitchell & Marland, 1989; Clark, 1986; Clark & Peterson, 1986; Shulman, 1986).

Increasingly, educators have begun to make their own contribution to the field of teacher thinking and my own research forms part of this process. The focus of teacher thinking research has broadened to include considerations of the situated and social context of teacher thinking and personal influences on teacher development. This inquiry answers the call for 'more qualitative data gathering processes' in research on teacher thinking which recognises the 'complexity of the phenomena to be studied' and encompasses a more 'holistic view of teacher as person' (Day et al, 1990: 2). It also answers the call for research on teacher thinking to be 'of value to practitioners and the participants within the research' (op.cit.: 3). Elliott (1993b) has made a similar appeal for research into teacher thinking to adopt a more 'practical interest' that actively seeks to 'develop' teachers' thinking. Similar sentiments are expressed by Clark & Lampert who claim the need for research on teacher thinking to 'understand practice rather than to dictate practice' (1986: 30). This study represents a strand of teacher thinking research identified by Day & Hadfield that adopts a 'critical' approach in that it is 'directly concerned with teacher improvement through moving through a cycle of reconnaissance, investigation, experiment and evaluation' (1996: 162; also Pope, 1993). They label such an approach 'action research'.

Investigating Pedagogical Intelligence

Since the self-reflective or self-evaluative aspect is arguably the most crucial part of the action research cycle, I believe there is a real need to clarify the 'cognitive journey' upon which action researchers embark which can help to identify the actual transformations that are intended to take place. A clearer path needs to be forged between the idealistic

presumptions action research makes about developing a critical frame of mind and what this actually entails for the practitioner. This may be possible through an investigation of practitioners' 'landscape of consciousness' (Bruner, 1986). This study hopes to provide a firmer indication of action research's potential in probing the practitioner's mind leading them to new depths in a critical analysis of their practice and the development of what Rubin (1989) calls 'pedagogical intelligence'.

PART TWO

RESEARCH METHODOLOGY

CHAPTER TWO

THE RESEARCH CONTEXT AND DESIGN

The Research Context

This study is partly drawn from a research project based at Goldsmiths' College entitled Principles into Practice: Improving the Quality of Children's Early Learning (hereafter 'PiP') that took place between 1993 and 1997. A brief description of this project provides a context for my own research. The PiP Project comprised three phases, the first involving an extensive survey of current early years provision in England and Wales. Although essentially a statistical review of the nature and quality of provision, level of resourcing and the qualifications of early years practitioners, this survey, conducted via questionnaires, also elicited some narrative views from experienced practitioners on what constitutes a quality early years education. The second phase of the project was of a more qualitative dimension and attention was directed to the means of improving quality in practice by providing opportunities for the promotion of the professional development for all adults working with children under eight in a variety of early years settings. Action research was selected as an appropriate procedure through which to facilitate continuing professional development by enabling practitioners to investigate the principles that guide their practice and evaluate and improve upon that practice. The third and final phase of the PiP Project was largely concerned with dissemination of findings to a variety of audiences as well as the development of action research-based guidelines for improving practice.

Data generated from this project has not yet been fully analysed although initial findings have highlighted some important insights into the current state of early years education in England and Wales as well as indications of the effectiveness of action research as a potential strategy for enhancing the quality of this provision (Blenkin & Kelly, 1997; Burgess-Macey & Rose, 1997; Blenkin, Rose & Yue, 1996; Kelly & Rose, 1996; Edwards & Rose, 1994).

The rationale behind the project team's choice of action research as a suitable method for effecting real improvement in the daily practice of early years practitioners has been documented elsewhere (Blenkin & Kelly, 1997; Blenkin et al, 1995). The grounds for advocating action research were borne out by the findings of a pilot study conducted in the first phase (Blenkin & Kelly, 1997; Edwards & Rose, 1994). Here a small number of practitioners from different early years settings in the London area found sufficient success in carrying out action research in their practice for the project team to introduce action research on a wider scale as part of the second phase. I was one of the pilot action researchers at that time before joining the PiP Project as a Research Associate in the second phase.

It is upon the second phase of the PiP Project that my own research is based. In this phase a series of action research case studies were conducted in over one hundred institutions in and around the London area with the cooperation and financial support of local education authorities. These varying settings ranged from local playgroups to day nurseries to primary schools, the vast majority being from the state-maintained sector. It involved a large number of practitioners working with children under eight holding different qualifications and training including playgroup leaders, classroom assistants, nursery nurses and teachers (hence the use of the term practitioner rather than teacher). The PiP Project was fundamentally concerned with the early years of education and the team believed their research would have some important contributions to make to this area of education as well as to the field of action research.

The next few sections provide some details of the participants, the research procedures, my own research role in the PiP Project and the types of data generated.

Research Procedures

Many of the first practitioners to join the PiP Project were selected by a local authority contact within each of the seven boroughs (usually an inspector or member of the advisory team). Other practitioners were invited to join at dissemination and information meetings arranged in the various boroughs after the second phase had

formally begun. Whether practitioners were initially selected or not, it was made clear that no practitioner would be under obligation to participate and the PiP team operated along the principles of 'informed consent' (Cohen et al, 2000; Kelly, 1989). Involvement was therefore voluntary and all were given an opportunity to make a personal choice about undertaking action research. With the exception of one or two cases, all those invited agreed to take part and commit themselves to a period of about one to two years.

The PiP team tried to avoid some of the pitfalls encountered by other externally initiated projects which have held prespecified agendas and unequal power relationships between the research team and research participants (Johnston & Proudford, 1994). Every effort was made to give the practitioners self-control over the research process with a member of the project team fulfilling whatever role was required to help the participants to become self-sufficient action researchers. Although guidance was given on the action research cycle, no formal or rigid programme was imposed on the participants. The only stipulation given was that the participants endeavour to examine their principles of practice. The practitioners were also given free choice over which aspect (based on some guiding principle) of their practice to investigate and the manner in which they wished to do this. Explicit authorisation was acquired via a contract that was signed between each participant and a project director setting out the expectations and rights of each party and taking into account, where possible, ethical considerations such as data usage.

Overall, the PiP team endeavoured to provide a safe and supportive environment for the practitioners to operate within, giving ownership of the research to the participants and creating contexts for group meetings in which the teachers could share their work, enjoy intellectual challenge and stimulation and gain emotional support. In this way the PiP Project closely mirrored procedures Zeichner (1998) claims are necessary for successful teacher research.

The research team worked mainly with individual practitioners, although the cooperation of other members of staff was actively encouraged and, indeed, often incorporated. In one of the boroughs the entire early years team within each setting became directly involved from the outset. A member of the project team, in the role of

a research partner, worked closely with a new group of practitioners every term visiting each setting at regular two week intervals for a full term. The research partners also usually visited each practitioner's classroom during working hours to familiarise themselves with the context and setting.

Each participant received a minimum of six visits during this intensive phase. After this period, the practitioner continued the research independently with occasional visits from the research partner on a half-termly and then termly basis for the remaining part of the project. The research partner also helped with the organisation of termly and/or half-termly network meetings within and across the boroughs, which provided additional support, along with dissemination opportunities.

Typically, the initial meeting was spent giving any necessary clarification of the action research process. No specific action research model was adopted by the PiP team but it was described as 'a continuous cycle in which you select an area of your practice to investigate, collect evidence about it, reflect on the evidence, then develop new ideas and act upon these ideas' (PiP Project Leaflet B). The definition offered by Zuber-Skerrit best describes the style of action research promoted by the PiP Project:

Action research ... is a learning process, an ongoing spiral of cycles of enquiry consisting of systematic planning, acting, observing and reflecting. It is not a static, but a dynamic, process of experiential learning consisting of a dialectic between theory and practice, abstract generalisations and concrete experiences, observation and action (1992: 121).

Several information leaflets were produced to elucidate the process and included helpful suggestions on ways of selecting a focus, collecting and evaluating evidence and changing practice. The role of the research partner and network meetings was also explained at the first meeting and included discussion on the selected focus, possible ways of getting started including advice on data gathering techniques. The participants were asked to write a brief summary of their understanding of action research mainly to help ensure comprehension and 'shared meaning' of the process both for the practitioner and research partner's benefit. They were also asked to write a short outline of their intended research area including their reasons for selecting this focus, their perceptions of current practice and the ways in which they hoped to improve upon it. Often this

provided some helpful ideas for beginning the research and for initiating the reflective process.

Usually the research meetings took place during the practitioner's own time such as the lunch hour or after school hours, lasting about an hour; although some practitioners were given release time by their head teacher. Once the research had begun, the regular meetings between the researcher and research partner followed a fairly standard pattern. The practitioners would talk about what they had been doing for the research during the previous two weeks and share any data gathered leading to an evaluative discussion of the data. Before the end of the meeting the research partner would ensure the practitioners had a clear idea of what they wanted to do in the next two weeks for the research. This gave the practitioners a manageable goal to work towards so that the research did not become too overwhelming, distracting or confusing. The research partners performed an important and necessary role in helping to facilitate the action research process as amplified in the next section.

The Role of the Research Partner

In action research terminology, the facilitator of the research process is commonly known as a 'critical friend'. However, this term was deliberately avoided by the Project team due to the negative connotations of the term 'critical' and the implication that we would be there to judge the practitioners' work. In calling ourselves research partners the Project team intended to portray a more open and democratic tone that would facilitate a non-hierarchical and collaborative relationship and reduce any implicit power relations. Zuber-Skerritt (1996) has made an important distinction between a facilitator that acts as an 'outside expert' and one that operates as a 'process moderator'. In the former case, a dependency relationship is established and is usually associated with a technical form of action research, whilst the latter encourages equality and empowerment as practitioners embark upon a self-critique of their practice.

The kind of relationship fostered by the PiP Project echoes the kind of principles of partnership proposed by Grundy and others (Grundy, 1998), entailing a democratic relationship with joint responsibility and striving for trust and understanding of each

others' perspectives. It is true, however, that it may not have resulted in a 'genuine' research partnership. Grundy (1998) highlights the difficulties of achieving this despite good intentions as it may not be entirely possible within an academic initiated scheme to eliminate the notion of 'outside expert' and potential inequalities that may arise, particularly in the light of the facilitator's role of promoting critical dialogue. Despite these problems the PiP team members strove to create an egalitarian relationship with the participants and were assisted by the parity of their professional history. All the research partners were themselves experienced early years practitioners which eased the path of access and acceptance. For my own part I had 'come straight out of the classroom' (Somekh, 1991b: 108). Such 'shared membership' (Miller & Glassner, 1997) helped to eliminate some of the traditional barriers between 'ivory tower' academic and practising teacher. That the PiP team managed to create an atmosphere of equality is reflected in this nursery nurse researcher's statement: "*I was taken on as an equal*" (AH/CR/QU/4). Another participant commented: "*You were on our side all the time which I think made a lot of difference. It helped us because we felt as if you were our friend and not somebody that was judging us. You weren't criticising us*" (SD/CR/IV/12).

As in other action research projects, the research partner in the PiP Project had a 'shifting role' (Somekh, 1991b) which took on both 'expressive' and 'instrumental' forms (Holly, 1984). The multifunctional nature of the research partner is evident from some of the observations made by the participants in the evaluation questionnaires they completed for the project. Here practitioners were asked about the ways in which they had been supported by the research partners from the project team. From their responses it is possible to discern three major dimensions to the role noted above.

The first of these was the furnishing of emotional support. Almost without exception the practitioners talked expressively in terms of the encouragement and reassurance they had received from the research partners. They were propelled by the "*genuine interest*", the "*sympathy*", the "*recognition of achievement*", the "*praise*" and the "*enthusiasm*" imparted by the research partners which increased their confidence and motivation.

Practical assistance was a second supporting role acknowledged by the participants with the research partner acting as a friendly advisor to help participants to get started and,

where necessary, initiate them into data gathering techniques. In particular, the practitioners spoke of the way they were helped to have direction and focus with guidance on "*realistic targets*" or "*mini-goals*" to work towards.

The third activity highlighted by the researchers was the partner's role in the shared evaluation process as a "*listener*" and a "*catalyst for ideas*". They talked in terms of the partner "*raising questions*", "*extending thoughts*" and "*clarifying thoughts*", helping to create "*another viewpoint*" and "*diversity of opinion*". This was perhaps the most important, and continuous, function for the research partner as both an audience and participant in the discussion of the research and the data that was generated. The dialogic role was intended to stimulate the practitioner to pose questions and evaluate the meaning and significance of their research, to act as a 'sounding-board' (Carr & Kemmis, 1986), provide 'alternative perspectives' (Mezirow, 1991a), 'check against bias' (Day, 1999) and generally help to forge a way forward for further exploration. In essence, the research partner helped to make the practitioners' thinking more explicit, to challenge understanding and generally to contribute to the 'learning climate of the research enterprise' (Dadds, 1993b: 298).

The equitable style of exchange between practitioner and partner has been described as 'symmetrical communication' (Zuber-Skerritt, 1996) and 'genuine dialogue' (Somekh, 1991b). As such, the research partner had to tread carefully not to impose 'externally derived theories of understanding' (Elliott, 1985b: 252) and to strike a balance between championing self-development whilst encouraging a focus on the 'intrinsic qualities' of learning rather than only their 'extrinsic products'. Gore & Zeichner (1991) have documented the dilemmas that exist for facilitators to maintain ownership of action research projects whilst endeavouring to elicit a more critical orientation.

The research partner's role was also to stimulate independent research. Once the practitioner had come to grips with the action research cycle, it was hoped that the collaborative colleagues within the setting would replace whatever functions the research partner had fulfilled. The research partner intended to provide a framework through which the practitioners could help and support each other to realise critical self-awareness and unearth unconscious intentions so that the realities of their practice could be exposed. Whether or not the practitioners accomplished this is the subject of my

own study. Day has suggested that a research partner (or what he calls a 'researcher-consultant') can achieve 'access to more valid information concerning how teachers learn and why they change ... and thus teachers' thinking' (1985: 140).

It should also be mentioned that the research partners had additional duties to fulfill in their capacity of Research Associates that were exclusively concerned with the overall intention of the project, namely to research the researchers. The dual responsibility towards the practitioners on the one hand and to the project team on the other at times created uncomfortable dilemmas for the research partners. For example, whilst advocating free choice and self-control for the researchers, the partners also had to ensure they fulfilled their obligations to the project such as the provision of evidence of their research and the completion of questionnaires.

The Research Data

The data generated by the PiP Project were vast and composite. Some were developed exclusively by the practitioners for their research focus and came largely in the form of written observations. Every practitioner at some time and in some form conducted observations of children and sometimes the adults. Usually this evidence included their evaluations on the data collected and the insights they gained. In addition to written observational material, many practitioners supplemented their research by gathering alternative perspectives of their practice through the use of video and audio recordings and photography. The participants were also encouraged (although not all chose to do so) to keep a personal journal which often took the form of a chronological account of plans and activities, as well as a record of self-understanding and growth, as they wrote about their thoughts and feelings on the developments of the research.

Further data were drawn from the network meetings, which often became helpful sources for extending the practitioners' contributions to the project. For example, the researchers often presented and discussed their findings at these gatherings. Records from these meetings were consolidated into reports. And many participants wrote about their research for the project's termly newsletter, which was developed as part of the

networking process to help keep practitioners informed of the project's progress and to create a written forum for sharing their research.

Each practitioner produced their own unique record of their research and inevitably this varied in both quality and quantity. Therefore an attempt was also made to elicit a more standardised review of the practitioners' work through the completion of evaluation questionnaires (see Appendix B). These asked the participants a range of questions that ascertained their general experiences and views on action research, but mainly the ways in which they believed their practice had been improved. This was drawn out through a consideration of the beneficial impact of the research on their practice, themselves personally, the children in their care, their colleagues and even the parents.

The research partners provided their own perspective of the practitioners' research through reports, field notes and reflections on each meeting encompassing 'detailed analytic memoranda' (Hanrahan, 1998). These included details of what had occurred, actual quotes from the practitioners and personal views on the developments taking place. Reflection played an integral part of the data generated by the research partners since 'facilitators of teacher-based action research need to be constantly deliberating about their own practice and its relationship to the nature of the activity they are trying to facilitate' (Elliott, 1985b: 259). Elliott calls this '*second order action research*' and claims that this helps to prevent facilitators from controlling teachers' thinking and distorting rather than enabling 'the processes of *first-order action research*' (ibid., original emphasis). The research partner's reflections often included considerations of the action research process, methodological matters and the significance of the practitioners' work for evaluating the efficacy of this strategy for improving practice. A sample of the meetings between the practitioners and research partners were also tape recorded. Regular project team meetings also produced evidence of the ongoing discussion on the progress of the project and the many issues this raised. These were in the form of minutes and reports, often transcribed from tape recordings.

Despite the extent and variety of the data collected, it became clear that for the purposes of my study it would be necessary to acquire more penetrating details that were directed towards my own particular research focus. It would have been inappropriate to have attempted to ascertain such information during the research meetings since these visits

were for the benefit of helping the practitioner to progress his/her own research. At the end of my year's involvement in the project, I therefore decided to conduct one-to-one recorded interviews with twenty-five of the practitioners with whom I had worked alongside in order to probe their thinking more deeply.

The Research Interviews Data

This study does make some use of the variety of data produced for the PiP Project, but much of it has acted as 'corroboratory evidence' (Nias, 1993). The twenty-five transcribed interviews form the primary source for my own enquiry since they deal more specifically with my area of interest: *the way in which action research affected the practitioners' thinking and whether a critical stance in the reflective process was generated*. They were also considered to be a means of eliciting more elaborate narratives of the practitioners' experiences. Cortazzi writes that 'teachers' stories of their own experiences ... is increasingly being seen as central to the study of teachers' thinking' (1993: 5). It was hoped that the narrative style of dialogue that interviewing might generate would not only help the practitioner to 'recreate' the way in which action research had affected their thinking but also help them to reorganise and reconstruct the meaning of their experiences (Cortazzi, op.cit.).

The twenty-five researchers were not chosen as a random sample nor were they selected for any particular or representative characteristic. They are therefore neither intended to be representative nor purposive, but are simply all those practitioners with whom I was directed to partner and with whose research I was involved for at least one full term; although in many cases this was for a whole year. Twenty-five seemed both a sufficient, but not unwieldy, number on which to base my own investigation. All were approached and each readily agreed to give of their free time to be interviewed and gave their permission for an evaluation of their experiences for the purpose of this dissertation. Every effort was made to be sensitive to ethical issues such as confidentiality and trust (Cohen et al, 2000).

All are drawn from the three boroughs for which I was responsible. These boroughs are situated in the inner and outer south London area, and therefore incorporate a diverse

socio-economic range from inner city scenarios to leafy suburbs. The practitioners were either nursery nurses or teachers working in a nursery or Reception class within eighteen different institutions that included infant, primary and nursery schools as well as a day nursery. In some cases more than one practitioner from each setting was included in my research. The reasons for this varied. For example, in one case two part-time teachers both undertook the research, whilst in three of the settings, a nursery nurse joined the teacher as a full participant and attended all the research meetings. Although partnered projects may have involved the same research topic, each participant played a role in data collection and evaluation and each was personally affected in their own way. All perspectives were therefore deemed a worthwhile study. The inclusion of more than one person within a setting also provides some interesting alternative views on the development of the research that took place.

In an attempt to avoid some of the pitfalls associated with traditional research interviewing, I envisaged the interview as a 'speech event' as suggested by Mischler (1986) and viewed the practitioners as 'conversational partners' (Rubin & Rubin, 1995; also Woods, 1985). I endeavoured to create 'ordinary discourse' and a conversational tone that would allow as much reciprocal meaning, common knowledge, shared assumptions and contextual understandings as were feasible (Mischler, 1986). The kind of relationship I attempted to foster and the style of interviewing adopted is elaborated upon in the following chapter.

The interviews themselves were semi-structured and were essentially 'evaluation' interviews (Rubin & Rubin, 1995). Some structure was necessary to serve my own research agenda and ease comparability of data responses, but enough flexibility was allowed to cater for the development of more extensive narrative responses as the practitioners described their experiences of conducting action research. The questions acted as a 'guide' and were grouped according to 'certain themes' (Kvale, 1983), but centered on how the action research might have affected the participants' thinking and feelings (see Appendix A). The practitioners were also asked to consider related aspects such as their views of the terms 'critical thinking', 'reflection' and 'professional development'. These were asked as part of the process of discovering 'joint construction of meaning' about the various issues between myself and the various respondents (Mischler, 1986). In order to avoid misunderstanding and dangers such as

'leading questions' (Kvale, 1983), the questions themselves were regarded in the following way:

Rather than serving as a stimulus having a predetermined and presumably shared meaning and intended to elicit a response, a question may more usefully be thought of as a circular process through which its meaning and that of its answer are created in the discourse between interviewer and respondent as they try to make continuing sense of what they are saying to each other (Mischler, 1986: 54).

The questions included main queries to guide the conversation as well as 'probing' and 'follow-up' questions for any necessary elaboration (Rubin & Rubin, 1995). They were invariably open-ended in order to give the respondents 'room to speak' (Mishler, 1986). I drew upon prior knowledge and understanding of the interviewee in deciding the way in which the questions ought to be phrased, the order in which to ask them and any additional probing questions that might have been considered helpful. Flexibility helped to ensure that the respondents were able to express the reflections of their experiences and what was considered significant to them. The participants were encouraged to express any uncertainties about the meaning behind the questions and contribute their own interpretations so that the exchange was perceived as negotiable and a 'shared language' developed (Rubin & Rubin, 1995; Mishler, 1986). Any closed questions were asked to set the context of the issue under discussion. Before every interview I reviewed all other data sources from each participant such as personal journals, reflective field notes and the questionnaires, and isolated key issues or quotes that were used as an exploratory stimulus and to supplement the standardised theme-based questions. I strove to make the questioning process as natural and as sensitive as possible to suit each interviewee to obtain a 'more richly nuanced picture' (Kvale, 1983: 189); 'custom-designed' as it were (Rubin & Rubin, 1995). This closely mirrors the style of questioning followed in Nias' (1993) study of primary teachers.

Reflective notes were made following each interview and again after each transcription, which included my personal views on the ease of its flow and its emotional tone. This helped to keep the 'social encounter' alive and accommodated some of the dynamic non-verbal and contextual factors that are lost in recording and transcription (Cohen et al, 2000). The practitioners were also asked for their comments on the interview itself. Some examples of their comments reflect the reasonable success of my intention to

'empower' the respondents not only to 'speak in their own "voices"' but to 'facilitate their efforts to achieve a meaningful understanding of their experiences' (Mischler, 1986: 118, 135).

In this way, the interviews seem to have been both 'therapeutic' (Oakley, 1981) and an 'enriching experience' (Kvale, 1983) for some practitioners. It acted as an extended 'tool' for self-reflection (Oakley, 1981), as well as a 'site' for knowledge generation (Holstein & Gubrium, 1997). The process of inquiring into their own thinking seems to have helped to clarify, confirm and/or open up new avenues in almost all the respondents' thinking. One respondent said that the interview had "*made me reflect a bit again on what [I've] been doing and where [I'm] going*" (KH/CR/IV/14) and for another "*there were several questions that make you think in a different way ... about what we're learning and what we're doing*" (CG/CR/IV/11). One declared that the interview had "*fired me with enthusiasm again. I'm now itching to get on with things*" (SHa/CR/IV/13).

I transcribed the taped interviews personally thus minimising potential data loss and distortion (Cohen et al, 2000). Quotes taken from these interviews constitute the bulk of the evidence presented. Whenever a practitioner is quoted directly in this dissertation an attempt has been made to provide authenticity by referencing the data source. Codes have been devised to ease the process of data location and include the practitioners' initials, the borough in which they work, the type of data used and, where relevant, the page number or date. All practitioners' quotes appear in speech marks and italics in order to distinguish their contributions from other texts.

The use of illustrative quotes helps to clarify my interpretations of the data material and provides a level of authenticity allowing the data to 'speak for themselves' (Nias, 1993; 1989a). I have also presented some of this quoted material in the form of small case studies in order to extend the portrayal of practitioners' thinking. I use the term 'case study' for those occasions when I draw upon more extended excerpts from the data bank. This has allowed me at times to present a fuller account of the cognitive transformations that seem to have occurred and derive more 'plausible inferences' about the patterns within the data (Guba & Lincoln, 1982). These are not comprehensive case studies and should not be viewed as such. However, the 'case studies' enable me to

penetrate more deeply the peculiarities of certain practitioners' experiences, whilst also serving to highlight more clearly similarities between the participants' thinking (Stenhouse, 1980).

CHAPTER THREE

RESEARCH ORIENTATION

A Research Biography

It is no simple matter to locate my research orientation. My methodology does not fit neatly into any of the classical research traditions. In any case, the sharp distinctions between positivistic and interpretive traditions or between quantitative and qualitative research are no longer so clear and it may be that 'no one is nestled firmly in any camp' (Miles & Huberman, 1988: 233). Moreover, it is no longer a simple question of addressing typical methodological criteria since concepts such as 'validity' and 'objectivity' are now a matter for debate. The situation is complicated by the nature of action research itself and the uncertainty of its own place within the different research traditions. My task was compounded by the lack of an established tradition for second order action research and potential problems in 'researching research'.

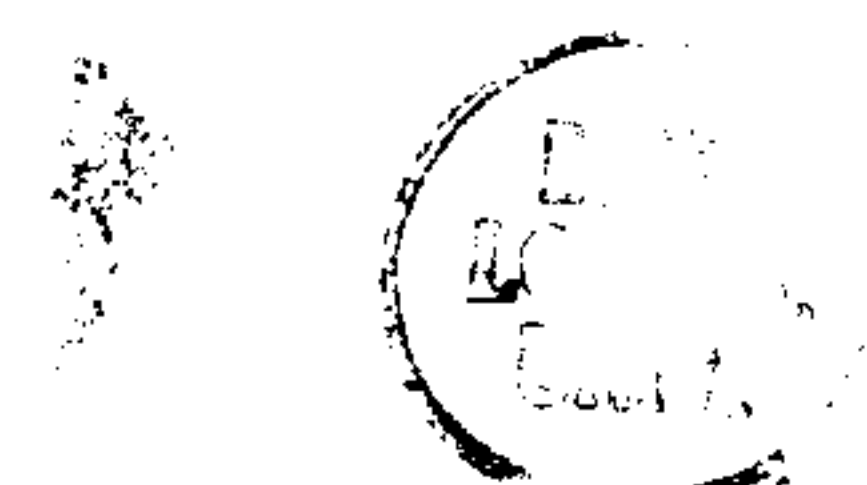
To elucidate my research orientation this chapter looks briefly at the notion of action research as a research methodology as well as the place of my research within the qualitative tradition. It then goes on to consider various methodological concerns that might be addressed using the standard frameworks of 'validity', 'objectivity' and 'generalisability'. Within each of these main sections, the personal perspective I have developed on the meaning of these terms in relation to my own research is traced. It also looks more closely at a range of methodological issues that seemed to merit further discussion. The final part of the chapter examines the nature of the data analysis and provides a rationale for the evaluative process of this study.

In place of traditional notions of 'validity', 'objectivity' and 'generalisability', it may have been more appropriate to use alternative terms like those developed by Lincoln & Guba (1985), such as 'credibility', 'confirmability' and 'transferability'. Certainly, my preference lies within a non-positivistic stance towards methodology. However, I have

deliberately chosen to utilise these terms simply because they are more recognisable and can be reinterpreted to suit the nature of my study. Acknowledgment must also be made that, by necessity, I have only confronted methodological issues in a somewhat cursory way. For the sake of brevity it has not been possible to provide a history of, or recreate, the ongoing discussion on the nature of educational research. Whilst recognising that such matters are still largely unresolved, I can give only a brief exposition of my own views drawing on the philosophy and experiences of others to give them credence.

It is also worth noting that much of this chapter is effectively a 'research biography' which 'recounts [reflexively] the processes, problems, choices, and errors' of my fieldwork (Ball, 1993: 46). Before turning to the broader methodological debates, it seems appropriate to reflect more specifically on my personal research biography. I realise that the questions I have asked in the pursuit of this study and its whole *raison d'être* are implicitly political, as Roman & Apple suggest (1990). My choice of topic can be traced to my life history and the way in which my views have been affected by my circumstances and status as a white, middle-class female. Many of my experiences resonate with those of Walker's (1995) and I am most conscious of the roots for this study lying in my experiences in South Africa where I lived for ten years during the years of my secondary and tertiary education. I have no doubt that the narrow and blatant propaganda of the education system which emphasised passive absorption of state-controlled knowledge led me to develop an interest in the importance of critical thinking. We were not encouraged to question, merely taught to recite; no doubt creating a yearning in me for my own children to encounter a critical education that I was denied. At the same time the oppressive politico-economic injustices within the apartheid system influenced a strong interest in empowerment and emancipatory ideals.

My recent advent into motherhood and accompanying desires to ensure my son and daughter are given every opportunity to enhance their potential, have only strengthened a genuine concern to ensure that educational provision is of the highest quality possible during this crucial part of any child's life. Following the work of Habermas (1972), the 'interest' directing my research was partly 'practical' in the sense of hoping to understand and make sense of the phenomena under study, but it was 'emancipatory' in the sense of an ultimate desire for social justice and the improvement of children's education through



the practice of action research and the development of more critical frames of mind in practitioners.

Other influences on my research orientation include a disposition towards a post-modernist perspective in the sense of rejecting apparent secure representations of reality and notions of certainty about the educational world and the findings that I draw from it (Kincheloe & McLaren, 1994). Yet I recognise the value of adopting seemingly positivistic practical techniques that can help to structure and inform research and enhance its credibility. No doubt part of my attraction to action research arises from its characteristics of 'collaborative, subjective, personal and tentative ways of knowing which are compatible with feminist ideology' (Johnston & Proudford, 1994: 13). I am also persuaded by the constructivists in that I have developed 'emergent designs and emergent understandings' (Denzin, 1994: 502) and that such understanding was 'socially constructed' (Guba & Lincoln, 1994). I also support aspects of the critical theorists' emancipatory and praxis orientated notions of research (Lather, 1991).

Despite potential accusations of eclecticism or incoherence (Shulman would call it a 'hybrid design', 1986), I am reluctant to locate myself firmly within a particular paradigm. Instead I have been guided by different elements of various methodological perspectives. Denzin considers such a 'multiple' approach an acceptable and increasingly common phenomenon in research circles and believes that any qualitative researcher can be 'more than one thing at the same time' (1994: 512). Hargreaves likewise believes that 'eclecticism can sometimes forge creative connections across paradigms and push the boundaries of understanding further' (1995a: 10). I have therefore followed Miles & Huberman's advice that

researchers should pursue their work, be open to an ecumenical blend of epistemologies and procedures, and leave the grand debate to those who care most about it (1988: 223).

Action Research as a Research Methodology

I am less concerned with a defence of action research as a research methodology than I am with a rationale for my own investigation into how the process of conducting action

research affects those who undertake it. Yet some defence of action research is necessary since part of my methodology involved taking on an action research stance and because the data being investigated arose from the context of action research studies by the participants.

There have been some attempts to champion action research as a research technique or as an 'alternative paradigm' (Elliott, 1991a). Cohen et al write of action research as a 'flexible, situationally responsive methodology that offers rigour, authenticity and voice' (2000: 241), whilst Somekh refers to action research as a 'radical research methodology which challenges the assumptions and status of traditional research' (1995: 347). The literature ranges from addressing issues such as 'validity' in action research to the advocacy of its practice in place of formal educational research (Feldman, 1994; Altrichter, 1993; McFee 1993; Elliott, 1991b; Watkins, 1991; Winter, 1987; Carr & Kemmis, 1986).

One of the most powerful arguments in favour of action research lies in its 'practical compatibility' or 'pragmatic orientation', playing as it does an active part in the everyday practice of practitioners (Somekh, 1995; Feldman, 1994). Conventional research is criticised for its passivity, for being ignored by and considered irrelevant to teachers with little impact on practice, as well as for being implicitly undemocratic in its application (for example, Elliott, 1988; Carr & Kemmis, 1986; Hustler et al, 1986; Stenhouse, 1975). What distinguishes action research from other forms of educational research claims Elliott (1997) is its 'transformative intentions'. Carr & Kemmis, in particular, have developed a treatise which endorses action research as a distinct research paradigm. They refer to this as a 'critical educational science' which is 'directed at the *transformation* of educational practices, the educational understandings and educational values of those involved in the process, and the social and institutional structures which provide frameworks for their actions' (1986: 156, original emphasis). It is research '*in and for* education' rather than '*on or about* education' (ibid., original emphasis). Blenkin et al, drawing on Elliott and Stenhouse, extend this point further when they write that 'action research is not something teachers do *on*, or even *for*, their practice; it is what they do *as* their practice' (1992: 120, original emphasis).

Some writers, such as Gitlin et al (1993) also contest that it is only through action research that educational research can suitably achieve goals of emancipatory change. They point out that such 'educative research' unites purpose with method, understanding with application and overcomes one of the strongest critiques of traditional educational research (whether qualitative or quantitative), that it rarely has an impact on social action. Kincheloe & McLaren (1994) refer to research explicitly aimed at emancipatory consciousness and the redress of injustices as 'critical research'. These authors often cite significant studies that may have highlighted important areas of social concern within educational practice but have had little influence on changing teachers' consciousness or behaviour. As Kincheloe & McLaren write, 'empirical observation cannot supplant theoretical analysis and critical reflection' (1994: 144). Indeed, one of the classic arguments in favour of action research highlights its capacity for effecting real change in practice and the active pursuit of democratic ideals and social justice through practitioner's self awareness of social action (Newby, 1997).

Counter-arguments have been mounted against these assertions and there are those who reject a place for action research within the frame of 'acceptable' research. Hodgkinson (1957) was one of the first writers to denounce action research as being 'unscientific', lacking the rigour of 'true' research, although his comments are now rather dated. Hammersley (1993) is less traditional in his reaction to action research and does not condemn its practice outright. However, he maintains that the charges against conventional research in terms of it being 'undemocratic', 'irrelevant' or 'invalid' are not convincing enough to replace it with teacher research. He also cautions against what he sees as 'a conception of rational action that is highly intellectualist in character, as if the rational response to a problem is always to seek to resolve it through inquiry' (1993: 224); and he questions the feasibility of Carr & Kemmis' utopian ideals for transforming society through emancipatory action research. Huberman (1996) doubts whether self-study like practitioner research can override inherent problems of self-delusion or self-distortion.

Many action research writers are conscious of the criticisms leveled against this form of research (see, for example, Zeichner & Noffke, in press; Sarland, 1995; Feldman, 1994; King & Lonquist, 1992) and, as with any debate, retaliations to these challenges can be mounted by supporters creating a perpetual cycle of contrary opinion. Elliott & Sarland

(1995), for example, note that one misplaced judgement of action research, is that of idiosyncrasy. Their response is to suggest that action research is intentionally 'person dependent'.

It appears that action research requires a reconceptualisation of the nature of educational research, with the benefits to be gained from the conduct of action research outweighing any traditional methodological 'weaknesses'. Although it is not the intention here to provide a rationale for validity issues related to action research, it is worth noting that supporters of this research genre challenge the application of 'norms and standards' from conventional research to practitioner research (Zeichner & Noffke, in press). It is suggested that the very nature of action research precludes it from answering the customary challenges of 'validity'. Instead authors offer criteria more appropriate to the particular style and circumstances of action research (for example, McTaggart, 1997a; Anderson et al, 1994; Winter, 1989a; Carr & Kemmis, 1986). Dadds, for example, talks in terms of a research study's 'relevance, appropriateness and useability' (1995: 113) and prefers to use the term 'valuing' rather than 'validation' to convey 'regard, respect and care' for the practitioners' work (op.cit.: 174). Zeichner & Noffke (in press) also show how alternative conceptions of validity within the feminist and narrative inquiry literature provide more relevant proposals for assessing the quality of practitioner research (although they are generally sceptical of the use of any universal criteria). The concept of 'catalytic validity' has been developed by Lather and 'represents the degree to which the research process re-orient, focuses and energises participants toward knowing reality in order to transform it' (1991: 68).

The rise of feminist research methodologies and post-modern views has 'made it much easier to present action research as a serious research methodology, without apology' claims Somekh (1995: 347). She implies that the rise of paradigms offering fresh philosophical and methodological perspectives on long-established practices (for example, Harding, 1991; Lather, 1991) helps to exonerate the pursuit of action research as a respectable research endeavour. According to Cochran-Smith & Lytle (1993) the fact that action research arises out of 'lived experiences' and 'everyday life' gives it its own *raison d'être*.

I would support the belief that practitioner research has a valuable role to play in advancing the understanding of educationalists and is a 'legitimate form of educational enquiry' (Zeichner & Noffke, in press), but I do not envisage it as a substitute for other forms of research. I acknowledge some of its shortfalls but would argue that all educational research fulfills different purposes and each style of research elicits some merit. Since all approaches contain anomalies and none can claim to address satisfactorily every one of the methodological criteria that have been distinguished by different research paradigms, action research can at least be considered one acceptable alternative operating, as with other research methods, within its own boundaries.

The Action Research Dimension to the Study

During the course of my investigation I was 'action researching' in the sense that I followed a similar pattern as would a practitioner examining her own practice. The correlations included the formulation of a focus (action research and practitioner thinking), data gathering as a research partner and PhD student (research meeting field notes, questionnaires, literature reviews on my chosen topic) and, of course, continuous reflection on the data during the course of the research. Like action research, I had a framework within which to work but was not restricted by preconceived and prescriptive procedures.

For example, I had no preset ideas about how many practitioners I would draw upon for my research and the criteria I chose for the final selection arose naturally from the context of the Project research rather than from my own volition. I had also hoped that simply working alongside the practitioners as a direct witness to any developments would provide sufficient data with which I could work. Although this certainly provided some important findings, it was clear that I could not elicit the kind of information I needed without artificially imposing on the practitioners' own research agenda (as I was inevitably already partly doing in order to meet the demands of the Project). Hence my decision to conduct interviews at the end of my tenure with the Project where I was able to incorporate and explore some of the themes that had arisen during the research as well as tackle new ground. The interviews themselves were

continuously reflected upon, especially after the first five which were used as a partial 'pilot' study.

My research had a momentum of its own and I had sufficient flexibility to follow the action research cycle as I was carried forward in new directions. However, such developmentalism did not mean I was laissez-faire. I was always conscious of methodological issues such as sufficiency of evidence, usefulness of corroboration and other means of providing 'internal validation' for my work. In essence, it was an attempt to develop a fine balance between allowing the research to unravel itself as I worked with the practitioners whilst creating or taking advantage of opportunities that would fulfill my needs and methodological concerns. At times this created uncertainty although I was less bemused by the action research dimension to my research than with the methodological demands created by the Project and my PhD. However, I endeavoured to develop a framework for my research orientation which helped to diminish this confusion.

The Qualitative/Interpretive Dimension

Although I took an action research approach to my work, I sensed that I was operating along more conventional research lines as I sought to address the methodological needs for my PhD study and the Project's work. Neither was I mainly undertaking the research in order to improve my practice, although I certainly incorporated this aspect into my work as a research partner. Despite the difficulty in locating my methodology, it is clear that much of it lies within the qualitative/interpretive tradition since it was, for example, 'intrinsically exploratory' (Kirk & Miller, 1986: 17), and a central interest was in 'human meaning in social life' (Erikson, 1986: 119). Action research itself could be placed within a qualitative paradigm not least because it is partly concerned with interpretive notions of 'understanding, meaning and action' compared to positivistic notions of 'explanation, prediction and control' (Carr & Kemmis, 1986: 83).

Whilst acting as a research partner for the practitioners' research, I also had to function as a participant observer. I had to enter (relatively) unknown territory and negotiate my entry in my role of research partner. In doing so, I had to develop a working

relationship based on mutual trust and respect. As Ball (1993) suggests, this involved an element of 'charming' participants into cooperation. My past experience as an early years practitioner, my lack of intimidating academic credentials and the fact that I was not there to judge their practice as such, no doubt eased my entry.

As a researcher I had to engage consciously with the various dimensions of my 'self' in the different roles I had to perform. Drawing on the work of Mead and Blumer, Ball (1993) refers to this as 'internal conversation' or 'self-interaction'. This is a part of the deliberate and critical reflective process that occurs continuously during the course of undertaking interpretive and/or action research (unlike much of quantitative research which focuses evaluation in the aftermath). According to Ball, the 'self-conscious engagement with the world' becomes a process whereby the 'technical trajectory' of data collection and the 'social trajectory' of data analysis are reflexively, dynamically and dialectically interconnected providing an important aspect of rigour for the research process (1993: 33). Issues that arose from my 'internal conversation' about aspects of the 'self' such as the impact of my presence on the practitioners were developed in my extensive reflective field notes.

Some Challenges to 'Internal Validity' (or the Trustworthiness of the Study)

This section answers possible calls for challenges to 'internal validity', although many qualitative researchers dismiss, diminish or ignore its relevancy, or else reconceptualise it to suit the nature of qualitative research (for example, Kincheloe & McLaren, 1994; Eisenhart & Howe, 1992; Goetz & LeCompte, 1984; Kirk & Miller, 1986). Rather than viewing 'internal validity' in terms of the extent to which a research study depicts the true so-called 'reality' of a situation, 'trustworthiness' is offered as a more appropriate term (for example, Zeichner & Noffke, in press; Kincheloe & McLaren, 1994; Eisenhart & Howe, 1992; Lincoln & Guba, 1985).

Some authors have also gone to lengths to identify different typologies of 'validity' (for example, Eisenhart & Howe, 1992; Maxwell, 1992; Kirk & Miller, 1986). Others (for example, Lincoln & Guba, 1985; Goetz & LeCompte, 1984) have adapted positivistic procedures to help address 'validity' by offering more suitable qualitative techniques.

Their suggestions include taking steps to ensure direct involvement in the lives of those studied and/or spending a sufficient length of time in the place of study, triangulation and so on. Erickson (1986), along the lines of Popper, would suggest a deliberate search for potentially disconfirming data as one of the steps to be taken to help establish the capability of evidence. An attempt to locate my own methodology within the wide ranging perspectives is hampered by the fact that each perception 'has its own criteria for judging the adequacy of any given interpretive statement' (Denzin, 1994: 501). I tend to share Richardson's postmodern perspective that 'doubts' whether 'any discourse has a privileged place, any method or theory a universal and general claim to authoritative knowledge' (1991: 173).

Giroux (1983) and others (for example, Kincheloe & McLaren, 1994) maintain that 'methodological correctness' is also no guarantee of 'validity'. As Phillips puts it, 'in general it must be recognised that there are *no* procedures that will regularly (or always) yield either sound data or true conclusions' (1987: 21, original emphasis). Drawing on the work of Brinberg & McGrath, Watkins makes the observation that 'validity is not a commodity that can be purchased with techniques. It is to be assessed relative to purposes and circumstances' (1991: 4). In this view, validity criteria varies for the different types of research and even for different stages of the research process. Maxwell similarly notes that 'the most prevalent alternative [to the positivistic approach] is a realist conception of validity that sees the validity of an account as inherent, not in the procedures used to produce and validate it, but in its relationship to those things that it is intended to be an account *of*' (1992: 281, original emphasis).

Eisenhart & Howe (1992) and others (for example, Lincoln & Guba, 1985) talk in terms of 'credibility' which is partly achievable through the application of general standards. These 'standards' include research that is 'cogently developed, competently produced, coherent with respect to previous work, important, ethical, and comprehensive' (Eisenhart & Howe, 1992: 656). Guba & Lincoln (1982) offer a series of processes to 'safeguard' credibility such as 'prolonged engagement' at a site, triangulation of data sources and 'member checks' in which data interpretations are checked with those from whom the data is elicited (which I endeavoured to do, to an extent, during the interviews). All the views outlined here seem appropriate perspectives with which to judge my research. Although I accept that following certain procedures can be a helpful

means of developing a more trustworthy study, I support the view that such procedures ought to be appropriate to the nature of the study and not regulated impositions.

Certainly, it should be clear that my research is not seeking to answer positivistic claims for 'validity' and I would agree with Erikson (1986) who maintains that interpretive research may be rigorous, systematic and empirical without being positivistic. My consideration of 'validity' issues is also underlined by an agreement with Eisner (1993) and others, who uphold Popper's belief that the truth of a claim can never be verified. Truth instead might be a matter of consensus (Kirk & Miller, 1986). Indeed, Carr & Kemmis, drawing on the work of Kuhn, note that 'there are no neutral criteria for deciding whether any paradigm offers a better way than any other for producing valid knowledge' (1986: 73). Some of these views on truth are explored a little further in the section on 'objectivity'.

I support Carr & Kemmis' claim that educational research can have both 'validity' and value if it relates to 'the theories and understanding of educational practitioners' and it enables practitioners 'to develop a more refined understanding of what they are doing and what they are trying to achieve' (1986: 118). They go on to say that

the success of educational research conducted by outsiders is to be measured not in terms of what they expropriate from the experience and work of teachers for the research literature, but in terms of their contribution to the improvement of education in the real and concrete situations in which those teachers work (op.cit.: 161-2).

A major purpose behind this study may be the pursuit of an academic credential, but I would hope that the action research nature of the PiP Project, my role as the research partner, the interview process as an extended vehicle for the practitioners' reflection and this study's promotion of action research as a method of professional development go some way towards fulfilling the criteria of validity suggested by Carr & Kemmis. In this sense, this study has striven for 'catalytic validity'.

Underlying my perspective of 'validity' is also a critically reflective perspective (not to be confused with the emancipatory critical approach based on critical theory). Lincoln & Guba believe that researchers have 'an obligation to be self-examining, self-questioning, self-challenging, self-critical, and self-correcting' (1990: 54). They would

agree with Winter's (1989a) argument that 'validity' is generated by critical debate and dialectical enquiry. Lather also calls for 'praxis orientated' research that demands a 'vigorous self-reflexivity' (1991: 66). 'Self-conscious criticism' is viewed by Kincheloe & McLaren as central to what they call 'critically grounded qualitative research' (1994: 147) and Carr & Kemmis (1986) have likewise suggested 'validity' in research can be developed through the evaluative criteria generated by the researcher and through critical reflection (also Altrichter, 1993; Altrichter et al, 1993). These views are supported by Delamont's belief that as long as a researcher is

constantly self-conscious about her (sic) role, her interactions, and her theoretical and empirical material as it accumulates [and as] long as qualitative researchers are reflexive, making all their processes explicit, then issues of reliability and validity are served (1992: 8).

My approach to considerations of 'validity' has therefore been ultimately directed by a critical reflective approach (recorded in extensive field notes) and drawn from my experiences of the study itself and the issues that arose from its context, as well as from my own reading of the literature on methodology. Just what this critical reflexivity entails is explored more clearly in later chapters when the notion of critical thinking is scrutinised.

The next few sub-sections illustrate some of the issues that might be deemed threats to the 'validity' or trustworthiness of my study. I have not attempted to follow any particular author's recommendations for developing credibility, but have considered only those which seemed pertinent to my study and which arose out of critical self-reflection. This reflective process has included incorporating particular qualitative 'techniques' or non-prescriptive procedures that were deemed helpful and appropriate to enhance the integrity of the study. I have endeavored to 'validate' sufficiently my methodology as far as is possible given my views on the concept of 'validity' and the nature of my study itself. In this respect I have tended to follow Smith's suggestion of considering an open ended 'list' of methodological concerns driven by critical reflection during the course of the study (cited in Eisenhart & Howe, 1992). These are outlined below and within subsequent sections.

Demonstrating the Impact of Action Research on Practitioners' Thinking

Hage & Meeker (1993) are just two authors who have highlighted the complexity of causality and note that the linkages of cause and effect can be problematic. The causal relationship according to Erikson is determined by the meaning interpretations of the actors in the social situation under study or, as he puts it, the 'reciprocal exchange of phenomenologically meaningful action' (1986: 133). Causation cannot be assumed to be a mechanical or uniform process and is ultimately a question of inference. Moreover, 'causes are not always accessible' says Phillips (1987: 16) and invariably many different and interacting forces may be responsible for the effect. Lincoln & Guba (1985) would deny any place for causality in naturalistic research. It is more a question of 'the demonstration of plausibility' (Erikson, 1986: 147). Carr & Kemmis also point out that the aim of interpretive research is not to provide causal explanations but rather to 'deepen and extend our knowledge of why social life is perceived and experienced the way that it is' (1986: 90).

I would therefore hesitate to make definite consequential claims between action research and its impact on practitioner thinking, not least because thinking is undoubtedly a mysterious and little understood process. Even researchers in brain neurology or cognitive psychology cannot agree on how the mind works. Edelman (1992), for example, takes issue with ideas such as Anderson's (1992), whose cognitive theories associate the brain with the working of a computer. In contrast, Edelman emphasises biology rather than psychology, preferring a less logical and more open ended perspective that likens the brain to the living ecology of a jungle. These views are explored more fully in the chapters that follow but hint at some of the difficulties that might entail in clearly identifying the thinking of the action researchers in this study.

Some corroboration of the practitioners' stated claims can be made. There is documented evidence in various forms of their research process and experiences, and I was a first hand witness to this. The data also yield incidents of inspectorate visits to at least five of the participants who made clear references to noticeable changes in practice within the focus area. Ultimately, it becomes a matter of trust. There is a good claim for stating that since action research is intended to empower practitioners, it ought to be

the practitioner who decides whether or not improvement has occurred rather than some 'external judge' (Burgess-Macey & Rose, 1997). There is growing support for 'the validity of teachers' inferences drawn from their own experiences' (Calderhead, 1992: 151). If practitioners can bear witness to their own improved understanding, we have to assume that their altered actions are preferable and of benefit to the children since the experiences practitioners subsequently provide are enlightened by their careful deliberation. Whatever causal inferences are made, what is important is that the research has led practitioners to question habitual practice, something that might not otherwise have been done. Their heightened consciousness can act as a form of monitoring as they continue to reflect on their actions within a continuous cycle, even after their initial focus has moved on. This 'follow up' is a natural and purposeful process that invariably occurs only within the mind of the practitioner.

It may not be possible to pinpoint how and when particular changes occurred. Practitioner research is, after all, 'temporal and spatial' (Feldman, 1994). New understandings are invariably incorporated into practice immediately with a consequential shift in the educational situation. Therefore, it may be impossible to say with any certainty whether any new thought or way of thinking was a direct result of the action research undertaken by the practitioner. Hammersley cautions that systematic and rigorous reflection and inquiry 'are not guaranteed to produce advances in useful understanding. The outcome of all research is uncertain' (1993: 224). Moreover, the strategies I have adopted in attempting to isolate the particular 'frames of mind' that appear to have developed out of the action research process are ultimately my own creation. Elliott identifies a 'double hermeneutic' in such research since 'it constitutes interpreting teachers' interpretation of their professional world' (1993b: 203). At the very least, I can only make suggestive, perhaps likely, connections between the two phenomena of action research and practitioner thinking.

Reliability of the Study

Reliability is often perceived as a necessary condition for 'validity', but positivistic notions of reliability are largely discarded by this study since I cannot ensure that replication would produce the same results. Reliability might still be a principle applied

to qualitative research, but perhaps in a looser, less equivocal form whereby a different researcher might perhaps reach similar findings (Miles & Huberman, 1988). Certainly, I have compared my own research with those other, albeit scarce, studies on the relationship between action research and teacher cognition and any similarities (or otherwise) have been noted.

It is also reasonable to suggest that 'dependability' (Lincoln & Guba, 1985) can be ascribed to the study itself by incorporating certain procedures that strengthen the likelihood of reliability within the research. This can be developed through critical consideration of aforementioned 'validity checks' such as sufficient consistency in data gathering methods, case comparison and searches for disconfirmatory or discrepant evidence, prolonged engagement in the field or triangulation across data sources ('concurrent validity'). The summative aspect of my evaluation is more a question of reaching a 'reasonable' rather than fully 'conclusive' conclusion (Miles & Huberman, 1988). A matter of 'confidence' rather than 'certainty' and acknowledgement that it is a 'representation of reality' rather than a 'reproduction' (Cohen et al, 2000).

Another means of increasing the 'reliability' of a study is to attempt to ensure that the study reconstructs the participants' perspectives (Lincoln & Guba, 1985). It was certainly the intention of this study to rely upon the practitioners' own views of action research's impact on their thinking despite the danger that such data might 'reproduce the rhetoric rather than the reality of change' (Vulliamy & Webb, 1991: 222). The elicitation of the 'teacher's voice' is increasingly being considered a 'central ingredient so far missing' from the literature on educational research (Goodson, 1991: 141; also Pope, 1993; Zeichner, 1993b; Lytle & Cochran-Smith, 1990). Carr & Kemmis (1986) also maintain that a research account is more in keeping with reality when it incorporates the participants' confirmation of the researcher's interpretation. I have not carried this as far as I might have done since the practitioners have not reviewed my findings and affirmed (or otherwise) my evaluation of their cognitive processes. This is only because personal circumstances prevented me from sustaining contact with the practitioners once the PiP Project had ended.

My study was conducted, however, in the spirit of giving practitioners a voice and I did elicit their interpretation of their experiences to a certain extent during the interviews in which I incorporated questions that related to issues they had raised during the course of

the year. These issues had been recorded both in their written journals, in their responses to the questionnaires and/or in my field note observations and reflections.

A particular ethical issue that ought to be considered here regards judgements that may be made in this study of the quality of the practitioners' thinking. Although at one level I am trying to present practitioners' own experiences of their work, I am doing so within a framework of critique. I have applied my own set of criteria, drawn from the literature, through which I am effectively making evaluations of their cognitive growth. The dilemmas facing 'outsiders' in their role as 'judges' of practitioners' action research has been debated in the literature (for example, Zeichner & Noffke, in press; Dadds, 1995; Johnston & Proudford, 1994). That my findings were largely positive reflections of their work eased the disquiet I felt in making assessments of the quality of their thinking. I would add that my analysis is not merely a reinterpretation of the participants' experiences, but is in many ways a 'deeper, more extensive and systematised knowledge and understanding of the [participants'] own interpretations' (Carr & Kemmis, 1986: 92).

The Nature of the Data

As described in the previous chapter, the data that I drew upon were from a conglomeration of sources. This provided me with a variety of potentially corroborative (or contradictory) databases. Lather writes that '*triangulation* is critical in establishing data-trustworthiness' (1986: 270, original emphasis). Such 'triangulation' would include 'multiple data sources'. Some might claim such variability discounts any possibilities of drawing together a coherent analysis. However, most of the data I drew upon was from the more standardised responses - the questionnaires, the field note reflections and the recorded semi-structured interviews. Of these the interview transcripts have contributed most heavily. The accumulative data produced by the participants during their action research, including their journals, have largely been cross-referenced for confirmatory or disconfirmatory purposes, as 'internal validity' checks, rather than as the foundation for evaluation (Erikson, 1986).

Whether the research data have adequately accessed the practitioners' experiences of conducting action research and most especially the development of their thinking, might also be a matter of contention. Some of the difficulties in demonstrating this have already been highlighted in an earlier section. Indeed, researchers acknowledge the problem of reaching 'inside' practitioners minds (for example, Hamilton, 1993; Calderhead, 1987) to what are essentially 'unobservable processes' (Ross et al, 1992b). Clark comments that 'to study teacher thinking, researchers must depend on teachers to think aloud' (1988: 8).

Thus, like most research on teachers' cognitive processes, much of the data from this study is in the form of verbal and written reports with accompanying limitations for such accounts to reflect suitably the participants' 'covert mental processes' (Calderhead, 1987). Calderhead draws attention, for example, to the 'time lag between the thinking and reporting of the thought' so that 'it is possible that the reported thought is an abstraction or reinterpretation of real thinking' (op.cit.: 185). (By 'real' I understand Calderhead to mean the actual thinking of the moment). Clark also makes the important point that researchers in teacher thinking are describing 'systems of thought [that] are not clearly articulated or codified by their owners, but are typically inferred and reconstructed by researchers' (1988: 6). Despite these drawbacks, the data do attest to some extent to the practitioners' own understanding of their thinking; and since they can be the only true witnesses to their thinking, their accounts and the form in which they are empirically exposed could be deemed acceptable.

Calderhead (1987) also points out the need for researchers to clarify the particular 'model' of teacher cognition on which they rely to guide their interpretation. In this respect I have followed a more 'heuristic' than 'deterministic' approach by allowing 'further exploration of teachers' cognition, and in consequence permit[ted] some ... elaboration of the model itself' (Calderhead, op.cit.: 184). The so-called 'model' of cognition that I have drawn upon during the research process is discussed in the chapters that follow. Here 'construct validity' has been employed as I have 'rooted' my theory construction in a wide range of literature (Cohen et al, 2000).

Variables Affecting the Data

'Validity' is sometimes believed to have been achieved if alternative causes for findings have been ruled out. It is true that other factors could well have influenced the data. The PiP Project team spent some time considering different elements that may have affected the practitioners' conduct of action research such as their training or length of experience. Early results were inconclusive (Miranda, 1997). Indeed, attempts to isolate variables tended to create confusion rather than coherence. For example, the issue of time created so many parameters it may be almost impossible to ascertain any impact it may have had on the findings. Practitioners undertook the research at different times of the year. The practitioners were also at different stages in their professional life cycle. The research meetings had to take place in the practitioners' own time such as lunch or after school and the research itself had to take place within daily practice. All these time factors may well have disturbed the quality of both the first order action research and the second order action research to some extent. However, trying to take into account all the alternative dimensions of how time may have affected the practitioners is an insurmountable task.

The discernment of potential influences on the data can be an unceasing endeavour and the matter is complicated by those variables that might change as 'a causal process unfolds, making it difficult to capture or measure' (Hage & Meeker, 1993: 81). Instead of pondering all the factors that might have affected the development of the research, it might be possible to argue that the different practitioners with their assorted backgrounds and contexts enriched rather than diminished the value of the data and may give greater credence to the fact that any practitioner can undertake action research with some degree of success.

Some Challenges to 'Objectivity' (or the Subjectivity of the Study)

Phillips (1993) writes that the term 'objectivity' has become a 'dodo-like entity' whilst Eisner (1993) notes that it is still largely viewed by some as a 'cherished ideal'. 'Objectivity' implies that some kind of truth has been found, a reflection of or

'isomorphic' with reality, i.e. what it really is (Phillips, 1993). Its commendatory connotations descend from this association with truth.

Eisner is one of many writers who disclaim the relevance of 'objectivity' in educational research. He notes that 'traditionally, the aim of the research enterprise, from a methodological perspective is to use a procedurally objective set of methods in order to gain an ontologically objective understanding of the events and objects we study' (1993: 51). Yet he declares the premise on which such 'objectivity' is based is presumptive and problematic resting on a 'faulty epistemology' that leads to an 'unrealisable ideal'. He writes that 'because any symbol system both reveals and conceals, its use provides, of necessity, a partial view of the reality it is intended to describe or depict ... To complicate matters still further, the particular schemata we use also structure perception' (op.cit.: 52). This structuring creates a 'framework dependent cognition' and he views knowledge as a process of 'transaction'. He claims to be a relativist and a pluralist:

The relativity of my view pertains to the belief that knowledge is always constructed relative to a framework, a form of representation, to a cultural code, and to a personal biography. My pluralism relates to the belief that there is no single, legitimate way to make sense of the world. Different ways of seeing give us different worlds (op.cit.: 54).

He stresses, however, that such a view need not dismiss the ideal of truth. Instead Eisner projects the idea of a 'regulative ideal' of truth in the sense that 'what we consider true is also the product of our own making' (ibid.). Guba & Lincoln also focus on the idea of 'multiple realities' with 'different perspectives' in the sense that 'phenomena do not converge into a single form, a single "truth", but diverge into many forms, multiple "truths"' (quoted in Phillips, 1987: 13). Similarly, Carr & Kemmis note that research paradigms are 'informed by a whole complex of beliefs, values and assumptions' (1986: 74) and 'facts' will always be a matter of interpretation based on prior beliefs, values and assumptions. For them, 'objectivity' becomes a question of 'intersubjective agreement'.

Phillips (1993) does not dismiss the notion of 'objectivity' quite so categorically and he challenges Eisner's relativistic stance. Whilst Phillips would accept a nonfoundationalist view of epistemology, he believes that a traditional notion of truth can be maintained. Despite agreement of the inherent uncertainty of knowledge,

Phillips suggests that the truth does exist 'somewhere out there'. We just may never have found it. Yet, while it may never be found with certainty, some ways may be better than others to seek it. Following from this, Phillips separates 'objectivity' from truth and instead depicts the notion of 'objectivity' in regulative terms. He says that "Objective" seems to be a label that we apply to inquiries that meet certain procedural standards, but objectivity does not *guarantee* that the results of the inquiries have any certainty' (op.cit.: 61, original emphasis). Put simply, some inquiries are more carefully conducted than others and have attempted to 'meet certain quality standards'.

Phillips suggests that the more worthy inquiries are those which have been 'subjected to critical scrutiny' (op.cit.: 65). The critical tradition can help to counteract the tendency to be blinded by the paradigm context within which all inquirers are likely to be bound. Hence, in Phillips' mind, a qualitative study can be deemed to be more objective if it has

been opened up to scrutiny, to vigorous examination, to challenge. It is a view that has been teased out, analysed, criticised, debated (op.cit.: 66).

In some ways I accept both Eisner's and Phillip's views. I do not claim to have found the truth of action research's impact on practitioner thinking, but I have followed certain procedures and particular paths, discarded others, and generally injected a rigorous critical frame of mind within my 'journey'; a journey Mezirow would describe as involving 'provisional consensual judgment based upon critical discourse' (1990a: 15). My reasoning is similar to the process described by Kitchener & King in their model of reflective judgment in which

knowledge can be constructed via critical inquiry and through the synthesis of existing evidence and opinions into claims that can be evaluated as having greater "truth value" or being more "warranted" than others ... such views can be offered as reasonable current solutions to the problem at hand (1990: 165).

Carr & Kemmis (1986) would support a notion of objectivity that is developed through critical inspection. In that respect I have striven for objectivity even if I have not achieved it, an 'estimation of truth' as it were (Siegel, 1997). Phillips would say that this has helped to give my research endeavor more integrity or 'objectivity'. The next few sub-sections focus more closely on some of the more obvious aspects of my research which might be deemed to have diminished my 'objectivity'.

A Personal Interpretation

There can be no doubt that no two research accounts are likely to be the same since data are 'a social construct of the research process itself' (Ball, 1993: 45) and that 'all texts are biased productions' (Denzin, 1994: 506). Nonetheless, any discernible differences are likely to be small 'matters of emphasis and orientation' rather than large discrepancies (Ball, op.cit.: 43). This appears to have been the case when I compared the findings from my research with some of those developed by the PiP Project team (Miranda, 1997). Despite some differences in the style of analysis (for example, the PiP approach was more quantitatively based), overall there was a common understanding of the data and a remarkable consensus between my own and the Project's findings.

Like any researcher, I entered into this study with 'considerable theoretical baggage' (Kirk & Miller, 1986: 30). However, I ventured to consider both my own and the practitioners' view of reality and the various beliefs, interpretations and intentions that permeated it (Gitlin et al, 1993; Carr & Kemmis, 1986). As suggested previously, I endeavoured to undertake 'self-conscious criticism' in the tradition of a critical researcher so as to 'become aware of the ideological imperatives and epistemological pre-suppositions that inform [my] research as well as [my] own subjective, intersubjective, and normative reference claims' (Kincheloe & McLaren, 1994: 140). Erikson (1986) likewise highlights the importance of deliberate reflection in research as this 'entails the observer's deliberate scrutiny of his or her own interpretive points of view, and of its sources for formal theory, culturally learned ways of seeing, and personal value commitments' (1986: 156). This incorporates a self-analysis in which I 'trace the genealogies of [my] subjectivities and the origins of [my] personal concerns' (Kincheloe & McLaren, 1994: 148). Some aspects of this self-analysis were highlighted at the beginning of the chapter.

As Ball (1993) points out, interpretation of data is as much a 'contextual exercise' as it is a theoretical examination. He goes on to say that 'the theoretical may help us with questions about the meaning or import of data. The contextual may help us with questions about its adequacy, partiality, or reliability' (op.cit.: 40). Yet we need to

remember that 'the presence, the effect, and the biases and selections of the researcher cannot be removed from qualitative research' (op.cit.: 43). All research is a matter of 'selection and interpretation', a partial construction of social reality and 'inevitably based on inferences' (Hammersley & Atkinson, 1983: 13). Allender takes this point a step further in his declaration that 'more and more it is recognised that subjectivity *is* reality' (1986: 188, original emphasis). Following a point made by Letiche (1993), this study may be primarily concerned with the practitioners' cognitive development, but it is largely my own thinking that will ultimately be portrayed.

Nonetheless, I have to some extent incorporated an 'intersubjective' approach to my interpretation (Firestone & Dawson, 1988), in that my findings include some negotiation with some members of the PiP Project's research team's own analysis of the action research data. This occurred during some of the initial analysis with which I was involved whilst still employed by the Project, as well as afterwards when I shared some of my findings with some of the extended analyses that had been performed by my ex-colleagues (as noted earlier). This provided me with an element of comparative analysis and possible alternatives, as well as confirmatory evidence. Also, there are the perspectives of my supervisors to consider as a contribution to the development of my interpretation, as well as the wealth of literature I drew upon in my search for understanding and meaning.

As suggested earlier, full collaboration of interpretation with the participants did not occur, although I encouraged the practitioners to give me feedback during the action research phase to help check my 'emerging hypotheses and descriptions ... for unwarranted interpretations' (Roman & Apple, 1990: 62). In this respect I have attempted to incorporate both an 'emic' (outsider) and 'etic' (insider) perspective (Guba & Lincoln, 1988). In many ways, the various 'voices' represented in this study, including my own, have 'become part of a shared perspective' (Hanrahan, 1998: 316). However, given the nature of a PhD, much of my analysis was solitary and personal and consequently limited in terms of negotiated understanding. Moreover, I accept the point that 'any judgement about the quality of a teacher's thought processes may be shaped by the educational values or beliefs of the judge' (McNamara, 1990: 151).

Relationship with the Participants

Adler & Adler suggest researchers may integrate themselves into a group under study at three levels - either as a 'peripheral', 'active' or 'complete' member (cited in Ball, 1993). The nature of my research necessitated that I become an active member. Whilst I might not be able to claim to have become a complete member, research is 'an interpersonal process' and 'socially dynamic' (Ball, 1993). Distinctions of membership status are therefore rather academic.

The social relationships I established with the practitioners were all deemed to be 'positive' by the Project's findings (Miranda, 1997) and I was able to elicit some informal affirmation from the LEA contact staff who spoke with the practitioners about me. I was not associated with authority beyond the Project and it was made clear that the Project's intention was not to diminish but to develop, and that the research was as much for their benefit as for the Project or even my own research. I also made it clear that I was there to learn from them as much as I was there to guide. As suggested in the previous chapter, my position as an academic researcher was diffused by my experiences as a recently practising early years teacher and my teaching background helped to create a context in which I shared some of the 'assumptions, beliefs, and worldviews' of the participants (Roman & Apple, 1990: 46). Moreover, I was prepared, as Oakley (1981) suggests, to invest my 'personal identity' in my relationships with the participants to elicit a more sympathetic climate. It is fair to say that the friendly and personal terms of the relationships facilitated 'rapport building', 'self-disclosure' and the possibilities of yielding more 'honest' and enriching data (Miller & Glassner, 1997; Lather, 1991).

As noted in the last chapter, the interviews themselves were conducted in the spirit of a 'friendly conversation' (Spradley, 1979). The intention was to engender an informal and relaxed atmosphere within the confines of the interviewing process and break down the 'usual 'asymmetry' between interviewer and subject' (MacLure, 2001: 169). That I knew and had worked with all of the interviewees and had a sense of shared history and culture, not only through the action research experiences but biographically through my professional life as an early years teacher and pilot action researcher, helped to diminish some of the barriers inherent within formalised interviews between strangers and helped

to ensure the interviews were 'situational' and 'contextually grounded' (Mischler, 1986). The following statement from one participant suggests that some of my aspirations were met:

"I wouldn't say it's been an interview. I would say it's more been a sort of ongoing conversation, dialogue, because we built up a working relationship between the two of us anyway. You're not coming in cold and it's not been a sort of formal interview. So there's been no threat there or anything" (EF/SO/IV/12).

There is also the possibility that my gender may have helped ease the development of relationships as some feminist writers propose, since twenty-three of the twenty-five participants were female. Oakley (1981), for example, believes qualitative research is enhanced and better 'rapport' established if interviewer and interviewee share the same gender. Finch (1984) makes similar assertions about the more equitable and empathetic nature of female-to-female interviews. She writes: 'There are grounds for expecting that where a women researcher is interviewing other women, this is a situation with special characteristics conducive to the easy flow of information' (1984: 74). Finch claims, for example, that women tend to 'welcome the opportunity to talk to a sympathetic listener' (ibid.). The gender issue appeared to transcend potential ethnic issues as I found no obvious barriers in my relationship with the only three black females in the grouping. With regard to the two male participants, no underlying gender or related difficulties were encountered, perhaps because these men were used to working in a female-dominant field.

As Nias proposes (1993), the personal intimacy that developed during the time spent with these practitioners strengthens rather than weakens the 'validity' of the data. Day also emphasises the importance of the 'affective, human-relating skills and qualities' of the academic researcher (1991: 537). He suggests that a more 'caring' and 'ethical' relationship creates a more 'lasting connection' between the researcher and researched and enhances the capacity for researchers like myself to 'gain access to and collect quality data about teachers' thinking and practice which go beyond "hit and run" research traditions' (ibid.). It would seem judicious to embrace rather than dismiss the likely benefits a close relationship can bring, so long as researchers critique their own role within the social milieu and the distortions of reality that may accompany this.

The Internal and External 'Generalisability' of the Study

Often referred to as 'external validity', 'generalisability' is another of the major methodological criteria researchers are traditionally expected to address. If educational research is to play a role in influencing policy, the issue of 'generalisability' takes on greater importance. However, the notion of 'generalisability' has been the subject of extensive debate amongst researchers alongside the associated concepts of 'validity' and 'objectivity'. There are also two levels of generalisation to consider; firstly, within the confines of the study itself between the various participants' accounts and the different sources of data; and, secondly, the extension of the findings to education in general. Generalisations can therefore be both empirical and theoretical.

Although it is clear that each individual's account of action research created a rich and diverse account, it was possible to find sufficient consistency from which to draw together commonalities and build a framework of inductive claims that encompass and reflect the practitioners' experiences and thought processes. Guba & Lincoln maintain that while absolute 'convergence' or 'correspondence' might not always be possible, naturalistic studies can produce a 'coherence' and 'internal consistency' that allows the researcher to develop themes and patterns and tentative summations of what has occurred (1988: 108). The incorporation of twenty-five practitioners could also be deemed 'enough' from which to draw reasonable comparisons (Ebbutt, 1988).

With regard to broader generalisations, Schofield notes that 'there is broad agreement that generalisability in the sense of producing laws that apply universally is not a useful standard or goal for qualitative research' (1993: 97). Yet a 'rejection of generalisability as a search for broadly applicable laws is not a rejection of the idea that studies in one situation can be used to speak to or to help form a judgment about other situations' (ibid.). Schofield's perspective suggests that in qualitative research

the goal is *not* to produce a standardised set of results that any other careful researcher in the same situation or studying the same issues would have produced. Rather, it is to produce a coherent and illuminating description of and perspective on a situation that is based on and consistent with detailed study of that situation (1993: 93, original emphasis).

For Schofield, generalisability in qualitative researchers is a question of similarity rather than replication. Guba & Lincoln (1982) agree that some form of 'transferability' might be possible between studies and Goetz & LeCompte (1984) refer to the 'comparability' and 'translatability' of qualitative studies. Generalisations are perceived by Brown & McIntyre to be 'naturalistic' rather than 'probabilistic' in the sense of 'forming hypotheses to be carried from one case to the next rather than as general laws applying across a population' (1986: 41). Kincheloe & McLaren, drawing on Piaget's theory of accommodation, suggest a process by which researchers can

reshape cognitive structures to accommodate unique aspects of what they perceive in new context. In other words, through their knowledge of a variety of comparable contexts, researchers begin to learn their similarities and differences - they learn from their comparisons of different contexts (1994: 152).

For these writers, cross-referencing is possible in qualitative research especially if the studies themselves are sufficiently rich in detail to allow comparisons of applicability. Such information would include the researcher's theoretical stance as well as descriptions of research techniques. Since my study is multisite-based, some depth of description has been lost. I would suggest, however, that since I had a relatively 'intense, ongoing involvement' (Schofield, 1993: 102) with the participants, I was able to gain an adequate understanding and knowledge of each context to ensure sufficient information to make comparisons possible between each practitioner's experiences and beyond. The following topics address more specifically some additional potential 'weaknesses' in the internal and external generalisations of this study.

Sampling

As Ball suggests, sampling in qualitative as in quantitative research is 'inevitable and necessary' (1993: 37). An interesting dimension to my study is that the sampling was not premeditated on my part. I was simply assigned certain practitioners and I involved those with whom I worked for at least a full academic term. Coincidentally about half of the participants in my study included those initially approached by senior LEA personnel whilst the rest came forward themselves. It is possible that those first selected by their local inspector, for example, may have been considered 'strong'

practitioners with potential implications on the findings, although it is worth noting that I have discerned no clear patterns that suggest the 'selectees' and the 'volunteers' were distinctly affected. In any case, it could be said that all the participants ultimately chose themselves through their voluntary agreement to participate.

Since my research is based on a multisite analysis, it is true that it is heterogeneous in many ways. Whilst I accept the fact that different settings and different participants in that setting will affect social action, there is a case for suggesting that my study can be deemed to have some form of representativeness or typicality within the confines of the particular broader social grouping; that is, early years practitioners working in state-maintained early educational settings. At the very least I could claim to have partial representation. As a tentative extension, these participants have some commonality with other education practitioners working with older children. For example, they all work in an educational environment with children and (theoretically) share a common goal of advancing all children's development.

I would also suggest the overall lack of selection on my part has diminished a priori assumptions or expectations I might have held about the participants had I been more deliberate in my choice of particular sites. In this way, I have reduced some of the variables that may have potentially influenced my perceptions of the findings.

The Value of Numbers

Erikson (1986) does not believe that quantitative elements have no place in qualitative research and there is some strength to Schofield's point that 'a finding emerging repeatedly in the study of numerous sites would appear to be more likely to be a good working hypothesis about some as yet unstudied site than a finding emerging from just one or two sites' (1993: 101). Numbers have certainly played a part in my analysis, mainly to demonstrate common responses to phenomenon and to help substantiate any claims. With such a small number of participants, it was unnecessary to employ special statistical techniques. I have mostly used numbers in a generic and unspecified form adopting such terms as 'many', 'some', 'few' to provide an indication of prevailing (or otherwise) experiences rather than producing a set of bland statistical tables.

Whilst I acknowledge that frequency of figures may carry some weight, it is worth considering Eisner's point that consensus 'merely demonstrates that people can agree' (1993: 53) and whether what they have agreed upon is the reality is a matter that could be debated. Phillips similarly argues that 'agreement does not mean that the views concerned are correct, or warranted, or that they have been reached in a way that has avoided sources of bias and distortion' (1993: 66). Phillips suggests that the critical issue is not consensus as such but whether a 'critical spirit' (in which consensus may never be attained) has been pursued in the study as a whole. I would hope my use of numerical descriptions would be viewed in a broader context of what is essentially a critical qualitative analysis.

The Data Analysis

As with my overall approach to methodology, the data analysis involved the use of some practical procedures but was essentially driven by a process of critical reflection. Some of this critical reflection incorporated subliminal 'intuition'. Firestone & Dawson maintain that 'individual intuition is the richest and primary source of subjective understanding in qualitative research ... through immersion and contemplation, findings emerge' (1988: 210). Although they acknowledge such private intuitive analysis is difficult to describe or understand, they suggest techniques that can help to ensure a more disciplined approach to the intuitive process thereby enhancing its credibility such as 'pattern matching' and consideration of alternative theoretical deductions. They also offer more distinct practical methods such as codification of data. Woods talks in terms of 'creativity' which involves 'the ability to perceive interconnections and associations among data, to provide explanations for them, and to see further ways forward' (1985: 86).

On a more explicit level, Miles & Huberman (1988) have conceived a 'flow of activity' for the analysis of qualitative data which are essentially three main steps for sorting and interpreting raw data. Despite their acknowledged positivistic tendencies, I discovered in retrospect that my own analytical 'activities' resembled some aspects of their suggestions. For example, I undertook part of Miles & Huberman's proposed activity of

'data reduction' from the practitioners' narrative responses through a process of selection and abstraction into a manageable 'cluster' of themes or data codes. Goetz & LeCompte (1984) make similar suggestions for synthesising data. This framework of codes was based on my conceptual schema or 'orientating ideas' which I brought to the inquiry as well as 'grounded' patterns or regularities that arose from the data itself. Brown & McIntyre (1986) also talk in terms of creating a 'framework of concepts' in which to organise the main themes that appear to arise from the breadth of data. Erikson (1986) calls these 'frames of interpretation' in which 'intelligible relations' are developed between 'concrete detail' and 'abstract assertions'. Admittedly such categorisation may render only a 'partial' account of the practitioners' experiences (Miller & Glassner, 1997).

My analysis was thus essentially a process of 'identifying patterns' and sifting 'common features' (Woods, 1985: 104), largely from the transcript material via individual profiling summaries and 'theme based maps'. Lincoln & Guba describe this process as linking 'units of information' from the data sources to 'form a pattern' (1988: 107). They go on to say 'the data will, after analysis into units and grouping of those units into "look-alike" categories, tend to suggest some theory that "explains what is being locally encountered"' (ibid.). In this interpretive coding process I endeavoured to detect a shared interpretation that took into account personal contextual meanings within which the practitioners' responses to the interview questions occurred (Mischler, 1986). I was conscious of the 'discursive nature' of the interviews and the underlying personal assumptions and 'ad hoc hypotheses' that permeate interpretation of meaning, as I sought generalisations from specific responses (Mischler, op.cit.). Since I had envisaged the interviews as an 'active, meaning making' process (Holstein & Gubrium, 1995) in which 'a mutual negotiation of meaning and power' operates (Lather, 1991: 57), my attempts to elicit 'reciprocity' (Lather, 1991; Oakley, 1981) helped to secure a basis of common understanding from which to develop my 'pattern analysis' (Altrichter et al, 1993).

A more illustrative example of some aspect of the data analysis process might be helpful here. As part of my analysis I followed a comparable path to Nias' (1993; 1989a) interview-based research with primary teachers. For example, Nias noticed how often teachers made references to the influence of headteachers on job satisfaction which led

her to explore this as a major theme. In a similar way, I noticed how often in research meetings the participants referred to the way in which action research had made their thinking more 'focused'. The concept of 'focused thinking' became one of the main 'grounded' categorical themes in my initial data analysis.

I incorporated the 'grounded theory' approach through '*the discovery of theory from data - systematically obtained and analysed*' from research (Glaser & Strauss, 1967: 1, original emphasis). I therefore followed Glaser & Strauss' suggestion of theory building within and during the research process. However, Altrichter & Posch point out that the grounded theory approach tends to devalue the theoretical preconceptions a researcher brings to the field and the role these can play in formulating a "theoretical nucleus" which will contribute to the more elaborate "theory" (1989: 24). Some themes arose from my initial research questions, which themselves were partly cultivated from my experiences of undertaking action research and early reading on literature related to critical thinking and teacher cognition. Indeed, some of the interview questions were an explicit attempt to explore some different authors' ideas of the thinking process with an inevitable impact on the character of some of the categories that were developed in the analysis. It is also likely that I was influenced on a more subliminal level by my past experiences and personal value system.

Clearly, my data analysis was not a preordained 'hypothetico-deductive' approach by any means, but it did involve some pre-formulated concerns or 'theoretical structure' from which to initiate the research (Altrichter & Posch, 1989). The conceptual and empirical elements of the research process were closely integrated in an ongoing dialectic. As such the analysis was a progressively cumulative process involving a 'reciprocal relationship' between data and theory (Lather, 1986). As Lather explains:

Data must be allowed to generate propositions in a dialectical manner that permits use of a priori theoretical frameworks, but which keeps a particular framework from becoming the container into which the data must be poured. The search is for theory which grows out of context-embedded data, not in a way that automatically rejects a priori theory, but in a way that keeps preconceptions from distorting the logic of evidence (op.cit.: 267).

Overall, I would contend that the theoretical framework derived from the data was largely an emerging, grounded and restructuring process and I was guided by a 'self-

critical attitude' and 'systematised reflexivity' (Lather, 1986: 271) which involved more than deductive or inductive reasoning. This critical reflexivity ensured that in no cases were the activities undertaken for the analysis process isolated 'step-by-step' procedures, but were 'interwoven before, during and after data collection' forming an 'interactive, cyclical process' as Miles & Huberman suggest they should be (1988: 230).

For my own analysis it was the intuitive process comprising personal judgement and interpretation that guided whatever procedures that were followed. As Denzin points out, 'interpretation is an art; it is not formulaic or mechanical. It can be learned, like any form of storytelling, only through doing' (1994: 502). Like Woods (1985), he points to the postmodern view of writing research as a 'creative act of discovery and inquiry' (op.cit.: 504). He describes the interpretive process as 'illuminating' and 'transformative', a matter of 'sifting' and 'refining' meaning, and says that 'meaning, interpretation and representation are deeply intertwined in one another' (ibid.). Altrichter et al also note that 'critical analysis of findings is not primarily a question of procedures. More important is intellectual integrity' (1993: 132). As Ball warns, I am conscious of the 'limits within which the portrayal and analysis should be read' (1993: 38). I acknowledge fallibility within my research methodology and adopt a 'research humility' which accedes 'the capriciousness of the consequences of inquiry' (Kincheloe & McLaren, 1994: 151).

The Continuation of a Story

Like Denzin (1994), Cherryholmes suggests research studies be read as literature since 'research findings tell stories' (1993: 2), albeit a particular type of story, and that all texts 'can be read differently' (op.cit.: 4). He advocates a 'pragmatic' approach to reading research which precludes a view of meaning as fixed and obvious and discernible without interpretation. McLean makes a similar point when she writes that 'we draw upon personal narratives to make sense of what we encounter in the world and we inhabit each other's stories in reflexive ways' (1993: 267). I view the reader as a 'coanalyst' (Erikson, 1986) and am conscious that readers of my text will derive their own understanding of the meaning I attempt to impart but hope that my perceptions might be comprehended and tolerable (Denzin, 1994).

I also consider my 'story' in many ways not to be complete and view it as part of the broader chronicle on action research. I support the view that as a researcher I have embarked upon an 'infinite path' with 'no final solution' (Vidich & Bensman, cited in Peshkin, 1993). Any 'conclusions' I reach are personal and tentative and part of a continuing search for understanding the significance of action research and its role in education.

PART THREE

**A THEORETICAL FRAMEWORK
FOR THINKING AND CRITICAL THINKING
IN ACTION RESEARCH**

CHAPTER FOUR

ACTION RESEARCH AND THE THINKING PROCESS

Thinking in Action Research

In embarking upon this study, it seemed self-evident that a good understanding of the thinking process in relationship to action research would be a necessary aid in my inquiry. I therefore sought a theoretical framework for thinking in action research to assist in my exploration and analysis of the way in which practitioners' thinking is affected by the conduct of action research. However, I found that only a few attempts have been made to theorise the cognitive dimension of the action research cycle and locate it within the broader literature on cognition and adult development.

Zuber-Skerrit is one author who has endeavoured to construct a 'metatheory' that supports the notion of action research as 'the most effective method of professional development and of improving student skills in learning' (1992: 9). She claims her 'theoretical framework for action research' is not only derived from theoretical sources but supported at a 'practical level' by evidence from action research projects. She draws, for example, on Kolb's work on experiential learning and Kelly's personal construct theory. Pope (1993) has also drawn attention to common assumptions held by action research and Kelly's (1955) work. Similarities include the belief that 'human beings are active, meaning seeking, potentially open to change, development, and capable of self-direction' and that 'growth may occur through reflection on and in action' (Pope, 1993: 26).

Somekh (1995) has made a briefer comparison between action research and the literature on adult cognition. She writes: 'It seems clear that action research incorporates a lot of the features which cognitive psychologists see as essential for effective learning' (op.cit.: 343). In quoting Desforges (1989), she says action research provides the 'high quality intellectual life' teachers need, although she stops short of

exploring the nature of this 'intellectual life' beyond noting the importance given by some writers to dialogue and discourse in learning and suggesting that action research is a good example of 'situated learning' (Brown et al, 1980). Elliott (1993c) is another author who has drawn on theories of 'situational understanding' to clarify his notion of practical wisdom (described as 'intelligent professional practice') which he claims action research promotes. Some of his ideas are revisited later in this chapter. Oja (1989; 1991) has made some connections between action research and developmental stage theories and associates action research with more advanced levels of adult development (also Oja & Pine, 1987; Oja & Ham, 1984). In her case study of one teacher researcher, Dadds (1995) has drawn on some of these theories to help analyse the practitioners' development.

However, when I considered these examples of ventures to link the action research strategy with other literature, they did not seem sufficient frameworks with which to research and theorise the relationship between action research and practitioner thinking. They were mostly too sketchy to use as a theoretical base or else did not deal adequately with the notion of critical thinking. It became apparent that alternative perspectives would need to be examined if the data yielded from this study were to be interrogated thoroughly. I therefore looked outside the field of action research and found that the varied disciplines of cognitive psychology, adult development and neuroscience, united in a common concern to unravel the mystery of the thinking process and how adults learn, offered a rich source from which to comprehend thinking in action research. The models of cognition propounded in this literature review provided a theoretical rationale with which to substantiate the key claim of action research as an effective vehicle for developing practitioner thinking. At the same time this review furnished several constructs to assist in the interpretation of the data.

There is then a threefold purpose to this chapter and the one that follows. Firstly, they contribute a *theoretical exposition of the thinking process in action research*, thus helping to fill some of the void in the literature on action research. By associating the thinking process of action research with empirical research and theory about adult learning, clarification is given as to what such a process entails. Moreover, since this study is especially concerned with critical aspects of practitioners' thinking, the framework addresses the notion of *critical thinking* and what this encompasses.

Secondly, the theoretical framework presented in this and the following chapter offer a *raison d'être for action research as a strategy for promoting practitioners' thinking*. We have seen in the introductory chapter how some of the underlying principles of action research resonate with the nature of change and professional development. It has been suggested that this resonance enhances its potential as an effective strategy for transforming practitioners and improving practice. Here a similar connection is made between various characteristics of thinking in action research with that of processes in cognitive development. This association is made partly to acquire a clearer insight into the meaning of thinking in action research and partly to bolster its claim of developing practitioners' thinking by highlighting its compatibility with leading theories of cognition and adult development.

Finally, this chapter and the next intend to highlight several authors' work that offer *explanatory insights with which to examine the data* generated from my own research on practitioners' thought processes. The review of literature on action research and other disciplines has yielded several theoretical perspectives that are helpful for deciphering the multifaceted thinking patterns of the practitioners in this study. The scrutiny of the data from diverse perspectives is an appropriate step given the complex nature of thinking itself. Before examining a theoretical rationale of thinking in action research, several points are worth noting regarding the thinking process in general.

The Multidimensional Nature of Thinking

There are many different fields that have sought to improve our understanding of the thinking process, from physiological explanations to metaphysical interpretations. They include the disciplines of neurology, psychology, education, sociology, theology and philosophy. The integration of these varying sources is a daunting task and is exacerbated by factions within each field. Tennant (1997) for example, highlights the fragmented and diverse nature of the literature on adult education. Bruner (1990) makes similar comments about the lack of cohesion within the field of psychology with its wide range of speciality disciplines.

Despite the enormous and disparate literature generated on this topic, there remains little certainty about what cognition entails. What is known is that thinking is effectively an electrical and chemical activity, a matter of nerve cells passing 'messages' to each other via synaptic connections (Matlin, 1998; Edelman, 1992). How this physiological phenomenon ultimately is transformed into mental comprehension remains a mystery. Much of the research has focused attention on specific aspects of cognition such as memory or problem-solving, although there have been some attempts to develop a general model of the cognitive process. Ultimately, however, we are left with essentially hypothetical constructs to explain the bridge between the level of the neuron and the level of the 'cognitive concept' (Gardner, 1987). What exists are various 'suggestions, constructs, tentative formulations, and models, rather than fully developed theory' (Merriam & Caffarella, 1991: 248) and many researchers offering 'models of the mind' acknowledge the limitations of their theories (for example, McClelland et al, 1986; Rumelhart et al, 1986).

Whilst there may be many different proposals for understanding cognition, a common theme can be discerned across the literature of the complexity of the thinking process. Theories of intelligence, for example, that view cognition as a single, general and measurable entity are giving way to a 'multiple' perspective (Howe, 1989; Gardner, 1983). By the same token, Gardner writes of the 'intricate, delicate, and multifaceted aspects of thought' (1990: viii), while Hannay & Levin describe the brain as 'one of the most complex electrical systems in nature and certainly vastly more complex than any manmade computer' (1987: 1). Meadows (1993) points to the evidence from neuroscientists which identifies the brain as a highly complex structure, its cells changing and developing over time. One such neuroscientist talks of the 'enormous diversity and individuality' of the brain (Edelman, 1992: 99). Even research in artificial intelligence has led to a 'growing respect for human intelligence and its operation' (Dehn & Schank, quoted in Loman, 1989: 364). Moreover, the evidence intimates that 'human thought' is 'messy', 'intuitive' and 'subject to subjective representations' (Gardner, 1987: 386) such that 'many ways of knowing are acknowledged' (Boucouvalas, 1993: 58; also Belenky et al, 1997).

In terms of adult cognition, traditional 'stability' and 'degenerate' models considered thinking to remain essentially stable once adulthood was reached and then supposed a

gradual deterioration in cognitive capacity. These models have given way to a more dynamic and developmental perspective which emphasises context and life experience (Tennant & Pogson, 1995; Merriam, 1993b). Tennant & Pogson stress that 'there is now an awareness of the multidimensional and multidirectional nature of intellectual development. That is, people are considered to possess a range of mental abilities, which grow and change in different ways' (op.cit.: 25). This study supports the notion of a 'lifelong perspective' of cognitive capability in which adults have the potential to refine continuously their intellectual development (Berg, 1992).

Given the complexity of the thinking process, it is not surprising that no one unified theory adequately explains the whole process of cognition. Nor is it surprising that research on teacher thinking has become 'increasingly interdisciplinary' (Day et al, 1990; Shavelson & Stern, 1981). Edelman (1992) similarly describes cognitive science as an 'interdisciplinary effort'; as does Gardner (1987) who documents the 'cognitive revolution' and the various disciplines that have made contributions to our understanding of cognition. A parallel movement has occurred within the field of adult development as it has become clear that no one perspective satisfactorily accounts for the intricacies of adult learning (Merriam & Caffarella, 1991).

The quest to find a comprehensive theory for adult cognition is, says Brookfield (1986), comparable to seeking the Holy Grail. Meadows writes of the difficulty in giving a 'good' account of cognition and suggests that 'a number of different approaches are possible; each ... necessary but not sufficient' (1993: 349). Merriam also doubts whether 'a phenomenon as complex as adult learning will ever be explained by a single theory, model, or set of principles' (1993b: 12). Instead, it is likely that 'there will be many theories useful in improving our understanding of adults as learners' (Cross, 1981: 111-112) and that 'each effort contributes to our understanding of learning in adulthood' (Merriam, 1993b: 12). This has led to a more holistic perspective of adult development which draws from a variety of fields and a 'new wave of theory building' (Merriam & Caffarella, 1991: 116) incorporating the biological, sociological and psychological aspects of adult development. From the field of cognitive science Howard joins the call for a 'broader, more interactive conception of thinking' (1990: 11), and Berg contends that 'each perspective may add to the puzzle of intellectual development, helping us construct a more nearly complete picture ... [which] may

allow us to crack the riddle of intellectual development' (1992: 14). It is clear that many writers from diverse fields support a multifarious approach to understanding the intricacies of adult learning.

Although potentially enriching, there are some dangers in adopting an eclectic view of adult cognition. There are potential problems of becoming too prolific or fragmented (Lowyck, 1990; Verloop, 1988; Clark, 1986) and integrating information that may not be compatible, particularly if theories operate on different assumptions about the nature of learning (Merriam & Caffarella, 1991). Kagan (1990) also warns against mixing paradigms in which methods are used which are based on differing epistemological traditions and are often inherently contradictory. Whilst this dissertation supports the development of a 'multifaceted understanding of adult learning, reflecting the inherent richness and complexity of the phenomenon' (Merriam, 1993b: 12), it is also mindful of the possible confusion created by such an approach. The works selected to analyse the data and to compile a cognitive framework of action research were therefore those deemed congruent with its paradigmatic assumptions. The literature drawn upon was also, therefore, necessarily selective.

A Selective Review

The selective process of inclusion or exclusion has been largely determined by the particular character of the research or theory, both its topic and nature and its implications for action research. For example, from the field of psychology the behavioural school, with its mechanistic and passive depiction of the learning process, was considered contrary to the nature of action research which stresses active development. The behavioural model was also excluded for being deemed 'conceptually incomplete' (Shavelson & Stern, 1981) with its emphasis on external consequences rather than internal mental processes, the phenomena with which this study is primarily concerned. In contrast, the work in cognitive psychology offered more applicable views on the thinking process.

Another example of material excluded includes the expanding body of work on life stages and cycles, biography and life narratives (for example, Goodson, 1992; Connelly

& Clandinin, 1988; Ball & Goodson, 1985). Despite their apparent importance for adult growth, these works were largely precluded because the scope of this study could not address adequately the extensive issues that can arise from investigations into these aspects of development. Although some biographical details were incorporated into the data, they were insufficient to give merit to the diversity of life cycle patterns from the sample group. Instead, from within the literature on adult development the works of researchers who have focused attention on adults' internal mental processes, rather than their external circumstances, were considered more insightful for the purposes of this study.

For similar reasons, the important work on teacher knowledge has not been given specific attention. This was a difficult task since knowledge and thought are inextricably connected and may even be indistinguishable. Certainly, 'one important component of teachers' ongoing learning is the expansion and elaboration of their professional knowledge base' (Borko & Putnam, 1995: 35). And Clark's (1986) point that teachers' knowledge and the way in which it is organised are 'crucial influences' on their thinking is conceded. Nonetheless, the work of researchers such as Elbaz (1981) or Wilson et al (1987) was excluded mainly because of the emphasis given to knowledge categorisation (however dynamically portrayed). For similar reasons it has avoided the work on novice/expert teachers that has attempted to represent and hierarchise the pedagogical wisdom of teachers (for example, Chi et al, 1988; Berliner, 1986; Leinhardt & Greeno, 1986). As Mitchell & Marland have noted: 'No conceptualisation of the totality of teachers' knowledge has been developed. Rather, researchers have sought to provide representations of isolated chunks of it, using concepts from codified knowledge' (1989: 116). Sanger suggests that knowledge categories tend to obscure that 'at the deeper levels there may be no neat differentiation into knowledge categories but a fossil bank record of conglomerated and diverse emotional and intellectual experience' (1990: 175).

This is not to say that codification of teacher's experiences is unhelpful. My own study makes use of this mechanism to help make sense of the participants' thinking. However, this dissertation concentrates on the literature that focuses more explicitly on more general mental process than on its specific content. In the data analysis, whilst depictions of practitioner thinking are categorised, the tendency is towards the

procedural rather than the componential elements of their thinking, thus supporting Bruner's contention of knowing as 'a process, not a product' (1966: 72).

It is also worth noting at this point that I use terms such as 'thinking', 'learning', 'knowledge', 'cognition', 'development' interchangeably. Although I am mindful of Kagan's (1990) warning that different terms can refer to different phenomenon, I do not wish to enter into sidetracking debates on the meaning of such terms and I work on the assumption, as do others, that such notions are synonymous (for example, Carlgren et al, 1994; Mezirow, 1991a). Furthermore, although the literature often categorises different aspects of the thinking process into terms such as 'planning' or 'decision-making', I am most concerned with 'reflective thinking' since this is the aspect of thinking emphasised in action research. In any case, it can be argued that reflective thinking encompasses most other categories of thinking, if such categories even exist.

The review of the literature from each field is not comprehensive nor does it purport to be a critical analysis of the theories surveyed. Given the vast array of sources, this dissertation has, at times, relied upon critiques of research and theories compiled by reviewers within the various disciplines (for example, Matlin, 1998; Tennant, 1997; Halpern, 1996; Tennant & Pogson, 1995; Calderhead, 1993; Meadows, 1993; Merriam, 1993a; Sutherland, 1992; Merriam & Caffarella, 1991; Kagan, 1990; Lowyck, 1990; McNamara, 1990; Mitchell & Marland, 1989; Clark, 1986; Clark & Peterson, 1986; Shulman, 1986; Cross, 1981; Shavelson & Stern, 1981). My intention was to pursue theoretical considerations or empirical research that supported an action research approach to developing thinking. What emerged was a compelling collection of perspectives that corroborated the style of learning promoted by action research and helped to provide a framework with which to characterise the thinking process within action research. This framework of characteristics is considered below. It should be noted that, since the complexity of thinking and consciousness defies 'conceptual precision', the framework is undertaken in the spirit of 'exploratory consideration' (Boucouvalas, 1993).

A Framework for the Thinking Process in Action Research

Characteristic One: Thinking involves the Active Construction of Meaning

It is now largely accepted, to varying degrees, that the process of making sense of the world is one of active construction as individuals internalise their engagements with the physical and social environment and become 'makers of meaning' (Candy, 1991). To quote Resnick:

Knowledge is no longer viewed as a reflection of what has been given from the outside: it is a personal construction in which the individual imposes meaning by relating bits of knowledge and experience to some organising schemata (1984: 130).

There is no single definition of the constructivist model of learning but it essentially entails 'the construction of personal meaning and the assimilation of new information, attitudes, and skills into the existing framework of personally meaningful experience' (Candy, 1991: xix). Both Piaget (1978; 1972) and Bruner (1966) were early advocates of constructivism and put emphasis on the learner as an active agent in the construction of knowledge. The literature on teacher thinking now increasingly portrays an image of the teacher as 'a constructivist who continually builds, elaborates, and tests his or her theory of the world' (Clark, 1986: 9).

Some of the underlying premises of constructivism echo the central tenets of action research. For example, the emphasis on 'transformation of understanding' and the idea that 'construction is a constant activity that focuses on change' (Candy, 1991: 256) could well describe characteristics of the action research process. Teachers as researchers have been described by Kincheloe as 'active producers of meaning' (1991: 34). A closer look at some of the major theoretical propositions in the constructivist paradigm offer clarification of the thinking that occurs in action research and are often mirror aspects of the action research cycle. The next few subsections outline some of the theories that help to explain how meaning is constructed. The various hypotheses drawn upon are those which Gardner (1987) has identified as leading the field in cognitive science. As explained earlier, they are examined in order to articulate a clearer understanding of the thinking process in action research and to help elucidate the

meaning of the research data. At the same time, the use of key theories helps to strengthen claims about the suitability of action research as a means of promoting practitioner thinking, so much so that it has been suggested that 'constructivism sanctions ... [the] action research methodolog[y]' (Candy, 1991: 277-78).

Scheme Theory

Scheme theory is one of the pre-eminent attempts to explain the adult thinking process and has strong Piagetian and Brunerian roots. Although many versions of scheme theory exist, all centre around the notion that external experience is actively organised into internal cognitive structures or schemas. Schemas have, for example, been described as 'an abstract structure of information' (Anderson, 1984: 5) or 'personal internal representations' (Halpern, 1996). Scheme theory focuses on knowledge acquisition and its organisation into 'schemata' (or schemas), which are viewed as the 'building blocks of cognition' (Rumelhart, 1980). Knowledge is generally distinguished between declarative (factual knowledge) and procedural (performance related) (Anderson, 1983), but schemas are all individually configured via learning experiences. The Piagetian (1978; 1972) model of scheme formation involving assimilation, accommodation and equilibration has been revised by Rumelhart & Norman (1978). Scheme creation, it is suggested, involves the processes of 'accretion', 'tuning' and 'restructuring'. Accretion is essentially the accumulation of facts, but the latter two processes, tuning and restructuring, are responsible for reorganising existing schemata or forming new ones. Rumelhart & Norman depict complex learning as 'a modification of the organisational structures' (op.cit.: 37).

Mitchell & Marland (1989) suggest that the identification of schemata is more reflective of teachers' thinking than, for example, models based on decision-making. Merriam & Caffarella (1991) also find scheme theory helpful for understanding adult learning. They write that

in most problem-solving situations we are trying to fit new ideas (declarative knowledge) and ways of acting (procedural knowledge) into earlier patterns of thinking and doing (our current schemata). If we are unable to change our earlier thought patterns (that is, fine-tune or

restructure them), our chances of being able to frame and act on problems from a different perspective is remote if not impossible (op.cit.: 171).

It will be seen in later chapters that aspects of scheme theory may be helpful for understanding the data yielded from this study in which the practitioners talked in terms of 'new' and 'old' thoughts being generated and regenerated as they undertook their research. It will also be apparent that the strategy of action research itself became a framework with which to help structure the practitioners' thoughts.

Information processing

Alternative models of cognition that focus attention on the actual physical processes that appear to lie at the root of all thinking are found within the information processing school. These models investigate 'the processes that constitute the core of intelligent behaviour' (Sternberg & Salter, 1982: 4) and equate the working of the brain with a computer-like 'input-output' system by which information is 'processed' (encoded, stored or retrieved) via a range of interacting mechanisms, 'components' or cognitive tools (for example, Anderson, 1992; Sternberg, 1985). Amongst the various proposals, most models envisage an executive component or 'controlling agent' that coordinates the different activities of the brain. These hypotheses essentially describe cognition as 'largely a matter of handling information in order to solve problems' (Meadows, 1993: 212). Under these terms, thinking is again reduced to a matter of problem solving techniques such as the allocation of appropriate strategies to perform a task and progress monitoring for problem resolution (Sternberg, 1985). Whilst the operation of such skills might mimic elements of the action research cycle, the mechanistic nature of information processing theories and the tendency to conceive thinking in terms of speed and efficiency are somewhat antithetical to the spirit of action research. Under these terms, information processing theories appear to have little to say about thinking in action research.

However, information processing theory may still be useful for three reasons. Firstly, much of the research on teacher thinking, which has tended to be based upon information processing theories, reveals some descriptive insights into practitioners' thought processes. Some of this information processing based research, which was

briefly reviewed in chapter one, has highlighted the problems of unreflective and habitual practice.

Secondly, the work of Craik & Lockhart from this field, suggests that some information is more deeply processed than others. They write:

Many theorists now agree that perception involves the rapid analysis of stimuli at a number of levels or stages ... This conception of a series or hierarchy of processing stages is often referred to as "depth of processing" where greater "depth" implies a greater degree of semantic or cognitive analysis (1972: 675).

This 'cognitive analysis' involves 'the extent to which [information] ... is thought about, examined, elaborated on, and linked to other things we know' (Sroufe et al, 1996: 348). Such 'deeper levels of analysis' are 'associated with more elaborate, longer lasting, and stronger [memory] traces' (Craik & Lockhart, 1972: 675). Thus, depth of processing theory may be important as it appears to affect the retention and durability of the experience. Matlin refers to the 'generation effect' which suggests that 'we remember items better if we generate or make them up ourselves, rather than simply studying items that other people made up' (Matlin, 1998: 78). This deep level processing occurs when information is drawn from 'personal experience' (Matlin, op.cit.). This implies that action research, which is premised in meaningful learning from personal experience, would generate deeper levels of processing. The depth of processing theory may then be helpful in explaining some of the data which indicate that action research encourages deeper levels of thinking.

Finally, the information processing school is helpful for stimulating some related ideas on 'parallel distributed processing' or 'connectionist' theories which offer further insights into the thinking process in action research and are particularly useful for the purposes of this study. These are described below.

Connectionism

The parallel distributed processing (PDP) approach or connectionist theories (for example, Crick, 1994; Martindale, 1991; Palmer, 1987; McClelland et al, 1986;

Rumelhart et al, 1986) essentially describe cognition as a complex linking process between 'neuron-like units' (Matlin, 1998). Meadows (1993) and Gardner (1987) both suggest that the PDP approach is most compatible with the neurological design of the brain. The increasingly sophisticated research techniques in neuroscience have revealed that 'neural activity for a particular cognitive process seems to be distributed throughout a section of the brain' (Matlin, 1998: 15) and that 'many cognitive activities seem to involve *parallel processing*, with many signals handled at the same time, rather than *serial processing* ... In short, processing appears to be both parallel and distributed' (op.cit.: 16, original emphasis).

Thus, under the terms of the PDP approach, information processing is viewed as a complex pattern of interacting units that work 'contemporaneously in parallel' (Meadows, 1993: 234). In the same way that neurons activate and inhibit each other, units make connections with each other which can be strengthened or weakened so that 'information is not stored in a localisable place but exists as a pattern of excitation and inhibition between units' (ibid.). Learning thus 'consists of changing connection strengths' (Martindale, 1991: 166). Or as Gardner describes it

"perception," "action," or "thought" occur as a consequence of the altering of the strengths (or weights) of connections among these units. A task is completed or an input processed when the system ultimately "settles" or "relaxes" (at least tentatively) on a satisfactory set of values or "stable states" - in short, upon a "solution" (1987: 394).

This more fluid and dynamic account of cognition has been extended by Edelman and offers a related perspective with which to examine the practitioners' thinking from this research.

Neural Darwinism

Edelman's (1992) thesis on cognition is comparable to connectionism, although he would place himself firmly outside the information processing tradition. In an attempt to link the physiological and psychological dimensions of the brain, Edelman has developed his theory of neural Darwinism to explain the thinking process (of which only some key aspects are discussed here). Like Piaget's, Edelman's theory is rooted in

biology, and he suggests that the brain operates on a principle of natural selection rather than on an instruction/memory model.

He acknowledges that the brain does, 'in some ways', behave like a digital computer. However, a closer look at the anatomy and development of the brain, in his view, dispels the computer analogy. He draws attention to the imprecise nature of the brain's neural networks which operate mostly in a parallel rather than linear fashion and which respond as much to emotional stimuli as to logic. He proposes that the 'electrochemical dynamics' of the brain 'resemble the sound and light patterns and the movement and growth patterns of a jungle' (op.cit.: 29). Elsewhere, he writes, 'neurons have treelike arbors that overlap and ramify in myriad ways. Their signaling is not like that in a computer or a telephone exchange; it is more like the vast aggregate of interactive events in a jungle' (op.cit.: 69). Although some of the neural networks are 'hardwired' for basic survival needs, others are 'softwired' to respond to personal experiences so that 'during behavior, synaptic connections ... are selectively strengthened or weakened by specific biochemical processes' (op.cit.: 85). These connections (or 'reentrant signaling') are 'massively parallel and reciprocal' and create 'complex patterns of interconnection between neuronal groups' (ibid.), which Edelman refers to as 'maps'. It is in the categorising formation of 'maps' arising from the complex process of weakening and strengthening of synapses where a correlation to the data from this study might be found.

What is also compelling about neural Darwinism from an action research perspective is that Edelman offers an explanation of cognition that closely mirrors the classroom environment in which teachers find themselves. Like the classroom context, the connection patterns between brain nerve cells are highly individualistic with the layers and loops of neural systems changing continuously. The image of a lively and 'messy' jungle ecosystem (Sylwester, 1994) might easily describe the kind of framework within which practitioners operate. The adaptable nature of action research predisposes itself to this kind of learning context and thus offers itself as an appropriate strategy for stimulating thinking.

Characteristic Two: Thinking is Self-Directed

The constructivists envisage learning as self-regulated cognitive change (Kincheloe, 1993b) and consider that the 'locus of control resides within the subjects themselves' (Candy, 1991: 256). Thus we 'produce facts rather than discover them; the "facts" that an adult learns ... are grounded in the orientation and frame of reference of the learner' (Mezirow, 1991a: 25). In this sense learning is self-directed and most conceptualisations of self-directed learning agree that it involves 'personal control' (Garrison, 1992: 140).

Self-directed learning is also an essential component in metacognition. Although metacognition is another vague concept with no firm agreement on its meaning or 'content', it broadly involves self-awareness of the thinking process (Ashman & Conway, 1997). Halpern (1996) calls it 'being mindful'. Self-regulation and self-interrogation are considered to be key metacognitive strategies and involve 'selecting task-appropriate strategies from [a] repertoire and monitoring and evaluating the effectiveness of the strategy' (Ashman & Conway, 1997: 149). The emphasis is on being 'active participants in [one's] own learning process' (Zimmerman, 1994: 3). Kagan describes metacognition as 'teachers' awareness and self-monitoring of the strategies they use to solve classroom/instructional problems' (1990: 427-8). Kagan (1990) also traces part of the metacognitive movement to Schon's notion of the self-reflective practitioner engaging in a problem-solving cycle. Within these various descriptions of metacognition, these authors might just as easily be referring to action research.

The ability to self-direct and monitor performance effectively also appear to be important factors for successful learning. Self-directed learning is considered a 'foundation concept' in adult education (Tennant, 1997). Whilst it has 'limitless interpretations of what it is and how it should be applied' (Tennant, *op.cit.*: 7), it is clear that different disciplines and philosophies share a common concern to develop 'active, self-aware learners who have the capacity and freedom to frame their own purposes' (Tennant & Pogson, 1995: 150). Action research could locate itself within the tradition of self-directed learning, or at least some interpretations of it. Caffarella (1993), for example, draws together some main operating principles within the concept of self-

directed learning, two of which characterise action research; that is 'a self-initiated process of learning that stresses the ability of individuals to plan and manage their own learning' and 'an attribute or characteristic of learners with personal autonomy as its hallmark' (op.cit.: 25). One recent study on self-directed learning has identified four 'repetitive cognitive processes' that occur in adult learning which include goal setting, focusing, persevering and reformulation (Cavaliere, cited in Merriam, 1993a), all of which may be incorporated into the action research cycle.

Further links between action research and notions of self-directed learning can be found in Knowles' work. Knowles (1990; 1975) is one of the earliest advocates of self-directed learning and asserts that adults have a natural desire and capacity to manage their own learning. His model of self-directed learning follows a similar pattern to the action research cycle and his writing on the role of the facilitator in adult learning likewise closely mirrors the collaborative role of the 'critical friend' or research partner in action research. He emphasises the importance of internal motivation and the need to know the purpose and meaning before learning something new. As Pratt has noted, his work contains the 'central tenets of choice and participation' (1993: 19). Candy (1991) also suggests self-directed learning incorporates the principles of 'personal autonomy' and 'learner control' and Merriam & Caffarella, drawing from studies on self-directed learning, point out that 'control, freedom, and flexibility are the major motivators for engaging in self-directed learning' (1991: 44). All these points echo attributes of action research. King & Lonquist describe action research as 'a self-controlled mechanism for social change over time' (1994: 11).

Since self-directed thinking lies at the heart of action research, it is likely to be an acceptable method for enhancing adults' learning. However, Tennant & Pogson (1995) raise some important issues about the use of techniques and strategies for self-directed learning. They note, for example, that one of the criticisms of adult learning theorists (such as Knowles and Candy) is their emphasis on mastery of learning techniques and linear, step-by-step models. This raises the question of whether the procedures in action research are therefore appropriate. However, action research may side-step the problem of linear development by offering itself as a cyclical or spiral process. A strong case can also be made to follow a particular programme as long as it is flexible enough to

operate within the unpredictable context of adult learning. We shall see evidence of the strategic value of action research in the data analysis from this study.

Another criticism of the notion of self-directed behaviour is the implication that learning is simply a matter of internalised personal control. Garrison, for example, writes that 'self-direction ... often implies a false and misleading form of independence' (1992: 144). Although self-regulation is a crucial factor in the thinking process, it is now acknowledged that learning is also a contextual and social phenomenon. The next two sections elaborate upon the notion that cognition is 'experientially defined and culturally bound' (Merriam, 1993b: 8).

Characteristic Three: Thinking is Experientially Based

Dewey wrote that 'all genuine education comes about through experience' (1938: 25) and Eisner has declared that 'knowledge is rooted in experience' (1988: 15). Tennant & Pogson (1995) see learning as the 'reconstruction of experience', whilst Elbaz contends that 'teacher's knowledge grows out of the world of teaching as he experiences it; it gives shape to that world, and allows him to function in it' (1981: 58). Indeed, the integral relationship between experience and learning is a well-established notion and emphasised as well by a variety of other authors (for example, Boud et al, 1993a; Schon, 1987; Boud et al, 1985; Kolb, 1984; Maslow, 1968). From the literature on intelligence and cognition, Tennant & Pogson (1995) note a move away from a concern with 'academic problem solving' characterised by abstract reasoning to an emphasis on 'everyday problem solving' which is based on concrete experience (for example, Sternberg & Wagner, 1986). It is now recognised that adult cognitive growth 'is based on the experience of dealing with concrete problems and situations at work, in the home, and in community life' (Tennant & Pogson, 1995: 28).

Wilson describes concrete experience as 'authentic activity' or as 'naturally occurring settings' where 'knowledge and learning become intricately integrated with the tools, social interaction, and activity of their use' (1993: 78-9). He goes on to say that 'authentic activity ... requires that learning and knowing always be located in the actual situations of their creation and use' (op.cit.: 77). A key point to make is that 'it is not

experience per se that matters ... but instead how well one utilises that experience' (Sternberg, 1999: 233). The dangers of 'mislearning' from experience (Richert, 1991) are considered in the following chapter. What is being stressed here is that 'experience is educative only with reflection' (Richardson, 1990: 12). As action research provides 'authentic contextual relevance' (Pope, 1993: 26) and is essentially about 'learning from experience' encompassing a reflective process that is the '*analysis of experience*' (Winter, 1989a: viii, original emphasis), it would appear to offer fertile ground for adult cognitive growth. A favourable comparison can also be found between action research and Kolb's (1984) model of experiential learning, which depicts a cyclical process that incorporates reflective observation and active experimentation. As noted earlier, Zuber-Skerrit (1992) has applied an extended version of Kolb's model to the action research process.

Furthermore, since action research is embedded in practice, not only is it concerned with everyday problem solving (and problem-posing), but it incorporates practical thinking and the 'pragmatics of intelligence'. The 'pragmatics' of intelligence have been distinguished from the 'mechanics' of intelligence (Dixon & Baltes, 1986). Tennant & Pogson define these two forms as such:

The phrase *mechanics of intelligence* refers to the way a person processes information and solves problems at a basic cognitive level, including the perception of relationship, the formation of classifications, and the extraction of logical conclusions. *Pragmatics of intelligence* refers to the application of the mechanics of intelligence to particular contexts or fields of knowledge (1995: 24, original emphasis).

Baltes et al suggest that pragmatic intelligence predominates in the adult phase of life in which 'application of contextual knowledge systems and of multiple criteria of efficacy may be involved' (1984: 50). Since 'real-life problems are said to be open ended' with 'no single correct and logical solution' (Tennant & Pogson, 1995: 2-3), pragmatic reasoning requires 'the ability to tolerate contradiction and ambiguity' (Tennant, 1997: 67). These are qualifications shared by action research. 'Practical thinking' says Rogoff is 'flexible in the face of unanticipated opportunities or constraints' (1984: 7). Flexibility also being a feature of action research.

Much of the work on 'practical thinking' might be related to Elliott's notion of 'practical wisdom' (1993c; 1991a) and his comments on 'situational understanding'; although his work incorporates a more explicit moral dimension. Elliott adopts an experientially based position for teacher cognition and claims that action research develops

the practitioner's capacity for discrimination and judgement in particular, complex, human situations ... it informs professional judgement and thereby develops practical wisdom, i.e. the capacity to discern the right course of action when confronted with particular, complex and problematic states of affairs (1991a: 52).

Elliott draws on the work of Klemp and Dreyfus to describe this process of developing situational understanding derived from 'hands-on experience'. He sees practical wisdom as 'the form of the practitioner's professional knowledge', but does not envisage this knowledge as 'stored in the mind as sets of theoretical propositions, but as a reflectively processed repertoire of cases' (op.cit.: 53). Professional knowledge essentially becomes a 'stock of "situational understandings"' (1993c: 67).

Lave & Wenger (1991) have also explored the notion of 'situated learning'. Like Vygotsky (1978), they emphasise the active and social context of learning, but stress the integral nature of learning as practice. They locate the learner and learning within practice or 'communities of practice' (i.e. that learning is a process of participation in communities of practice), so that 'agent, activity, and the world mutually constitute each other' (1991: 33). It has been proposed that 'knowledge is situated, being in part a product of the activity, context, and culture in which it is developed and used' (Brown et al, 1989: 32) and Wilson (1993) summarises the situated cognitivists position as a question of learning in, rather than merely from, experience. This principle could easily be applied to action research, which embodies the notion that learning is 'fundamentally situated' (Brown et al, 1989: 32). Cohen et al (2000) make explicit the connection between 'situated learning' and action research.

The situated cognitivists also stress the socially interactive nature of learning in the sense that 'all knowledge is a joint construction of the mind' (Lampert & Clark, 1990: 22). This leads us to the next major principle underlying thinking in action research, closely linked to the experiential nature of learning.

Characteristic Four: Thinking is a Social Process

Bruner & Haste (1987b) draw attention to the 'realisation' that the 'achievement of meaning' is not merely an individual process, but is rooted in the social environment. They comment that "'making sense" is a social process; it is an activity that is always situated within a cultural and historical context' (op.cit.: 1). Many other writers from the various fields reviewed support the notion of cognition as a 'social phenomenon' (Jarvis, 1987; also for example, Brown et al, 1989; Rogoff & Lave, 1984; Vygotsky, 1978; Berger & Luckmann, 1966). Keating & MacLean (1988) acknowledge this through their term 'cognitive socialisation' which considers the role of socio-cultural and historical forces on the development of thinking.

These writers claim that the traditional concept of cognition, with its emphasis on individual mental processes, 'decontextualises' the thinking process, thus losing its meaning (Wilson, 1993). Vygotsky (1978), a leading critic of this individualist bias, stressed the socially interactive origins of cognition and considered that 'human learning presupposes a specific social nature' (op.cit.: 88). He saw cognition in terms of both an interpersonal and intrapersonal process envisaging a social constructivist model of learning. He believed that cognitive activity was affected by the social context via sociocultural 'tools' such as language. As Rogoff describes it, 'the social system ... channels cognitive development' (1984: 4). Thus internal mental processes are 'quasi-social' in nature (Wertsch & Kanner, 1992). The influence of socialisation on thinking is revisited in chapter five.

Crawford (1995) has compared action research with some of the key tenets of Vygotskian and neo-Vygotskian theory. She notes, for example, that sociocultural theories of consciousness offer a 'more systemic view of human transformative activity *in situ*' which 'resonates with the aims of action research which generally include a desire to change the ways in which groups of people act within existing social systems/institutions' (op.cit.: 244). Supporters of this perspective, which focuses on 'action in context', 'share with action researchers an interest in learning and development through *participative transformation* in changing sociocultural contexts' suggests Crawford (ibid., original emphasis). Similar connections between action

research and sociocultural psychology have been made by Edwards (2000). She considers that action research incorporates 'culturally embedded knowledge construction' (op.cit.: 197).

Like the thinking process, action research is a social and collaborative activity. It incorporates the notion of 'distributed cognition' which emphasises the interactive and dialogic nature of cognition in which thinking is 'distributed socially' (Engestrom, 1994: 46) and acknowledges the 'interdependence and interconnectedness' of adult learning highlighted by feminist writers (for example, Belenky et al, 1997; Hayes, 1989). It provides the 'support, trust and challenge from others' that learning requires (Boud et al, 1993b: 15). This point is particularly significant in the context of the early years practitioners in this study since these adults tend to work collaboratively. Early years settings invariably incorporate a higher adult:child ratio and the staff mostly work in teams. Nurseries, for example, create a physical environment in which all adults and children mix and interact in a loose, accessible context that exhibits few of the boundaries typical of later years classrooms.

However, action research is also a personal and individual process, and the debate over whether social structures or human agency has the greater influence continues within the various fields that attempt to understand the thinking process. Tennant (1997) warns against extremist views in which theories of the self and the self in society ignore or diminish the other and there have been some attempts to accommodate the tension between the psychological and sociological view of learning. Bruner & Haste, for example, talk of the 'dialectical relationship between the individual and the social' (1987b: 5) and Merriam (1993c) suggests that the learner, the learning process and the context are equally important for a comprehensive view of the adult learner. Some of these points are discussed again in later chapters.

Jarvis, like Dewey, views learning as a gap or disjuncture between 'biography and experience' (1987: 94; also Boud et al, 1985). He sees the learner as a 'social construct' and learning as a 'social phenomenon' and culturally based, yet still envisages the learning process as an internal, personal and individual phenomenon. So, whilst acknowledgement is made in this dissertation of contextual and social influences, the emphasis is on *internal* mental processes and the *personal* impact of action research.

The previous two principles drew attention to external influences on learning but the next section shift the focus back to the 'self' in cognitive development.

Characteristic Five: Thinking is an Emotional Experience

It is increasingly recognised that descriptions of cognitive development are incomplete without at least some reference to the affective dimensions of thinking; so much so that the existence of 'emotional intelligence' has been proposed (Goleman, 1995; Salovey & Mayer, 1990). Leventhal & Scherer stress that cognition and emotion are 'inseparably interrelated' and 'bound together in the underlying processing system' (1987: 12). They write that 'schemata are created in emotional encounters with the environment' (op.cit.: 10) and that 'activation of the cognitive or perceptual components of the schema is likely to be ... simultaneous in time with the activation of the expressive and autonomic components' (op.cit.: 12). Oatley & Johnson-Laird similarly claim that emotions are 'central to the organisation of cognitive processing' (1987: 30) and that they have 'important cognitive functions' (op.cit.: 31). They propose that emotions are a form of both internal and external communication. Internally they integrate with and help regulate cognitive functions and externally they facilitate social relations. The theory of multiple intelligences also draws attention to the importance of emotional skills in developing the 'intrapersonal' and 'interpersonal' intelligences (Gardner, 1983). Jarvis comments:

Reflection is ... a very complex process involving both the cognitive and the affective dimensions; this recognition is very important indeed, because the affective dimension will itself affect the learning outcomes of any potential learning experience and this will in turn have been influenced by previous experiences (1987: 98).

Although complex issues such as the conceptual nature of emotion and the way in which the affective and cognitive aspects of the brain interact have yet to be resolved, there is growing evidence that the emotional state *does* affect cognitive performance, such as the quality of memory (Matlin, 1998; Goleman, 1995; Meadows, 1993). It has been suggested that emotional signals 'focus attention' and give rise to conscious reflection (Oatley & Johnson-Laird, 1987). It also appears that without 'emotional intelligence' decision-making can be seriously impaired since most decisions adhere to a

personal value system (Goleman, 1995). Not surprisingly the affective facet of motivation also seems to have a significant impact on the quality of learning (Carr et al, 1991; Chandler et al, 1990; Dweck & Elliott, 1983). Askew & Carnell (1998) highlight the importance of personal commitment and intrinsic motivation to ensure 'deep learning'. Sylwester comments 'we know emotion is very important to the educative process because it drives attention, which drives learning and memory' (1995: 72). He goes on to say that 'the emotional system ... defines our basic personality very early in life' (ibid.). Thus, emotions form an integral part of traits that can affect learning disposition such as curiosity, imagination and perseverance.

Nias shares the view that separation of cognition and emotion is a 'false and arid division' (1996: 294). She highlights the 'deeply emotional relationship' teachers have with their work and explores some of the reasons why teaching is so 'highly charged with feeling' (op.cit.: 293, 296). Drawing on a collection of articles, she suggests the reasons lie with the nature of the profession since it involves 'intensive personal interactions' and entails 'close, even intimate, contact with other human beings for whose conduct and progress [teachers] are held responsible' (ibid.). Furthermore, teachers 'invest their "selves" in their work' to the extent of 'merging their sense of political and professional identity' (op.cit.: 297). Thus 'the school becomes a main site for their self-esteem and fulfilment, and so too for their vulnerability' (ibid.). She also draws attention to the extensive evidence that shows how the teaching profession is imbued with a strong 'commitment to caring'.

Hargreaves has also drawn attention to the 'turbulence, excitement, and unpredictability of teachers' emotions' that abound in teacher development (1995a: 23). He suggests that strategies for professional development must be sensitive to teachers' emotional needs and 'address the real conditions of teachers' work, the multiple and contradictory demands to which teachers must respond, the cultures of teachers' workplaces, and teachers' emotional relationships to their teaching, to their children, and to change in general' (op.cit.: 26). Golby likewise stresses the need to take into account 'the emotional lives of teachers as a serious and fundamental element of professional development and educational practice' (1996: 434).

In writing about action research, Dadds makes a case that it is a

misconceived enterprise to try to separate teachers' thinking in action research from their feelings, beliefs, attitudes, their being and their sense of self. To do so is to create difficulties in attempting to understand how and why worthwhile change evolves as a result of the teacher's systematic, reflective enquiries (1993a: 229).

Attention is drawn to the essentially personal nature of action research and Dadds notes the way in which practitioners' 'identity' is 'locked into the research focus and the consequent research process' bringing with it 'all the attendant wisdom, knowledge, beliefs, values, attitudes, prejudices, loves and hates, of the professional and personal self' (ibid.). Chisholm claims that '*the integration of emotionality is not weakness, but enrichment*' (1990: 253, original emphasis). Along with Chisholm (1990), Dadds criticises the action research literature for portraying the reflective process as 'coolly cerebral and analytical' when it is 'emotive, disturbing and judgmental' (1993b: 294). Thus 'emotional intelligence' operates as a fundamental condition within action research leading Dadds (1995) to refer to it as 'passionate inquiry', Chisholm (1990) 'passionate scholarship', and Kincheloe (1993a) to call teacher researchers 'passionate learners'.

Review

The chapter has offered some insight into the thinking process in action research and has sought to provide a framework of key attributes which address integral aspects of cognition and adult development. These characteristics include the recognition that thought is actively constructed (with various theories depicted to explain this process), that it is self-directed, but that it is also a social and emotional process and embedded in experience. Thinking in action research has been portrayed as a holistic process that interconnects all dimensions of learning: the cognitive, the affective and the 'conative' ('concerned with action and doing'; Boud et al, 1993b: 12). Through action research learning is experienced as a 'seamless whole' (Boud et al, op.cit.). The chapter has sought a theoretical rationale for thinking in action research by linking these key attributes with research evidence and leading hypotheses from various disciplines. The mutual resonance between action research and key theories of learning offer a compelling basis for action research as a favourable model of professional development.

At the same time this chapter has illustrated several principal theories of cognition that offer helpful mechanisms with which to explain the research data from this study.

What this chapter has not done is consider a *critical orientation* to the theoretical framework of action research thinking. The following chapter's investigation of the notion of critical thinking extends the theoretical framework by highlighting several useful theoretical models with which to evaluate the relationship between action research and critical elements within teachers' thinking.

CHAPTER FIVE

ACTION RESEARCH AND CRITICAL THINKING

This chapter continues the task of presenting a theoretical rationale of the thinking process within action research, but shifts attention to a particular form of thinking, namely *critical* reflection. This chapter elaborates on the theoretical framework of thinking in action research through a verification of the way in which action research reportedly promotes critical reflection. It does so by comparing the work of authors who have written about critical thinking with the claims made by proponents of action research, thus extending the efforts of the previous chapter which related various attributes of action research thinking with the broader literature on cognition and adult development. At the same time, this chapter highlights various theoretical models of critical thinking deemed to be appropriate mechanisms by which to analyse the critical nature of the practitioners' thinking from my own research study. Whilst the previous chapter mostly drew upon the fields of the cognitive sciences, here the literature sources are taken mostly from the fields of adult development and action research.

Before addressing these topics, some important points ought to be made. Firstly, like the word 'thinking', the term 'critical thinking' (and variations of it) is not only 'exhortatory, heady, and often conveniently vague' but is 'interpreted in a variety of ways' (Brookfield, 1987: 11). Moreover, despite 'burgeoning scholarly interest, the concept of critical thinking continues to suffer from great ambiguity of meaning' (Mezirow, 1990b: xvi). Candy maintains the literature on critical thinking is 'confused and confusing' (1991: 329). Unrau has observed that attempts to clarify its meaning are 'much like trying to capture big floating bubbles in a butterfly net' (1997: 13). It is acknowledged, therefore, that a universal definition of critical thinking is likely to remain 'elusive' (Kincheloe, 1993a). However, in order to evaluate the quality of thinking in action research, both theoretically and empirically, some choices had to be made about the character of critical thinking. Key aspects have therefore been sifted

from the literature that help to portray its nature as well as provide an evaluative framework for the data analysis in this study.

This brings us to a second keynote. Within the large collection of works written on critical thinking and reflection, it was necessary to discriminate between the various models and viewpoints that favour a critical interpretation congruent with the spirit of action research. I was therefore, once again, selective in my choice of literature. In this review, traditional and instrumental depictions that emphasise logical and deductive reasoning have been superseded by broader visions of critical thinking. The accounts drawn upon recognise most everyday problem solving scenarios as ill-structured, uncertain and open-ended and surmise that a more complex form of thinking is required in which reflection plays a pivotal role. In these portrayals of critical thinking, the search for habitual assumptions is given priority over the application of procedural skills.

Finally this chapter avoids lengthy semantic debates, as did the last chapter, over the differences or similarities between the terms reflection and thinking. King & Kitchener (1994) point out that reflective thinking and critical thinking are often used interchangeably in the literature, 'even by Dewey'. Most of the literature consulted affirm the central role played by reflection in critical thinking and Mezirow notes that 'reflection is generally used as a synonym for higher-order mental processes' (1990a: 5). So, whilst some differences might be found between the two notions, these have been deemed to be less important than the need to differentiate critical thinking and critical reflection from their non-critical forms. Reflection and thinking are therefore used here indiscriminately, with attention being drawn to the critical nature of these concepts.

Critical Thinking in Action Research

This section reviews some of the theoretical and empirical resources on critical thinking and compares it with the critical frame of mind advocated in action research. From the wealth of writing on this topic, some general characteristics can be isolated that help to illustrate what critical thinking might entail. These are identified with the

understanding that such features are dynamic and multidimensional processes (Noffke & Brennan, 1988). The attributes outlined below provide some corroboration for the theoretical assertions made by action research supporters about its potential for developing critical reflection.

Some General Attributes of Critical Action Research

Littered amongst the various models and descriptions of higher order thinking are references to the terms *reason* and *rationality*. Unrau (1997) defines critical thinking as 'reasoned reflection', King & Kitchener (1994) indirectly refer to it as a 'reasoning process' and Kurfiss (1988) includes 'sound reason' as a major element of critical thinking. Dewey (1933) was one of the early writers who associated rational thinking with the reflective process, whilst Mezirow (1991a), drawing on Habermas, highlights how the application of rationality can bring reliability to critical reflection. Critical thinking is also judged by Siegel (1997) to be the 'educational cognate' of rationality. He describes a critical thinker as 'basing one's beliefs and actions on reasons' and involving 'committing oneself to the dictates of rationality' (op.cit.: 13). If we turn to the writing on action research, some references to reason and rationality can also be found. Zuber-Skerrit (1992) describes action research as a process of 'rational reflection'. Kemmis & McTaggart (1988) talk of how action research can improve the 'rationality' of practice, while Carr & Kemmis (1986) write of the different qualities of 'reasoning' in action research.

The association of reason and rationality with critical thinking and their parallel usage within the two literature sources gives action research some support for its critical claims. However, problems arise with the use of these terms since their meaning is rarely clarified (Siegel, 1997), with most authors making broad assumptions about their value. The practice of rational thinking in action research takes on both favourable (Carr & Kemmis, 1986) and derogatory (Webb, 1996; van Manen, 1990) connotations depending upon how its meaning is interpreted. Perhaps a preferable term might be '*evaluation*' since both rational and reasonable thinking are generally considered to incorporate some kind of evaluative process. Certainly, 'evaluation' is regarded as a fundamental element of the action research method and references to this term proliferate in the literature. The wider literature on critical thinking also emphasises its

importance. Hawes (1990), for example, views critical thinking as 'reasoned evaluation' and Siegel (1997) says critical thinking incorporates a 'reason assessment' component. The evaluative process, defined by King & Kitchener as 'true reflective thinking' (1994: 18), might be seen to involve a deliberate analysis of comparative assessment of the available information and options, leading to a plausible and informed judgement.

Critical thinking, however, might be seen as comprising more than the procedural description of the evaluative process suggested above. Other aspects of critical reflection given prominence in the literature need also to be taken into account. These emphasise the evolving nature of critical thinking, a characteristic which closely matches the essence of reflection in action research. Merriam & Cafarella's broad review of the literature on adults' higher order cognitive processes, reveals 'two prominent themes ... of *dialectic* and *relativistic* thought patterns' (1991: 202, own emphasis). Works such as those from Belenky et al (1997), King & Kitchener (1994) and Kramer & Woodruff (1986) all associate complex thinking with a dialectical and relativistic mode of thinking. Like the terms reason and rationality, a uniform description of these thinking styles is difficult to formulate. What can be ascertained from the published works on this subject is that dialectical and relativistic reflection acknowledges the dynamic and contextual nature of everyday living with its complex and ambiguous environment in which various alternative interpretations of phenomena might abound. Attempts to synthesise contradictory 'truths' through reflection are therefore conducted in an exploratory and open-ended manner. Perry suggests a thinker at the highest level of development is one who acknowledges that

I must be wholehearted while tentative, fight for my values, yet respect others, believe my deepest values right yet be ready to learn. I see that I shall be retracing this whole journey over and over - but, I hope, more wisely (1981: 79).

Jarvis also alleges that critical thinking entails viewing a 'variety of interpretations of single events' and gaining awareness of 'the relativity and contextuality of a great deal of knowledge' (1987: 204). Similarly, King & Kitchener categorise the higher stages of reflection by an awareness that whilst 'some views may be evaluated as more reasonable explanations', nonetheless 'absolute truth will never be ascertained with complete certainty' (1994: 17).

Such thinking is characteristic of action research and a small body of research appears to support this (Oja, 1991; Oja & Ham, 1984). Oja and others' work suggests that action researchers deemed to be operating at the highest developmental level are more flexible, show an 'increased toleration for paradox, contradiction and ambiguity' (Oja, 1989: 15) and are able to adopt and synthesise multiple perspectives. Moreover, dialectical thinking in action research is considered to be an 'open and questioning form of thinking which demands reflection back and forth between elements' (Carr & Kemmis, 1986: 33). In particular, Carr & Kemmis emphasise the way in which action research employs 'the dialectic of retrospective analysis and prospective action' (op.cit.: 185). Thus theory and practice become 'mutually constitutive', 'as in a process of interaction which is a continual reconstruction of thought and action' (op.cit.: 34). Winter also proposes the role of 'dialectic critique' within action research as a means of 'understanding the relationships between the elements that make up various phenomena in [a] context' (1996: 13) and O'Hanlon refers to reflective professionals as being 'involved in an ongoing, questioning dialectic in search of meaning' (1997: 170).

When incorporating dialectical and relativistic forms of reflection, critical thinking becomes, as Unrau puts it, a 'process of interpreting and reinterpreting, of understanding and re-understanding' in which 'the quest for valid interpretations is a recursive, circular activity' (1997: 22). Thus critical thinking, with accompanying dialectic and relativistic thought patterns, is placed within the hermeneutic tradition (Unrau, 1997). Action research is also associated with hermeneutic principles (Carson, 1990). Cohen et al consider action research to be a 'hermeneutic activity of understanding and interpreting social situations with a view to their improvement' (2000: 231). Certainly, the bulk of the literature offers action research as a continuous process of inquiry and understanding as it seeks meaning in the social context (Cohen et al: 2000). Sumara & Carson also contend that

action research practices are deeply hermeneutic and postmodern practices, for not only do they acknowledge the importance of self and collective interpretation, but they deeply understand that these interpretations are always in a state of becoming and can never be fixed into predetermined and static categories (1997: xviii).

Tripp affirms this point when he writes that reflection in action research 'can never be exhaustive, can never "arrive" at the end point of full understanding' (1990: 160). This

'endless process of analysis' may be 'interrupted for the sake of action' (Elliott, 1991a: 74) and 'to make practical decisions' (Dadds, 1995: 150), yet an action researcher is someone who would 'display ... findings and argue for their value, but always with one hesitation, a stutter, a tentativeness - never as the truth' (Kincheloe, 1991: 120). Perry (1981) calls this 'commitment in relativism'.

In summary, critical thinking in action research might be seen essentially as an evaluative process that incorporates both dialectic and relativistic modes of thinking rendering it to be always in a state of transition. There is, however, one further aspect that might be added to this characterisation involving the role of assumptions in the development of critical thinking. The practice of 'assumption hunting' as a means of generating critical thinking is given serious attention in both banks of literature as the following section demonstrates.

The Role of Assumptions in Critical Action Research

The reason assumptions appear to be of such importance in the development of critical thinking appears to lie in the circumstances of their creation. Since much of internalised thought is believed to be a personalised construction of reality (Kelly, 1955), the potential for misconstruing reality exists. Many of the publications consulted, from action research to wider fields of cognitive and adult development and beyond, rested on the premise that much of what adults think about is distorted to 'fit' into existing understandings. Matlin points out how research 'shows that people may misremember material so that it is more consistent with their schemas' (1998: 256). Mezirow elaborates upon this:

There is much evidence to support the assertion that we tend to accept and integrate experiences that comfortably fit our frame of reference and to discount those that do not. Thus, our current frame of reference serves as the boundary condition for interpreting the meaning of an experience (1991a: 32).

Gadamer (1989) refers to a similar process when he talks of inherent 'prejudices' or 'fore-meanings' that are projected into our understanding of any situation constitutively influencing our interpretation of it. Richert also points out that 'teachers repeatedly

claim that most of what they know they learned from their experiences working in classrooms', but she warns of how research 'cautions us about the difficulty of learning from experience by suggesting numerous ways of misapprehending experience and thus mislearning from it' (1991: 113). Since 'individuals will always reorganise incoming information on the basis of prior constructions, ideologies, and value orientations' (Kincheloe, 1993a: 37), this means that 'our interpretations are often fallible and often are predicated upon unreliable assumptions' (Mezirow, 1991a: 35). Nisbet & Ross (1980) claim to have identified various distortions that appear to exist within 'knowledge structures' or schemas which create inaccurate representations of external reality. Some of these distortions are the result of the use of heuristics or 'rules of thumb'. We have seen in chapter one how teachers unconsciously employ such implicit rules in their daily practice. Assumptions are thus 'self evident rules about reality' which fundamentally underlie our understanding, judgments and actions in the world (Brookfield, 1987: 44).

Although meaning making is a personalised response, it is recognised how socio-cultural forces influence an individual's representation of reality. The previous chapter has highlighted how knowledge acquisition is an interpersonal process and 'intersubjectively grounded and consensually validated' (Candy, 1991: 278). Since intellectual development is mediated by social activity and in specific contexts (Vygotsky, 1978), this has 'enormous consequences for the form and content, as well as the quality of the intellectual products and processes' (Berg, 1992: 9). Individuals are

rooted in a particular cultural milieu. It is through this unique cultural framework of values, beliefs and attitudes that individuals view and make sense of their reality and express this in behaviour and language ... The expression and the transmission of cultural norms and practices thus become the "stuff" of learning (Barer-Stein, 1987: 89, original emphasis).

Historical forces legitimate cultural values and beliefs that are 'inherited' via social interaction, a process Gadamer (1989) refers to as 'historical consciousness'. Whilst quoting Cole, Edwards makes a similar point in saying 'our interpretations as we try to make sense of our worlds are mediated in part by "the cultural past reified in the cultural present"' (2000: 198). In other words, as individuals' construct their 'model' of the world, they are strongly influenced by contextual categories that encompass historically constituted and conventionalised forms of ideology (Bruner, 1996, 1990). Thus

‘learning and knowing are a process of enculturation, not simply a matter of acquisition’ (Wilson, 1993: 77).

In the realm of education, O'Hanlon refers to this phenomenon when she talks of how teachers undergo a process of 'professional enculturation' into 'prevailing educational trends and philosophies' which are blended into existing personal experiences, needs and values (1993: 245). It appears that 'personal history cultures' as well as 'school cultures' both affect how teachers enact their practice (Hamilton, 1993). The biographical heritage of educational encounters can create prototypes of teaching models that shape future conceptions of the teaching role and performance (Weinstein, 1989; Zeichner et al, 1987), such that when students begin teacher training they already hold 'definite ideas about teaching and learning' (Hollingsworth, 1989: 161). These ideas may not be articulated yet they 'serve as culturally based filters' (op.cit.: 162). Butt et al describe the autobiographical formation of teachers' knowledge as being 'grounded in, and shaped by, the stream of experiences that [arise] out of person/context interactions and existential responses to those experiences' so that 'teachers ... bring to teaching a particular set of dispositions and personal knowledge gained through their particular life's history' (1988: 151). At the same time new teachers 'largely adopt existing practices and traditions' (Chandler et al, 1990: 130). Thus teaching knowledge is derived from a number of sources that become 'the lights that teachers live by' (Buchmann, 1987). Such 'lights' include 'folkways of teaching' and 'local mores'.

The problem with 'folk pedagogy' is that it 'predisposes individuals to think and teach in particular ways' and that such 'uncritically held beliefs' are often 'oversimplified, misleading, or inaccurate' (Torff, op.cit.: 197). In chapter one, attention was drawn to the way in which teachers' thinking and actions are guided by 'a personally held system of beliefs, values, and principles' which are only 'partially articulated' (Clark & Peterson, 1986: 287). Carr & Kemmis also claim that the 'theoretical preconceptions' held by practitioners are 'largely the product of habit, precedent and tradition ... [and] ... rarely formulated in any explicit way or informed by any clearly articulated process of thought' (1986: 123). Assumptions arise since '*the production and representation of ideas, values, and beliefs*' tends to be accepted as '*natural and as common sense*' (McLaren, 1998: 180, original emphasis) and since teachers' tacit pedagogical belief system and knowledge base is 'rarely openly expressed or stated' (Torff, 1999: 195).

The implication here is that not all conventional or institutionalised educational practice is necessarily wise or effective, yet it is invariably absorbed passively into practitioners' personal belief systems.

An additional problem with prevailing values, attitudes and social practices that are popularised, legitimated and act as 'regimes of truth', is that they may disguise inequitable power relations and structures. Knowledge derived from 'dominant ideologies or forces of power' (Kincheloe, 1993a: 168) means that it may misrepresent or marginalise particular groups (Sparks-Langer, 1992). The implication here is that if practitioners do not sufficiently challenge the knowledge that they introject, their intuitively held conceptions of education may inhibit socially just practices.

There is less agreement in the literature as to the extent to which these 'socialising agents and mechanisms' (Zeichner et al, 1987: 24) influence a person's internal thought processes and the 'existence of diverse teaching cultures' (ibid.) may create conflicting messages. These factors suggest that internalisation of 'cultural codes' may be resisted allowing for 'individual expressions' of teaching. Cognition is thus both 'universal' and 'highly individualised' (Gardner, 1987).

Overall, it appears that assumptions are essentially autobiographical, experiential, historical and cultural constructs and a complex web of phenomena operate in their formation. They are troublesome because, not only are they likely to be inaccurate representations of the external world, but their internalisation is largely determined by the sociocultural milieu as culturally sanctioned frames of reference are tacitly accepted. Such socially derived knowledge and conventions of community are potentially problematic given that ideological norms that are maintained and promulgated from one group or generation to the next may also be a distortion of reality or else incorporate inappropriate or unjust practices.

Critical reflection is seen by many as the means of overcoming the problems of ingrained practice and for uprooting hidden assumptions. Dewey was one of the earliest writers to recognise the need to 'turn upon some unconscious assumption and make it explicit' and associate it with critical inquiry (1933: 215). Gadamer (1989) also relates 'critical reason' with bringing to consciousness tacit assumptions (or 'prejudices'), a

process he calls 'hermeneutic consciousness'. More recently, Apple has stated that critical thinking 'seeks to illuminate the problematic character of the common-sense reality most of us take for granted' (quoted in Smyth, 1991: 44). Torff also calls for the engagement of reflective thinking to 'encounter and evaluate ... uncritically held beliefs, and to develop a greater understanding of the limitations and pervasiveness of folk pedagogy' (1999: 210). Brookfield puts it succinctly when he writes that

central to the process of critical reflection ... is the recognition and analysis of assumptions (1990: 177, own emphasis).

The key role played by 'assumption hunting' (Brookfield, 1987) is echoed in the action research literature. Noffke argues that action research is about 'taking everyday things in the life of education and unpacking them for their historical and ideological baggage' (1995: 5) and Kincheloe contends that critical action researchers must 'dig out and expose to the light of day' hidden assumptions (1991: 122). In doing so, they will 'discover a world of personal meaning which is socially constructed by a variety of forces' (op.cit.: 158). According to Elliott, reflection takes on a critical dimension when

the practitioner reflects about the taken-for-granted beliefs and assumptions which underpin his/her practical interpretations of professional values and their origins in his/her life experiences and history. (S)he begins to reconstruct his/her constructs of value and discovers that this opens up new understandings of the situation and new possibilities for intelligent action within it (1993c: 69).

The importance of unearthing entrenched assumptions offers the most compelling correlation between the critical claims of action research and the broader literature on critical thinking. The connections are explicit often with parallel proclamations about how critical reflection entails the probing of entrenched preconceptions, leading to fresh perspectives and the restructuring of established norms. This crucial aspect of critical thinking has also acquired primary importance in my own research. The emphasis placed in the literature on 'assumption hunting', in which dialectic and relativistic evaluation plays a part, and the consequent transformations of the mind has proved to be especially helpful in terms of the data analysis for this study. The remainder of this chapter, therefore, examines more closely the ideas of a small number of selected authors whose work will be used to help interpret the critical nature of the practitioners' thoughts presented in this research study.

These authors have been chosen for a variety of reasons. The works of Brookfield (1995; 1987) and Mezirow (1991a; 1990a) were singled out essentially to provide an 'external' perspective of critical reflection for comparison with action research sources, but also because they are two of the leading adult education writers who have brought a 'critical perspective' to the field of self-directed learning (Cafarella, 1993). Carr & Kemmis (1986) and Kincheloe (1993a; 1991) were obvious choices because they write about critical thinking from an action research perspective and have made particularly powerful claims about the potential of action research to 'emancipate' the thinking of teachers. Any researcher seeking evidence of action research's capacity for transforming practice is compelled to examine the critical possibilities proposed by these writers and it was certainly one of the early intentions of my own research. It will be seen that Brookfield and Mezirow's ideas offer a practical diagnostic framework with which to consider how action research can transform practitioners' understanding at a personal and individual level. The model offered by Carr & Kemmis (1986), and Kincheloe (1993a; 1991) proposes a broader perspective of transformation that encompasses the wider socio-political context. Brookfield and Mezirow are first reviewed in the section below which features critical thinking as personal transformation. This is followed by a summary of Carr & Kemmis and Kincheloe's perceptions of critical thinking as emancipatory transformation.

Critical Thinking as Personal Transformation

Although Brookfield's theories are less extensively developed than Mezirow's, there are many similarities between them and both place the weeding out of embedded assumptions at the heart of critical thinking. Their work is also compatible with action research and together they provide a robust portrayal of how critical reflection might bring about transformations in practitioners' thinking. Their arguments are briefly outlined below and the relevance of their ideas for action research highlighted.

Brookfield's Assumption Hunting

For Brookfield, critical thinking is essentially a process of 'calling into question the assumptions underlying our customary, habitual ways of thinking and acting and then being ready to think and act differently on the basis of this critical questioning' (1987: 1). In education, 'critically reflective teaching happens when we identify and scrutinise the assumptions that undergird how we work' (1995: xii). Thus Brookfield (1995) believes it is the 'unearthing' and 'scrutiny' of various assumptions that ensures reflection becomes 'critical'. He broadly categorises assumptions into the paradigmatic, the prescriptive and the causal. Paradigmatic assumptions are the 'basic structuring axioms we use to order the world' (op.cit.: 2); prescriptive assumptions arise out of the fundamental paradigmatic assumptions and assume what 'ought to be happening' in the world; and causal assumptions are more explicitly predictive and help to 'understand how different parts of the world work and the conditions under which processes can be changed' (op.cit.: 3).

'Assumption hunting' includes viewing one's own practice 'from as many unfamiliar angles as possible' (op.cit.: 28). These multiple perspectives or 'lenses' help to ensure that assumptions are scrutinised for their 'validity' and 'accuracy'. Assumptions are then 'reconstituted' to become 'more inclusive and integrative' in order to fit 'reality' (Brookfield, 1990). Assumption hunting can create an awareness of 'how context influences thoughts and actions' (1987: 8) so that critical thinkers become 'contextually aware'. Such thinkers then 'imagine and explore alternatives to existing ways of thinking and living' (ibid.). With the realisation that other 'norms' exist, comes what Brookfield (1987) calls 'reflective skepticism' where critical reflectors become distrustful of 'universal truths' or 'ultimate explanations'. Here, dialectical and relativistic modes of thinking can be found.

Although Brookfield does not explicitly associate the process of critical thinking with action research, the following statement verifies the close affinity of his ideas with it. It also demonstrates the feasibility of drawing upon his work to help understand the critical thinking process within action research:

As a process critical thinking is not purely passive. It involves alternating phases of analysis and action ... This process of active inquiry combines reflective analysis with informed action. We perceive a discrepancy, question a given, or become aware of an assumption - and then we *act* upon these intuitions. As our intuitions become confirmed, refuted, or (most likely) modified through action, we hone and refine our perceptions so that they further influence our actions, become further refined, and so on. Critical thinking is a praxis of alternating analysis and action ... If asked, we can justify our reasons for our commitment and point to evidence in its support (1987: 23, original emphasis).

In his writing on critical thinking, Brookfield draws upon the work of Boyd & Fales who regard the culminative stage of the critical thinking process as the 'creative synthesis of various bits of information previously taken in, and the formation of a new "solution" or change in the self' (1983: 110). Mezirow has developed some elaborate ideas about this transformation of the self, particularly in relation to his theories on perspective transformation. These are reviewed next.

Mezirow's Perspective Transformation

Mezirow's theory of critical reflection, heralded as a 'landmark theory' even by his critics (Clark & Wilson, 1991: 91), is encapsulated in his transformative learning theory, and in particular his theory of perspective transformation. He holds that reflection takes on a critical turn when it involves a critique of 'presuppositions', what he calls 'premise reflection' (1990a). Premise reflection is necessary in order to unravel 'unwarranted epistemic, sociolinguistic or psychological presuppositions' (1991a). These presuppositions are essentially 'habits of expectation' or 'meaning schemes' and 'perspectives'. Meaning schemes might be beliefs, values, attitudes, knowledge and emotional reactions. Related schemes collectively become meaning perspectives which are essentially personal paradigms or 'orientating frames of reference' 'that serve as a (usually tacit) belief system for interpreting and evaluating the meaning of experience' (op.cit.: 42).

Meaning perspectives are 'psychological structures' and comparable to Kelly's (1955) 'personal constructs', Kuhn's (1970) 'paradigms' and Schon's (1983) 'frames' or 'theories-in-action'. Mezirow also associates meaning perspectives with the 'prevailing view of cognitive psychology' which identifies 'schemas' as 'organised representations of an

event that serve as prototypes or norms for what is expected' (1991a: 48). He asserts that 'schemas, like meaning perspectives, are supposed to guide the way in which we experience, feel, understand, judge, and act upon particular situations' (ibid.). However, he extends this interpretation so that 'rather than simply serving as frameworks for classifying current experience, meaning perspectives are informed by an horizon of possibility that is anticipated and represents value assumptions regarding ends, norms, and criteria of judgment.' (op.cit.: 49). According to Mezirow, meaning schemes and perspectives 'constitute codes that govern the activities of perceiving, comprehending, and remembering' (op.cit.: 4). They effectively act as 'perceptual filters'. He declares:

These meaning schemes and meaning perspectives constitute our "boundary structure" for perceiving and comprehending new data ...We allow our meaning system to diminish our awareness of how things really are in order to avoid anxiety, creating a zone of blocked attention and self-deception (ibid.).

Not only are meaning schemes and perspectives 'all or almost all products of unreflective personal or cultural assimilation' (op.cit.: 118), but a meaning perspective 'selectively orders what we learn and the way we learn it' (op.cit.: 44). Such is the power of these built-in assumptions to govern our interpretation that

overcoming limited, distorted, and arbitrarily selective modes of perception and cognition through reflection on assumptions that formerly have been accepted uncritically is central to development in adulthood (op.cit.: 4).

He therefore alleges that 'the most significant transformations in learning are the *transformations of meaning perspectives*' (ibid., own emphasis). Perspective transformation involves 'becoming aware, through reflection and critique, of specific presuppositions upon which a distorted or incomplete meaning perspective is based and then transforming that perspective through a reorganisation of meaning' (op.cit.: 94). Critical reflection (or premise reflection as he calls it) thus plays the central role in perspective transformation via the 'assessment or reassessment of assumptions' (op.cit.: 6). Through this process of 'premise reflection', experiences are 'reinterpreted' and 'reconstructed' giving place to 'new meanings and perspectives' (op.cit.: 11). In his early work Mezirow set out the importance of perspective transformation:

I have suggested that a crucial dimension of adult development involves a structural reorganisation in the way a person looks at himself and his relationships. This perspective is important because it dictates criteria for identifying problems seen as relevant to him, for attitude formation, for making value judgments, for setting priorities for action and for feeling that he can change his situation through his own initiative (1978: 108).

Mezirow's transformation theory operates on the basis that 'meaning is interpretation' and as such 'present interpretations of reality are always subject to revision or replacement' (1991a: xiv). Premise reflection involves a particular type of 'logic' says Mezirow which he calls 'dialectic-presuppositional'. He quotes Basseches in describing this logic as 'developmental movement through forms [cognitive structures]' (Mezirow, 1991a: 110). These ideas can be related to the dialectical and relativistic attributes of critical thinking.

The association of Mezirow's hypothesis with action research is easily made since he proposes it himself as a suitable model for helping to bring about perspective transformation, quoting examples of this in practice. The use of his theories as an analytical tool for detecting critical thinking in practitioners undertaking action research is therefore an entirely appropriate step to take. Both Mezirow's and Brookfield's theories are revisited in later chapters when they are employed in the investigation of the critical character of the practitioners' thinking from my research study. Their work is also beneficial for the emphasis they make on *personal* transformations in thinking. This focuses attention on the internal changes brought about by critical reflection and the impact on individuals' perceptions of their practice.

In contrast, Carr & Kemmis and Kincheloe tend to emphasise the social context and wider, group change. Their interpretation of critical thinking is more concerned with the recognition of how sociopolitical processes operate than with personal development. Indeed, one of the major criticisms of Mezirow's work is his apparent 'misappropriation' of critical social theory for 'individualistic ends' (Clark, 1993; also Collard & Law, 1989). The final section in this chapter surveys the emancipatory stance on critical thinking and the explicit claims about action research's potential for emancipatory transformation.

Critical Thinking as Emancipatory Transformation

The emancipatory perspective of critical thinking is largely based upon the ideas of the Frankfurt School of critical social theory, particularly the work of Habermas (1987, 1984). Educational applications of critical theory have been developed by writers such as Shor (1992), Giroux (1988; 1983) and McLaren (1998; 1995) who have promoted the idea of critical pedagogy. Within the educational context, practitioners are called to develop an emancipatory praxis encompassing ideology critiques of the existing cultural, social and political structure within schools and the wider world in order to reveal inhibitory and disempowering structures. Kincheloe & McLaren avow that

inquiry that aspires to the name *critical* must be connected to an attempt to confront the injustice of a particular society or sphere within the society. Research thus becomes a transformative endeavor unembarrassed by the label "political" and unafraid to consummate a relationship with an emancipatory consciousness (1994: 140, original emphasis).

Practitioners are to examine the construction and maintenance of prevailing discourses, knowledge structures, policies and practices that have legitimised their power and position of control. Kincheloe & McLaren pronounce that through a self-critical examination of the 'assumptions that privilege particular interpretations of everyday experience', practitioners can uncover the 'oppression that characterises contemporary societies' (op.cit.: 149). They can then work towards redressing imbalances and the creation of a more just and democratic society (also Smyth, 1987; Arnowitz & Giroux, 1985). It is a question of 'engaging in the world as it *is* in order to imagine and bring about a world as it *could* and *should* be' (Sultana, 1995: 131, original emphasis).

The emancipatory interpretation of critical thinking in action research has largely been addressed by the writers Carr & Kemmis (1986) and Kincheloe (1993a; 1991) where it is claimed that the practical methodology inherent within critical theory 'articulates with' action research (Cohen et al, 2000). All draw on critical social theory for their analogous arguments. In Carr & Kemmis' view (1986), critical reflection involves the recognition and realisation of the ideological forces and constraints and the social and political mechanisms that distort self-understanding and self-perception of educational practice. They state:

The very purpose of critical self-reflection is to expose and identify self-interest and ideological distortions. The practitioner sets out deliberately to examine where his or her own practice is distorted by taken-for-granted assumptions, habits, custom, precedent, coercion or ideology (op.cit.: 192).

As with Brookfield and Mezirow, assumption hunting is deemed to be the focal point of critical reflection, except that specific attention is given to macro issues and reflection becomes more than an individual concern. Inherent to Carr & Kemmis' interpretation is the way in which critical action research shifts the focus beyond mere critical reflection to 'critical praxis', from the 'transformation of consciousness' to 'transformations of social reality' (op.cit.: 181). Hence the adoption of action research which naturally unites the 'double dialectic' of thought and action, and between individual and society. Critical action research is intended to be a collaborative inquiry by a 'self-critical community' with a 'common critical enterprise'. The emphasis given to collaboration is necessary, they say, to ensure exposure of culturally determined assumptions and to challenge sufficiently the status quo of power structures.

Carr & Kemmis' outlook on critical reflection and action research is shared and extended by Kincheloe. He also applies an emancipatory intent to what he calls 'authentic critical thinking'. This has a 'concern with the development of a liberated mind, a critical consciousness, and a free society' (1993a: 26). He too professes that 'we construct our consciousness within the boundaries of discursive practices and regimes of truth molded by power' (op.cit.: 36). Kincheloe attests thinking to be both a political and social act and claims that we need to 'ask what are the forces that shape our constructions' (op.cit.: 36). It is through critical reflection (or post-formal thinking) that practitioners can become 'aware of their own ideological inheritance and its relationship to our own beliefs and value structures' (op.cit.: 158). Relativistic and dialectical thinking also operates through what Kincheloe terms 'cognitive cubism' in which reality is viewed 'from as many frames of reference as is possible' (op.cit.:160) and where thinking is 'distributed' and 'interconnected' in the 'holographic mind'.

Action research is seen by Kincheloe as a 'catalyst for post-formal thinking and democratic action' (op.cit.: 175). He observes that it can 'encourage epistemological analysis and professional self-reflection on the nature of the construction of their consciousness' (op.cit.: 180) and proclaims action research to be 'the logical educational extension of critical theory' (op.cit.: 182). He announces it as the 'perfect

vehicle' to 'force (sic) teachers to think about their own thinking, as they begin to understand how ... sociopolitical distortions have tacitly worked to shape their world views and their self-images' (op.cit.: 185). Once again, assumption hunting plays a pivotal role as practitioners explore 'tacit forces' and 'illuminate the taken-for-granted'. In this way, they learn about how 'power operates to create oppressive conditions for some groups and privilege for others' (ibid.). Through critical action research, practitioners can develop 'new ways of knowing that transcend formal analysis' (ibid.) and create 'complex reconceptualisations of knowledge' (op.cit.: 186). He goes on to say that 'if enough people think in new ways, social transformation is inevitable' (op.cit.: 25).

Closely associated with the term emancipation is the notion of 'empowerment'. Carr & Kemmis and Kincheloe, along with authors from the broader literature on critical pedagogy (for example, Kincheloe & McLaren, 1994; Smyth, 1989), contend that emancipatory action research can 'empower' practitioners. It is empowering since it is self-directed and brings teachers to make 'conscious choices' and 'power decisions' about the improvement of education (Kinchloe, 1993a). It is empowering because 'it engages practitioners in the struggle for more rational, just, democratic and fulfilling forms of education' (Carr & Kemmis, 1986: 205). Carr & Kemmis add:

The empowerment which action research produces is significant because action research initiates processes of the organisation of enlightenment and the organisation of change and realises them in the concrete practices of groups of practitioners who are committed to the critical improvement of education (op.cit.: 205-206).

According to the emancipatory interpretation, a critical practitioner will perceive practice as problematic and recognise that education is 'historically located', a 'social activity' and 'intrinsically political' (Carr & Kemmis, 1986: 39). Also, 'teachers as critical thinkers are aware of the construction of their own consciousness and the ways that social and institutional forces work to undermine their autonomy as professionals' (Kincheloe, 1993a: 26). These are significant points as they suggest that practitioners engaging in this kind of critical reflection are predisposed to construing practice in emancipatory terms. This issue is explored more fully in chapter nine, along with the role played by disposition in developing critical thinking, called the 'critical spirit' by Siegel (1997).

The emancipatory case that is presented by Carr & Kemmis and others has been widely criticised from both within action research circles (for example, Webb, 1996; Somekh, 1995; Elliott, 1993b; Rudduck, 1989) and the broader education literature (for example, Cohen et al, 2000; Brookfield, 1995; Oberg & Underwood, 1992; Gibson, 1985). These critics largely object to the application of critical theory to critical reflection, and the implication that without it such thinking loses its critical orientation and is dismissed as superficial, technicist and unlikely to bring about meaningful change. Some also question the feasibility of the emancipatory claims for transforming the socio-political order. Cohen et al write 'the link between ideology critique and emancipation is neither clear, nor proven, nor a logical necessity' (2000: 31). The arguments of these critics reflect the complexity of the term 'emancipation' (and the related concept of 'empowerment') and open up possibilities of alternative interpretations. Both Brookfield (1995; 1987) and Mezirow (1991a; 1990a), for example, incorporate a version of the emancipatory vision within their understandings of critical thinking. These matters are taken into account when the emancipatory view of critical reflection is applied to the data generated from this research study.

Review

This and the previous chapter have provided a theoretical rationale of thinking in action research, and, in particular, its potential for developing a critical dimension to practitioners' thinking. These chapters have attempted to illustrate the way in which action research is congruent with the cognitive, affective and contextual factors that shape not just thinking in general, but also critical reflection. The key features of critical action research have been expounded and grounded in a number of theoretical frameworks with which to substantiate its claims. Special emphasis has been given to a select number of writers whose works offer an appropriate diagnostic tool with which to investigate the central claim that action research can transform practitioners' understanding and, in particular, help them to develop a critical perspective that can promote quality practice.

The next few chapters turn their attention to the interrogation of the research data and an empirical evaluation of the impact of the practice of action research on the professional

thinking of teachers. These chapters are based upon the main analytical 'themes' abstracted from the practitioners' descriptions of how their thinking was affected by the conduct of action research. These 'themes' have been related to various theoretical models of cognition and critical reflection and include a consideration of both the form and the content of the practitioners' thinking. They disclose the many different ways in which action research can help to bring practitioners' minds to life.

PART FOUR

**THE IMPACT OF ACTION RESEARCH ON
THE PRACTITIONERS' THINKING**

CHAPTER SIX

FOCUSED THINKING

The immediately preceding chapters have portrayed a theoretical framework of thinking in action research and have provided a grounding from which to examine the research data of this study. The intention of this and the following chapters is to present the practitioners' reflections on how their thinking was affected by the conduct of their action research. For practical purposes, these narratives are contained within various data themes that were encoded through the initial data analysis. The process of eliciting data themes from the broad database and arranging the practitioners' responses into a workable framework has been described in chapter three.

Before commencing the data evaluation, a cautionary note is made of the somewhat artificial nature of classifying the practitioners' thinking into data themes, a process that, in many ways, is contrary to the dynamic complexity of thinking itself. It is unlikely that the categories of thinking elicited from the database can do justice to the complex weave of interconnecting thoughts that may have been stimulated by the conduct of action research. This point is touched upon again later in this chapter. However, it may be remembered that some of the 'themes of thinking' arose out of the practitioners' own descriptions. Moreover, none of the categories necessarily make sharp distinctions between content, form or process but attempt to incorporate every aspect of the dynamics of thinking. Finally, I would suggest that much of the richness and significance of the practitioners' thinking has not been lost through categorisation, but has been enhanced as a consequence.

The data themes essentially comprise five major groupings, each of which have been identified as depicting some key aspect of the way in which action research appears to have impacted the practitioners' thinking. The data evaluation itself is thus structured around these *five data themes*. In order to provide a more robust interpretation of the data, one that moved beyond a descriptive account, the evaluative process incorporates

various theoretical models of thinking and critical thinking (presented in the previous two chapters) which are related to the various 'themes of thinking'. The intention behind this comparative analysis is to give both credible and coherent meaning to what was happening in the practitioners' minds. An investigation of potential correlation between current literature on the thinking process on the one hand and the apparent development of practitioners' thinking during action research on the other, provides both an exploratory and an explanatory mechanism with which to penetrate and interpret the data. The various theoretical constructs also offer a powerful tool with which to challenge and perhaps affirm the reality of the laudatory claims of action research to transform practitioners' understanding.

Thinking Theme One - "Thinking has More Focus"

This 'theme of thinking' was deliberately selected to head the list of categories, not least because it comprises the most prevalent data code. It became apparent during the course of the research that this was a common and obvious impact that action research appeared to be having on the practitioners' patterns of thinking. The field notes and journals are filled with references and quotes related to the notion that the practitioners' thinking became 'more focused' in some form or another. The frequency of this notion of 'focused thinking' led to a justifiable decision to include a specific question relating to this emerging data theme during the recorded interviews (although posing this question was often unnecessary since the issue arose spontaneously). A review of the data reveals that *every practitioner in the study could affirm in some way that action research had helped their thinking to become 'more focused'*.

During the interviews the practitioners were asked to elaborate upon their meaning of being 'more focused'. My own initial understanding of this theme was that action research was helping to prioritise the practitioners' thinking, enabling them to centre their attention on specific concerns. This process is not surprising given that this is the intention behind action research and the topics of interest investigated by the practitioners were known as 'focus areas'. However, further probing, especially during the interviews, divulged that many of the practitioners utilised a variety of terms and phrases to help describe their thinking, some that did not always specifically include the

term 'focused thinking'. It soon became clear that the participants shared a complex web of different understandings and connotations related to the notion 'thinking has more focus'. This necessitated the expansion of the original theme and the development of sub-categories in order to do justice to the varying illustrations of their thinking.

This was a difficult task and this category, more than any other, highlights the problem of trying to create boundaries in the thinking process. Consideration should be made of the fact that the lines that divide the groupings are more blurred than distinctive, with often a close overlap in meaning. In effect they all interlink, with the whole notion of focused thinking weaving in and out of each, but taking on an altered state with each subtle change in expression. Furthermore, the practitioners' responses did not always fall neatly into one category or another. Instead their accounts often fell constituent of some, if not all, the identified sub-meanings of the main theme of focused thinking.

Whilst taking heed of the above points, it was still possible to discern three recognisable interpretations from the data that collectively represent the variegated accounts of what is meant by the practitioners' thinking becoming 'more focused'. As an interesting aside, the results of a small and informal investigation during a seminar presentation of this work appear to affirm this process of eliciting different construals of meaning from a 'theme of thinking'. The seminar participants were asked for their understanding of the phrase 'thinking has more focus' before being told the practitioners' explanations. What emerged is that the seminar participants' varying responses could be differentiated into the three sub-groupings that were drawn from the database.

The next part of the chapter considers more closely the three translations of the theme 'thinking has more focus'. The sub-categories are outlined below and elaborated upon through the practitioners' own words (their narratives are taken from the recorded interviews unless otherwise stated). The sub-themes are then related to theoretical models of thinking in order, firstly, to appraise their significance in terms of what is known about thinking itself and, secondly, to evaluate action research's capacity for developing understanding.

Sub-Theme One: "There is More Structure/Purpose to Thinking"

Just over half of the practitioners talked about how the action research had given their thinking what might collectively be described as 'purposeful structure'. It appears to have given them something that was both deliberate and goal-orientated as well as offering an organised framework that could be applied in practice. This 'purposeful structuring' process thus seems to have operated at both internal and external levels, in that action research helped to orient and structure the practitioners' internalised thinking as well as provide them with an external, practical tool with which to evaluate their practice. This finding is not surprising given that action research's design is to help to make reflective teaching more methodical. This point was made in chapter one which drew attention to the systematic (but not mechanistic) intention of action research to ensure reflection becomes a deliberate investigative process and to realise effectively the dialectic between thought and action.

Some examples

Gaynor is a Nursery teacher who worked as part of a group of practitioners investigating various aspects of the speaking and listening abilities of the children in their care. She provides a good example of someone who found that her thinking became more structured and purposeful and considered this to be the main impact of the research. Her own words describe what occurred:

"I've always been somebody who doesn't stop thinking, who thinks: 'We should be thinking about that now'. But it was always really all over the place ... This came along and made me think 'Ah, this is how it should be'. You should be thinking for yourself. You should be pushing yourself on but there should be some sort of structure to it ... This has been really good in that it's made me home in on something and really do it properly ... That's how I've changed - that I had that way of thinking but I didn't know how to do it properly. I needed someone to say: 'Well, start off like this and go forward like this' ... Suddenly it's like now I really understand why I'm doing this, there is a real purpose ... because I've found the process of doing it ... Instead of just having it in my head, this wooly idea, I've actually looked at what's happening, thought of some ideas on how to change or improve or to find out more ... We're now looking at other things, all of us" (HO/GF/IV/1-3).

Gaynor agreed that the research had essentially given her a 'framework' with which to view not just the original focus topic but her whole practice. It created a 'structuring' process in her mind which could be implemented in action. Her thinking moved from being *"all over the place"* (HO/GF/IV/1) to being more purposeful. Gaynor's story is elaborated upon in both chapter six and chapter nine and provides an indication of how the method of action research can lead to comprehensive reorientations in how practitioners' view their practice.

Aileen, a Nursery nurse, who looked at block play, also considered action research to be *"a purposeful thing"* (CR/AH/IV/5) and a Nursery teacher, Sue, valued the way action research meant that *"you were working towards something"* and that you had *"something specific to tune into"* (CR/SHi/IV/2/12). Another Nursery nurse, Belinda, who investigated outdoor play with her colleagues, also spoke indirectly about the sense of purposefulness action research gave to her and her colleagues, talking about the way it *"made people address things they weren't doing"* (SO/BR/IV/1). This meant that as a team she now felt that they *"plan more effectively ... and [we] have recognised our strengths and weaknesses in our practice"* (SO/BR/Q/Q3). Davina, a Nursery teacher, also appreciated the way action research helped her do things *"for a reason"* (SO/DA/IV/8).

Sandy, a Reception teacher, also believed the 'structuring' process of action research had had an impact on her thinking. She expressed how action research *"made me direct my thinking"* (HO/SD/IV/1) and that now *"there's a purpose to it"* (HO/SD/IV/3). Sandy worked with a Nursery nurse on an area of their practice that they had previously talked about together for 'hours'. These discussions had led them to *"go home frustrated because we'd not got anywhere and we couldn't think how we were going to go forward on it"* (HO/SD/IV/6). Once they tackled the area of concern using action research, Sandy felt she had discovered a beneficial and concrete mechanism which *"instead of letting my mind waffle"* enabled them to *"actually put it down on paper so that we would be able to come back to it and actually analyse what we thought of [it] and actually be able to look through the things"* (HO/SD/IV/6). Both Sandy and her colleague, Julieanne, agreed that action research gave them a kind of *"action plan"* with which to approach their problem both in terms of how they thought about it and in terms of how they applied this thinking in practice. We shall see in a later chapter how the

purposefulness of action research helped Sandy to go on to question all aspects of her practice with a more critical slant.

Katharine, a Nursery teacher working in a primary school, is another interesting example of a practitioner whose thinking, and in turn her practice, became more "*purposefully structured*". She spoke directly about how with action research "*you've got a purpose in mind, you know that that's where you want to get to*" (CR/KH/IV/6). She also found the action research made her "*much more structured*" (CR/KH/IV/4) and explained the way in which the 'structuring' process worked for her:

"I've changed in a lot of respects in that at one time, when I first started teaching, I had a very chaotic classroom ... From that, I've come down to ground level basically and realised the practicality of things. I still want that freedom for the children to become imaginative and to have that freedom to be able to think for themselves. But I also see the need for a lot more framework and a lot more structure"(CR/KH/IV/4).

Relation to Theoretical Models of Thinking

Zeichner (1998) makes a claim based on evidence that action research is used to 'structure' reflection and action research has been described as 'ordered ways of recollecting, rethinking, and analysing classroom events' (Lytle & Cochran-Smith, 1990: 84). Many of the practitioners from this study clearly appreciated the valuable way in which action research helped them to organise and order their thoughts about their practice. Their experiences correlate with those of teacher researchers participating in the Teacher Training Agency's Teacher Research Grant Scheme. Evidence from these government funded projects shows that having a clear focus and a mechanism for systematic enquiry helps practitioners to 'avoid being swamped by problems' (TTA, 1999b).

What is also interesting about this structuring tendency of action research is that it correlates with some of the leading theories expounded on how our minds operate. One of the main models of thinking that has been proposed suggests that we structure and organise our experiences in order to make them meaningful. Chapter four has described the work of constructivists such as Piaget (1978; 1972) and Rumelhart & Norman

(1978) who believe external experiences are internally shaped and arranged into schemas. These schemas represent a network of nodes and links which correspond to conceptual categories. Variations of scheme theory have been developed by other authors who have elaborated upon theories of how the brain symbolically represents reality, such as Lakoff's (1987) 'idealised cognitive models'. What these theories share is the belief that people *categorise* their experiences (just as I have shaped and structured the data from this study in order to make it meaningful and presentable for both my own benefit and for the benefit of potential readers).

The capacity for action research to help construct and regulate practitioners' thoughts thus appears to relate to our innate tendency to structure our experiences. In this respect, action research can be deemed an appropriate strategy for helping practitioners' thinking given its compatibility with some of the leading theories of cognition. It should not suggest, however, that such 'structuring' is a mechanical and simplistic activity. Recent work from different disciplines indicates that 'scheme-making', whilst helping to disentangle and abridge experiences, is nonetheless a hugely complex phenomena (see for example, Edelman, 1992; Lakoff, 1987). Scheme theory is revisited in later chapters where the ideas of restructuring and revising existing schema are explored in relation to the way in which action research stimulates new ways of thinking.

Sub-Theme Two: "There is Increased Awareness/Consciousness of Thinking"

Of all the different versions of the notion of 'focused thinking', this sub-theme was the most common interpretation and is, perhaps, the more obvious explanation. Certainly, it was my own initial perception of its meaning. It seems that in focusing thinking, action research helped to create an alertness and vigilance within the practitioners' minds. This might be seen as a magnification process or a convergence of thoughts in a particular direction. It thus has some relation to the previous theme of structured and purposeful thinking. Inevitably, this focusing of thoughts centered on the selected focus topic, but it also came to include a broader range of issues that were raised through the conduct of the research. *Evidence of this sub-theme could be found (in some form) in the responses of every participant in the study.*

Some Examples

Ann is a Nursery teacher who investigated the outdoor play area. She commented specifically on how the action research had made her *"more aware"* and *"more conscious"* of what she was doing and thinking, and how some of her thoughts had *"been made more definite in [my] mind"* (CR/AE/IV/1/3). In her journal she described how she liked the way action research meant that *"you are concentrating on one thing and saying 'this is what we are focusing on and let's devote our energy, our thinking more to this area'"* (CR/AE/J). She went on to say that

"if you don't take time to look at that specific thing, you can overlook things that are right in front of your face ... It's only when you stop and look more closely beyond the normal hustle and bustle of life that you become more aware of how much can be done outside and planning for it ... So now I'm more conscious of other curricular areas of learning" (CR/AE/J).

The developments in Ann's thinking, brought about by an increased awareness of her practice, are considered in more detail in the next chapter when her experiences are used to illustrate how action research can help to generate more critical transformations in thinking.

The idea of heightened awareness or consciousness was also voiced in other ways by the practitioners. Some expressed it through their claim that action research helped them to *"think more"* (for example, CR/SD/IV/1; SO/BR/IV/1; CR/AH/IV/1; CR/CG/IV/2), although the simplicity of these words belies the complexity of what 'thinking more' entailed. A good example of this is offered by Aileen, who worked with Katharine on block play in a Nursery. She spoke about their increased awareness in these terms:

"We were actually thinking more about what we were doing - like not just getting the blocks out and leaving people to build on their own [but] also just looking at all the different concepts between the maths concepts and the socialisation ... It was all being broken down into social development, mathematical development and physical development and how the children were using the blocks and also ... the way they were cooperating ... the mathematical language ... You were looking at all these different concepts ... From that you were extending as well ... So you're just aware of it more ... Now, no matter what's going on, you are always thinking of

either encouraging their ideas and development or even just being aware of what they're doing over there [in the block area] ... Automatically you are just thinking all the time" (CR/AH/IV/1/3).

Robb, who examined the topic of planning with a team of Nursery and Reception class colleagues, referred to the way in which action research had helped to increase his team's "attention". He felt that since doing the action research:

"We pay more attention to the experience of the children. We're paying more attention to the quality and nature of the child's experience of school in a holistic sense" (HO/RJ/IV/3).

This sense of attentiveness was shared by Davina, a Nursery teacher, who also saw action research as an enabling process for "giving more attention" to something and "following it through" (SO/DA/IV/1/7). Davina worked with two nursery nurses on the team's planning methods and in the questionnaire she described how valuable it was to have

"an opportunity to get more involved in my practice at a different level, i.e. looking more closely at some aspect of my work and have a chance to evaluate what I was doing ... Better planning is now done and there are more written observations and more verbal exchanges. This has helped to improve and make easier our record keeping and we are making more attempts to monitor which children we focus on and improve the quality of their education. As a staff group we are working better together". (SO/DA/Q/Q2/Q3).

Similarly, Mary, a Reception teacher, who worked with a team of colleagues, felt that as a consequence of action research she thought about her practice "far more precisely now" and that she and her colleagues were "actually trying to focus on things and follow it through" (HO/MT/IV/2). In the questionnaire, she wrote how doing the research meant that

"we met as a team to discuss our findings and this has led to questioning, reflecting and ultimately adapting our practice. Different strategies have been suggested and tried with the children ... The group sessions are now more child rather than adult dominated. Strategies have been developed to encourage the quieter child to talk and the dominant child to listen. Children have opportunities to talk about what they want to and to speak and listen in smaller groups" (HO/MT/Q/Q3/Q4).

The focus that action research gave to Mary had some far-reaching consequences on how she perceived her entire practice. In the next chapter, her reflections on action research are offered as an example of how researching one area of practice can engender significant reappraisals of habituated beliefs and a more critical review of the entire practice.

Angela, a colleague of Robb's, had another way of characterising action research's capacity for intensifying the thinking process. She reports that action research

"focused my own thoughts and ... brought it to the fore of my mind ... rather than concentrating on anything else ... It's made me more aware of other observations that I do, ongoing, that are just in my head. And I know I do it all the time now" (HO/AL/IV/1).

In her questionnaire response she considered that

"our concentration on the observation of children .. is enabling me to develop a better understanding of that process. I am gaining insights into how to observe children, how to interpret what we have noted and how to develop that increased knowledge of individuals to support their development" (HO/AL/Q/Q1).

Nicky also expressed how action research helped to bring her chosen topic of record keeping and related issues *"very much to the forefront of my mind" (SO/NT/IV/4)* so much so that

"I've had to sort of really keep on thinking. It isn't just a two week effect, it's a year long effect and probably longer. I can't imagine ever stopping thinking about it anymore. And now I've started thinking ... 'what will I do next, what am I going to go on to?' ... I'm obsessed" (SO/NT/IV/5).

Gaynor, who'd found the 'structuring' process of action research so helpful, also experienced this feeling of alertness and portrayed it as a process of

"really, really looking at the child ... I feel I really am looking at what's happening ... I'm not saying 'I think this is what's happening' or 'I'm hoping this is what's happening' ... I'm really beginning to look at what is happening" (HO/GF/IV/6).

A Nursery teacher, Elizabeth, who looked at block play, regarded the focusing process to be beneficial since *"when you are actually ... focusing in ... you don't have to be aware of what other things are going on"* (SO/EF/IV/2). She found it valuable

"just actually having the time to just really focus on one area and just think about that. In the normal run of things you actually don't have necessarily the time to look at one particular area because you're taking it in as a whole and so you sometimes just take snatches of things" (SO/EF/IV/5).

By observing *"quite closely"* what the children were doing Elizabeth was able to see *"the intricateness of the building that some children were engaged in and the thoughts that they were going through"* (SO/EF/IV/2). This, in turn, helped her to become

"more aware of the learning that's taking place, more aware of the stages that children can go through in that area .. that some provision in the area lends itself to more solitary play, whereas some lends itself more to a social interaction within the play. And that it can go on to develop and spread into other areas as well" (SO/EF/IV/1-2).

Julianne, a Nursery nurse who worked with Sandy in studying what they considered to be 'wandering children', also remarked on how action research had affected her awareness of the children: *"This year I think I've felt more aware of where the children are and if there's been enough work for them to do"* (HO/J/IV/4). Carla, another Nursery nurse working in a Reception class, agreed that *"it does make you ... very much more aware of your own practice"* (CR/CG/IV/6). Katharine made related comments:

"It's being more aware of the children ... more focused on the children's development. You're always aware of them developing but you're more focused on what you want to develop with them ... You're more aware of the different focus that you can have" (CR/KH/IV/4).

The action research also helped Sue, a Nursery teacher researching storytelling, to be *"more aware of how I was using language ... and how my interaction would affect [the children]"* (CR/SHi/IV/1). She made similar comments in her questionnaire:

"I am more aware of a whole range of issues that influence storytelling. It has raised my awareness of my own interaction with children, with the resources I provide and how and when ... particularly language input and to be careful about directing/controlling children and be more aware of

what their intentions might be ... Because I am focusing in a regular, more in-depth way, I am paying greater attention to what is happening and probably observing more and taking time to evaluate and therefore learning more about the children, their learning and my own learning" (CR/SHi/Q/Q1/Q2).

Another Nursery teacher, who investigated the outdoor play area with her colleagues, reckoned that the research had

"raised our awareness of our practice outdoors and actually changed our practice ... fundamental changes in how we work with the children ... It's changed our practice in that we actually are aware of what we're doing outside with the children ... Our awareness of how we spoke to the children was raised ... Because we were doing it outside we actually brought it back inside as well and it made us listen to ourselves talking to the children" (CR/SHa/IV/1/8).

This heightened awareness of the children's learning and the practitioners' role in this development was thus a common experience for many of these practitioners. Carla also worked on outdoor play and she provides another example of how action research can help practitioners to alter their perceptions of how they work with children and accommodate their interactive style. Prior to the research Carla did not question how she related to the children, believing that any adult involvement was helpful for the children. Carla claims the research helped her to recognise *"when adult interaction has extended the learning opportunities of activities"* and when it did not. She declared: *"I am now much more aware of when it is a good time to step in and equally when it isn't"*. She now realises that *"sometimes, we, as adults, have to take a back seat to let this independently learning and experimenting take place"* (CR/CG/Q/Q4).

The representative examples given above suggest that action research can affect practitioners' perceptions of children's capabilities and how adults interact with them with a likely consequence on how children learn. The significance of this finding is amplified in later chapters.

Relation to Theoretical Models of Thinking

Sanger declares that action research 'is about becoming *more acutely aware* of what is happening in their classrooms and beyond' (1990: 174, own emphasis) and this study appears to have confirmed this claim. Raised awareness certainly seems to be a common experience for action researchers in general. Liston & Zeichner (1990), for example, describe how teachers became 'more aware' of pupils' abilities when they undertook action research (also Zeichner & Gore, 1995; Vulliamy & Webb, 1991; Noffke & Zeichner, 1987). Johnston & Proudford (1994) have documented parallel comments from teacher researchers who have talked of having an 'increased awareness' of educational issues. The statement of one teacher quoted in a review by Zeichner that action research 'makes you more focused and just more aware' (1998: 39) could easily have been made by one of this study's participants.

The findings from this study, mirrored in the action research literature, articulate sensitively with some of the more recent theories on cognition, particularly connectionism theory (McClelland et al, 1986; Rumelhart et al, 1986) and neural Darwinism (Edelman, 1992). As pointed out in chapter four, these theories offer a more fluid, dynamic account of cognition than scheme theory and are more closely based upon the neurological design of the brain (Meadows, 1993; Gardner, 1987). Key elements within these theories are briefly reviewed here.

Relatively recent advancements in neuroscientific research techniques suggest that cognitive activity comprises intricate patterns of interconnections between 'neuron-like units' (Matlin, 1998). Rather than envisaging static blocks of cognitive structures as portrayed in scheme theory, connectionism or the parallel distributed processing approach (PDP) proposes that cognitive processes should be viewed as 'large-scale dynamic networks of simple neuronlike processing units' (Palmer, 1987: 925). Rather than 'explicit data structures', schema are rather 'implicit structures' which are distributed throughout sections of the brain (Palmer, op.cit.). Memory thus becomes a 'set of relationships' rather than a stored 'set of facts' (Gardner, 1987: 395). It also supercedes the traditional serial view of cognitive processing highlighting the way in which neural transmissions involve more than one signal operating at any time.

Meadows describes the multitude of interacting neural units as working 'contemporaneously in parallel' (Meadows, 1993: 234).

An important element to this vast linking process is the activation and inhibition of the various units. The dynamic interplay between excitatory and inhibitory connections 'eventually tends to stabilise into a pattern' (Palmer, 1987: 926). Meadows writes that 'connectionist networks can learn from experience by changing the weights of connections, the strength of the excitatory or inhibitory links between units' (ibid.). Thousands of connections are posited among hundreds of units resulting in a complex network that communicates via signals of excitation or inhibition between units. Learning has thus come to be viewed as a 'strengthening of connections' (Martindale, 1991) or a 'matter of finding the right connection strengths so that proper patterns of activation are produced under appropriate circumstances' (Gardner, 1987: 395).

Edelman's theory of neural Darwinism is similar to the PDP approach, although he disassociates himself from the information processing school of cognitive science. Edelman turned to biology and evolution to explain how we think. He agrees that thinking is both parallel and distributed but extends this through the use of jungle imagery. He proposes that Darwinian principles of selection help explain the electrical signalling process within neuronal tissue that occurs in response to stimuli. Gardner explains Edelman's theory: 'Certain combinations of connections are selected over others as the result of particular stimuli encountered and of resultant competition among different neuronal groups. The different groups of cells, or "maps", speak to one another to create particular categories of things and events, which themselves are altered over time by subsequent experiences' (1987: 396). Thus 'maps' are selectively reinforced or 'strengthened' by sensory input, whilst others are 'weakened' (Edelman, 1992). It is possible to relate these 'maps' to schemas.

What is significant about these theories, both from the perspective of action research and the data analysis of this study, is the correlation that might be found between the practitioners' sensations of 'heightened awareness' and the ideas propounded by connectionism and neural Darwinism. It is reasonable to suggest that action research may have stimulated the practitioners' neuronal activity to make specific connections within the network of the brain. In doing so, certain units have been excited or

strengthened and thus brought into active consciousness. Thoughts relating to the focus area have been strengthened whilst other thoughts have been inhibited or weakened. This process helps to explain the usage of some of the practitioners' illustrations of how their thinking was "*brought to the forefront*" or "*been made more definite*". This 'consciousness raising' effect of action research on all the practitioners seems of greater import given its compatibility with these theories about the mechanics of the mind, two of the most important to have emerged in recent times.

Like scheme theory, the ideas on cognition presented in this section will be revisited in later chapters when other changes in the practitioners' thinking are explored and their altered states of mind are related to the principles behind connectionism and neural Darwinism.

Sub-Theme Three: "*There is More Depth/Substance to Thinking*"

This sub-category was fairly distinctive largely because many of the practitioners employed the use of the term "*depth*" (in some form or another) within their narratives about how action research had impacted their thinking. Since this sub-theme suggests that the practitioners' thinking was intensified and strengthened, it relates to the portrayals of increased awareness and heightened consciousness given in the previous section. However, these two themes also offer an interesting contrast in the imagery that is used by some of the practitioners to describe their thinking process. In the previous sub-theme, the practitioners related to way in which their thinking had been brought to the 'forefront of their mind'; to the surface as it were. The idea of deepening thinking, however, implies that thinking has moved almost in the opposite direction, downwards or perhaps inwards. This third sub-theme therefore continues to make the point that the thinking process cannot be easily explained and it adds to the rich diversity of evidence on how action research affected the practitioners' thinking.

Some Examples

The idea that action research *"makes you think about things in more depth"* (CR/SHi/IV/12) was firmly shared by just over half of the practitioners and is echoed in the action research literature (for example, Brennan & Noffke, 1997; Denicolo & Pope, 1990). Kay, Ann, Belinda and Emma are some of the participants who used almost these exact words to articulate this point made by Sue (CR/KB/IV/9; CR/AE/IV/1; SO/BR/IV/3; SO/E/IV/2). Other almost identical statements came from practitioners like Carla and Helen, who together investigated their outdoor area. Carla commented how action research *"makes you look a lot more in depth at what you're doing and the effect you have ... particularly whether I step in or not [to help the children] or just stand back and observe. It makes me think a lot more about when I do that and why ... And I think a bit more about how I extend [an activity] when I'm out there"* (CR/CG/IV/1/2). Helen valued the way it meant that *"you've thought more deeply about what you're doing"* (CR/HW/IV/1). In practice this meant that

"now we're thinking more about what the children are doing in the garden and what would enhance what they do in the garden ... It's questioning everything you do. Not just what you're doing but what you're using, the time you do it, the children you work with. We just hadn't thought hard enough about what we were doing before. So what we've done now it look at what the children do, what they've actually used and how they play ... [Before] we used to plan a maths activity or a science activity for the garden because we thought that looked good on our plan and it sounded really organised. But now we plan for different materials, for different interests, for different things to be there and then we take it from there. We see where the children are. We know now that it will give the children more opportunities" (CR/HW/IV/1/2/6).

Both Helen's and Carla's research led to their common realisation that the children *"didn't do what was expected"* (CR/CG/IV/1). They had to reassess their perceptions and provision of children's play activities and accommodate their own teaching so that it was no longer based upon *"what we thought they should be discovering"* but working instead from what *"the children were discovering for themselves .. and starting from there"* (CR/HW/IV/2).

One Nursery nurse, Belinda, who also studied outdoor play along with her colleagues, elaborated upon her meaning of *"looking at things in more depth"* (SO/BR/IV/3). She considered that this process involved thinking about

"what [I am] expecting the children to get from putting these things outside. It's just asking yourself why do we put these things out ... It's definitely doing more things ... and looking at things in more depth. Trying to find a better quality of play for [the children] and just asking yourself why you want them to do these things ... This has made us challenge our practice" (SO/BR/IV/3).

Prior to the research she said that she *"took the garden for granted"* (SO/BR/IV/2), viewing simply as somewhere for the children to *"let off steam"* (SO/BR/IV/4). Her journal is filled with statements which describe how her 'deeper' level of thinking led to significant changes in the nursery outdoor practice:

"I look at things in more depth. I look at my practice. I look at other people's practice. It's made me very critical ... Suddenly I'm looking at it from a completely different angle. And talking to other people ... It has changed us as individuals as well as a staff team ... There is much more interaction in the outdoor area now and it has made us look at what we made available for the children and this has changed the play that is available. We don't rely on bikes and balls etc to occupy the children. We tend to look at the outdoor area with a much wider perspective creating an outdoor play area with construction, craft, imaginative play, science, technology etc ... Children's play within the outdoor area has changed and developed. They use their imagination a lot more and are more aware of the natural elements, exploring the garden in the dark with torches and taking umbrellas out during a rain storm ... The biggest change is the relationship between the adults and the children with a lot more interaction from the adult to extend and develop play as well as observe the children" (SO/BR/J).

Sandy was another of the practitioners who also spoke about how action research had *"made me think more deeply"* (HO/SD/IV/1/6). She felt this was because she and her colleague had *"honed in on a particular area"*, *"concentrated more on a narrow area"* and *"gone into it in more detail"* (HO/SD/IV/1). Her colleague, Julieanne, who chose to be interviewed with Sandy, now considered that in their practice they were no longer *"taking everything at face value"* (HO/J/IV/4) but were, as Sandy then put it, *"less superficial than ... before "* (HO/SD/IV/7). The way in which Sandy's thinking 'deepened' is elaborated upon in the next chapter. As noted in a previous section, her reflections on how the research affected her thinking are used as a case study example

to help clarify how action research can stimulate a deeper level of thinking and lead to important new insights about practice.

Nicky, a Reception teacher investigating reading and record keeping, adopted a related image to depict the 'deepening' process action research appears to generate:

"It did deepen my understanding because I really had to think about it ... The action research has made me stick at a task and actually delve deeper and deeper ... rather than spreading myself thin" (SO/NT/IV/1/6).

In her journal, Nicky also talked about how the research had *"really deepened my thinking"*. For her, this deepened form of thinking involved

"focussing my thinking and enabling me to concentrate on something quite particular. And as I discuss and reflect and change there always seems to be more questions raised and opportunities to delve deeper. The issues raised in looking at a particular aspect of my practice seem to expand into other parts of my practice" (SO/NT/J).

Her questionnaire response likewise refers to how the research served to

"deepen my understanding of children's reading by concentrating on one specific area rather than flitting between many ... and the records show the differences in the kind of reading behaviour I am recording. The questions I have asked have sparked off others and my reflection skills are much better ... I now approach reading sessions with children in a different way and encourage the children to reflect on what they are reading rather than just focusing on the skills aspect. This has made the reading time together more interesting and lively and much less of a chore for both the children and me" (SO/NT/Q/Q3/Q4/Q8).

Sarah also considered that with action research *"you get a deeper insight into [children]. You can see the difference between your perceptions and the reality more clearly"* (CR/SR/IV/3). A closer examination is made in chapters seven and nine of these 'deepened insights' in Sarah's practice in order to demonstrate how the instigation of a deeper level of thinking initiated by action research can lead to the reevaluation of misguided convictions about practice and create a more critical outlook.

Sue, the Nursery teacher focusing on outdoor play, elaborated upon the same point made above by Sarah:

"I think you merrily go along without thinking maybe that deeply about what you're doing and assuming that this is happening when it's not. When you actually look at something, sometimes you get quite a shock because what you think is happening isn't ... It isn't until you really stop and look at something deeply that you can find out really what is going on with the children or with the adults working with the children" (CR/SHa/IV/3).

The way in which thinking 'more deeply' about particular aspects of practice seems to have helped these practitioners to recognise discrepancies between their prior perceptions and a new perceived reality is a theme that is explored in the next chapter, where the role action research plays in revealing hidden assumptions about practice is considered.

Relation to Theoretical Models of Thinking

As explained in chapter four, the only theory from the original information processing school that offered possibilities for helping to interrogate this study's data was the 'levels of processing approach', otherwise known as the 'depth of processing approach'. Craik & Lockhart, who support the depth of processing approach, suggest that some information is more deeply processed than others. Their work (Craik & Lockhart, 1972), with subsequent revisions (Lockhart & Craik, 1990), is essentially a model of memory that is procedural rather than structural. One of its key proposals is the relationship between memory retention and depth of processing. Information that is analysed at a deeper level, known as 'elaborative rehearsal', is likely to be durable and remembered. Lockhart & Craik consider two main factors operate in deep level processing that ensured better memory retention. One is the 'distinctiveness' of information that set it apart from other information and the other is 'elaboration', which involves the synthesis of meaningful information. The depth of processing theory postulates that 'people achieve a greater depth of processing when they extract more meaning from a stimulus' (Matlin, 1998: 77). A 'generation effect' occurs when memory 'items' are self-generated or self-created rather than acquired through others' efforts (ibid.).

There is no doubt that action research is embedded in personal experience and that in conducting action research practitioners set apart and synthesise incoming information generated by the research, and then construe their own meaning from it. This process is in convincing agreement with the deep analytical procedures advanced in the depth of processing theory. The value of such deep-rooted thinking in action research is the very strong likelihood that the meaningful information gleaned from the research will long be remembered by the practitioners (through the 'generation effect') and increases the probability that the changes in thinking wrought by the research will be sustained over time. This potential long-term impact of action research is discussed again in chapter ten.

It is also fair to suggest that action research is able to encourage the kind of deep-level processing proposed by the depth of processing theory. Some of the evidence quoted in this chapter indicates that action research can generate a deeper degree of analysis amongst the practitioners. The extent of this analysis is investigated more thoroughly in the next chapter, and again in chapter nine, where more critical aspects of the practitioners' thinking are explored.

Thinking Theme Two: "Thinking has been Confirmed"

We now turn to the second major 'theme of thinking' to be presented in this chapter. In comparison to the previous theme of 'focused thinking', the construction of this data code was a relatively simple matter. It arose, like most of the themes, partly from the practitioners' own statements and partly as a result of direct questioning during the interviews. In this respect I was attempting to distinguish between the idea of 'old' and 'new' thoughts (if such a process is possible). I envisaged this as one means of eliciting whether or not action research stimulated new, and possibly critical, ways of thinking. Although affirmation of previously held convictions is, in some ways, contrary to the spirit of action research, the practitioners descriptions of how aspects of their thinking had been confirmed appears to have been a valuable contribution to their professional development. For many of the participants action research helped them to remember some important principles of practice that had been lost, and *nearly all the practitioners in the study felt that at least some aspects of their professional thinking had been*

verified by the research. It will be seen in later chapters, when the discovery of new insights are explored, that any affirmation process stimulated by action research did not necessarily detract from or limit the possibilities of new learning. Brookfield maintains that sometimes the critical thinking process entails 'confirming, with a renewed sense of conviction, existing stances' (1987: 27).

In this theme we also see some similarities to one of the 'focused thinking' sub-themes. In the same way that some participants described their increased awareness in terms of having their thoughts being brought to the 'forefront' of their minds, a large number of practitioners considered that action research had led their 'old' thoughts to 're-surface'.

Some Examples

Nicky was one of the practitioners who felt that the research had "*brought my training to the forefront again*" (SO/NT/IV/3/7). Similarly, Sarah, the Reception teacher looking at reticent children in her class, felt that action research had helped her to "*rediscover*" some of the important lessons learned at college that, since she had started teaching, had been "*pushed aside*" or gone "*out the window*" (CR/SR/IV/1). One of these was the immense value of conducting observations of children for the research, which she hadn't done since her training days. She said that she found the rediscovery of observations "*so rewarding in that you could find out so much about the children ... It was a revelation in practice because it was [previously] in theory*". Sue also felt the research had "*reminded*" her and her colleagues of their training. It had "*brought it all back and reinforced everything that I was doing*" and that this was helpful since "*you need reminders because you do so many activities over the years and you forget things, something that's good and it's worked*" (CR/SHa/IV/2-3).

For some of the practitioners, the research was valuable in re-establishing important principles of practice. Helen, the Nursery teacher exploring, with Carla, outdoor play, had this to say about action research:

"What I found interesting about it is basically I've always believed you should start from the children and where the child is. And in Infant school that's what I believed and I thought that's what I was trying to do. And I

got very cross about an inspector who told us that child centered work wasn't where we should be ... So when I came to the Nursery I was, I suppose, not as sure of my ground as I'd been for a long time. But doing this action research work has made me even more positive that what I was doing before was better for the children and the results were better... It's confirmed that" (CR/HW/IV/3).

Angela, the Nursery nurse working with the Reception and Nursery team on their planning, also felt the research had *"reconfirmed for me what I believe to be true about early years education and how it should be done" (HO/Al/IV/2)*. Angela's colleague, Robb, echoes this statement when he describes how action research has meant a

"reemergence of ideas that I had before ... It's revalidated how I thought early years practice ought to be but I've been blown off course having to cope with the whole school approaches to planning and stuff like that and pressure from teachers in year 1 and 2 ... I've rediscovered things that I thought were true" (HO/RJ/IV/3/5).

Andrew, a Nursery teacher who focused on children's oracy likewise found action research had *"reaffirmed old thoughts and old practice"* and that *"it's helped me realise that what we're doing out there is right ... It has reaffirmed the way in which we have organised ourselves [for] the best way to develop oracy" (CR/AL/IV/1/3)*. Elizabeth, the Nursery teacher investigating block play, shares these sentiments:

"I think it's confirmed what I've always felt. I always felt that the brick area was an important learning area with a lot of learning taking place ... cross curricula and for some children it was a good area to start off in to get some security within the Nursery, to build up their confidence ... And through doing the action research it's backed up the thoughts that I had but now I've got direct evidence that I can draw on ... [I'm] able to justify it and explain exactly what's going on ... [It has] revitalised me in that area. I've always seen it as an important area but even now it's more important and even dearer to my heart" (SO/EF/IV/1).

Relation to Theoretical Models of Thinking

The models of thinking that have already been related to the research data can also be called upon for application to this theme of thinking. The idea of thoughts reemerging to a conscious level suggests that action research has triggered neural networks that had been lying dormant within the participants' minds. Both the parallel distributed

processing approach and Edelman's neural Darwinism can be called upon to explain how action research helps to confirm practitioners' thinking. Scheme theory might also be said to be operating here with the reestablishment of old thought structures. These structures have also undergone some alteration in the process by being given research-based evidence to bolster their existence.

The rekindling of forgotten principles of practice was clearly considered a productive gain from the research. Although such long held beliefs might normally be challenged by the conduct of action research, in these cases the research seems to have given their convictions some justifiable validation. Evidence-based confirmation of appropriate practice can play an important part in helping teachers respond more confidently to calls for accountability. It is worth stressing once again that the experience of this affirmation process did not prevent many established ways of thinking to be transformed, as the following chapters will demonstrate.

Review

Already it can be ascertained that action research can influence practitioners' thinking in a number of ways. Its close correlation with leading models of cognition has also been affirmed. Extracts from the practitioners' narratives have told how the 'structuring' element of action research can help to focus the busy teacher's thought processes so that they can organise their thinking into a more coherent and purposeful framework. The 'awareness raising' ability of action research can help to sharpen practitioners' level of consciousness and absorption of significant information. The 'deepening' capacity of action research can help to ensure such information is analysed in a deeper and more meaningful way, thus enhancing its durability for future use. Action research can also help to unearth some important values and knowledge that have fallen to the wayside but have been reestablished with well-founded conviction.

However, the 'thinking themes' considered here do not necessarily address one of the primary questions of this study, that is whether or not action research has helped the practitioners to become more *critical* thinkers. There is a suggestion of this in some of the examples given when the participants spoke of how the research had helped them to

think more clearly and methodically, to question their practice more thoroughly and deeply, and in particular to reevaluate their views on children's learning and their role in its development. More substantial evidence of these trends can be found in the two 'themes of thinking' that are introduced next. It is in the following chapters that a more complex picture emerges of the ways in which the practitioners' thinking was affected and one that addresses the critical nature of their thoughts. More elaborate illustrations of the practitioners' narratives (presented as case studies) reveal that some significant reappraisals occurred in their thinking and when these transformations are compared to theoretical models of critical thinking, some powerful findings emerge.

CHAPTER SEVEN

CRITICAL THINKING AS PERSONAL TRANSFORMATION

This chapter continues the exploration process begun in the previous chapter in which some of the 'thinking themes' that arose from the research data were introduced and examined. Five main data themes were identified from the broad range of research material and the first two of these have now been evaluated. This current chapter concentrates on the presentation and analysis of two further theme groupings. These two 'thinking themes' have particular significance for this study since they relate more specifically to the issue of critical thinking. It is in this chapter that attention is given to the question of whether action research can encourage a more critical slant in practitioners' thinking.

This chapter follows a similar pattern to the previous one by presenting a brief introduction to each 'thinking theme' followed by examples from the research material that suitably illuminate the character of the data theme and clarify my data interpretations. At times, relatively short quotations from the practitioners suffice for this. However, it was also deemed appropriate to select some more lengthy exemplars of the qualitative changes perceived by the participants in their thinking. These 'case study' samples, in particular, help to exhibit the way in which their thinking appears to have developed a critical orientation. This critical dimension is elucidated through the discussion that follows each illustrated 'thinking theme' in which the data is related to theoretical models on critical thinking. By comparing the kind of transformations the practitioners believe took place in their thinking with some of the leading theories on critical thinking, both clarification and credibility are sought for the apparent impact action research can have on practitioners' understanding. As was proposed in the last chapter, this comparison and articulation of the research data with current literature on critical thinking creates an opportunity both to explore as well as to help explain the body of data from this study and may provide affirming evidence of action research's claim to endow practitioners with a more critical insight into their practice.

These two encoded themes that arose from the data pivot around the notion of hidden assumptions and the development of new insights in the practitioners' thinking. As an earlier chapter has emphasised, assumptions appear to play a fundamental role in the development of critical thinking and therefore have special significance for this study. The sections that follow investigate the relationship between the idea of hidden assumptions and the changes deemed to have occurred in the practitioners' thinking through the conduct of action research.

Thinking Theme Three: "Assumptions have been Challenged"

It has been suggested in chapter five that in order to cultivate a critical frame of mind, an evaluative process needs to occur that incorporates both dialectical and relativistic dimensions of thinking. This course of continuously accommodating and synthesising alternative interpretations of phenomena hinges itself upon a deliberate search of the self for any underlying preconceptions that may influence the translation of such phenomena. Indeed, much of the literature consulted stresses the existence of unconscious beliefs, values and ways of thinking that apparently dictate and potentially distort our understanding and judgment of the world. The well-documented dangers of self-fulfilling prophecy created by low teacher expectancy or the tendency for teachers to categorise pupils as 'bright/dull' or 'cooperative/nuisance' (Askew & Carnell, 1998; Jussim, 1986), suggest an imperative need for practitioners to question the basis on which they make such predictions. For many leading scholars on the subject, it is the scrutiny of concealed assumptions that lies at the heart of developing a critical stance in thinking.

The importance of 'assumption hunting' in fostering critical thinking, together with corresponding claims of this process being a fundamental part of the action research cycle, alerted me of the need to ensure that the issue of assumptions played a key part in the assessment of the research data. I was also motivated by preliminary evidence from the pilot phase of the official PiP Project which indicated that some of the practitioners had altered previously held convictions about aspects of their practice (Edwards & Rose, 1994). During the course of the main phase of the project, similar findings began

to emerge (Burgess-Macey & Rose, 1994). Furthermore, the matter held particular personal significance since I had myself undergone changes in existing beliefs resulting from my involvement as an action researcher in the pilot phase. The issue was therefore deliberately confronted during the recorded interviews where each practitioner was asked about the possibility of challenges to assumptions in their thinking. This 'thinking theme', then, naturally arose out of the data but at the same time was specifically introduced as a possible 'theme' for the diagnostic purpose of assessing a critical perspective from within the practitioners' thinking. During the data analysis it became clear that *all of the twenty-five participants could identify, in some form, assumptions about their practice that had been challenged as a result of undertaking action research.*

Some Examples

Several of the participants made clear statements about how the research had helped them to question assumptions about their practice without any need for specific inquiries on the subject. Julia, a Nursery nurse, had this to say about the research: *"It just taught me not to assume. Don't assume what they're doing or what they're saying" (CR/JS/IV/3).* She talked about *"how I thought before and how I thought after doing the research"* and declared:

"I was surprised how much of my own knowledge of the children I assumed before ... I didn't realise how much was going on. You can look around a nursery and see what children are doing and you think 'great they're sitting at a table'. But what they're actually doing and actually how that individual child is using his time you can't tell unless you observe it properly and you realise how much information you can gain through that time observing" (CR/JS/IV/1).

Julia felt that the close observations she made of the children as part of her research had *"opened up my eyes a bit more to what these children actually are doing in the Nursery" (CR/JS/IV/4)* so that now she was *"listening more"* and making her observations and interactions with children *"more deliberate"*. Julia went on to explain what this change in her thinking now meant:

"When you're watching a child, you're actually thinking what they're doing, why they're doing it and how they're doing it, rather than thinking 'Oh great, that's one lot quiet, I'd better get on with something else' ... You actually do reflect more" (CR/JS/IV/4).

Although Julia worked alone as an action researcher, the discoveries she had made about children's learning and the value of close observation work was shared with her Nursery colleagues with some promising results. As she herself put it: *"we had a staff meeting about it and then it was tried by other people and then it was written into the policy" (CR/JS/IV/1)*. Other practitioners would now have opportunities to spend time observing children and to question their own preconceptions about children's development.

Mary, a Reception teacher who worked with a team of colleagues on speaking and listening skills, had similar experiences to Julia. She, too, can make a distinction between her thoughts prior to the research and the changes that occurred as a result of having to revise formerly established principles about her practice, particularly in relation to children's capabilities. She also claims that her colleagues underwent similar conversions in their thinking about children's speaking and listening skills as a result of doing the research. She explained this process at some length:

"We hadn't actually thought about the skills the children needed to be able to speak and to be able to listen. And we'd always assumed that many of the children don't have very good literacy backgrounds from home and that was the reason why they weren't particularly speaking very well ... We've actually made time to actually find out what the children's skills are ... and find out what's going on ... And that's been a real eye opener because children, who at the end of the year you would have written something about [how they have] a limited vocabulary and [don't] always use properly constructed sentences in a situation with an adult. But you put them in the home corner ... and it's brilliant. All this language comes out and it's all in well constructed sentences. And suddenly you think all these years we've made these assumptions about the children and we've based our perceptions of their speaking and listening on how they operate in one situation and not how they operate throughout the day in different situations ... And although previously we didn't consciously label the children 'oh, they come from poorer educational backgrounds, there's bound to be problems' and dismiss them, I suppose in some ways subconsciously you must have done that" (HO/MT/IV/1-2).

Verification of these transformations in the practitioners' knowledge and understanding of children's development comes from Gaynor, who worked with Mary at the same

school. She likewise describes how the research led her to recognise misconceptions she had held about children's abilities. She needed no prompting during the interview to proclaim:

"I was making assumptions and maybe they weren't true and the research has helped me say 'No, I'm really going to find out what's true first and then act on it' ... I'm now really looking at what is going on rather than what I thought was going on" (HO/GF/IV/2).

The focus topic of speaking and listening skills in children appears to have been an especially rich source of discovery for these practitioners. Sarah studied the speaking and listening skills of selected bilingual children in her class, children she initially believed to be reticent and uncommunicative. Her findings from her observations echo those of Mary and Gaynor:

"I realised that the children that I were looking at were actually at a different level than I had perceived them ... I got a better picture of what that child can do ... It was the fact that they were such quiet children and so shy and yet they could take the role of the leader, they could dictate what was going on in play and other children were interested in their ideas and followed their ideas ... when there was no adult there ... And that surprised me. They surprised me. And my perception of them before and after, the big change in them, surprised me a lot ... It led on to looking at my assumptions for other children as well" (CR/SR/IV/1-2).

These accounts by Mary, Gaynor and Sarah of important changes in their thinking are amplified in this chapter and in chapter ten in the form of case studies where their testimonies are scrutinized and analysed for further evidence of critical elements.

Time and again the data from this research yielded examples of practitioners whose prior expectations were overturned by the research. Like the examples given above, these invariably related to specific discoveries related to the chosen focus area. Kay, a Nursery teacher who focused with colleagues on Recall sessions with the children (part of the early years High/Scope programme), realised that she had overestimated some of the children's abilities to communicate with adults and that *"rather than assuming"*, she had learned to discern those areas in which they required support (CR/KB/IV/2). The tape recordings of Recall sessions that she made during the research alerted her to aspects of children's development that she needed to encourage as well as more appropriate techniques for doing this. She declared that the research had made her more

"self reflective ... [because] you analyse your own actions, look at them carefully and think 'why am I doing this and for what reason?' ... It's made me think about what you're going to say first before you say it ... Things like jumping in before the child has a chance to think about what they were doing or assuming that that was what they were doing ... I question children differently and talk with rather than to them. It is a difficult way of communicating when you've been so much used to that sort of teacher questioning where you just get back 'yes', 'no' or 'blank'. Whereas now there's a more relaxed sort of questioning. It's a subtle difference to trigger off a reaction that's more meaningful for them" (CR/KB/IV/2/3/).

The questionnaire response completed by Kay and her colleague Sheila makes further claims about how the research affected the nursery practice:

"We allow the children to interact more. We don't worry about the children's recall going off at a tangent. The quality of recall sessions has improved because the children have benefited from our heightened awareness." (CR/KB/Q/Q3/Q6).

Thelma, a teacher who investigated gender issues in her Nursery, considered that the research had challenged her assumptions about children's "sociability" and enabled her to appreciate the apparent similarities and differences between the play of boys and girls. She says the research "made us look a lot closer at the way the children are working because I think we took it for granted before" (CR/TP/IV/2). Her observations during the research led her to declare:

"I think we all assume that girls and boys play together ... Yet we've actually looked at the children and the differences between the way boys operate when they're playing sociably and the way the girls operate if they're playing socially ... It's offering new insights into the way that children operate in terms of being social" (CR/TP/IV/2).

Thelma's recognition of her prior assumptions meant that she went on to "question adult involvement". She said that "I didn't used to question my role" but now she looks at "how I'm going to intervene ... to encourage gender interplay or cooperative play" (CR/TP/IV/3). The research helped Thelma and her colleagues' concerns about equal opportunities in their nursery practice to be better realised. The discussions amongst the nursery team that arose from the research led them to alter their planning and "the provision that we make for the children It's affected the planning in that we're trying to give them more variety, trying to mix things a little bit more and we're obviously

much more observant. It's affected the nursery set up because we've actually changed the way we set up the nursery to accommodate this" (CR/TP/IV/2/3).

Katharine, another Nursery teacher, expressed surprise at what she noticed about some children's activities in the block play area leading her to declare *"I wouldn't have thought that they would have done that" (CR/KH/IV/5)*. She realised that her knowledge about children's skills and conceptual development had been misconstrued and she came to appreciate that *"it's not that they don't have them. It's the fact that you haven't discovered them ... a lot of time they're hidden and if you tap into them, then you find out they are actually there, it's just finding a way in" (CR/KH/IV/4)*. For Katherine, action research provided *"a way in of finding that out"* and a way of *"challenging things that you've always believed in" (CR/KH/IV/4/7)*. Like Thelma, the process of discovering incorrect assumptions about children's activities, made her question her own role in working with the children. She said that *"I'm much more aware of teacher intervention and the type of intervention that's needed ... It's being aware of the differentiation and changing practice to fit in with that" (CR/KH/IV/4)*.

Katherine recorded a number of benefits to the children in the questionnaire believing the work conducted in the block play area as a result of the research and the adaptations she made in her interactions helped the children *"develop self-esteem and confidence; work cooperatively and collaboratively; extend their concentration not just in block play area but in other areas such as games/sharing stories; improve maths skills (balancing, estimating, symmetry, counting); improve imagination skills" (CR/KH/Q/Q8)*.

Relation to Theoretical Models of Critical Thinking

The findings from this 'theme of thinking' suggest that action research triggered some important reassessments in how the practitioners perceived their practice. Parallel findings can be found in the action research literature of the way in which action research helps practitioners to question their assumptions (for example, Zeichner & Noffke, in press; Zeichner, 1998; O'Hanlon, 1993; Vulliamy & Webb, 1991; Sanger, 1990). For the participants in this study, the process of challenging assumptions invariably led to a more cautionary attitude when making other judgements about their

practice. The research helped these teachers to unearth suppositions related to children's development, their capabilities, the way they learn and the role adults play within it. These discoveries, called "*revelations*" by some of the practitioners, meant that some potentially serious preconceptions were uprooted and revised or replaced with more enlightening perspectives. For example, Sarah and Mary's realisation that children's language abilities had been misjudged or Gaynor and Julia's awakening to what was really happening in the nursery. It also seems this generated an increased disposition to question other potential presuppositions in their practice such as Thelma and Katharine's reconsideration of their adult role and the way in which they interacted with the children. Although there are potentially significant implications in terms of how these apparent changes in thinking might affect the quality of the participants' practice and the children's educational experiences, the key question needed to be asked here is whether these transformations signify that the practitioners were developing a more *critical* dimension to their understanding of their practice.

Of all the 'thinking themes', the issue of assumptions appeared to offer the clearest correlation between the data and the literature on critical thinking. The importance given by leading writers to the role of assumptions in developing critical reflection has been elaborated upon in chapter five and is reemphasised in this chapter. Here the work of Brookfield, a leading writer on critical reflection in adults, is related to the evidence portrayed above that indicates how the conduct of action research might be seen to have generated critical thinking by challenging in-built assumptions.

In order to become a critically reflective teacher, Brookfield (1995) proposes that we question the implicit assumptions that direct customary and habitual ways of thinking and acting, that is 'our taken-for-granted beliefs about the world and our place within it' (op.cit.: 2). He proposes that practitioners go 'assumption hunting' by viewing their practice from a variety of different angles. This creates 'multiple lenses' with which to perceive events so that opportunities for discovering alternative perspectives of phenomena can be found to call established norms into question. The process of action research led the participants in this study on such a 'hunt'. In all cases, the systematic act of conducting observations of children in specific scenarios that differed from their normal observational practice provided a means of viewing their work from an 'unfamiliar angle'. Although observations were not the only ways the practitioners

considered their practice from a different 'lens', it was invariably the most common path that led to the deconstruction of false perceptions.

Brookfield (1995) distinguishes between different levels of embedded assumptions - prescriptive, causal and paradigmatic assumptions. My interpretation of these distinctions considers that prescriptive assumptions relate to inbuilt expectations of phenomena and causal assumptions involve making unconscious predictions about causal relationships between phenomena. Both categories are underpinned by more general paradigmatic assumptions which essentially appear to comprise 'world views', the prototypes and standards on which all our understanding is based. These classifications were treated with caution when they were applied to the research material due to difficulties in identifying sharp divisions within the practitioners' thinking, not least because each type of Brookfield's embedded assumptions is grounded in or arises out of another. It was, however, possible to make some tentative associations with prescriptive and causal assumptions.

As some of the examples above have shown, many of the practitioners could be said to have held prescriptive and causal assumptions about children's learning and abilities. For example, their *prescriptive* expectations of what children would or could do in certain circumstances were often refuted by the research. Examples include the realisations by Katharine, Julia, Thelma and Kay that their anticipated suppositions of children's activities in certain situations were unfounded. Similarly, *causal* predictions of children's capabilities were invariably incorrect as in the cases of Gaynor's, Mary's and Sarah's prior held relational beliefs between potential ability and seemingly reticent children or those from 'poorer' backgrounds. All these practitioners 'reconstituted' their assumptions to be 'more inclusive and integrative' to fit 'reality', as Brookfield (1990) suggests ought to happen in order to develop a more critically reflective practice.

The last of Brookfield's categories - *paradigmatic* assumptions - becomes more problematic when attempts are made to 'match' this more deeply embedded type of assumption to the research data. Brookfield's more recent writing (1995) implies that without the transmutation of paradigmatic assumptions, the reflective process will be insufficiently penetrating to be deemed 'critical'. He goes further than this to suggest that for reflection to be truly critical it needs to recognise how the 'dynamics of power

invade and distort educational processes' (op.cit.: 9) and to uncover 'hegemonic assumptions' that 'we think are in our own best interests but that have actually been designed by more powerful others to work against us' (op.cit.: 14-15). This emancipatory slant within Brookfield's work is revisited elsewhere. At this stage, it is pertinent to note that within the data examples provided in this 'theme of thinking', it is difficult to detect on the part of the practitioners an awareness of the 'illumination of power' or 'hegemonic forces' as Brookfield proposes (1995). Whilst these examples do seem to offer evidence that illustrates the practitioners' capacity to unearth buried assumptions and thereby embark upon the course of critical reflection, they do not appear to meet the full criteria of Brookfield's understanding of critical thinking.

The examples of challenged assumptions given here indicate that the practitioners saw the conversion of unrecognised beliefs about children's learning as a valuable and worthwhile endeavour and the insights they gained into the realities of their practice as significant and profound. It is fair to suggest that any newly found discernment by practitioners of misconceived practice might be deemed to be important and have likely benefits for future conduct. Certainly, we have seen in a previous chapter how much of the literature on critical thinking associates critical thinking with the revelation of hidden assumptions. In this respect, these practitioners have experienced critical insights as a result of conducting action research. Moreover, my attempts during the interviews to elicit the practitioners' personal understandings of the term 'critical thinking' reveals a close correlation between the processes of action research and critical reflection. When questioned about the meaning of 'critical thinking', the practitioners' responses incorporated key aspects of action research such as "*evaluating*", "*analysing*", "*comparing*", "*thinking in a variety of ways*", "*asking questions*", "*thinking more deeply*" (HO/RJ/IV/5; SO/EF/IV/3; SO/NT/IV/5; CR/SHir/IV/8; CR/TP/IV/5; HO/SD/IV/6). Direct probing during the interview shows that all the practitioners could envisage a close correlation between the notion of critical thinking and action research and all believed that action research had helped them to think 'critically'.

Nonetheless, if the practitioners' views are to be related to those authors chosen from the existing literature to help understand the critical nature of their thinking, it is necessary to move beyond personal ratification of their discoveries and critique their transformations of consciousness from the selected authors' perspectives. Under these

terms, this 'theme of thinking' on challenged assumptions goes some way towards indicating the presence of a critical stance in the participants' understandings, but does not appear to go far enough to address satisfactorily the issue of critical thinking sought by this study. The next and fourth 'thinking theme' to be considered appears to offer more enriching data from which to detect a more advanced critical orientation to the practitioners' thinking. The work of Mezirow is called upon to dissect the data examples since his ideas about critical reflection are more extensively developed than Brookfield's, and he can furnish the data evaluation with a more robust and penetrating frame with which to discern critical features within the practitioners' thinking.

Before turning to the last 'thinking theme', it is perhaps worth noting that the findings from the 'theme of thinking' on assumptions also resonate with the physiological models of thinking presented in chapter four. The 'assumption hunting' process the practitioners experienced with action research necessitated the revision and reconstruction of existing knowledge structures about their practice. Desforges notes that the restructuring process within schema theory 'is characterised by new insights' which can include 'a new way of looking at old information' (1989: 21). Scheme theory helps to explain the reorganisation in practitioners' thinking that occurred as they accommodated the findings from their research into existing schemas and refashioned new ones. Similarly, it is possible to relate the process of disclosing hidden assumptions and subsequent amendments in thinking with the theories of neural Darwinism and connectionism. It suggests that old neural connections have been weakened or severed and new 'maps' created. As one practitioner described it, "*[with action research] you keep making connections*" (CR/SHi/IV/3). These same theories can equally be applied to the next 'thinking theme' which focuses attention on the new structures or patterns of thinking the practitioners claim were developed by the research.

Thinking Theme Four: "New Ways of Thinking have been Developed"

This 'theme of thinking' follows on closely from the previous one. Indeed, the two are inextricably linked and could well be incorporated under one single heading since the reorganisation of preexisting assumptions inevitably creates *new* structures or patterns of thinking. However, two separate themes have been delineated for two reasons.

Firstly, and less importantly, each theme in turn places subtle emphasis on the 'before' or 'after' scenario within the practitioners' thinking (if such a distinction can be made). The idea of assumptions being challenged focuses attention on the old beliefs, whilst the idea of new ways of thinking shifts the balance towards the new changes that have occurred. Secondly, and more importantly, the isolation of a fourth 'thinking theme' was deemed necessary in order to explore more thoroughly the cases of those individuals who seem to have undergone far-reaching transformations in their thinking. These changes appear to move beyond the specific restructuring of particular attitudes or beliefs to a more comprehensive transmutation in their mindset. It is in this 'thinking theme' that we begin to see examples of the kind of paradigmatic assumptions that Brookfield proposes. However, it is through Mezirow's work on *perspective transformation* that the significant changes in some of the practitioners' thinking might be understood more powerfully.

The main challenge for this 'thinking theme' was deciding upon those cases which adequately demonstrated the kind of perspective transformation Mezirow propounds. Certainly, general evidence could be found that action research had triggered new ways of thinking since *twenty-one out of the twenty-five participants readily agreed that the research had generated new insights about their practice*. Upon further questioning during the interview, the remaining four conceded that revised assumptions could be interpreted as new ways of thinking. These 'new insights' included discoveries made about aspects of their practice when prior suppositions had to be reframed to accommodate the findings from their research. Mary reflects many of the practitioners' statements in her assertion that the research created *"new thoughts about the way children learn and new thoughts about the way we perceive children"* (HO/MT/IV/3; also for example, SO/BR/IV/1; CR/CG/IV/2; CR/SD/IV/3; CR/SHi/IV/3; HO/SD/IV/5).

Another example of new ways of thinking includes the notion of a more questioning mind. *Over half of the participants made general comments about how the research had generated a more questioning approach to their practice*. A number of participants' comments mirror those of Ann who said that as a result of the research she was now *"questioning all the time why I'm doing this"* (CR/AE/IV/1) or as Julia put it *"[there's] a lot more questioning going on"* (CR/JS/IV/8; also for example, SO/FN/IV/2; CR/SHa/IV/3; HO/IV/J/2; CR/TP/IV/3). Not only did these practitioners talk of a

quantitative increase in the questioning of their practice, but also related qualitative differences in their questioning style. Sheila and Belinda, for example, both considered they now asked "*different questions*" about their practice (SO/BR/IV/1; CR/SD/IV/3), whilst Mary declared: "*I find myself now not just thinking about ... 'how can I approach this activity?', but ... 'why am I doing that?' ... It's not just the 'how's?'. It's the 'why's?'"* (HO/MT/IV/3; also for example, HO/SD/IV/4; SO/ET/IV/3).

Like the increased disposition to treat previously held convictions with suspicion (created by the disclosure of unreliable assumptions and revelation of newly found insights), these claims by the practitioners of developing a more questioning attitude goes some way towards suggesting that they were becoming increasingly critical about their practice. However, as with the evidence on challenged assumptions, brief comments such as these from practitioners did not seem to venture to the limits of critical transformation that Mezirow propounds. Although Mezirow emphasises the vital and intrinsic role played by this kind of questioning for developing critical thinking, something more substantial was sought from the practitioners' narratives that reflected the kind of altercations proposed in Mezirow's theory.

According to Mezirow (1991a; 1990a; 1981), critical reflection involves the reassessment of fundamental presuppositions or 'meaning perspectives' that act as the 'orientating frame of reference' for personal paradigms or belief systems. He stresses the role that psycho-cultural assumptions play in dictating actions and distorting understanding and the need to transform these perspectives that undergird our meaning system. According to Mezirow, 'meaning perspectives' essentially comprise a collection of 'meaning schemes' which relate to particular sets of knowledge, beliefs, value judgements or feelings. Meaning schemes are the 'concrete manifestations' of the more general, underlying 'habitual orientations' or meaning perspectives. It is the overhaul of both meaning schemes and meaning perspectives that brings about perspective transformation.

In reviewing the data, I therefore looked for more than specific declarations about unearthed assumptions that related to particular aspects of practice. In effect, I sought the conversion of 'meaning perspectives' in addition to 'meaning schemes' as suggestive of a perspective transformation. The examples given in the previous 'thinking theme'

were interpreted to be representative of 'meaning schemes', such as the recognition by a practitioner of the outdoor area as offering more learning potential than previously realised or the revelation that reticent children were not what they seemed. For indications of perspective transformation, I considered data that reflected the more paradigmatic underlying shift in consciousness of the proportion called for by Mezirow.

Some of the other factors that influenced the quest for representative models of perspective transformation included the length of practitioners' responses to key questions during the interview, notably the extent to which they spoke about the changes in their thinking. The length of time a practitioner spent talking about action research's impact on their thinking usually indicated that more profound changes had occurred. I also looked at whether they spoke specifically about the focus area or talked in more general terms about their practice. Those who talked about how their whole practice had been affected by the research invariably offered more comprehensive evidence of radical reassessments in their thinking. Other factors included their general demeanour and level of enthusiasm when talking about their experiences. Those who talked at length about the changes in their thinking and the wider impact on their practice usually appeared more passionate and excited in the way they expressed the transformations that had occurred. This often suggested that something more significant had taken place. When the data was reviewed, *at least six practitioners appeared to offer a reasonable indication of a perspective transformation*. Three case studies were selected to illustrate this and were chosen, in particular, for the commonality in the pattern of development that their thinking took.

Some Examples

Case Study One

Ann is a Nursery teacher in a primary school. She had previously taught Reception and was relatively new to the Nursery. She chose to focus on the outdoor area as she felt this was an aspect of her practice that she needed to improve. Her investigations mainly revolved around experimenting with different types of outdoor equipment and spending time observing what the children were doing. Initially these observations merely

revealed that *"I'd seen them doing these things a hundred times before"* (CR/AE/IV/3). It was only when she took time to reflect and discuss these observations from a different perspective (by looking at the actual learning that was taking place) that she *"found so much that they had got out of these little activities ... I found it revealed the tremendous amount of learning that was actually happening"* (CR/AE/IV/3/NL). These observations and her subsequent reflections upon them were *"enlightening"* in terms of what she realised children were capable of doing, the learning potential offered by the outdoor area, and her own role within this.

Before she began the research Ann had held preconceived notions about the outdoor area, viewing it as simply an environment for physical exercise. She had limited her planning to the provision of equipment. Through action research she became conscious of the underlying learning skills and cognitive concepts that children could develop in this area, the value of the social interactions that occurred between the children and the need to be more discriminatory in her own interventions. For example, she said *"I used to intervene a lot, I think, in my practice and I've realised sometimes that it's more important to stand back and let them get on ... Just reflecting on what they've done, you can see they get other children to help them"* (CR/AE/IV/2). These findings caused her to reevaluate the way she perceived her practice in this area: *"I had my own views about things and they've been questioned"* (CR/AE/IV/1).

Ann recognised that she had developed an alternative way of thinking about her practice and acknowledged that prior to the research:

"I really didn't know what I was doing ... When I started in the nursery I regarded the outdoor area as being completely separate from the nursery classroom. It was where the children were to release some of their energy ... It was just a matter of thinking -'Right, I'll put this out today because I didn't have it out yesterday' ... But now ... I know why I'm putting things out, why I'm choosing things ... It's definitely more questioning because before that wasn't coming into it ... It's thinking 'why do I need to do this?'. 'Why do the children need this?' ... and a lot of the question: 'If we do this, what will happen?'. The way I approach the outdoor area now is totally different to what I used to do before" (CR/AE/IV/2-3/NL).

For Ann the research had led her to

"become a lot more reflective about things that I'm doing and things that the children are doing ... as well as questioning all the time: 'why am I doing this?' ... I have developed my thinking a lot ... I think more carefully about the learning experiences I offer the children" (CR/AE/IV/1/NL).

Her completed questionnaire reveals what this more questioning mind meant for the children in her practice:

"The children now have access to equipment and materials which they didn't previously and are encouraged to integrate different equipment with each other. They are given more opportunities to develop their learning. For example if it is noticed that the children are doing something which could be carried further then we offer the apparatus again the following day" (CR/AE/Q/Q8).

There seems to have been a point where Ann moved beyond her focus topic and the particular discoveries she was making and began to reassess the way she approached and evaluated her practice. She was conscious of this transformation and declared: *"I can see the difference it's made to my thinking ... in the way I think ... It does change your way of thinking and you want to find out more ..."* (CR/AE/IV/5/13). She explained that she wanted to move this new way of thinking to the rest of her practice *"so it's not static"* and in the questionnaire she wrote that *"I feel that I can now work more systematically to develop other areas of practice"* (CR/AE/Q/Q5). During the interview she gave an example of this:

"The way I feel I'm thinking now I could go on to a different area and look more in depth at what the children are achieving, what they get out from storytelling or from using jigsaws or whatever ... For example, we have playdough quite a lot and it tended to be that we put some cutting-out shapes out for them, some rolling pins and things. And sometimes, I feel now - 'No, I'll take those away and just let them use their hands for things' ... so that they're thinking of different ways of using it" (CR/AE/IV/3/13).

The shift in Ann's thinking appears to have been more than the unearthing of a few assumptions or meaning schemes. The underlying premise upon which she based her decision making had shifted from superficial provision of learning activities to a more experimental and deeply questioning approach. This is indicative of a paradigm shift based upon the realisation of a range of meaning scheme reconstructions that included reassessments about her role as a teacher, the children's learning potential and the style of educational experiences she offered them in which the processes rather than the

products of learning now took prominence. Collectively these alterations in previously held beliefs, knowledge and values led to a comprehensive reevaluation of the leading premises upon which she interpreted and promulgated her entire practice.

Case Study Two

Mary worked with a large team of Reception and Nursery class colleagues of an Infant school investigating the speaking and listening skills of children. An experienced teacher, she led the team as the Reception/Nursery co-ordinator and was one of two practitioners from this group that was interviewed for this study. The team represented a good example of collaborative action research as they all worked together to examine the focus area offering an interesting context for seeking signs of individual transformations in consciousness. For Mary, the research appears to have had a similar impact to that of Ann in the way she has come to perceive her practice.

Mary and her colleagues set about examining children's communicative skills using a different 'lens' by spending time observing and recording children under different scenarios. Freed from the constraints of traditional roles as formal assessors, these practitioners were able to learn from children's activities without imposing a formal agenda. The group-based discussions about the findings gave the practitioners opportunities to share personal reflections and discoveries. When Mary described her research experiences during the interview she often chose to express her assertions collectively, using the term 'we' rather than merely 'I' as if the changes were shared by all.

Mary's path to perspective transformation echoes that of Ann and began with the process of exposing well-established convictions about children's speaking and listening abilities. During the course of the research it became clear to her that she had misjudged children's capabilities and that her accompanying underlying beliefs about the causes for differing abilities were unfounded. Mary's proclamations about these challenges to unconscious assumptions were used as an example in the previous section. She spoke of how she and her team had come to realise how they had seriously misconstrued children in terms of their communicative abilities and the causes for

differences between children. Their major finding that children's speaking and listening skills were not as they expected had ramifications for some of their established beliefs about children's literacy backgrounds and the way in which they communicated with adults and other children. A previous section has recorded how these new insights appear to have benefited the children.

The necessary reconstruction in beliefs, values and knowledge triggered by these findings penetrated Mary's consciousness at a deeper level. She went on to say that

"It's moved me on tremendously ... It's made me think about everything I'm doing. Starting off with that speaking and listening was like the starting point but now I find everything I do [makes me question] 'why are we doing this and why have the children responded in that way and why did this happen?'. I'm just asking more questions of myself all the time ... A lot of questioning. A lot of reflecting ... I think the whole team are ... We used to get together and evaluate things but now we do it in a ... different way" (HO/MT/IV/1).

This new outlook on her practice meant that she was now *"constantly thinking about things. The whole questioning and reflecting ... you're thinking all the time ... I've become more reflective ... not just accepting something on its face value"* so much so that *"it's just becoming part of me as a practitioner now"* (HO/MT/IV/2/10/12). She described how before the predominant issue in her mind was 'how' to plan activities whereas now she first considers *"the 'why' and the 'how' comes after that ... it's looking at the 'why's' all the time rather than just the 'how's' or the 'what's'"* (HO/MT/IV/5/10). She was motivated to apply this reformed state of mind *"on to other areas as well ... In fact, the whole team would say that ... We've already identified areas that we'd like to move on to"* (HO/MT/IV/6).

Mary's perspective transformation began with an awakening to the realities of children's varying communicative abilities and her preconceptions about the reasons for these differences. Her realisations led her to reconstruct the way in which she envisaged the rest of her practice and the foundations upon which she based her decision-making. Her orientating frame of reference had altered to more of a process-based rather than product-based perspective of education, the 'why' as well as the 'how' and 'what'. Once the scope of her reflections moved beyond the initial research topic it had potentially far-reaching repercussions for the rest of her practice.

Case Study Three

Sandy is an experienced Reception teacher who worked with her nursery nurse examining children who did not appear to focus well on their work. They decided to spend some time observing these so-called 'wanderers' to see what could be done about improving their concentration. Once again, it was observational methods that prompted the uprooting and reorganisation of various meaning schemes that Sandy had not hitherto realised were invalid assumptions.

"We had previously decided why children weren't doing all their jobs in the classroom. We thought we knew the answer ... and when we actually looked at the children who were wandering, all sorts of other reasons came up ... things we hadn't thought originally ... Ordinarily, I would have been nagging these children, thinking that they were just not achieving what they were capable of. It made me have to stop and look at what I was providing and change my curriculum" (HO/SD/IV/3).

Once Sandy acknowledged her unexamined predictions of children's behaviour, she embarked upon a reappraisal of her entire practice. She became cognisant of the fact that she was not carrying out what she called "*child centred work*" (HO/SD/IV/6). For Sandy the research essentially stimulated her to "*think about thinking*" (HO/SD/IV/4) and like Mary and Ann she underwent a radical change in how she viewed her educational practice. In the questionnaire data, she and her nursery nurse expressed that

"by observation and discussion and recording regularly within the class, we found many new questions were thrown up, which made us further question the children, our planning, our classroom management and ourselves. As a result we had to regularly change all of these to improve the classroom situation and our understanding of the children. This has made us generally question why and how we teach and why and how the children learn and has made us more flexible and, I feel, better teachers as a result" (HO/SD/Q/Q3).

The questionnaire also records how Sandy applied these changes in her thinking on a practical level "*by changing routines, difficult of work loads suitable to abilities, by rearranging groupings of children within the class*". She and her colleague felt that these changes in their practice "*have led to the children being happier and thus working better*" (HO/SD/Q/Q8).

As with Ann and Mary, Sandy's more deeply questioning approach is indicative of a perspective transformation. The extension of this renewed way of thinking to the rest of her practice is evident in the following statement:

"Before I used to 'do' and now I often question 'why' I think that things are going to happen or 'why' I think we're doing something in a certain way ... Now I'll think 'am I right in making assumptions?'. Before I thought I knew why things were happening because it had happened year after year or we'd tried it several times and it seemed to work and therefore it must be working. But now ... I think: 'Right, we'll try this and if it doesn't work then I'll sit down and think ... why?' ... The whole action research has made me look and think 'why was I thinking that, what led me to the assumption that by providing an activity I thought this was going to be the end result?' ... I feel I look deeper into why children do things ... It's definitely changed the way I think, the way I plan and the way I react" (HO/SD/IV/4-5/6/15).

Sandy clearly appreciated the profound effect she believes action research had on developing her thinking. She claims that *"since doing the action research my theories have been challenged regularly"* (HO/SD/Q/Q4) and declared that

"I wish I'd been shown how to do it a lot earlier in my teaching ... I think [it] would have helped my teaching in every direction right from the beginning rather than waiting until I've been teaching 20 years" (HO/SD/IV/5).

Relation to Theoretical Models of Critical Thinking

For each of the three case study examples presented here, action research appears to have stimulated a move beyond 'assumption hunting' and the specific reinterpretations of particular aspects of practice, to a more general critical reappraisal of the primary reasoning which underlay and directed the overall approach to their practice. The correlation of their changes in thinking with Mezirow's development of perspective transformation is a credible link, particularly in the light of the following words by Mezirow. He writes:

Critical reflection is not concerned with the how or the how-to of action but with the *why*, the reasons for and consequences of what we do (1990a: 13, own emphasis).

and also:

Perspective transformation is the process of becoming critically aware of how and why our presuppositions have come to constrain the way we perceive, understand, and feel about our world; of reformulating these assumptions to permit a more inclusive, discriminating, permeable, and integrative perspective (op.cit.: 14).

In his transformation theory, Mezirow distinguishes between content reflection which essentially considers the 'what', process reflection which is concerned with the 'how' and premise reflection which centres on the 'why'. He directly associates premise reflection with critical reflection. It is possible to discern the prevalence of premise reflection within the practitioners' thinking reflected in their process of asking 'why?' questions about their practice. This suggests that these practitioners exhibit what Mezirow would consider to be a critical orientation in their thinking. We can also trace some evidence in the case studies of the particular types of 'distorted' or 'underdeveloped' meaning perspectives that Mezirow suggests lie beneath our consciousness. Identification of particular meaning perspectives are made with some caution, but the correlation between the practitioners' statements and Mezirow's theory was deemed to be sufficiently plausible to help highlight critical elements within the practitioners' thinking.

For example, the practitioners seem to have transformed the 'problem solving' meaning perspective identified by Mezirow, which he refers to as an '*epistemic* premise distortion'. Such 'epistemic' distortions relate to 'the nature and use of knowledge' (1990a: 15) and include 'cognitive, learning, and intelligence styles' (1991a: 144). In these case study samples, the practitioners seem to have undergone a comprehensive review of how they 'problem solve' their practice. Their problem-solving style, upon which they base their decision-making, has moved from traditional techniques and concerns about educational provision to one in which open-ended inquiry becomes the propelling force rather than the seeking of finite solutions, where 'reality' is open to scrutiny rather than the simple acceptance of presupposed truths, and where consideration of the processes of education take priority over the products. Mezirow

(1991a) relates such a transformation of this kind of 'epistemic' meaning perspective with the highest level of Kitchener & King's (1990) empirically-based model of reflective judgment.

Another type of premise distortion identified by Mezirow that influences the nature of meaning perspectives include '*sociolinguistic* distortions'. These involve 'prescribed norms and roles ... role expectations ... prototypes, anticipated scenarios of interaction, and philosophies and theories that serve to frame experience selectively' and 'contain values and behavioral expectations' (1991a: 144/131). Examples of such 'sociolinguistic' meaning perspectives are also evident in the examples given above. They show how the practitioners overturned entrenched convictions about how they perceived their adult role, discovered impaired expectations of children's abilities and revised inadequate theories of children's learning. In chapter nine, more examples are provided of this type of perspective transformation when the emancipatory element of critical thinking is explored.

According to Mezirow, '*sociolinguistic*' distortions essentially involve 'taking for granted belief systems, that pertain to power and social relationships, especially those currently prevailing and legitimised and enforced by institutions' (1990a: 15). He notes that such ideological distortions invariably creates the phenomenon of self-fulfilling prophecy, a common pitfall amongst teachers, as noted elsewhere. Mezirow also warns that

ideology can become a form of false consciousness in that it supports, stabilises, or legitimates dependency producing social institutions, unjust social practices, and relations of exploitation, exclusion, and domination. It reflects the hegemony of the collective, mainstream meaning perspective and existing power relationships that actively support the status quo (1990a: 16).

Such '*sociolinguistic* premise distortions' could be related to Brookfield's 'hegemonic assumptions' mentioned in the previous section. From these case studies, we can therefore see some evidence of the practitioners fulfilling both Brookfield's and Mezirow's more comprehensive criteria for critical reflection. Attempts to distinguish between different types of assumptions or between a meaning scheme or perspective seem less important than the tangible manifestations of what both Brookfield and

Mezirow might denote as a critical frame of mind. To paraphrase Mezirow (1991a) these practitioners have embarked upon a process of critical reflection on the 'distorted premises' that sustain their 'structures of expectation'. They have altered these 'structures of habitual expectation' and become more 'inclusive, discriminating and integrative' and they have begun to act upon these 'new understandings' in the way they perceive and interpret their educational practice. In effect, they have exhibited critical thinking and transformed their consciousness.

Review

From the 'thinking themes' presented in this chapter it would appear that action research stimulated a more critical component within the participants' thinking. Their recognition of the need to question prior convictions and seek more valid interpretations of reality are intrinsic to critical thinking. The awakened compulsion of some to query all aspects of their practice and to consider alternatives is suggestive of a dialectical and relativistic style of thinking that is integral to critical reflection. Certainly, the strong pattern of unearthing habitual assumptions and the development of a more appropriate and beneficial understanding of key areas of practice would no doubt satisfy many scholars' understanding of critical reflection. At least some of the evidence seems to support both Brookfield and Mezirow's models of critical thinking. It is fair to say that the 'assumption hunting' process could be seen to mark the beginning of a more critical style of thinking indicative, as Tennant and Pogson (1995) suggest, of 'developmental progress' (1995: 119, original emphasis). Perspective transformation, on the other hand, which represents a 'developmental *shift*' (op.cit.), seems to demonstrate the full exercise of critical reflection.

However, there are other scholars who would cast doubt on such a verdict. If their interpretation of critical thinking were to be taken into account, the evidence from the data would need to reflect emancipatory transformation to be deemed critical in character. Kemmis, for example, has written that 'educational action research has been captured and domesticated in individualistic classroom research which has failed to establish links with political forces for democratic educational reform' (1986: 51). Problems emerge with this issue since both Brookfield's and Mezirow's works

incorporate a version of the emancipatory depiction of critical thinking. Brookfield's (1995) view of critical thinking takes on emancipatory connotations when, for example, he associates critical reflection with an ideology critique of existing linguistic, social and cultural norms.

It is Mezirow's (1991a; 1981) direct claim of perspective transformation to be an 'emancipatory process' and the grounding of his work in the critical theory of Habermas, that draws most criticism. Critics largely claim that too much emphasis is placed upon personal development rather than social change and that he has 'misappropriated a critical social theory for individualistic ends' (Clark, 1993: 52). It is contended that Mezirow's emancipatory vision of critical reflection is a 'thoroughly liberal democratic view' since he emphasises incremental rather than revolutionary change and places the individual at the 'centre of society' (Clark, op.cit.). These criticisms are ironic in the light of other comments on Mezirow's work which credit him for emphasising the social dimension of adult learning and for correcting 'the individualism apparent in various conceptions of self-directed learning derived from the humanistic tradition' (Tennant, 1993: 35). Mezirow's defence of his transformation theory are explored further in the chapter that follows.

The emancipatory image of critical reflection which expressly dedicates itself to socio-political issues and structural, group-based change broadens the notion of critical reflection to encompass much more than transformation in personal consciousness. Under these terms, the practitioners would need to demonstrate how their thinking concerned itself less with the immediate problems of their own practice than with those ideological and socio-political forces that impede the creation of a more just and democratic society. The following chapter considers more thoroughly the feasibility of the emancipatory position and reviews the data for evidence of this more expansive portrayal of critical thinking. It will be seen that the practitioners' experiences in this study fall short of some scholars' vision of emancipatory change. However, a strong body of literature is offered to support the evidence presented which illustrates how many of the participants seem to have been led by action research to embark upon a course of critical enlightenment that could be termed both empowering and emancipatory.

CHAPTER EIGHT

CRITICAL THINKING AS EMANCIPATORY TRANSFORMATION

This chapter continues the task of seeking a critical dimension to the practitioners' thinking from the data yielded by this study, but centres its attention on the *emancipatory interpretation* of critical thinking. The quest for evidence of emancipatory transformations within the practitioners' thinking proved to be a more complex undertaking necessitating a departure from the evaluative format followed in the previous two chapters.

This chapter therefore follows a different structure in its investigation of critical thinking as emancipatory transformation. It begins with a brief 'recap' of the emancipatory depiction of critical thinking as presented in chapter five and the search for exemplars within the research material. The lack of significant findings in the practitioners' thinking that support such a portrayal of critical thinking raises the question of why these practitioners appear not to have developed the sophisticated levels of critical thinking as intended by some leading proponents of action research. These queries lead to a scrutiny of the notion of emancipatory thinking in action research as construed by Carr & Kemmis and Kincheloe, and the recommendation of an alternative portrayal of emancipatory transformation that both reflects the practitioners' experiences and provides a more satisfactory rendition of critical thinking. Under these new terms, it is possible to reexamine the data for further evidence of critical elements within the practitioners' thinking. This is done in the chapter that follows. A fifth and final 'thinking theme' arises in this context, one that suggests how action research can empower practitioners' thinking and make a significant contribution to the development of a critical appraisal of practice.

The Search for Emancipatory Critical Thinking

The emancipatory perspective of critical thinking has been outlined more fully in chapter five and is briefly reviewed here. As noted earlier, this perspective draws on the work of critical social theory and the development of these ideas by critical pedagogists. McLaren writes that ‘educators within the critical tradition argue that mainstream schooling supports an inherently unjust bias, resulting in the transmission and reproduction of the dominant status quo culture’ (1998: 166-7). He states the main objectives of critical pedagogy to be

to empower the powerless and transform existing social inequalities and injustices ... to disclose and challenge the role that schools play in our political and cultural life ...to scrutinise schooling more insistently in terms of race, class, power, and gender (op.cit.: 163-4, 166).

In this way critical theorists are ‘dedicated to the emancipatory imperatives of *self-empowerment* and *social transformation*’ (op.cit.: 166, original emphasis). Thus in critical pedagogy practitioners are called upon to ‘clarify their own beliefs about the purposes of education and to critically examine teaching methods and materials for hidden lessons about equity and power’ (Calderhead, 1992: 150).

The notion of emancipatory praxis, which encompasses critiques of cultural, social and political structures and the restitution of hegemonic imbalances and oppressive forces that diminish the existence of a more just and democratic society, has been applied to action research by authors such as Kemmis & Wilkinson who make a useful summary of what emancipatory action research entails:

[It] aims to help people recover, and unshackle themselves from, the constraints of irrational, unproductive, unjust and unsatisfying social *structures* which limit their self-development and self-determination. It is a process in which people explore the ways in which their practices are shaped and constrained by wider social (cultural, economic and political) structures, and consider whether they can intervene to release themselves from these constraints - or, if they can't release themselves from these constraints, how best to work within and around them to minimise the extent to which they contribute to irrationality, unproductivity (inefficiency), injustice and dissatisfaction (alienation) as people whose work and lives contribute to the structuring of a shared social life (1998: 24, original emphasis).

Although there are other supporters of emancipatory action research (for example, Atweh et al, 1998; Zuber-Skerritt, 1992; Grundy; 1987), this study has selected the work of Carr & Kemmis (1986) and Kincheloe (1993a, 1991) since they are leading proponents of the emancipatory case and they provide a theoretical basis from which to examine the data for signs of emancipatory transformation.

As with Brookfield and Mezirow, 'assumption hunting' forms a pivotal role in the emancipatory depiction of critical reflection but emphasis is given to the exposition of ideological distortions at a macro, rather than localised, level in which practitioners are called upon to examine the construction and maintenance of prevailing discourses, knowledge structures, policies and practices that have legitimised positions of power and control. Privileged and external power structures are conceived as oppressive systems which perpetuate inegalitarian and unjust social conditions and relations. Political purpose is deliberately injected into the research process from the outset through the application of critical theory to the interpretive analysis of the data gathered. There is a shift from the individual towards a collaborative inquiry of a 'self-critical community' working towards a consensually based and 'common critical enterprise' (Carr & Kemmis, 1986). Transformation of the socio-political order is also viewed as an inevitable and necessary consequence of critical reflection. For these authors action research is considered to be the mechanism by which 'transformation of consciousness' is converted into 'transformations of social reality' and a 'critical praxis' is implemented (op.cit.). Kincheloe has described action research as 'the logical educational extension of critical theory' (1993a: 82) and the 'perfect vehicle' to bring about a 'free society'.

During the course of the PiP Project I looked for emerging signs of practitioners taking on the emancipatory cause, but found little that suggested these practitioners were embarking upon emancipatory action of the scale proposed by the literature. It also became clear that the artificial introduction of issues related to power structures and oppressive conditions seemed wholly inappropriate. The nature of the Project centred on giving practitioners autonomy for their research without the imposition of external agendas.

I attempted to tackle the issue during the interviews by asking the practitioners whether the action research had stimulated them to think about issues beyond their immediate

practice or if they had been led to question such matters as the internal organisation of the school or government policies. I was conscious of the somewhat leading nature of these questions but had decided that the practitioners were unlikely to relate to socio-political issues that were communicated through the unfamiliar discourse of critical theory. Brookfield makes the important point that to many practitioners the literature on critical reflection and emancipatory praxis 'might as well be in a foreign language' (1995: 207). He notes that the jargon and rhetoric of critical pedagogy is 'exclusive' and exposes users to the dangers of 'operating within a self-enclosed semantic loop' (op.cit.: 210). Oberg & Underwood (1992) also warn of the 'debilitating' effect of critical theory with those unfamiliar with its particular discourse. Even Carr himself suggests that critical theory may appear 'dense and abstract' to teachers and 'violently opposed to the ordinary everyday language of teachers' (1987: 287). Research by Brookfield has shown how alienated and inhibited adults feel when faced with the 'theoretical sophistication and literary panache' of works on critical theory (1994: 208).

The matter of questioning government policy wrought two main reactions that revealed the research had done little to initiate a critique of the existing socio-political order. Either the practitioners responded with "no" or "not really" or else they maintained questioning government policy was already an established part of their thinking. The fact that *thirteen of the twenty-five respondents already question government policy* suggests something of the type of practitioners involved. Perhaps in this particular study many of the participants already embraced some level of political awareness, mostly likely due to the existing climate of educational reform, especially since many recent government directives have been aimed at regulating early years education. This sense of politicised consciousness could perhaps have created a suitable background for practitioners to consider the broader social and political realities of their practice. Yet this cannot be said to have happened on the kind of revolutionary scale predicted by most followers of emancipatory action research.

There is one other level, however, in which it is possible to detect this sense of political awareness and that is in the choice of topics chosen by the practitioners throughout the PiP Project. These choices could be considered 'political' since most concentrated their attention on non-traditional curriculum subject matter and very few selected administrative or managerial topics. Indeed, from the large number who joined the

Project, more than half chose to focus on aspects of play such as outdoor play, imaginative play or block play (PiP newsletter, no. 7, 1996). These choices reflect the practitioners' values about early education and their primary concern with young children's learning. Their general disregard for subject-based material and bureaucratic matters contrasts sharply with the more traditional view of curriculum currently advocated by the government for the early years and the kinds of accountability issues past and present governments have imposed on educators. This reflects at least some sense of socio-political opposition. It might be seen as a form of what Elliott calls 'creative resistance to the hegemony of the technocrat' (1991a: 56).

There was a more detailed response to the question related to school organisation with *more than three quarters of the practitioners claiming the research had led them to consider the impact of the research on the rest of the school*. That they thought about this may have been due to Project staff encouraging participants wherever possible to share their work with colleagues both formally and informally. For the most part their thinking on this issue centred mainly on reflecting about the difficulties they encountered in their attempts to share or spread their research beyond their classes. Their dilemmas are classic concerns for action researchers and the problems they met are well documented in the literature on action research.

Aileen, for example, commented on her realisation that the work they were doing on block play *"wasn't getting any further [than] the nursery"* which she felt was a result of their lack of awareness of the importance of block play and viewed more as a *"past time for children just to build"* than a *"learning process"* for children as she had discovered (CR/AH/IV/6). Sheila also noticed the lack of interest in her research by the rest of the school. She declared:

"I thought it hasn't had any impact on the rest of the school and I thought 'why not?'. And that made me think 'right, well I want to find out what the rest of the school think about the nursery children'. And so I actually went and I started interviewing the teachers ... It's just a survey but it's made me think in a different way" (CR/SD/IV/3).

The general indifference some of these practitioners encountered from colleagues who had not participated in the research, particularly those based in a primary school, seemed a predominant concern and raises issues about the professional status of early

years practitioners and how their work is perceived by other teachers and society in general.

Although these particular examples do not appear to reflect an awareness on the part of the practitioners of hegemonic influences or ideological constructs, we shall see in the next chapter how the research seems to have stimulated a 'consciousness raising' process in the practitioners' sense of professionalism that has potential repercussions in terms of their propensity towards engaging an emancipatory style of critique.

Another main issue that arose from these practitioners' attempts to share their work with colleagues relates to the change process. Several made some insightful comments about the nature of innovation with lessons learned about the obstacles to change. Sue, for example, said of her research into storytelling:

"It's ... been interesting how other staff have responded to it ... Some staff got very enthusiastic...and other staff didn't really regard it very important at first ... At first I couldn't understand why people couldn't see the importance of it and the value of it ... Maybe they were feeling it was being imposed upon them. Maybe they thought it was something [only I] was developing" (CR/SHi/IV/1).

Another Nursery teacher's attempts to extend her work to the rest of the school helped her to recognise that

"working at changing your own practice is easier because you're changing yourself. And that's probably easier than trying to change other people .. who've been doing a job in a certain way for a long time and don't see any reasons for change" (CR/SHa/IV/10).

Noffke & Zeichner note that 'although there is some evidence to support the claim that action research does help teachers to broaden their understanding of teaching, schooling, and society, examples also indicate that such understandings focus primarily on constraints, rather than solutions' (1987: 14). However, it is fair to say that in the data examples given above it is possible to discern an increasing awareness of the nature of change and the way in which action research contrasts with more traditional centre-periphery styles of innovation (Schon, 1971). As Fullan suggest, these practitioners became 'self conscious about the nature of change and the change process' (1993: 12). The practitioners' reflections are indicative of an increasing sensitivity towards the

unsuitability of authoritarian policies, albeit they may fall short of the kind of socio-political critique expected by advocates of emancipatory action research.

The evidence of the practitioners' predicaments in confronting institutional barriers raise some important questions about the feasibility of emancipatory action in such circumstances. This issue has been raised by some critics of critical pedagogy along with other objections. These are worth investigating as they throw some light on the possible reasons why the practitioners from this study seem to have 'failed' to have embarked upon the kind of emancipatory action research anticipated by Carr & Kemmis and Kincheloe.

Problems with the Emancipatory View

This study is not alone in its apparent absence of widespread emancipatory critique and action. There are a number of other action research based studies which report an apparent lack of reflection on the wider sociopolitical context on the part of the participants (for example, Zeichner & Gore, 1995; Walker, 1993; King & Lonquist, 1992; Day, 1991; Gore & Zeichner, 1991). Of all these examples, the work of Walker more than most suggests that the grandiose claims of emancipatory action research may well be mere rhetoric. The location of her work in South Africa with practitioners undertaking action research would appear to offer a highly relevant and opportunistic context for stimulating practitioners to tackle and address issues of equity and justice. Yet it seems that the teachers with whom she worked lacked the kind of political commitment required for emancipatory action and concentrated their concerns on more 'practical' matters that centered on their own immediate practice.

Walker, who expected that 'engagement with action research would logically (and inevitably) develop into critical reflection on schooling and society', came to realise that teachers'

starting points and their values ... shape the probability of teachers being able to shift between classroom concerns and a critical understanding of institutional and social constraints (1993: 101).

Her experiences have led her to profess:

I do not believe that action research can liberate participants in a “grand” sense. The real responsibility is to change oneself, searching and struggling with others for the social spaces in which we might challenge and reassemble the self (1995: 11).

Although the practitioners did not challenge social conditions in South Africa and the way in which they impacted upon their classroom, Walker still maintains that there were 'real gains' in the way action research 'helped them work towards change in their classrooms [and] ... generated empowering and *personally emancipatory moments* for teachers' (1993: 101, own emphasis). The examples she gives of these 'emancipatory moments' could easily have come from the practitioners in this research study since they closely mirror many of those in my own study.

We shall return at a later point in the chapter to the implications behind Walker's belief that 'change has to start somewhere' (op.cit.: 105) and the significance of individual 'emancipatory' transformation and its relationship to change on a wider scale. At this point it is important to note that Walker's experiences about the difficulties and complexities involved in achieving the emancipatory vision suggest that practitioners in Western democracies are far less likely to take up the emancipatory cause, where instances of oppression and inequality are minimal in comparison to the widespread social, political and economic disparities within South African society, even under the new democratic regime. If practitioners within South Africa are not moved to widescale socio-political transformation when inequalities are so overt, then it is less likely to occur when they are greatly reduced or at least disguised within the context of a long established democracy. Social and economic differences may still exist but are insufficient to arouse revolutionary fervour. Whilst critical pedagogy may seem a just and noble crusade, it may be that its rhetoric is mostly 'wishful thinking' (Blenkin et al, 1992: 124).

The case of Adams et al's (1997) recent work with teachers in a UK inner city school is another example where the emancipatory intentions of the external facilitators did not materialise. This work aimed to help practitioners to 'take more control over their professional practice' within the current context of increasing bureaucratisation and mechanisms of surveillance and control which has impacted teachers' professional

autonomy (op.cit.: 85). The university team also hoped that conducting action research would help teachers to confront 'social justice' issues. Adams et al looked at the current context of inner city schools in London where inequality proliferates through the gap between rich and poor and at government reports that testify to the poor performances of working class and black pupils. Instead of focusing on action research's 'explicit commitment to challenging social and educational inequality' (op.cit.: 88-9), the practitioners (who were given freedom of choice over their research topics) tended to 'reflect and respond to emphases within government policymaking' (op.cit.: 96-7) such as discipline, planning and reading.

Nonetheless, Adams et al consider that

“failure” to achieve the desired outcomes of an action research initiative need not necessarily be seen as a negative experience, so long as those involved are able to learn from it and re-invest that understanding in further development (op.cit.: 89).

They highlight how the practitioners developed 'a greater sense of achievement and control over their work' and 'a greater degree of confidence ... and a stronger sense of ownership' and to 'recognise their ability to effect change rather than merely reacting to the apparently endless stream of government policy directives' (op.cit.: 94). Dadds (1995) refers to action researchers who realise their change agency potential as 'confident catalysts'. Like that of Walker's study, Adams et al's findings are very similar to those from this study.

Critical pedagogists would no doubt argue that the main reason these practitioners did not incorporate a more overt socio-political dimension to their reflections lies with the nature of the topics they chose to research. This is perhaps ironic since the choices that they did make could well be interpreted as 'political' choices, as pointed out earlier. However, in terms of the kinds of topics advocated by critical theory, the practitioners in this study and in the PiP Project as a whole did not choose to focus on 'themes of oppression' but instead looked at more pragmatic and micro concerns such as outdoor play or storytelling. Yet one of the key facets of emancipatory action research presupposes that researchers will commit themselves to projects specifically concerned with an overt political agenda and address issues such as equity, justice and democracy. These preconditions over topic choice as well as style of interpretive analysis have

generated the most extensive criticism of critical pedagogy and emancipatory action research. A closer look at some of this critique helps to explain why the aims of Carr & Kemmis and Kincheloe and others might be deemed to be unrealistic and therefore an unhelpful framework with which to interpret the cases of critical reflection from this study.

In allowing practitioners to select their own research focus, the PiP Project team was adopting a 'humanist' perspective according to Gitlin & Thompson in which 'politics' become 'a matter of personal choice' (1995: 137). This type of action research is characterised as 'humanist' because the power relationship that exists between the practitioner and the 'outsider' (who invariably initiates and supports the bulk of action research studies that occur) is intended to be non-hierarchical in giving the practitioner complete freedom over their conduct of the research, both in terms of research topic choice and interpretive analysis. Since the methodology of action research is intended to be empowering by making 'teachers the central authority in the research process', the emancipatory position, by imposing a political agenda on the researcher, 'thus violate[s] a basic tenet of action research' (Gitlin & Thompson, op.cit.: 132). Such an interventionist stance, which might be considered 'manipulative', 'coercive' and 'authoritarian', operates on a 'deficit model' of the practitioner as it is assumed that they require assistance for their research from critically informed theory (Gitlin & Thompson, op.cit.). Some of the potential dangers of 'indoctrination' that may occur in externally driven action research projects carrying 'outsider' goals are discussed by Kelly (1989).

Other authors similarly accuse critical pedagogists and supporters of emancipatory action research of being 'highly abstract', 'utopian', 'paternalistic', 'debilitating' and having no practical agenda for bringing about the intended reformations in society (for example, Webb, 1996; Oberg & Underwood, 1992; Ellsworth, 1989). Clandinin & Connelly express scepticism about the sheer enormity of the task confronting teachers undertaking an emancipatory style of research. They note that teachers are

required to develop knowledge, undertake research, change, grow, reflect, revolutionise their practice, become emancipated, emancipate their students, engage in group collaboration, assume power, and become politically active (quoted in King & Lonquist, 1992: 18).

Gibson is a well-known critic of the 'marriage of action research and critical theory' (1985: 59). He considers it to be prescriptive rather than emancipatory and likely to result in 'conformity' rather than freedom. He refers to Carr & Kemmis' work as 'an elitist text masquerading as an egalitarian one' (op.cit.: 60). One of his chief objections is their claim that 'only' critical theory can achieve emancipation. He writes 'its Political (with a capital P) imperative might come as a shock to those teachers who turn to action research in order to improve their children's learning of number or reading' (op.cit.: 63). He sees a place for teachers, both 'individually and collectively' achieving 'some degree of "emancipation" in their classrooms for themselves and their pupils' (ibid.) and he considers that 'emancipation' can take '*different forms and degrees*' (ibid., own emphasis).

Gore (1991) also considers that critical theory becomes a 'silent regulator' effectively disempowering practitioners and rejects the need for the importation of metatheoretical narratives into action research. Although Gore talks largely from the perspective of conducting action research within teacher education programmes, she makes some salient points about the dangers of the critical social science interpretation of emancipatory action research. Gore comments that, although the connection of action research to critical social sciences (i.e. critical theory) gives it 'power', she says that 'it is precisely these connections which contribute to its potential "dangers"' (op.cit.: 48). She highlights how critical theory 'functions' 'through abstract and universalised conceptions of democracy, notions of knowledge's control over power and a belief in the intellectual's centrality to social transformation' (ibid.). She notes that 'there is nothing inherent to action research that makes it emancipatory' (ibid.) but that

universalised notions of emancipation and oppression ... function to legislate particular notions of the appropriate content for emancipatory action research. Class, gender and race formations (and often only one of these) have tended to become *the* issues for all contexts. Thus, although action research is said to proceed from the particular concerns of those who are to conduct it, there has been a tendency to prescribe a moral basis which is generalised rather than specific to particular contexts. The assumption is that we can know to some extent what is empowering, oppressive, emancipatory, and so on (op.cit.: 49, original emphasis).

She points to the dangers of the 'critical intellectual' who 'leads the masses' and 'functions as an agent of ... emancipation' (ibid.) but instead effectively dominates and

indoctrinates. She goes on to say that ‘we can only “know” [about forms of injustice] within specific contexts and local manifestations’ (ibid.). She also draws attention to feminist objections to critical social science (as does Noffke, 1997), which is considered to devalue women's perspectives and she maintains that a 'local focus' need not detract from more 'universal concerns'.

All of Gibson and Gore's points are pertinent to the findings from this study, as are Walker's. Their critiques of emancipatory action research open up the possibility of an alternative interpretation of emancipatory thinking as critical reflection which intimate that the lack of an overt political framework and limitation to a 'local focus' need not prevent practitioners' reflections from incorporating a broader critique of their practice that encompasses socio-political issues of equity and justice and that ‘emancipated societies do not necessarily demonstrate or require an awareness of ideology critique’ (Cohen et al, 2000: 31). Noffke adds that ‘the professional as well as the personal dimensions of action research are distinct from the political *only if they are constructed that way*’ (1997: 331, own emphasis).

We shall see in further examples of perspective transformation provided in the following chapter how some practitioners, despite operating in the micro world of their individual classroom, confront power related issues in their reconstructions of the adult-child relationship and the way in which they perceive children's learning potential. These findings would appear to support both Gore's and Gibson's belief that emancipatory change can occur within individual classrooms and Walker's own research that implies the same.

Further Challenges to the Emancipatory View

Elliott's work also offers a compelling argument for an alternative interpretation of critical reflection that might still be deemed to contain emancipatory elements but excludes the potential pitfalls of the critical pedagogist tradition. He is one of the leading critics of Carr & Kemmis and he considers their distinction between practical and emancipatory reflection to be misguided. Elliott maintains that action research can

become critical in an emancipatory sense without the injection of 'critical theory' since action research

incorporates its own critical perspective. It does not need to be supplemented by a critical paradigm based on absolutist and objectivist assumptions about the nature of human understanding (1987: 167).

The critical dimension to action research becomes apparent when practitioners reflect on

the taken-for-granted beliefs and assumptions which underpin his/her practical interpretations of professional values and their origins in his/her life experiences and history. (S)he begins to reconstruct his/her constructs of value and discovers that this opens up new understandings of the situation and new possibilities for intelligent action within it (1993c: 69).

Thus, he says,

I cannot see why practical reflection which is interested in how to act consistently with the values embedded in our social traditions, need not require us to think critically about values (1993b: 197).

From Elliott's long experience in working within the field of action research, when teachers research their practice and become aware of inconsistencies between practice and educational values, 'they also begin to question the taken-for-granted beliefs and assumptions which define those values for them' (1993b: 197). Since values are often ideological manifestations, Elliott maintains that a critique of ideology need not come from understandings generated by critical theorems but that teachers' own self-understandings represent a 'natural' source for ideology critique. He therefore objects to the introduction of critical social theorems into the literature on action research and the way in which the practitioners 'depend for their source on the "insights" of experts in the critical social disciplines' in order to critique ideological distortions (1987: 166).

He draws on the work of Gadamer to bolster his belief that practical reflection can incorporate a critique of values. He supports Gadamer's view of social traditions as dynamic entities in which values are 'continuously reconstructed on the basis of practical reflection' (1993b: 197). Elliott writes:

On a Gadamerian account of the development of educational theory, teachers would be involved in the reflective process of phronesis in which they deliberated about concrete practical problems in relation to the principles, values, and beliefs they brought to the situation (1987: 164).

Hence, 'practical reflection incorporates the critical as an intrinsic dimension' (1993b: 197). He goes on to say:

According to Habermas the emancipatory interest incorporates the practical interest but also transcends it. From a Gadamerian point of view the critical aspect of reflection does not serve an emancipatory interest in the sense of emancipation from social tradition. Rather as an intrinsic feature of practical reflection it serves an evolutionary interest (1993b: 197).

Thus 'the testing of practical principles and the critique of their underlying values and beliefs are just two aspects of a unified process of reflection' (1987: 163). According to Elliott practitioners are potentially capable of developing critical reflection that addresses the kinds of infrastructure and mechanisms advocated by critical pedagogists. As he comments:

I have always been puzzled by those critics who have attacked [my and others'] ... work with teachers on the grounds that it didn't encourage them to critique the power relations in which their reflection and practice are situated. I have never experienced it that way. My experience has always been that teachers tend to develop critiques of the macro-context of their practices during the process of reflectively developing and testing their practical theories (op.cit.: 167).

Hence, for Elliott, action research 'may move from reflection on pedagogical strategies into reflection on political strategies undertaken to change "the system"' (1985a: 244-45).

Elliott's view is supported by Tripp's empirical evidence which suggests that, although practitioners may initially restrict their concerns to their immediate practice, '*socially critical questions emerge as they proceed*' (1990: 164, own emphasis). Tripp's understanding of emancipatory action research not only questions 'social assumptions' but 'seeks to improve the [social world] by, for instance, making it more egalitarian'

(op.cit.: 160). He calls this 'socially critical action research' since 'critique in and of the world of human action is necessarily social' (op.cit.: 161) and claims it is 'informed by the emancipatory interest' (ibid.). He considers it to be a more 'common form' than the emancipatory version proposed by Carr & Kemmis and is 'often small scale, localised, and seldom involving more than a few teachers' (op.cit.: 158).

The experiences of the action researchers with whom Tripp worked corresponds with the developments within the practitioners' thinking in my own study. What began for some of these practitioners as an investigation into a localised practical problem emerged into an investigation of broader issues which led them to 'challenging an aspect of the existing social order' (Tripp, op.cit.: 158), as it did with Tripp's practitioners. Although notions of justice and equality may not have been made consciously explicit, their realisation of the invalidity of their habitualised assumptions awakened their sense of what is morally just and fair. For example, their recognition of the need not to pre-judge children's literacy abilities on the basis of their social background or effecting a different perspective of the traditional adult role in classrooms to one that considers the child's perspective reflects an engagement with notions of justice and equality. In this way they have become 'aware of the social implications of their practice' (Tripp, op.cit.: 162). Thus practitioners who begin by working on their own concerns develop themselves professionally but also have 'the further potential of awakening [themselves] to the constraints that impinge on their practices and to the broader social effects of their practice in terms of justice and equality' (Blenkin et al, 1992: 123).

This thesis supports Zeichner & Gore's avoidance of 'the dogmatism that class, gender, and race formations .. are *the* appropriate issues for all contexts' (1995: 20, original emphasis). Instead, they call upon the need to incorporate 'moral and ethical criteria ... that are characterised by justice, equity, caring and compassion' (op.cit.: 19-20). Although theoretical resources can contribute 'categories and frameworks for thinking that enable us to deconstruct common sense and reconstruct it as "good sense"' (Walker, 1995: 18), I would argue that these are not essential prerequisites, nor suitable mechanisms to impose upon practitioners, in order to generate attention on issues of social justice and their realisation.

Moreover, there is the possibility that practitioners embarking upon action research may not explicitly tackle such issues in the early stages of their action researching, but as they move on to the next research focus there may be opportunities for the consciousness raising process to elicit more expressed 'democratic political commitment' (Walker, 1995). The example of Dadds' intensive study of one action researcher indicates how a practitioner can move from an essentially subject-based research focus towards one that was "explicit "conviction-research", based upon principles of equity' (1995: 149).

The notion of the 'critical' operating within the localised context of individual practitioners is also shared by Zeichner. Although he agrees with many of the 'political commitments' of the critical pedagogist camp, he joins Elliott and others in his reaction to followers of critical theory for

creating the perception that the "critical" is somehow out there above and beyond the world of practitioners in the macro-world, and that practitioners' struggles in the micro-world in which they live daily are somehow insignificant in the larger scheme of things (1993b: 201).

In a similar way to Elliott and Tripp, he goes on to argue that

separations between technical and critical, micro and macro are distortions, and ... the critical is in reality *embedded in the technical* and *in the micro-world* of the practitioner. Every classroom has a critical dimension. Individuals or small groups of practitioners such as teachers may not be able to change unjust societal structures through their classroom action research, but these teachers can and do make *real and important differences in terms of affecting the life chances* of their students ... The political and the critical are right there in front of us in our classrooms and ... the choices that we make every day in our own work settings reveal our moral commitments with regard to social continuity and change ... The classroom is an important site for what has been called socially critical action research, or action research that is connected to the struggle for greater educational equity and social justice (op.cit., own emphasis).

The arguments of Elliott, Tripp and Zeichner suggest that the emancipatory vision of critical reflection proposed by Carr & Kemmis and Kincheloe need not become the flagship by which the quality of the practitioners' thinking in this study be judged. In this alternative perspective of critical reflection which locates the possibility of

emancipatory critique within the micro world of the classroom rather than wider society, Elliott offers some additional grounds for rejecting a version based on critical theory.

He contests the way in which the critical theorists interpret the structural system as if 'structures exist externally to and independently of the situated activities of individual teachers' (1993d: 181). Not only are these structures 'posited as independent variables which shape and control' teachers (ibid.), but they are subsumed within social systems, hence the need to focus attention on the social system in order to explicate the constraining structures of domination which in turn shape distorted ideologies. Elliott supports Giddens' (1984) 'theory of structuration' which he maintains 'provides a basis for understanding' the kind of pedagogical change that occurs through action research (op.cit.: 183). Elliott notes Giddens' conception of systems as 'generalised patterns of conduct discerned in the activities of different individuals over time' rather than existing as external entities (op.cit.: 182). Structure and agency are viewed as interdependent and recursive. Systems themselves cannot structure the activities of individuals as an external force since the power to direct activities is situated within the 'patterns of relationships' and manifested in the form of 'rules and resources' (or structural properties) which regulate the social organisation. Rikowski describes the key tenets of structuration theory thus:

Social practices, undertaken by human agents who could have acted differently, create social structures that solidify into social rules and routines within social spaces. These social rules then come to act as a series of constraints (structure) upon social actors. However, social actors as reflexive knowledgeable agents can also utilise social rules for their own ends such that they become resources for action ... [hence] social rules are constraining and enabling (2000: 5).

Elliott adheres to Giddens' notion that 'structural properties of social systems are constituted and reconstituted in the actions of individual agents' (1993d: 182). Whilst structural properties may impose limits, they may also empower action and become 'a resource for individuals to bring about certain effects in their interactions with others. Teachers, for example, are empowered to do certain things in the classrooms by drawing on rules and resources embedded in their professional culture' (op.cit.: 183).

Elliott also draws attention to Giddens' contention that individual agents are conscious of the contribution they make towards reproducing certain patterns of conduct. Teachers, by 'participating in the flow of routinised every-day activities ... are aware of what they are doing. They participate in the flow of action with intentionality i.e. to bring about certain effects' (ibid.). Elliott associates Giddens' notion of 'practical consciousness' with practitioners 'tacit theories' derived from the 'common practical culture'. It is this 'store of mutual knowledge' derived from 'shared memory traces' that teachers appropriate and reproduce teaching traditions, patterns and 'routinised every-day activities'. Changes in structural properties involves 'the reconstruction of [individuals'] ... store of mutual knowledge' (op.cit.: 184) and the development of 'discursive consciousness' in which this knowledge is reflexively rationalised and 'talked about'. Thus 'changes in the practices of individuals do indeed imply system change. But this is not a matter of changing an entity that exists independently of the agency of individuals' (ibid.).

Edwards (2000) supports Elliott's integration of Giddens' analyses of agency and structure with action research. Drawing on various authors' work in the fields of sociocultural psychology and cognitive anthropology, she envisages culture as 'both within and without individuals and both shaping and shaped by them as they interact in and with cultures that are mediated by the resources within them' (op.cit.: 198). She makes a parallel connection between Giddens' notions of agency and structure and that of Leont'ev's and quotes his assertion that 'the human individual's activity is a system in the system of social relations' (op.cit.: 201). Furthermore, Edwards emphasises the contention that 'knowledge is held and distributed within groups'. Thus individuals help to construct and contribute to the 'mutual store of knowledge' (to which Elliott refers) in the sense that 'the interactions of differently informed participants scaffold understandings that continue to augment the funds of knowledge distributed in pairings or groups' (op.cit.: 199). Returning to Elliott again, he writes 'discursive consciousness implies a capacity for discourse with others about one's practice and their effects' (1993d: 184). Thus knowledge is 'carried' from one community to another and the idea of 'distributed cognition' (Engestrom, 1994), which was associated with action research

in chapter four, opens up the possibility of individuals distributing their knowledge within and beyond action research networks.

What is helpful about Elliott's interpretation and application of Giddens' structuration theory to action research (and Edwards' contributions) from the perspective of this study is that it shifts attention back to individual transformation and implies that individuals can be agents of change. It thus situates at least part of the process of structural change within the internal consciousness of the practitioner, rather than perceiving it as an external force that can only be brought about by organised collective action. Giddens' notions of 'discursive' and 'practical consciousness' might also be associated with some of the evidence of 'perspective transformation' from this research. Here the practitioners have undergone a reflexive process in which their 'patterns of conduct', 'rules and routines' have been 'restructured' and this implies at least a contribution to a 'system change'.

It is a recognition of the potential power and significance of individual transformation in bringing about social reform that enables an alternative interpretation of emancipatory thinking to be developed. The work of scholars such as Elliott, Zeichner, Tripp, Gibson, Gore and Walker provide a foundation from which to construct a revised perspective of critical reflection that addresses emancipatory intentions and is realised in *socially critical action research*. This next section substantiates this argument.

An Alternative Vision for Emancipatory Critique

We saw in the previous chapter how the work of Mezirow has come under fire for lacking the kind of emancipatory impact proposed by critical theorists. Mezirow has countered most of this critique and has affirmed his position that his theory of transformation is critical in an emancipatory sense. It is helpful to review briefly the defence of Mezirow's position since his work is used as the main 'standard' by which the data from this study is evaluated in order to detect evidence of critical reflection. One of the key issues that will be explored will be what Tennant has described as the

'pervasive tension' in Mezirow's work 'between the individual and the social' (1993: 35), that is 'between individual psychological development and social development' (ibid.). This is the area of Mezirow's work that has come under most attack and is most pertinent to this study.

Tennant suggests one of the reasons Mezirow's transformation theory has come under fire is that 'his theory is directed at the intersection of the individual and social' (op.cit.: 36). Tennant defends Mezirow in noting that he 'clearly recognises the dialectical relationships between the individual and society' (ibid.). Whilst it may be true that in perspective transformation 'it may be the individual, not the society, which is being transformed', Tennant highlights that Mezirow's theory still accommodates social critique but one in which 'he shifts the onus for social analysis onto the learner, so that it is grounded in the learner's experience, rather than being a decontextualised theory of society generated by, and for, academe' (op.cit.: 37).

Mezirow sees no need for the artificial importation of metatheory into the practical process of adult learning and does not see its inclusion as intrinsic for emancipatory learning. He also rejects the view that collective social action is the 'goal and *sine qua non*' of emancipatory learning as Collard & Law (1989) claim. Mezirow maintains that perspective transformation may be *both* individual and socially collective (as in group or collective action) but that social action is 'not the only goal of adult education' (1989: 172, own emphasis). Although he incorporates the work of Habermas into his theory of transformation, it is a 'humanistic' interpretation (Pietrykowski, 1996) and Mezirow accepts that his position may reflect a 'liberal democratic' rather than 'radical' view.

In addressing the issue of collective social action, Mezirow protests the dismissal of transformatory learning's potential for this through individual transformation. He uses an important example of a group of teachers involved in action research engaging

in critically reflective analysis of a common problem, who then return individually to their classrooms to collect data and try out new practices which they subsequently share for further critical discourse (1989: 173-174).

In a similar stance to that of Elliott's noted earlier, he questions why this should not be deemed 'radical praxis' or 'collective social action'. He notes that there are 'many kinds of social action' just as there are 'many kinds of transformative learning' (op.cit: 174) and declares 'it is a dogmatic adherence to the notion that *all* transformative adult learning *must* result in collective social action, facilitated by an educator with an "overtly political agenda"' as Collard & Law intimate (ibid., original emphasis). He argues that part of the critically reflective process involves 'discovering that one is not alone in his or her problem' and that 'when learners come to identify with others who have been similarly oppressed, collective social action may develop' (op.cit.: 172). He says that this is the 'learner's decision' and should not be imposed upon the learner otherwise social action becomes an 'instrumental goal' and attempts to effect specific political goals by outsiders involves 'indoctrination'.

He emphasises a point that was suggested earlier in this text that

in modern democratic societies, where, at least by comparative standards, the rule of law, respect for civil and human rights, and a goal of social justice pertains, and there is opportunity for dissent and social change, active collective effort to more fully realise the ideal conditions for participation in critical discourse and for social democracy will take a *reformist* rather than revolutionary character (op.cit.: 171-172, own emphasis).

Mezirow also protests Clark & Wilson's (1991) claim that he has omitted to account adequately for cultural context in his theory when he writes:

I have tried to show how the internal dynamics of adult learning operate within the cultural context, how critical reflection, discourse, and action can change culturally assimilated assumptions and premises which limit and distort understanding and give learners greater control of their lives. It is precisely our cultural frames of references and how we learn to change them that transformation theory addresses (1991b: 190).

Mezirow says 'it is a serious distortion to characterise perspective transformation as an approach limited to "personal growth"' (1994: 232). He claims that critical reflection on sociolinguistic codes 'leads logically to challenging the dominant ideologies and, when feasible, to taking social action to change the system' (ibid.). There may, however, be 'intervening variables between reflective insight and collective social

action' (1992: 252). Mezirow thus recognises factors such as 'situational constraints' that may impede someone who had undergone perspective transformation from taking social action and notes that those who advocate collective political action such as Freire fail to take adequately these phenomena into account. The same accusation is made towards the critical pedagogists by authors such as Ellsworth for lacking a practical 'program for reformulating the institutionalised power imbalances' (1989: 306).

Mezirow stresses that transformation 'limited' to personal development (such as that which occurs when addressing epistemic or psychological assumptions) is still valuable since

significant learning occurs in understanding one's psychological or epistemic learning problems without the necessity of a critique of society or of social organisation awareness of the cultural context shaping our assumptions is important, but does not necessarily require a critique of social organisations or of society *per se* (1994: 228).

He writes that 'change in oneself and in the way one learns ... involves cultivating the learner's ability to negotiate meanings and purposes instead of passively accepting the social realities defined by others' since 'learning is profoundly social' (ibid.). Hence

social action may be action other than collective political action, as when we act upon our transformed meaning structures to effect changes in our interpersonal relationships ... Social norms are sometimes changed through *individuals acting in concert* (though not collectively), through support groups, through heightened awareness and emotional reinforcement for change ... Often such *cultural action* has been far more effective than collective political action in producing social change (op.cit.: 230, own emphasis).

It is fair to suggest that such 'cultural action' was evident within the PiP Project. This can be seen in many comments made by the practitioners contained within the Questionnaires and my own interview transcripts that testify to the valuable lessons they learned from sharing each others' research experiences. The regular network meetings and the Project newsletters in which some practitioners published accounts of their research, all provided a context for such 'cultural action'. They talk about how listening and discussing each other's work on particular topics invariably led them to begin to ask the same questions about areas of their own practice. Thus the practitioners were identifying with each other and able to see themselves as part of a wider structure. The

cumulative changes in localised contexts might be seen as a form of collective action that might ultimately transform the 'system' through impacting a broader spectrum of children's educational experiences. This point is revisited in the next chapter.

There are two major points that Mezirow is making that are significant for this study. Firstly, that individual, personal development, even when unassociated with broader socio-political action, is a valuable and important process for adult learning. Such a process might still be deemed critical or emancipatory. Secondly, he argues that individual transformation, especially when it involves the reconstruction of socio-linguistic meaning perspectives, may lead to collective socio-political change. The same messages also comes across from the authors quoted in the previous section. They, too, see a worthwhile role for individual agency that might still be inherently critical in its outlook and that it is from this basis that wider societal change for the greater good might be effected.

Review

The ineffectual search within this study's data for emancipatory transformation of the revolutionary scale envisaged by Carr & Kemmis and Kincheloe has shifted the focus of this chapter to a consideration of an alternative characterisation of critical reflection, one that contains an emancipatory interest but appears more realistic and relevant in terms of its likely fulfillment. The apparent non-feasibility of the emancipatory vision based on critical theory and its alienating and authoritarian features which counteract the spirit of self-directed learning integral to action research methodology, have made me question its legitimacy in providing a suitable framework with which to evaluate critical elements from within the practitioners' thinking from this study.

A different perspective of critical reflection that encompasses emancipatory elements without necessitating revolutionary change has therefore been adopted. This preferred option is mostly a return to Mezirow's position on critical reflection contained within transformation theory but has been substantiated by other authors' work from the field of action research. In this revised interpretation of critical thinking, the emphasis is placed upon personal transformation brought about by the reconstruction of meaning

schemes and perspectives through a critical examination of built-in, ideologically based educational values and beliefs. Through this kind of critical reflection, practitioners have the potential of challenging 'social norms' and 'social realities' and becoming aware of the 'social implications' of their practice with the likely immediate and significant effect on children's educational experiences and thus their 'life chances'. This review of value commitments and reconstruction of socialised 'rules and routines' reflect moral choices related to political issues of equity and justice. Transformed individuals can come together and learn from each others' experiences of becoming 'socially critical' and forge connections between the micro and macro contexts of their world. The existing social order may be gradually redefined individually but with the potential growth of broader social action via reformist 'cultural action' rather than radical political action.

The next chapter continues the work of illustrating cases of practitioners who appear to have developed a critical stance in their thinking. This classification is based on the version of critical reflection summarised above. Here a critical dimension is identified on the basis of the practitioners' having undergone some form of perspective transformation. These transformations have broader socio-political implications since the 'professional paradigm shifts' (Ovens, 1993) that occurred invariably dealt with hegemonic related issues thereby incorporating an emancipatory critique.

The chapter that follows also expands upon the adopted conception of critical reflection to incorporate the notion of 'empowered thinking'. This form of thinking elaborates upon the cognitive process of critical reflection by encompassing an affective dimension. It will be argued that whilst 'assumption hunting' and Mezirow's transformation theory form the foundation for the reflective process and provide it with a critical orientation, it is 'emotional intelligence' that helps to create the kind of disposition or 'critical spirit' necessary for practitioners to undertake critical reflection.

Before turning to the last section of this study's findings, it is worth noting that I have avoided questioning the meaning behind many of the terms portrayed in emancipatory thinking like that of 'justice' and 'equality'. This circumvention was considered necessary given that the idea of 'social justice' is 'highly contested', 'historically constituted' and can reflect 'conflicting and divergent political' views (Rizvi, 1998: 47).

Space does not permit a discussion of the various traditions that comprise dissenting conceptualisations of notions such as 'fairness' or 'ownership'. This study does, however, acknowledge that different (and often unintentional) interests can be served depending upon the particular perspective of social justice that is applied in education (Gale, 2000). Teachers, for example, who interpret equality in terms of uniformity still have to accommodate children with differing needs and capacities if they are to ensure their treatment of all children is 'fair'. It may be that different 'spheres of justice' may need to operate within classrooms where practitioners purport to employ egalitarian principles (Walzer, cited in Rizvi, 1998). Here, the value of action research reaffirms itself as teachers can become more alert to the complexities and subtleties behind seemingly socially just practices and open to alternative ways of approaching practice.

CHAPTER NINE

CRITICAL THINKING AS EMPOWERMENT

In the light of the revised understanding of critical reflection proposed in the previous chapter, it is now possible to revisit the data and consider some additional case study samples of perspective transformation. These examples are helpful as it is possible to detect some clearer signs of a socially critical dimension to the practitioners' thinking and thus a form of emancipatory critique. The structure of this chapter returns to the original data evaluation process followed in earlier chapters where 'themes of thinking' were explored and illustrated and then evaluated with reference to theoretical frameworks of cognition and critical thinking. The fourth 'theme of thinking' that related to 'new ways of thinking' is revisited and the case studies provided are analysed in terms of the alternative conception of critical thinking developed at the end of the last chapter.

In addition, this chapter opens up a new and final 'theme of thinking' that can be identified from the research material. This theme relates to the notion of empowerment which is detectable within an important part of the research base. This 'thinking theme' differs slightly from the other themes in that it shifts attention towards the *affective* dimension of thinking rather than the cognitive processes. In this respect, the study joins a growing body of work which recognises the significant role played by the emotional state in cognitive development. In presenting this final 'theme of thinking', the importance of emotions in thinking is highlighted along with the way in which action research affects practitioners' personal feelings. This 'thinking theme' reflects how action research can generate positive feelings within the practitioners' sense of self, which has important repercussions for their sense of personal professional identity. This subsequently has implications on their *disposition* to reflect critically on their practice.

Thinking Theme Four (revisited): "New Ways of Thinking have been Developed"

This section provides examples of practitioners deemed to have undergone a perspective transformation in which a socially critical facet to their thinking is more discernible. Three main 'case studies' are put forward as illustrative samples of how action research might enable practitioners to challenge social norms and realities, to question traditional power structures and to embark upon a more egalitarian and just practice. In addition, some smaller examples are given to exemplify the socially critical stance practitioners in this study seem to have developed. These briefer quotations emulate the conversions in the case study samples and arguably reflect to some extent the same kind of perspective transformations.

More specifically, the stories provided here indicate how some of the practitioners in this study came to reevaluate the stereotypical adult role and the way in which they related to the children; how some came to reconceive their practice from the perspective of the children and their needs rather than from traditional agendas; and how some came to recognise their capacity to implement improvements and become agents of change. What these reconsiderations of previously held convictions about practice signify is explored in the section that follows the presentation of examples from the data. Here the developments in the practitioners' thinking are related to the particular portrayal of critical reflection adopted by this study for diagnosing critical elements within the data. In this way, the apparent capacity for action research to stimulate a more critical frame of mind within practitioners' thinking is exhibited.

Some Examples

Case Study Four (with Supplementary Examples)

Sarah is a Reception teacher who chose to investigate bilingual children's speaking and listening skills with a particular interest in those she perceived to be 'reluctant speakers'. As with many other participants, it was the process of acting as an observer of children other than in the usual supervisory, teaching or assessor role that led Sarah on the road

to perspective transformation. She recognised that reviewing her practice in this way meant that she could *"evaluate [my] teaching from a different perspective"* (CR/SR/Q/Q5).

Her observations of children in different circumstances from those she normally undertook initiated the 'assumption hunting' process within her thinking. She talked about how she had found the research *"so rewarding in that you could find out so much about [a] child"* and that her findings were a *"revelation"* (CR/SR/IV/4). Her revelatory findings were used as one of the exemplars for the third 'thinking theme' that displayed how practitioners' assumptions had been challenged. The research served to demonstrate how Sarah's predictions of children's abilities were shown to be flawed. In her questionnaire response, she noted how the research had

"made me aware of how easy it is, as a teacher, to underestimate the abilities and competencies of children who are reluctant speakers. It also has encouraged me to broaden my assessments of children's speaking - looking at more informal talk" (CR/SR/Q/Q3).

The results of Sarah's observations prompted the uprooting and reorganisation of various meaning schemes that included ingrained presumptions about children's communicative skills and inveterate beliefs about the adult role. This led her to retranslate her overall conception of the adult role as she realised that

"teachers don't always have to interact with the child for the child to be learning or to be doing something of value. That sometimes sitting back and watching what the child is doing or learning from each other in some constructive play situation or even an unstructured one, one that they're structuring themselves, is of equal if not greater value than a teacher led activity ... There's so much more to children's communication than just adult-child talk" (CR/SR/IV/1).

It was the reevaluation of the meaning system that related to her role as a teacher that seems to have had the most far-reaching influence on Sarah's way of thinking about her practice and which led to a fundamental overhaul in her understanding of the conventional relationship between teacher and pupil. She had always felt that

"intervention [was] something you feel you ought to do ... I felt pressured as a teacher to intervene and take the language onto a higher level" (CR/SR/IV/2).

Sarah considered that this was *"what was expected"* (CR/SR/IV/7) of her and vocalised the sources of this pressure to *"intervene"* and *"be doing something"* to include *"parents, [my] head, the school as in governing body ... outside bodies like inspectors, educational thinking, government"* (CR/SR/IV/7). The compulsions Sarah felt were placed upon her by the wider society became a frequent topic of conversation during the research meetings I had with her. She often expressed frustration at the contradictory messages between the didactic and interventionist style of teaching she felt society expected of her and what the research was telling her about more appropriate ways adults can develop children's learning. Through the research Sarah felt she was now able to see *"clearly"* that

"sometimes [intervention] is not a good thing ... because sometimes the play or the talk that's going on stops because children want to make you happy and give you the answers that you want or what they think you want" (CR/SR/IV/2).

Sarah came to believe that she no longer had to perform in her customary role in order to maximise children's learning. Her revised understanding of the adult role was carried over into her new class. She remarked that *"I've got a new Reception class and I've certainly spent a lot more time watching them and listening to them than I have done previously"* (CR/SR/IV/3).

Sarah's case is interesting, not only because she learned important lessons about appropriate adult interaction, but because she seems to have become consciously critical of the socially conventional power relationship between teacher and pupil. Her recognition of the untenable nature of the stereotypical authoritarian teacher role and her consequent adjustments in the way in which she related to her pupils implies that Sarah was embarking upon a more egalitarian form of practice. In this respect she might be said to be taking, at the very least, a step towards emancipatory action.

Other practitioners seem to have undergone similar reconstructions in their comprehension of the orthodox role of a 'teacher'. Elizabeth reached similar conclusions to Sarah about the impact of customary interactions with children in her work on block play. She learned to resist internalised social pressures to perform in the traditional way: *"I have seen how easy it is to intervene as an adult in the wrong way. I*

no longer feel guilty if I am in that area observing and not interacting. I need to observe before I can help the play" (SO/EF/Q/Q4).

Another Nursery teacher, Andrew, similarly came to see that *"it's all right to have an inspector around and not say anything ... you can still be facilitating and allowing children to talk and developing their talk by doing that" (CR/AL/IV/1)*. Through his investigations into children's oracy, Andrew came to learn that he did not have to conform to the typecast image of a 'teacher' constantly instructing pupils and directing their learning.

The following comments by Belinda, a Nursery nurse in a day care centre, provides a valuable illustration of a practitioner who has come to reconsider her stereotypical performance and create a relationship with the children that was more egalitarian in its approach in which the children could learn *with* rather than merely *from* their teacher:

"I have thought in depth about the adult role ... It made me observe the children in a different way allowing them to lead and extend their play, being used as a tool in their learning, giving them more responsibility for themselves and much more choice" (SO/BR/Q/Q3).

Case Study Five (with Supplementary Examples)

In a similar way to Sarah and others, the research appears to have helped Gaynor to reconstruct the way in which she perceived not only her role as a Nursery teacher, but also her overall perception of the children in her care. She worked with a large group of Reception and Nursery practitioners within an Infant school on the topic of speaking and listening skills. Once again, the observation of children in different scenarios stimulated this teacher to question existing beliefs and attitudes about aspects of her practice. In her questionnaire response, she wrote that doing action research

"made me really analyse what speaking and listening is. I had to observe carefully what was really happening in the classroom rather than what I assumed ... I'm more aware of myself as a role model" (HO/GF/Q/Q3/4).

Along with her colleagues such as Mary (whose experiences were portrayed in a previous case study), she made a number of discoveries about misconceptions she had

held of children's speaking and listening abilities. In addition to helping her to adopt an 'assumption hunting' approach to her practice where she became determined to *"find out what's true first and then act on it"* (HO/GF/IV/2), the research led Gaynor to reform the basic foundations upon which she viewed her practice. She shifted her underlying conceptions of how to comprehend her practice from one dominated by her own viewpoints and agenda to one which hinged upon the children's needs. She came to realise that

"before I was looking at it through my head and now I think I'm looking at it more through the children. I always thought I was looking at it through the children's but I wasn't. I was looking at it from my point of view. And I think this has helped me step back and actually be really truthful and look at what is really going on ... from the children's point of view, rather than making assumptions" (HO/GF/IV/2).

In Gaynor's revised orientation towards her practice, she has allowed the child's perspective of learning to become the central mechanism upon which she bases her decision-making. She went on to say:

"This action research [has] excited me ... I'd felt I was losing what I knew was important in early years ... that you start from the child ... It was one of those things you just say and I'd begun to forget what that really meant. I think that has made me go back and think 'yeah, I do know' ... It means actually looking at the child" (HO/GF/IV/3).

During the interview Gaynor talked about how she realised that it wasn't so much the focus area that was important as *"the thinking that's changed"* (HO/GF/IV/3). The extent of her perspective transformation is apparent in the following statement which suggests her new frame of reference affected the way in which she perceived her whole practice:

"I've found that I look at things in a different way and I am naturally researching other areas such as gender, outdoor provision etc ... there's room now for something else [to focus on] ... We'll start again ... it is a long term thing" (HO/GF/IV/4;HO/GF/Q/Q5).

Gaynor's appreciation of a guiding paradigm of practice that begins more from the child's needs than the adult's imposed agenda is something other practitioners also encountered through their research. For Robb and his co-workers action research meant

"having the children reinstated as prime concern in the education process" (RJ/HO/Q/4). As another example, Fumni realised that like many others she had underestimated the children's abilities in her Reception class which caused her to focus her attention on the children rather than simply considering her own role and programme of teaching. She said that

"action research has really exposed me to looking at the way children think ... I have come down to their level now ... it allows me to see things from [the] children's perspective and how they think differently ... [and] meet children's needs ... Before I assumed ... now I look at the processes involved" (SO/FN/IV/3/4/6, SO/FN/Q/Q8).

We saw earlier how Andrew's work on oracy had helped him to reevaluate his stereotypical role as a teacher in which he had felt compelled to conduct himself in typical 'teacher' style. His observations were an *"eye opener"* for him and he learned that *"children's independent talk seems so much more richer than that we see in adult-led groups ... I've tried to say less, listen more ... [and] focus on what is really happening"* (CR/AL/Q/Q4). He now thought more carefully about his *"intentions"* and began *"to differentiate more in my interactions"* (CR/AL/Q/Q4/Q6). Like Gaynor and Fumni, Andrew consequently came to consider his practice more from the child's perspective rather than his own and this change in attitude had a profound effect on how he regarded his entire practice. He said:

"I put myself in the position of the child a lot more ... I'm listening to them ... I hear what I'm saying now rather than just saying it ... I don't stop thinking about it. I haven't stopped thinking about it. It sort of filters through all your practice ... After a while it becomes second nature ... [and] it does make an immediate difference to one's practice" (CR/AL/IV/1; CR/AL/Q/Q6).

As in the previous case study and examples, we can detect here at least some degree of engagement with social norms and hegemonic issues. The research seems to have helped these practitioners move away from conventional socialised role models and dominant curricular styles to ones that seem to offer fairer and more egalitarian learning experiences for the children. In this respect, these practitioners could be said to be embarking upon a more emancipatory type of practice.

Returning to Gaynor for a moment, there was one other significant comment she made that is worth noting and that relates to the notion of empowerment. She declared that the research had given her

"a sense of power - I can change what is going on for the better"
(HO/GF/Q/Q6).

She was not alone in experiencing this empowering effect as the practitioners' story in the next case study suggests.

Case Study Six (with Supplementary Examples)

Sheila worked in the Nursery class of a large Infant school that had adopted a High/Scope curriculum imported from America. She was supportive of the High/Scope approach, but since it was a relatively new experience for her, she was still grappling with its application in practice. She and her colleague Kay decided to look at the 'Recall' sessions in which children talked about their work with the teachers and other children. The teachers' research material based on observations of each other and the children and tape recordings of their interactions with the children, once again helped this practitioner gain valuable insights relating to her own adult role and her relationship with the children. Prior beliefs and practices were revised and consequently affected how she and Kay communicated with the children. They wrote in their questionnaire response that *"we allow the children to interact more ... we listen more carefully to the children not only at 'Planning' and 'Recall' but at 'Worktime'"* (CR/SD/Q/Q3/4).

These experiences helped Sheila to reassess the way in which she comprehended her entire practice. She described these changes in outlook during the interview and in her questionnaire response:

"I see things in a completely different light now. I think of children's strengths, whereas I don't think I thought of that before ... It has made us more critical, to become more reflective and more flexible, to try out different thoughts and ideas ... [I am] extending my thoughts and developing them ... I'm open more to new ways of thinking, new ways of developing because we've done this research. And I think even if nobody came to see us anymore, I'd still feel differently. I'd still go ahead and

think in different ways ... I've already started thinking of what I want to do next" (CR/SD/IV/1/2/9, CR/SD/Q/Q5).

Not only did the research set Sheila on a more critical path of understanding, it also had a significant impact on her sense of personal and professional empowerment. Through the research she came to recognise that she had the power to alter her circumstances and that of her practice:

"Well it's made me think in other ways and realise we can change things if we want to. We can develop. We don't have to stay doing the same things all the time. We can develop all the time in different ways ... It's made me think ... 'I want to change that' and actually realising that you can do that yourself ... We don't have to go to meetings to actually change within ourselves ... it is under my control" (CR/SD/IV/1).

Sheila had a clear sense that the action she took in her own setting also had potential implications on the rest of the school. She envisaged a clear link between her individual actions and how this affected the children's learning experiences, which in turn could influence their development when they moved onto the next class. She professed:

"I didn't realise that I could develop inside myself just from doing this research. I can change things and I didn't think I could. I've realised that I can change things in the nursery so that it can have an effect all the way up through this school ... so we have got that power to change things" (CR/SD/IV/11).

It is possible to discern from this example an illustration of a practitioner confronting previously unchallenged existing power structures that give an impression of innovation as an externally imposed mechanism beyond the will of individuals. Sheila's new found sense of professional empowerment also has potential implications for effecting broader change that could move beyond the confines of her own workplace. What makes Sheila's story particularly compelling is that she admitted during the interview that she had been somewhat 'coerced' to join the Project by her headteacher. Although the Project team had made it clear that it was to be voluntary, there were still some participants who had joined under pressure from those in authority. That Sheila had undertaken the research without fully exercising her own free will arguably makes her comprehension of her own power and capacity to effect change all the more meaningful.

Belinda provides another good example of a practitioner who came to see herself as a change agent. She maintained that once she had embarked on the research

"something suddenly lit up ... and I started thinking 'Yes, I can make things change'. I don't need to be in management in order to do this ... I've got that power ... It's installed enough enthusiasm within me to make things change ... It's given me the confidence to know that I can change things now and ... it's having a knock on effect. People take notice of what you're doing because you're enthusiastic [and] they can see the results" (SO/BR/IV/7/8/9).

Many other practitioners came to recognise the value of the action research approach which gave ownership of the change process to the practitioner. Ann, for example, commented that with action research

"you are in charge of what you are doing and can change your practice at your own pace ... it encourages you to be more reflective about your practice rather than having someone else tell you about their views on your practice" (CR/AE/Q/Q6).

Ann liked the way action research meant *"it's taking it on board yourself .. Not having anybody else govern what you do"* (CR/AE/IV/11). In her questionnaire response, Mary agreed that one of the main advantages was

"changing/improving our practice based on our own findings ... [and] the needs of the children ... rather than having change imposed on us and not understanding why" (HO/MT/Q/Q6).

Kay echoed these sentiments:

"[With action research] you seek yourself the answers and you sort them out rather than somebody say[ing] .. 'Right, I want you to do this' ... You're an automaton then, aren't you? And you don't question it. Whereas if you question it and there are reasons why you do it and you can understand these reasons, you can take them on board. I think that is a professional approach" (CR/KB/IV/8/9).

There were a large number of references in the data which hint at socially critical opposition to the existing centrally dictated monitoring system for bringing about school improvements. The significance of practitioners becoming aware of and acting out their role as change agents might be seen as a sign of emancipatory action against prevailing

structural change. Practitioner resistance to 'top down' change is reflected in the following statement from one Reception teacher:

"I think if an inspector [came in to criticise my practice] I'd probably feel absolutely lousy and I think I'd probably find excuses and say 'Well, he doesn't know what [it's] like ... or he doesn't know what's gone before' ... When you're actually doing it yourself ... you're not given an opportunity ...to pretend it's not happening or make excuses. If anybody tells you from above ... you'll start making excuses. Whereas when you think about it yourself, you don't. And you go at your own pace as well. You know what you're capable of ... Action research is the ultimate in ownership" (SO/NT/IV/8/14).

Relation to Theoretical Models of Critical Thinking and other Literature

Mezirow contends that emancipatory critique is possible when adults transform meaning perspectives that are based upon 'sociolinguistic' codes. From Mezirow's position (1994; 1981), Sarah, Gaynor and others were challenging dominant norms of social roles through their reactions to the stereotypical model of the teacher, which had become 'legitimised' and seemed 'natural and correct'. In this way, these practitioners identified 'real problems involving reified power relationships rooted in institutionalised ideologies which [they have] internalised in one's psychological history' (Mezirow, 1981: 18). Moreover, new (or revived) world-views about perceiving practice through the eyes of a child have role model repercussions that are likely to affect the style of relationship and quality of interactions that occur between teacher and child.

In the case of Sheila and others it could be said that in becoming 'agents' rather than 'victims[s] of change' (Fullan, 1993: ix), these practitioners overcame an 'epistemic' distortion by transforming 'reification' meaning perspectives which envisage 'a phenomenon ... as immutable, beyond human control' (Mezirow, 1990a: 15). A recognition of change agency becomes a propelling force to effect real innovation so that the kind of paradigm shifts we have seen here and in chapter seven, are not only meaningfully understood but carried out in practice. This evidence of action research providing an impetus for teachers to become self-conscious change agents is emulated in the literature (for example, Zeichner, 1998; Brunner, 1995; Dadds, 1995; Oja & Pine, 1987; Day, 1985).

The portrayals of perspective transformation presented here and in chapter seven illustrate that once these practitioners found habitualised assumptions to be 'distorting, inauthentic, or otherwise invalid' (Mezirow, 1991a: 6), it seems they underwent a reorganisation in fundamental meaning schemes and perspectives. Their perspective transformations encompassed socially critical elements that challenged existing social norms and realities and hegemonic structures. This is discernible through their adoption of a more democratic relationship with pupils, a curricular style that focuses on educational processes and not only the products, and one which encompasses the children's perspectives and needs rather than restricting provision to the teacher's agenda.

Similar evidence can be found in other reports on action research in which teachers became more 'learner-centred' in the sense of selecting a more supportive rather than directive teacher role, adopting a pupil perspective, and listening more carefully to pupils (for example, Zeichner, 1998; Vulliamy & Webb, 1991). Zeichner's review of multisite action research studies suggests that 'a greater disposition to listen to students leads to more democratic and interactive work in classrooms' (1998: 19). He also quotes Ernst who describes the impact of action research on a group of teachers whose experiences were similar to that of the practitioners in this study:

These teacher researchers clearly changed the way they related to their students. Assumptions of power and authority were questioned ... the teacher researchers in this study repeatedly described changes in their thinking and practice that reflect a move from teacher-directed to child-centred pedagogy (quoted in Zeichner, *op.cit.*: 40).

The quality of the relationship between adults and pupils and the style of practice they adopt is vitally important with potential consequences for any stage of children's development; although it has been given special emphasis within the literature on early learning. The majority of the work on child development and early education (for example, Blenkin & Kelly, 1994; Athey, 1990; Moyles, 1989, Bruner & Haste, 1987a; Tizard & Hughes, 1984) draws attention to the importance of learning provision that is child-constructed rather than simply teacher-imposed; has a child-centred curriculum where 'finding out' is emphasised as much as 'being told' with children as active participants in their learning rather than mere recipients; and where teachers adopt an

appropriate interventionist approach rather than one of interference in their interactions with children.

Indeed, the significance of the adult role in education cannot be stressed enough. The literature on children's development and the field of education in general, makes continual reference to the importance of the quality of the relationship between teacher and learner. Edwards & Knight write that 'teaching is above all led by sensitivity to the state of the learner' (1994: 28) and the type of role and mode of interaction a teacher chooses to adopt has a crucial impact on children's learning. The work of Donaldson (1978), for example, shows how dependent children are on the language and interactive style of the adult in learning perception and making sense of their experiences. Such attention to the teacher's role in the learning process and the interactive communication between teacher and child helps to counteract problems such as 'situation definition' in which different interpretations of the task may occur (Wertsch, 1984). Research by Tizard & Hughes (1984) and Athey (1990) has also affirmed Vygotsky's (1986; 1978) belief that language is fundamental for concept acquisition and that the quality of adult conversations with children is a significant factor in promoting their development; so much so that Gipps has claimed 'if speech in childhood lays the foundations for a lifetime of thinking the implication for pedagogy is enormous' (1992: 4).

Other authors highlight the vital significance adult-child interactions have on learning and how 'the quality of social interactions a child experiences' can have a 'significant effect' on his/her development (Diaz et al, 1990: 152). Jarvis also notes how social structures affect the quality of learning and maintains that

where authority is exercised over the learner ... there is greater tendency to produce non-reflective learning ... Where there is a more egalitarian environment learners might feel freer to reflect upon their experiences (1987: 187).

This does not mean that practitioner should neglect to 'teach' children in order to progress their learning, but it is a matter of ensuring the style of this teaching is one that will be most effective and of most benefit for all children. *Every single practitioner in this study learned something about their role as a teacher and/or altered their understanding of how they approached their practice.* Whether this operated at the level of transformed meaning schemes or an entire meaning perspective, steps were

taken by these individuals to improve the quality of their educational provision and relationship with their pupils. As Mezirow contends:

The individual perspective transformation process includes taking action, which often means some form of social action (1990c: 363, own emphasis).

These practitioners were undertaking 'social action' through the changes they made in their 'interpersonal relationships' with the children (Mezirow, 1994), both in terms of the way they perceived the style of their provision and in the quality of their interactions. That these 'social actions' by the practitioners are more reformist than revolutionary in character need not detract from their potential power to effect wider change. It seems that Zeichner would recognise the experiences of these practitioners as

small victories [which] can enable teachers to break out of the determinism that says, "It's too big for me, there's nothing I can do" ... and can be an important link in a larger effort toward social reconstruction. We must be able to recognise the importance of each small accomplishment along the way (1993b: 209).

Although mindful of Zeichner & Gore's warning that that we should not 'romanticise about what can be accomplished by using action research' (1995: 21), it is suggested that practitioners who conduct action research can bring out more emancipatory forms of provision, at least within their own classrooms. The prospects for this are strengthened by the likelihood that practitioners are imbued with some sense of emancipatory vision, whether conscious or not, simply by adopting teaching as a profession. As Fullan puts it: 'Teaching at its core is a moral enterprise. It is about making a difference in the lives of students' (1995: 253; also Day, 1999; Sirotnik, 1990; Liston & Zeichner, 1987). Spodek similarly expresses that 'education is essentially an ethical act, concerned with changing children and in some way making them better' (1988: 170). Gold & Roth cite evidence that documents teachers reasons for entering teaching which include a desire 'to motivate and help young students grow, to make a difference in children's lives, to attain a sense of accomplishment by doing something worthwhile' (1993: 13). Indeed, Hargreaves' study on teacher thinking reveals that

many teachers' purposes were .. much broader than those of official reform agendas. These purposes valued emotional and social outcomes as well as cognitive ones, and clearly linked these, in the ways teachers taught, to the *moral outcomes of equity and social justice* ... Teachers' classroom commitments ... encompass ... their desire to care for students; to develop them as tolerant and respectful citizens and not merely high performing learners and future workers (1998b: 844, own emphasis).

Fullan writes that '*societal improvement* is really what education is about' (1993: 14, original emphasis). He also notes that many teachers later come to feel a sense of disappointment or guilt at having fallen short of their professed ideals (op.cit.: 54). This loss emphasises the sense of moral commitment to egalitarian principles that many teachers hold.

Moreover, teachers do not merely join the profession for moral reasons, in their daily practice they create behaviour expectations about acceptable models of social interaction. Amongst the plethora of classroom 'laws', a child is learning about authority, responsibility, justice and equality. As Shulman highlights, 'norms, values, ideological or philosophical commitments of justice, fairness, equity, and the like ... occupy the very heart of what we mean by teacher knowledge' (1986: 11) and 'educational decisions are inevitably based on beliefs, however tacit, about what is good or desirable' (Valli, 1990: 39). These comments imply that emancipatory ideals are integral to a teacher's sense of professionalism.

Those writers who criticise teachers for holding 'depoliticised' views of education (Stevenson, 1991) and for having 'little vested interest in promoting change to the status quo' (Sultana, 1995: 135), should take heed of the examples presented here of practitioners actively engaging with the kind of 'ethical and political concerns' they are often accused of ignoring (Hursh, 1995: 104). Many of the practitioners from this study would no doubt object to being labeled 'unpolitical' and supporters of the radical emancipatory vision seem to disregard that idea that 'the personal is political'. Noffke & Brennan (1997) contend that all classroom practice embodies a political stance whether directly acknowledged or tacitly held. Whilst most teachers may 'lack the political edge which [emancipatory] proponents of critical reflection have in mind' (Louden, 1992: 192) and whilst many teachers adopting action research might not exhibit an overt political agenda, nonetheless the political is located in the public and the 'private sphere' (Zeichner & Noffke, in press). Noffke & Brennan go on to suggest that

many teachers are women with major responsibilities for children and home-work in addition to their full-time teaching jobs. The politics of changing their own practice must necessarily be focused on their own classrooms, sandwiched in among the many other activities aimed at providing a quality education for (their own) and other people's children (1997: 65).

Action research is political because it has 'public consequences' (Kemmis, 1987). Micro changes in individual classrooms are worthwhile since even 'small modifications' wrought by practitioners' research can have 'significant results' or a 'significant impact on their pupils' (Rudduck, 1989: 10). In this sense, 'the challenge for a more equitable world, a more humane and compassionate society is on our doorstep' (Dadds, 1995: 156). Such moves might be considered more 'practical action' than 'political action' (Louden, 1992), but as Maeroff (1988) contends, individual practitioners are not as powerless to change things as emancipatory supporters would imply.

All the points being made here suggest that critics such as Cohen et al misconceive the potential of action research when they write that 'the reality of political power seldom extends to teachers' (2000: 32). They seem to underestimate the empowering effect action research appears to have on practitioners through its methodological mechanism of giving them control over changes in their own thinking and practice, and the implications of this on how these teachers influence children's everyday educational experiences. The transformations illustrated in this study of how the practitioners perceive their roles as teachers, their interactions with the children and their style of provision have socio-political implications since they directly or indirectly affect children's responses and future potential. What is essentially argued in this study is that the personal empowering process of becoming a change agent enables the practitioner to engage in some form of emancipatory action that can foster more socially just and democratic educational experiences. In doing so, it is also hoped that practitioners can realise the complexities behind notions of 'power' and recognise how power can operate as a process of liberation as well as a vehicle of oppression.

These ideas are explored further in the next part of this chapter which presents the final 'theme of thinking' from this study. This 'thinking theme' centres around the notion of empowerment and traces the way in which action research appears to have affected the

practitioners' emotional states, which in turn seems to have engineered a greater sense of professional empowerment. This has implications for their disposition to think critically about their practice and their potential to effect emancipatory action.

Thinking Theme Five: "Thinking has been Empowered"

This final 'thinking theme' largely relates to the emotive aspects of the practitioners' thinking. It arose as a frame with which to categorise the practitioners' thinking partly because during the course of the research the practitioners frequently expressed how action research was making them *feel* as often as, and invariably in the same context as, they described how it was making them think. Early findings from the PiP Project indicated that action research was affecting the practitioners' personal and professional development in terms of improving their morale, their self-esteem, their confidence, their self-respect (Burgess-Macey & Rose, 1997). Since, as Hargreaves suggests, 'emotions are rooted in and affect' teachers' sense of self and identity (1998a: 319), these findings suggest that important changes were occurring in how the practitioners perceived their personal and professional self-image.

From the point of view of this study, the benefits the practitioners gained in terms of their professional personal self had potential implications for their propensity to address proactively the problems within their practice. The literature suggests that the process of change is eased to a great extent if practitioners are empowered and motivated to seek improvements in their practice. Action research appeared to be offering both a context for engendering empowerment and one for perpetuating a more critical disposition towards their practice. A consideration of the empowering connotations of the emotional impact of action research was therefore explored during the interviews and led to the creation of this last 'thinking theme'. Practitioners were asked about how the research had affected their feelings, and building on comments that arose during the course of their research, particular reference was made to the way it may have affected their confidence. *All of the twenty-five practitioners had positive emotional experiences during the research and at least twenty-one agreed that it had made them feel more confident personally and professionally.*

It is worthwhile considering the empowerment of the practitioners' thinking against the existing background of 'professional disempowerment' (Day, 1993a). The introductory chapter has made reference to the growing body of literature that testifies to the 'deprofessionalisation' of teachers under the past and current climate of imposed educational reform and regulation. Scholars write of the gradual erosion of teacher professionalism as more and more of educational practice becomes centrally controlled and monitored; draw attention to the 'blaming and shaming' discourse that victimises teachers for educational failure; and note the emotional cost as it generates feelings of 'despair', 'fear', 'powerlessness', 'helplessness' and 'alienation' (for example, Stoll & Myers, 1998a; Woods et al, 1997; Jeffrey & Woods, 1996; Bridges & Kerry, 1993; Elliott, 1991a; Gilroy, 1991; Kelly, 1990; Rudduck, 1988).

Whilst early years practitioners have suffered the same sense of marginalisation as their colleagues, Burgess-Macey and I have argued elsewhere that early years practitioners are possibly 'more deprofessionalised and disenfranchised' (1997: 56) with additional barriers to overcome in order to regain a sense of professional identity and prestige. Early years workers are generally held in the least esteem by society at large. Spodek & Saracho (1988), for example, write of the 'low status' and salaries of early childhood practitioners. Curtis & Hevey highlight the 'outmoded public attitudes' that does not view the care of young children as 'real' work (1992: 202). These attitudes are no doubt exacerbated by the fact that the vast majority of early years practitioners are women (Curtis & Hevey, op.cit.) who, along with children, are considered to be the least valued members of society (Joseph, 1993). Apple notes that 'when a job has been defined as mainly women's paid work, it is subject to greater external control, less respect, lower salaries, and reduced autonomy' (quoted in King & Lonquist, 1992: 27). Drummond maintains that early years workers are 'isolated and undervalued, at the bottom of the school' and suffer from 'self-doubt, anxiety, and lack of confidence' (1989: 12, 13).

Hargreaves highlights the dangers of a demoralised' workforce on the quality of the educational experiences they provide. He suggests:

We will build a better system of teaching and learning if we do so on *a foundation of pride* in our existing achievements that we seek to extend

further rather than on a wreckage of despair regarding teachers' educational failures (1998a: 331, own emphasis).

The data examples given below suggest that action research might help to create such a 'foundation of pride' through the affirming sense of achievement it can bring about. The personal emotional impact of action research is largely evaluated in terms of its effect on the practitioners' sense of professional identity since the personal and professional self are intimately bound to each other (Hargreaves, 1998a; Dadds, 1993a; O'Hanlon, 1993). The implications of this empowered professionalism in terms of practitioners' proclivity for critical reflection are explored in a later section.

Some Examples

In addition to an overwhelming agreement that the research had boosted their *confidence*, the practitioners also talked in terms of how it had made them feel "*revitalised*", "*excited*", "*enthusiastic*", "*re-enthused*" and "*valued*" (for example, CR/SHi/Q/Q5; HO/SD/Q/Q5; CR/SR/Q/Q5; HO/MT/IV/13; CR/AL/IV/4; HO/AL/IV/5). Other common responses included experiencing a "*sense of achievement*" and improved "*self-esteem*" (for example, HO/GE/Q/Q6; CR/CG/IV/5; CR/AH/IV/6; CR/KH/IV1; CR/AL/IV/4). The practitioners appear to have reacquired a sense of professional status, as expressed in the words of one Reception teacher: "*It's raised the status of what early years people can do and ... I feel as if our end of the school has been raised. As if we're important*" (HO/SD/IV/8-9).

The impact of these feelings on professional self-image and morale seems to have been pronounced. Robb described this sense of renewed professionalism in the following way:

"For the first time ever ... [I've] felt validated and respected as a teacher ... It's made me feel validated as a professional ... I've been teaching a long time and over the years I've lost ... confidence in what I do ... [Action research has] made me feel more positive about what we do ... I've felt good about ourselves as professionals ... [It's] much more genuinely professional development in that it's allowed us as professionals to develop our professionalism" (HO/RJ/IV/1, HO/RJ/Q/Q5).

The close link between the emotional impact and professional self-image is also evident in Katharine's declaration:

"After you'd finished you were on quite a high really because you'd found out all sorts of things that you hadn't realised were happening ... It was something that was worthwhile and that you're actually developing ... It's given me the confidence to believe in what I'm doing and that I can present something that is professional, that looks professional, that is professional" (CR/KH/IV/1/8).

Twenty-four of the twenty-five participants made some kind of reference to the way in which their increased confidence had helped them to 'justify' their practice. This was considered particularly helpful in the current climate of professional accountability. Below are a collection of statements from various practitioners that once again testify to the empowering effect of the positive emotional state engineered by action research:

"I feel more confident about my focus areas ... and also generally [about] my practice ... and feel that I can justify what I am doing" (CR/AE/Q/Q3/5).

"Before I just got upset about it. Now I can justify my feelings and what I say ... I'm much more confident about what I think now than I was before I started" (CR/HW/IV/4/5).

"Before I wasn't absolutely certain I was right and you get a lot of pressure from outside that might indicate to you that maybe you're not right, that perhaps you should be looking more in terms of subject areas perhaps or pens and paper work ... I feel more confident about saying this is how it should be and I know it should be this way because I've seen it work ... I feel that I could actually articulate it to others in education and outside education. I could make a good case for what I do" (HO/AL/IV/6).

"Because you've got the evidence to back it, I could talk to anybody ... I feel I know what I'm talking about ... I [now have] the confidence to be able to question somebody whereas before I wouldn't have said anything" (CR/AH/IV/5/6).

For one practitioner the research was particularly inspirational in terms of her professional development and personal life. Like the others, the research had built up her confidence and made her feel

"good. It was a challenge ... It makes you think about things ... It [made me] think critically and reassess my practice ... The fact that you pulled it off and that it worked and it's still working. That's got to give you confidence" (SO/EH/IV/6).

During the course of the research she made a significant decision to embark upon a BA in Education having spent a number of years as a Nursery nurse. She wrote about this life-changing decision in one of the Project Newsletters:

"This is not a story about my action research experience, more a story of how action research can change your life ... Action research involves critically reflecting upon aspects of one's practice and this encouraged me to look at my own professional development ... Action research was the catalyst - forcing me to stop and re-evaluate my life" (EH/NL/7/2).

Other practitioners also seem to have developed a more proactive state of mind. For a large number of the practitioners the action research seems to have stimulated a strong motivational attitude. These practitioners talked about how it had generated a sense of "challenge", "determination", "interest" and especially "motivation" (for example, CR/AH/Q/Q5; CR/SR/Q/Q5; SO/NT/Q/Q5; CR/AH/IV/6; CR/KH/IV/1; HO/AL/IV/5; CR/AI/IV/4). The incitement of the practitioners' general professional outlook in this way has the potential for spurring further growth. Data examples given in both this chapter and in chapter seven show how many of the practitioners were moving on to a new focus, their previous research having given them an incentive to continue to investigate and critique their practice of their own volition. There were a number of other comments such as those from one Nursery teacher who said she would continue to do action research once the Project had ended because *"it's given me a strategy that I can use myself, on my own"* (SO/EF/IV/11). Others declared they would continue as *"you want to find out more"* (CR/AE/IV/13) or because *"I want a new challenge"* (CR/SHa/IV/13). Katharine felt that she would carry on action researching since

"it becomes obsessive because you get into something so much that you want to develop things further. And once you start working in this way, its' very difficult to stop because you're getting so much out of it for you and the children . You just want to keep on even if it is on a different aspect" (CR/KH/IV/14).

All the practitioners agreed that action research was a valuable form of ongoing professional development. Their appreciation of this is reflected in Mary's comment:

"I've found another avenue of professional development through the action research which is far more meaningful than trotting down to the teacher's centre ... It's such a valuable process ... It should be introduced in teacher training college and we should all be doing it" (HO/MT/IV/12/14).

Relation to the Literature

This study is not alone in recording evidence of positive emotional experiences from conducting action research. The increase in confidence and self-esteem and sense of personal and professional growth that action research generates is overwhelmingly supported in the literature (for example, Zeichner, 1998; Dadds, 1995; Johnston & Proudford, 1993; Sanger, 1990; Vulliamy & Webb, 1991; Oja & Smulyan, 1989). One study talks of how the research had made the teachers feel 'more professionally alive' and how they came to 'feel empowered to make significant change in their profession' (Oja & Pine, 1987: 110).

Chapter four has pointed out how thinking is an inherently emotional experience. There are an ever increasing number of theoretical and empirical accounts that testify to the importance of the affective dimension to the thinking process and the existence of some kind of 'emotional intelligence' is now recognised (for example Goleman, 1995; Salovey & Mayer, 1990; Gardner, 1983). Emotional intelligence appears to play an important role in interpersonal relations and the conduct of socially appropriate behaviour, whilst different facets of the emotional state do appear to affect cognitive performance and the learning process (Matlin, 1998; Meadows, 1993; Carr et al, 1991; Chandler et al, 1990; Dweck & Elliott, 1983). Oatley & Jenkins' (1996) refer to the functional roles of emotions and the 'substantial effects' they have on 'mental processes' such as perception, attention, memory and judgment. Salovey & Mayer (1990) call upon a collection of works that indicate how emotions act as the main motivating force behind decision making by arousing, sustaining and directing activity.

Hargreaves (1998a) also maintains that teaching itself is a 'profoundly emotional form of work'. He refers to it as an 'emotional practice' involving 'emotional understanding' and 'emotional labour' and considers that the cultivation of teachers' emotional states is 'absolutely central to maintaining and improving educational quality' (op.cit.: 315).

Elsewhere he writes 'emotions are pivotal to the quality of teaching' (1995a: 26). Furthermore, Mezirow (1990a) and Brookfield (1995; 1994) both consider that critical reflection is an 'emotional experience' and that cognitive interpretation will inevitably 'evoke emotional reactions'. There is also a growing body of studies within the field of action research and beyond that testify to the 'critical role emotions play in the thinking process' (Halpern, 1996: 298) and how our emotions can affect adult development (for example, Day, 1997; Belenky et al, 1997; Dadds, 1993b; Elbaz, 1991; Kitchener & King, 1990; Nias, 1989a; Connelly & Clandinin, 1988; Wagner, 1984).

What is especially significant about the affective dimension for this study is the way in which cognitive transformation manifests itself through the emotional state. Kincheloe points out how feminist theory has shown how 'emotional intensity precedes cognitive transformation to a new way of seeing' (1993a: 153). The data from this study seems to mirror that of Dadds' where 'transformation of both the cognitive and affective self' occurred as 'perceptions, understandings and attitudes took on new shape and form' giving rise to a new 'architecture of self' (1993a: 240). The indepth research by Dadds of one teacher conducting action research has shown the process to be an 'emotionally powerful experience'. Dadds describes how it entailed a

personal concoction of thoughts and emotions, of attitudes and theoretical insights. Theory was not simply a cognitive act but had warm, passionate underpinnings. Ideas and emotions were the integrated warp and weft of ... theoretical fabric. And they informed each other ... These *passionate elements were as important to professional growth as development of cognition* (op.cit.: 233, own emphasis).

Action research also acknowledges the role self-respect and status play in developing a sense of professionalism. It offers 'an alternative path for professional development that [does not] marginalise or demerit' (Burgess-Macey & Rose, 1997: 62). With action research practitioners can also become freely answerable for their actions without an accompanying sense of condemnation and blame. As action research helps practitioners to provide legitimacy and corroboratory evidence for the defence of good practice it opens up avenues of self-validation in which accountability becomes an accomplishment as they make their progress public by championing their own practice.

It is true that not all the feelings generated by the research were positive. New learning may be expressed as euphoria or a sense of accomplishment, but the process to get there or the disruptions that may have taken place to established cognitive structures or patterns of thought may create anxiety and frustration. Brookfield (1994) talks in strong terms of the emotive dimensions to critical reflection which his research suggests incorporates 'cultural suicide' and 'lost innocence'. 'Cultural suicide' entails 'the recognition that challenging conventional assumptions risks cutting people off from the cultures that have defined and sustained them'; and 'lost innocence' involves loss of reassurance as adults move 'from dualistic certainty toward dialectical and multiplistic modes of reasoning' (op.cit.: 203). Such processes incorporate 'moments of crisis' and feelings of sadness, despair, fear and anger. As Blenkin et al put it: 'learning is often a painful process' (1992: 60). The 'emotional experience of learning' can generate feelings that range from helplessness, confusion and inadequacy to those of excitement, triumph and hope (Salzberger-Wittenberg et al, 1983).

The practitioners in this study also experienced a sense of "*frustration*", "*inadequacy*", "*confusion*", "*worry*", "*guilt*", "*apprehension*" and "*vulnerability*". These mirror the evidence from a number of other studies within the field of action research which refer to the difficulties and 'emotional turmoil' (Day, 1997) that can arise when practitioners engage in this kind of self-examination (for example, Dadds, 1993b; Ovens, 1993; Nias, 1989a). Both Mezirow (1990a) and Brookfield (1995) acknowledge that critical reflection is a 'risk taking' venture.

However, the conflicts the practitioners faced in this study are not explored mainly because the positive emotions they experienced far outweighed any troublesome ones. The self-directing process of action research can help to keep more dysphoric emotions to a tolerable level and the network groups and meetings provided a supportive context that counteracted the 'emotionally taxing' (Dadds, 1993a) aspects of action research. The importance of a psychological safety net in which practitioners can receive encouragement, reassurance and sympathy to bolster them in their risk taking venture is emphasised by a number of writers (for example, Hargreaves, 1995a; Brookfield, 1994; Dadds, 1993a; Fullan, 1982). Not only did the network groups provide a challenging forum for professional debate and the exchange of knowledge, they also created a secure haven for the practitioners, one that was "*non-threatening and non-judgemental*"

(HO/RJ/IV/7), in which they could share both the 'highs' and 'lows' of their research experiences. Day stresses the need for personal support if practitioners are to 'take the risk of departing from their niche' (1984: 76). Brookfield also emphasises the need for a community forum to help adults cope with what he calls the 'dark side of critical struggle' (1994: 215). He also refers to such support as a 'emotionally sustaining peer learning community' (op.cit.: 212) which 'provide the context for testing new identities, beliefs and values and which also provide valuable emotional sustenance' (op.cit.: 213).

The kinds of comments made by the practitioners from this study suggest that the emotional manifestations of their cognitive growth had a significant impact upon their professional self image. Their renewed sense of professional self-respect seems to have had an empowering effect. Hargreaves' draws attention to this relationship between emotion, status and power when he writes that 'emotions are political as well as personal phenomena' and draws on Kemper's argument that many emotions can be understood as 'responses to power and/or status' (1998a: 319). He concludes that emotions are 'shaped by experiences of power and powerlessness' (ibid.). Maeroff also emphasises the importance of status and its relationship to empowerment when he professes that for teachers

enhancing their status is a first step toward empowerment because so long as teachers are undervalued by themselves and others they are not likely to feel they have much power (1988: 19, own emphasis).

By acting as 'a vehicle of empowerment' (Kincheloe, 1991a: 34), action research seems to have helped these practitioners not only to restore their professional integrity and morale, but created a foundation from which to extend their professional development by the blossoming of a 'critical spirit'. Siegel defines a 'critical spirit' as a 'complex of dispositions, attitudes, habits of mind, and character traits' which incorporate seeking 'reasons and evidence in making judgments' and subjecting such reasoned evaluation to 'critical scrutiny' (1997: 35). The evidence from this research appears to support other action research based studies that suggest how increased self-esteem can help establish '*the long term habit of self-examination*' (Noffke & Zeichner, 1987: 7, own emphasis) and a more questioning attitude (Day, 1985). Elsewhere with Liston, Zeichner reports on evidence that shows how action research can create 'dispositional qualities' of reflective thinking in teachers (Liston & Zeichner, 1990).

The importance of disposition for critical thinking has been identified by a number of authors (for example, Unrau, 1997; Halpern, 1996; Merriam & Caffarella, 1991). Chandler et al also suggest that motivation is the major 'determinant of whether or not a teacher becomes and remains proactive' (1990: 136). Drawing on Hertzberg, Aspland & Brown (1993) cite various factors that motivate professionals that include 'a sense of achievement and personal and professional fulfillment, a feeling of doing a valued and worthwhile job, and opportunities for autonomy and responsibility' (op.cit.: 16). Action research provides a sense of well-being so that the desire to progress can become self-recurring. Fullan notes that 'there is nothing like accomplished performance for increasing self-esteem and confidence to go on to greater heights' (1993: 26). These sentiments are echoed by one participant who declared "*when you achieve something, it's such a nice feeling and that takes you forward*" (CR/SHa/IV/6).

Brookfield has described the emotional impact of the assumption hunting process thus:

As we abandon assumptions that had been inhibiting our development, we experience a sense of liberation. As we realise that we have the power to change aspects of our lives, we are charged with excitement. As we realise these changes, we feel a pleasing sense of self-confidence (1987: 7).

A self-perpetuating cycle can be established in which the empowering methodology of action research stimulates socially critical reflection and an emotional boost, both of which enhance professional self-respect. This in turn empowers and motivates practitioners' to continue to employ a critical style of thinking in their practice. If action research can help to give practitioners a propensity for critical reflection, then the potential for empowered practitioners to improve their practice is greatly enhanced.

Empowered Individual Thinkers and Social Action

Maeroff makes the important point that 'good communication among teachers breeds power' (1988: 88) and that 'there is much more chance of gaining access to the mechanisms of power if they can operate as part of a network' since 'there is strength in numbers' (op.cit.: 89). By 'making public' their findings (Stenhouse, 1975) and sharing

the wisdom they learned, practitioners were not only finding emotional support from the network meetings, they were creating a *sense of solidarity* through common understanding and identity (Burgess-Macey & Rose, 1997). One participant had this to say of the network groups: *"The important thing was the fact that [we'd] got that forum and [we] were able to share it ... [action research gives] me and people like me a voice"* (CR/AL/IV/8).

As suggested in the previous chapter, these networks provided a potential power base for the kind of 'cultural action' envisaged by Mezirow which might bring about broader social change. The accumulative effect of individuals sharing the benefits of critical reflection can trigger similar responses in other practitioners creating, as one practitioner put it, a *"knock on effect"* since *"others pick up ideas from you and vice versa"* (HO/SD/Q/Q6). In time more and more children profit from their teachers' reappraisals of the 'system'. There is evidence from Zeichner's (1998) study of multisite action research programmes in which participants recorded a 'multiplier effect' whereby they all learned from each other's research. There are signs of the 'multiplier effect' occurring in the PiP Project through both 'formal channels' and 'informal conversations' (Vulliamy & Webb, 1992).

The nursery where Andrew worked provides an example of the way in which the work of a single action researcher can have a broader effect. In his work on oracy, one of his observations included tracking a group of children as they showed the products of their cooking session with all members of staff. What began as an investigation into children's communication became a revealing insight into how adults talk with children. His research showed how the teachers adopted the same didactic questioning style which tended to inhibit the children's responses. When the evidence was reviewed and discussed in an informal conversation, the staff collectively realised that they were not only asking the children the same kind of questions, but their interactions were not developing the children's oracy skills. The work on one researcher triggered an evaluative response amongst colleagues as they began to challenge long established communicative styles they had erstwhile believed to be appropriate practice. Andrew said: *"Just because we talked together about it, it changed it"* (CR/AL/IV/10). Whilst some might view these events as a localised concern and empty of serious socio-political critique, the argument propounded in this dissertation is that small and

evolving transformations are just as significant because of the way they directly impact upon children's daily educative experiences.

Elliott maintains that the work of one action researcher reported by Dadds (1995) shows how there is 'ground for optimism about the power of individuals to effect significant change in the work-place and its organisational context' (1995: ix). The example given above affirms this point. Many other authors within the field of action research (including Carr & Kemmis) have expressed the possibility that action research may 'start small' (Kemmis & McTaggart, 1988) but can gradually widen to involve the broader community. As in other action research projects, some of the practitioners from this study were able to 'influence school cultures' (Vulliamy & Webb, 1992) to various degrees including the formalisation of relevant findings into policy procedures. Thus teacher research can move 'beyond the level of the classroom and [affect] school and school authority policies' (Zeichner, 1993b: 208).

Zeichner cites other evidence that shows how individual classroom research can effect institutional change and that 'as teachers pursue issues within the classroom, their attention is naturally drawn to the institutional context in which the classroom is located' (1993b: 208). Similarly, Holly suggests that whilst the 'focus for the change struggle ... has to lie within the individual practitioner [since] this is where real change occurs' (1991: 153), action research provides a context for sharing common concerns of 'practical, real-world problems' that are likely to attract interest and creates opportunities for collaborative inquiry. Somekh agrees that

action research may be investigated by an individual, but its momentum is towards collaboration, because the emphasis on social interactions and inter-personal relationships has the effect of drawing other participants into the research process. The focus of the research is likely to be an issue which is of concern to the group (1995: 149).

Elliott also notes that the 'solitary' aspect of self-evaluation in action research is 'an initial stage of a process which would eventually involve a sharing of information and insights across classrooms, the identification of common themes and issues, and the development of some shared practical knowledge' (1985b: 256). Holly has claimed that 'several teachers theorising together influence and shape culture' (1989: 73).

Although the tensions and dilemmas inherent within action research's movement from an individual to community action may never be resolved, Dadds points to current trends of school self-evaluation and development teacher appraisal that have helped to create school cultures which are 'more reflective, open, sharing and mutually supportive ones' (1995: 159) providing potentially fertile soil for collaborative action research. She believes that once action researchers have developed confidence in their ability to be catalysts for change then 'passions and theories could be planted and ideas could be translated into worthwhile action for children' (op.cit.: 142). Holly calls such a process the 'percolation of ideas up and through the school system' (1984: 17). The 'oral craft tradition' inherent within school culture in which 'stories are shared daily among school practitioners' (Anderson et al, 1994: 35) might facilitate the sharing of action research experiences amongst colleagues. Cortazzi (1993) also draws attention to the high frequency of 'naturally occurring narratives' that hold strong 'social validity' amongst teachers.

The potential of others to learn vicariously from the experiences of action researchers (Day, 1999) is firmly supported by the TTA in its drive for developing teaching as a research-based profession. Early reviews of the Teacher Research Grant Scheme by 'independent evaluators' declare that evidence of 'changes and developments ... is not confined to the actual teacher researchers' own practice but involves other staff in the teacher researchers' schools and in local development networks' (TTA, 1997). More recent reports affirm that individual projects 'have the capacity to make a much wider impact' (TTA, 1998) and affect a 'widening circle of interest' inciting the interest of colleagues 'who are not natural enthusiasts' (TTA, 2001b).

In the TTA scheme we can see indications of knowledge distribution and 'cultural action' that occurred in a similar fashion during the PiP Project. It was noted in chapter eight how the newsletters, intra- and interschool network meetings and presentations made between the action researchers from the PiP Project stimulated colleagues to return to their classrooms and try some of the ideas and discoveries for themselves. Rudduck (2001) notes that 'teachers are most likely to be influenced by accounts of research undertaken by other teachers'. Individuals may then 'take away and re-fashion' the new knowledge gained to their own context thus 'making it [their] own' (ibid.). It is perhaps a misplaced criticism for writers like Chisholm (1990) and Weiner

(1989) to berate action research projects for not adopting overtly emancipatory goals for they underestimate the potential for social or 'cultural action' that the kind of reflective critique displayed in this study can generate.

Review

This chapter culminates the main quest of this study which sought substantiation of the claim that action research can enable practitioners to reflect more critically about their practice. The detection of a critical dimension to the practitioners' thinking was authenticated through a corroborative process of relating partial narratives told by the practitioners of how action research allegedly affected their thinking with the literature on leading authors' empirical and theoretical work within the fields of cognition, adult development and action research. A framework of critical thinking was selected, ultimately based upon the work of Mezirow and Brookfield, with which to evaluate the findings from the data.

These findings appear to suggest that the practitioners from this study developed a more critical frame of mind through the conduct of action research. Some of these practitioners also seem to have incorporated a socially critical dimension to their thinking in which emancipatory elements are detectable. The process of perspective transformation brought about by doing action research indicates that practitioners called into question prevailing ideologies of socialised roles and relationships, dominant forces of hegemony and pre-eminent styles of curricular provision. These fundamental shifts in outlook have socio-political implications, firstly in terms of helping practitioners to challenge existing power structures and reified educational norms, and secondly in terms of helping to foster a more egalitarian and educationally appropriate style of practice which ultimately may affect the life chances of pupils.

The evidence also gives the impression that action research has a double-sided empowering impact. Firstly, via its *practical* empowering design which places ownership and control of change in the hands of the practitioners and propels them into a change agency role. And secondly, via its *psychologically* empowering emotional force manifested in an improved professional self-image which motivates and compels

practitioners to imbue their professional development with a self-perpetuating 'critical spirit'. With a renewed sense of professional self-respect and belief in their capacity to bring about change, these practitioners can come together and through 'cultural action' and the 'multiplier effect' collectively work towards some fulfillment of emancipatory ideals. As Zeichner predicts:

While educational actions by teachers within schools cannot solve all of ... societal problems by themselves, *they can contribute their share to the building of more decent and just societies* (1993a: 15, own emphasis).

PART FIVE

CONCLUSION

CHAPTER TEN

REVIEW OF FINDINGS

(WITH SOME RISING ISSUES)

Study Review

The findings from this study suggest that action research positively affects the quality of practitioners' thinking. The evidence supports other testimonies from action researchers to be found in literature which attest to the beneficial changes in thinking brought about by conducting action research. This research study has inspected such claims more closely by investigating the nature of these transformations in 'pedagogical intelligence'. To assist this process, an examination has been made of the thinking process within action research in an attempt to evaluate its suitability as a strategy for promoting cognitive development and, more specifically, critical reflection. Key characteristics have been traced and grounded within various conceptual models of cognition and critical thinking drawn from a variety of sources within the fields of the cognitive sciences and adult development. By relating a framework of main attributes of thinking in action research with research evidence and leading hypotheses, a theoretical rationale of action research as a tool for developing practitioners' thinking emerged. The implication behind this theoretical rationale is that in adopting action research teachers can address and integrate the three domain needs that Gold & Roth (1993) maintain must be met to ensure professional effectiveness, that is the psycho-social, the emotional-physical and the personal-intellectual.

The theoretical framework also provided an exploratory and explanatory mechanism with which to interrogate the 'themes of thinking' that arose from the initial data analysis. This initial analysis involved a data reduction process which helped to organise the research material into a manageable cluster of data themes. Five themes of thinking were synthesised from the practitioners' narratives via pattern analyses that

identified common features and 'look-alike' categories. By linking these themes of thinking to major theoretical constructs in the broader literature, the full significance of action research's impact on the participants' thinking could be ascertained and any critical facets determined.

It appears that action research made a particularly big impact in terms of helping to *focus* the practitioners' thinking. The findings indicate that the action research method can stimulate neuronal activity so that the brain is brought to a state of attentiveness about specific aspects of practice. Major theories that venture to explain the 'mechanics of the mind' give credence to this purposeful consciousness-raising effect of action research.

The impact of action research can also be seen in procedural terms in that its strategy seems to provide coherence to thought processes. This study reveals how action research can operate as a valuable mental and practical tool for helping busy practitioners to structure and work through the confusing array of problems and dilemmas which daily beset them. This *structuring* feature of action research is consistent with some of the leading theories of cognitive development which suggest an innate tendency to categorise experiences into a more regulated order.

The findings also signify that the experiential and self-generating nature of action research can promote more *meaningful and durable reflection*. The process of heightening awareness and inciting deeper levels of thinking plays a role in helping practitioners to embark upon a more *critical review* of their educational provision. The evidence from this study shows that with action research, practitioners' thinking can venture beyond affirmation to a more profound degree which calls into question ingrained convictions and gives rise to alternative perceptions about various aspects of practice, such as children's developmental capabilities or how to perform appropriately in their role as a teacher. This course of '*assumption hunting*' within action research articulates with key hypotheses on critical thinking and adult development. Some of the findings divulge that a more critical orientation can stimulate *perspective transformations* entailing a comprehensive reappraisal of paradigmatic educational outlook.

Finally, action research appears to stimulate an emotionally empowering process. This impact is considered valuable for the way in which it seems to have affected how practitioners perceive themselves professionally. The findings exhibit that the empowering method of action research, which gives ownership of change to the teacher, along with its intrinsic value and the positive gains of the research process, can raise morale and self-esteem as well as self-awareness of practitioners' capacity to transform practice. This renewed sense of *professional confidence* has important manifestations in terms of practitioners' proclivity for improving practice. This study implies that as practitioners are empowered by action research to become *change agents* and to reflect critically on their practice, they acquire a psychological boost, and their revitalised professional self-respect engenders a *self-recurring propensity* to work continuously at advancing children's educational experiences.

A key debate discussed in this dissertation has been the emancipatory interpretation of critical reflection. It has lent support to those who cast doubt on the challenge posed by authors such as Carr & Kemmis to address imbalances in society through the conduct of critical action research. In accepting an alternative vision of emancipatory action research and critical thinking, this study has evaluated the practitioners' thinking in terms of their capacity to examine inherent value systems and to reconstitute unfounded beliefs via the discovery process of action research. Whilst it may be true that none of the practitioners in this research study opted to focus on specific emancipatory issues nor purposefully drew upon academic theoretical frameworks to articulate their thinking, this investigation signals that practitioners can develop, to at least some level, a socially critical awareness of existing power structures and relationships and can alter these structures in accordance with more enlightened and egalitarian principles.

This study's support of action research's capacity to generate *socially critical reflection* is premised upon the following arguments: that ideological critique is intrinsic to practical reflection; that engagement with notions of equity and justice can thus occur without critical theorems as practitioners naturally challenge social norms and realities; that such challenges are likely in any case, given that practitioners are motivated by emancipatory intentions via the moral purposes inherent to teaching; that practitioners may develop more explicit emancipatory interests as they work within the action research spiral; that individual transformations in practice have immediate social

consequences since they make real differences in pupils' educative experiences; that individual transformations in practice have political implications since they indirectly affect pupils' life chances; that individually enlightened practitioners can thereby effect system changes and cumulatively bring about a more egalitarian society via 'cultural action'. In this way action research can play a 'small' but 'important part' in the broader struggle 'to bring about greater social, economic, and political justice' (Zeichner, 1993b: 215).

The support for action research as a favourable tool for professional development and a suitable means of enhancing the quality of educational practice is, however, viewed within a context of some unresolved issues related to this research study. These issues correlate with common dilemmas prevalent in the literature regarding the conduct of action research and raise questions about the feasibility of its success. A brief review of some of these key debates helps to place the positive findings from this research into the reality of the educational world. This contextualisation of the findings within a broader background need not detract from the real and valuable difference action research has made in the everyday work of the twenty-five participants from this study. That action research does seem to affect favourably the quality of these practitioners' thinking has important implications for what is possible when other practitioners undertake to improve their practice through action research.

Some Unresolved Issues

a) The Impact of Action Research on Pupils' Development

Edwards & Rose have written: 'In the final analysis, the effectiveness of educational action research has to be judged in relation to its impact on the learner, be they children or adults' (1994: 44). Whilst the purpose of this study has been to demonstrate the benefit of action research on adults, it might be said that a major limitation lies in the little it has offered in terms of demonstrating the ways in which children have benefited from their teachers' enhanced thinking. This absence is partly due to the various obstacles of demonstrating a clear link between alleged transformations in practitioners'

consciousness and visible improvements in children's learning. Some of the problems of causal inference have already been highlighted in chapter three.

The difficulties in showing cause and effect was a particular dilemma for the PiP Project team, the members of which often debated the problems of demonstrating the impact of action research on improvements in educational quality that ought to be apparent in the progress made in the children's development. One of the arguments put forward questioned the necessity of producing measurable or tangible results of pupils' progress resulting from action research. Many followers of action research, and within the field of education at large, emphasise the significance of the educational process rather than its products. Elliott, for example, draws attention to the need to consider the 'intrinsic qualities' rather than the 'extrinsic products' of the learning process and suggests that when teachers investigate the quality of their provision they should focus on 'establishing certain conditions which *enable* rather than *produce* understanding' (1985b: 250, original emphasis). Moreover, given the nature of action research and the need to ensure ownership was held by the practitioner, it was inappropriate to ask the practitioners to provide empirical 'proof' that their research had improved the quality of their practice; 'proof', that is, beyond their own observations and beliefs that the children were benefiting from their altered perceptions. Attempts to monitor improvements might seem redundant to the busy practitioner unless it was deemed by them to be a valuable exercise for the purposes of their investigation. It is not their intention to prove causality but to transform practice (Feldman, 1994).

King & Lonquist, whilst acknowledging that 'it is not sufficient to demonstrate that action research invigorates teachers or makes them feel professionally empowered; the bottom line rests with student learning', they are aware of the 'unavoidable problems of demonstrating causation in the messy world of practice' (1994: 19). They go on to say 'notwithstanding the growing research base that suggests the merit of action research, the prospects of definitively "proving" its value in both practice and theory remain daunting' (ibid.). In any case, as Elliott points out, 'the quest through "educational research" to link teacher performance variables causally with pupils' learning outcomes, has been inconclusive' (1993a: 35).

This study thus shares in the pitfalls of many action research (and other research) studies in their attempts to verify improved quality of learning on the part of the pupils. Zeichner's (1998) broad-based study of about seventy action researchers, for example, yielded very little evidence of 'improved student learning'. However, many of the teachers in Zeichner's study 'reported improvements in pupil attitudes, involvement, behavior and/or learning as a direct result of specific actions taken in [the] ... research' (op.cit.: 20). As with Zeichner's study, the connections made here between adult development and improved children's learning are essentially by implication and by assumption, but are bolstered by reports from the teachers of the benefits to the children in their care (even if such declarations are only of 'perceived improvement') (King & Lonquist, 1994). Sources for these data include the interviews as well as the questionnaires from the PiP Project in which the participants were asked to record any advances in the children's learning. Similar claims to those from Zeichner's study were made of the gains brought about by the action research in terms of children's development.

The evidence presented in this study of practitioners' changed perceptions of their role, altered ways in which they interact with the children, and revised knowledge of children's capabilities all seem to have been translated into affirmative action. *All reported on some kind of practical change in their provision which affected the actual learning opportunities given to children.* Belinda, a nursery nurse who looked at outdoor play makes a case that

"the children have benefited in my focus area by being given much more choice in their play, they have more independence in that area and are given the opportunity to plan their own play, to extend their play, to take ownership on where they want to go and who they want to involve in that area ... We have observed more interactions amongst the age groups since the variety of play has differed due to more productive planning" (BR/SO/Q/4).

As another example, Angela who worked with Reception children talks of the impact of the research on the provision for specific children who were observed during her collaborative action research project:

"We observed Vanessa's over-dependence on her brother which led us all to support her in becoming more independent by ensuring they are often engaged in separate activities ... [and] ... we observed Michele's dominance and 'mothering' of Dominic and his inability to extricate himself from this constricting role. Both are being helped, verbally and through activities, from other relationships ... Dominic's mother had observed the same behaviour so was re-assured when we confirmed it and made explicit our strategies for dealing with it" (AL/HO/Q/4).

By revising their planning and creating new activities in the classroom based on findings from the action research, many of these practitioners testify to improved language skills, increased collaborative play, extended concentration, developed imaginative skills and more independent learning on the part of the children in their care (for example, *KB/CR/Q/4; SHir/CR/Q/4; NT/SO/Q/4; SR/CR/Q/4; TP/CR/Q/4; MT/HO/Q/4; CH/CR/Q/4; AE/CR/Q/4; KH/CR/Q/4; AH/CR/Q/4*).

b) The Potential of Action Research to Generate Critical Reflection in all Practitioners

The problems of action research remaining at a superficial and technicist level is well documented in the literature and no doubt this is what has led some supporters to categorise action research into technical, practical and critical forms. It has also been accused of being 'mere therapy' (Hargreaves & Fullan, 1992: 12) and 'self-indulgent' (Hargreaves, 1994). Somekh has similarly warned against action research becoming a therapeutic process of 'self-exploration and personal growth' rather than rigorous research (1995: 348).

There is, however, increasing support within action research literature that practitioner research might simultaneously contain personal and emotional as well as technical and practical elements and that 'classification creates a hierarchy that devalues practitioners' (Zeichner, 1993b: 201). As suggested in chapter eight, there are a growing number within the action research community who see the 'critical as embedded in the technical and practical' reality of the classroom (Zeichner & Gore, 1995: 20). Noffke also talks of how technical, practical and emancipatory interests are 'seldom one-dimensional, but rather interconnected and all essential to educational practice' (1995: 2). Elsewhere she writes with Brennan that every action research study has 'its technical (how to),

practical (what to), and critical (why) dimensions' (Noffke & Brennan, 1988: 11; also Dadds, 1993b; Elliott, 1991a). Rather than simply making judgements about the level of insight achieved, all benefits acquired from undertaking action research are considered to be of equal value to meet the various needs of the teacher. Technical or affective advances equate with more critical evaluations of daily practice in the mind of the multi-purpose driven teacher. The judgements made here of practitioner's progress thus ought to be viewed in the light of the evidence which discloses both personal and professional improvements claimed by the participants.

Whilst the therapeutic, pragmatic or localised benefits of action research are recognised by this study, its main purpose nonetheless has been to evaluate whether these practitioners incorporated a more critical dimension to their thinking. It is possible that the work of a few practitioners in this study might be construed by some to be more technician than critical in character. Two in particular seem to have retained a relatively mechanistic approach to their work and their thinking did not venture much beyond a raised awareness of their chosen focus and some small challenges to prior assumptions. It could be said that for them action research was a more 'therapeutic' than critical journey (although one of these then moved on to another focus which elicited a more extended critical dimension to her thinking). For many others the increased awareness brought about by action research extended to significant revisions in presuppositions about vital aspects of their practice and stimulated a critical style of thinking. But it is acknowledged that only six of the twenty-five practitioners from this study were determined to have undergone the pervasive transformation in consciousness that is upheld by this study to be the 'ideal-typical' of critical thinking.

It should be recognised, however, that the evaluative process of the participants' thinking is effectively an imposed theoretical analysis of data interpretation. Within this framework, perspective transformation has been portrayed as the main aspiration for critical thinkers, whilst the process of converting prior convictions is considered an integral part of critical reflection. The evidence indicates that *every* participant in this study underwent some form of critical enlightenment through the revision of at least one incorrectly held assumption about aspects of their practice. Action research might only stimulate critical insight into just a small element of a teacher's value system, but that change can be said to be crucial and worthwhile. As one action researcher has put it

elsewhere ‘there hasn’t been a huge change, but the small shifts are really important’ (quoted in Askew & Carnell, 1998: 156).

Since the empowering process of action research has been championed by this study to be as important as discernible cognitive changes, this is significant in the light of affecting practitioners’ psychological *disposition* towards a critical frame of mind as they become imbued with a ‘critical spirit’. Hargreaves contends that

once this *stance* of critical reflection begins to be taken in teaching and teacher development, other actions and consequences flow from it (1995a: 27, own emphasis).

He goes on to say that ‘increasing competence and mastery both fuels and is fuelled by teacher desire’ (op.cit.: 27). Action research is intended by its advocates to be integrated into practice as a continuous learning cycle of investigation and self-reflection. That some of these practitioners extended the level of this critical frame of thinking to a transmutation in educational perspective attests to the far-reaching *potential* of action research to generate perspective transformations in how practitioners confront their practice. Brookfield (1994) points out how Mezirow considers perspective transformation as more likely to entail incremental movements rather than a single dramatic shift. Indeed, Mezirow talks in terms of a ‘series of transformations’ as being ‘a more common pattern of development’ (1981: 7). Brookfield’s research supports this idea and he describes the ebb and flow of critical reflection as

a rhythm of learning which is distinguished by evidence of an *increased* ability to take alternative perspectives on familiar situations, a *developing* readiness to challenge assumptions, and a *growing* affective tolerance for ambiguity (op.cit.: 211, own emphasis).

Evidence from the Teacher Training Agency’s funded teacher research projects scheme reveals that much of the research is ‘cumulative’ and builds upon previous projects ‘moving the work forward progressively’ (TTA, 1999b). One of the pioneering writers on adult development considers that adopting a more personal orientation, which may later develop into a more critical inquiry, is not only more likely but is an acceptable route for practitioners to take (Knowles, 1993). Knowles writes that ‘individuals start with themselves when reflecting before

encompassing the social, economic and political contexts' (op.cit.: 87). There is also the evidence highlighted by Marilyn Johnston that shows how 'given support and encouragement' teachers can 'get better at thinking reflectively' (1994: 10). Perhaps practitioners deemed by this study to have confined changes in their thinking to 'mere' revisions in some assumptions might, in other circumstances, undergo a more paradigmatic transfiguration in their mindset that could help them in their work to provide better quality of provision throughout their practice. Bottery contends that in action research

a technical-rationalist agenda can develop into an "interpretive" one fairly quickly; after all, good teaching demands an awareness of others' understandings and needs; and any research which begins to view issues from a number of angles, particularly within education, invariably begins to point to issues of a critical nature (1997: 288).

c) *The Sustainability of Action Research*

The problem of sustaining action research has long been debated within action research literature. The difficulties in maintaining the impetus of action research and the support network established by the PiP Project are the same as those encountered by other external projects (for example, Stevenson, 1995). At the end of the interviews the twenty-five practitioners were questioned on the likelihood of their continuing to practice action research and a few were very definite about continuing as chapter nine has indicated. Their convictions are best expressed in the words of one practitioner who declared that action research had "*become part of me now*" (FN/SO/IV/10). Most of the others expressed a hope and a desire to carry on. Unfortunately it was not possible to validate these claims once the external support of the PiP Project was withdrawn.

Another serious question related to the issue of sustainability considers whether the critical changes in thinking have endured in the minds of the participants. Once again, circumstances have not made it possible to follow up the experiences of the research participants in an attempt to evaluate the longer-term impact of the research on their professional lives. Nonetheless it is worth noting that a significant number of those interviewed were relating experiences that were almost a year old and it was clear that time had not erased any valuable lessons learned or transformations in perspective. It is

reasonable to assume that these practitioners' 'consciousness and practices in school were *irreversibly* changed' as claimed by teachers in another action research study (Dadds, 1995: 173, own emphasis). Noffke & Zeichner (1987) cite evidence that suggests teachers maintain an action research stance towards their work, and an extended project by Day (1995; 1991) has traced the development of one teacher five years after his action research experiences which provides some indication of its sustainability. Certainly, the evidence from this study suggests these practitioners were profoundly affected to various degrees and cognitive schema altered by their experiences of action research.

Perhaps the main point here is not so much whether their altered structures of consciousness have been maintained, but whether a critical frame of mind that action research may have helped to generate has endured. The nature of action research necessitates an endlessly questioning frame of mind which stimulates perpetual revision of existing frames of reference so that even revised assumptions are revisited and evaluated in terms of their 'fittingness' with reality. The participants, particularly those practitioners who underwent a perspective transformation, all seemed to have developed at least some aspects of the 'deeply questioning attitude and desire to understand' claimed by Desforges et al (1986: 72) to be required by effective action researchers. The hope remains that their experiences have at least planted the seed for action research to become part of a 'living practice' where action research is undertaken not for external reward but for intrinsic satisfaction (Carson & Sumara, 1997), in a self-propelling drive to improve practice.

d) Some Limitations of the Action Research Method

Whilst this dissertation has attempted to offer credence to the belief that a professional development strategy such as action research can bring about 'personally meaningful, educationally defensible and socially justifiable practices' (Thiessen, 1992: 102), it is also conscious of not presenting an 'uncritical glorification' (Zeichner, 1993b) of action research. Much has been written of the dangers of superficiality, the inherent tensions and paradoxes of action research, the problematics of institutionalisation and the practical constraints of conducting action research (for example, Cohen et al, 2000

Stevenson, 1995; Johnston & Proudford, 1994; King & Lonquist, 1994, 1992; Somekh, 1991b; Vulliamy & Webb, 1991; Wallace, 1987; Elliott, 1985b; Holly, 1984). Amongst other things, it is accused of being 'slow, time-consuming and costly' with 'unpredictable outcomes' (Hargreaves & Fullan, 1992: 12). Hargreaves has warned that

excessive beliefs in the transformative power of personal knowledge and personal change can lead to pious grandiosity ... or, when personal change is constantly frustrated by organisational constraints, to intolerable guilt (1994: 75).

Hargreaves & Fullan also contend that 'critical reflection will not take place if there is neither time nor encouragement for it' (1992: 13) and call for the need to understand and cater for teachers' 'ecological context' which requires support structures, appropriate resources and positive leadership. Dadds makes a neat summary of some of the demands made on the practitioner by an action research style of professional development:

The journey of professional growth into new and better practices is often unpredictable; often non-linear; often emotional as well as cerebral. It demands the capacity and strength to ask questions; to analyse and interpret feedback; to discipline the emotions generated by self-study; to change established practices in the light of new understanding; to remain interested and professionally curious (2001: 55).

Data from both my own interviews and the PiP Project questionnaires have yielded parallel evidence to that existing in the literature of the problems faced by practitioners conducting action research. These problems are either emotional or practical in nature. However, the difficulties and trials encountered by action researchers ought to be situated against a background of broad achievement. Somehow these practitioners found the time and energy, commitment and enthusiasm to carry out the research and contend with the barriers or pitfalls they chanced upon. Many of those interviewed talked of action research in terms of "*worthwhile time*". Support within schools, at least at a senior level, was not as difficult in this project as some studies have encountered perhaps because the Project was initially endorsed at the level of the Local Authority. Official sanctioning eased the accommodation process of time for meetings as well as research and reflection. Formal endorsement of the research helped to provide contexts for the researchers to present their work to colleagues in most of the

settings increasing opportunities for a 'snowball' effect in which other practitioners might be influenced and inspired by the products and method of action research.

e) *The Feasibility of Action Research as an Established Form of Professional Development*

Despite the potential for the 'snowball' effect of action research, Reid et al have written that 'the teacher-as-researcher movement has spawned many thinking and more effective teachers, but not many thinking schools' (1987: 178). Hancock observes that despite what appears to be a 'gathering teacher research movement', 'the great majority of classroom teachers remain uninvolved' (2001: 119). The gradual permeation of action research into normal educational practice stimulated by a groundswell of motivated and committed action researchers may yet still be a utopian goal. Holly has written that

the optimistic belief that groups of (action-researching) teachers can cumulatively and over time radically change their institutions involves, at the very least, a giant act of faith (1984: 12).

Certainly the revolutionary transformation of society via educational means envisaged by the critical pedagogues and authors such as Carr & Kemmis has not yet revealed itself to be realistic. Even the less lofty vision of Stenhouse (1975) and Elliott (1991a) of teacher research spreading itself as a 'counter-culture' within schools has not been realised. Stenhouse himself acknowledged that it would take a 'generation of work' for practitioner research to move beyond 'the enthusiastic few' (1975: 142). Dadds suggests a reason for this: 'Collaborative reflective practices are not yet sufficiently embedded in the craft culture of the teaching profession for them to offer the mass resistance of which Elliott dreamed' (1995: 156). Presently most of the 'solace, support and stimulus' for action research comes from externally sponsored projects or award bearing courses (Dadds, 1995: 158; also Elliott, 1991a).

Hancock (2001) offers some reasons why teachers may be reluctant to become researchers. He points, for example, to the understandable 'professional preoccupation' with maintaining classroom order and with coping with the 'demanding', 'illogical' and

'unpredictable' nature of teaching which absorbs much of teachers' 'energy and creativity'. He also draws attention to the marginalised sense of professional self-worth and personal confidence in a climate of imposed reform, coupled with a general unfamiliarity with the 'culture of research' which create further disincentives. He further raises the important point that classroom research may intrude upon teachers' ability to give full attention to the children's ongoing needs thereby potentially conflicting with good practice. Sue Johnston (1994) is another writer who has highlighted similar barriers that prevent teachers from researching their own practice and questions whether it is a 'natural process' for teachers to undertake.

Practitioners from this study have offered their own insights into the likelihood of teachers embarking upon an action research form of professional development. Some strong opinions were expressed during the interviews about context and circumstances being conducive to practitioners' potential receptivity in doing action research. The majority considered, for example, that newly qualified teachers ought not to undertake action research since almost all felt that some level of confidence and experience was a helpful prerequisite. A large proportion also believed that certain personal commitments might inhibit practitioners from giving appropriate time or concentration to such a challenging task. Other potential hindrances expressed included personal fears and misunderstandings about the potential workload; a general unwillingness to take on something new, or a parochial stubbornness about changing practice; a general insecurity about questioning themselves or else an introverted nature that would have difficulty in communicating and relating to colleagues. There were also some interesting comments about the lack of 'tangible rewards' which raises questions about the intrinsic motivation that appears to be necessary for practitioners to take on action research.

Questions during the interview relating to the motivations behind these practitioners' agreement to take on action research reveal probable preconditions that might be necessary in practitioners' attitudes and characters before action research can realistically and successfully be carried out. These practitioners were willingly to join the PiP Project through a belief that it would be of practical help to their practice, a wish to improve that practice and a personal desire for new challenges. The participants were also asked to consider particular characteristics that they believed might have eased

them in their role as action researchers or that might be helpful for action researchers in general to have. From these data, a picture emerged of the 'ideal action researcher'; one who is "*committed*", "*motivated*" and actively "*seeks new challenges*", who is "*willing*" to improve practice and "*openminded*" to change, prepared to be "*reflective*" and "*self-critical*", who is "*patient*" but "*enthusiastic*" and with at least some level of "*self-confidence*". Some of these attributes relate to those proposed by Dewey (1933) as necessary for critical reflection: openmindedness, wholeheartedness and responsibility. They also closely mirror the findings from Nias et al's (1992) study on teacher development.

Despite the many deterrents that might impede teachers' willing and enthusiastic adoption of action research, Dadds nonetheless gives grounds for 'hope and optimism' that 'collaborative action research may, indeed, become one of the dominant critical school improvement methodologies of the future' (1995: 159). Government initiatives such as the DfEE's Best Practice Research Scholarships and recent developments within the TTA suggest that Dadds' and others' vision for action research is a more likely prospect than previously imagined. The establishment of The Teacher Research Grant Scheme and School Based Research Consortia Initiative reflect the TTA's declared intention of 'supporting the Government in its drive to promote teaching as a research and evidence-informed profession as a means of improving teaching and learning' (TTA, 2001a). Their aim is to assist 'individual teachers in carrying out small-scale high quality action research projects' but emphasise the TTA's commitment to 'wide dissemination' (TTA, 1998) and 'generating national interest' (TTA, 1997). The instigation of these funded teacher research projects signals the growth of government sanctioned practitioner research.

It may be that official championing of an action research style of professional development may be the only way in which this largely grass-rooted movement can extend itself to a significant level. Although centralised endorsement of action research is likely to open up a realm of paradoxical problems inherent within changing practice through centralised means (not least the dangers of relinquishing fundamental principles of ownership and the dangers of technicism), the gains that could be made through government backed action research (if applied appropriately) ought not to be discounted.

Moreover, since action research is a 'long term investment' (Zeichner, 1998), some patrons of action research contend that continuous external support is a conditional necessity for maintaining the impetus and effectiveness of action research (for example, Dadds, 1993b). There is also the belief that 'outsiders' are crucial in order to provide an 'alternative discourse' and to help to generate 'ideological critique' (O'Hanlon, 1996; also Day, 1995, 1993b). According to Bottery action research cannot 'deliver the pot of gold at the end of the professional rainbow' without a 'facilitating framework' of support from the government, teacher education and teachers themselves (1997: 290). He goes on to say 'given the right conditions, it could be one of its primary colours' (ibid.).

Hargreaves offers the opinion that in creating a process that 'respect[s] teachers' professional discretion and enhance[s] their decision-making capacity' and which stimulates 'empowering school cultures and those involved in them to develop changes themselves on a continuing basis', it may be necessary to 'preemptively impose new structures' which will create the framework necessary to ease the collaborative learning process which generates both cultural and structural change (1994: 260-61). Within the educational change process, Fullan talks of the need for 'simultaneous top-down bottom-up influence' in which centralist and decentralised elements work together in a balanced and effective way (1993: 38). Elsewhere with Hargreaves, he writes of the need to have both a common 'vision' and the teacher's 'voice' with neither privileging the other since

a world of voice without vision is a world reduced to chaotic babble, where all voices are valid and where there are no means to arbitrate between them, reconcile them or draw them together ... A world of vision without voice is equally problematic, however. In this world where purposes are imposed and consensus is contrived, there is no place for the practical judgement and wisdom of teachers ... [thus] a major challenge for professional development and educational change is to work through and reconcile this tension between vision and voice (Fullan & Hargreaves, 1992b: 5-6).

The 'longstanding dilemmas' and 'tension' between agency and structure (Cohen et al: 2000; Askew & Carnell, 1998) would no doubt continue to cause problems should government assisted research-based practice be ratified. The hazards of convincing

practitioners of its value and minimising the potential pitfalls of reducing action research to a technicist exercise will have to met if and when the opportunity arises.

So whilst many barriers exist that might inhibit action research's viability as a conventional form of professional development, and whilst government intervention may be a beneficial proviso to help initiate, extend and maintain action research (albeit this may in turn create further obstacles), it is fair to say that it has real prospects as an emerging method for enhancing the quality of practice through the contributing work of individual professionals. The growth of the TTA's work from isolated grants to broad-based consortia projects are promising signs of future possibilities for action research as an embedded part of professional life. Rudduck (2001) refers to the teacher research movement as 'building up slowly over the years, gradually gaining recognition and national legitimacy' and calls it '*a quiet revolution*' (own emphasis).

CHAPTER ELEVEN

FINAL COMMENTS:

THE POWER OF ONE

If teachers are skilfully to scaffold children's learning by providing appropriate resourcing, to apply timely interventionist strategies and to assess children's proficiencies, they need to have a conscious awareness of their own role and the consequences of their actions upon the educational process. By articulating their implicit belief system, by carefully examining any pre-judgements made of children's aptitudes and by investigating the nature of their interactions, teachers are more likely to develop a pedagogic role that is finely tuned with children's developmental needs and encompasses more proactive expectations of children's learning potential.

Every single practitioner in this study reexamined in some form and to some extent their pedagogic role. The research helped them all to reflect on, for many to alter and, for some, to fundamentally transform the way in which they observed, perceived and interacted with children. Their more critically reflective approach to practice led them to undertake a more supportive and interactionist rather than didactic teaching style, to broaden their agenda to incorporate the child's perspective, to give prominence to the processes of learning as well as the products, and to appreciate the value of observations in revealing children's real capabilities instead of simply surmising them. By investigating their own practice, these practitioners were empowered to engender more worthwhile provision for the children in their care.

This study has emphasised the fundamental importance of individual practitioners effecting improvement in their own practice and endeavouring to ensure they provide experiences that are educationally sound. Fullan is a firm believer in the power of personal change agency to affect educational transformation and this dissertation supports his notion that individual growth has been an 'undervalued source of reform'

(1993: 35). Fullan contends that 'the individual educator is a *critical starting point* because the leverage for change can be greater through the efforts of individuals' (1993: 12, own emphasis). He draws on the work of Senge who asserts that

organisations learn through individuals who learn. Individual learning does not guarantee organisational learning. But without it no organisational learning occurs (1990: 139).

Askew & Carnell are amongst those who also believe from a 'pragmatic conviction' borne out of experience that 'group, organisational and societal change comes about from individual change' (1998: 1). One of the early pioneers of the teacher research movement envisaged individual teachers gradually reforming and improving learning in schools (Stenhouse, 1975).

If we accept constructivist models of learning and adhere to principles within humanist psychology that operate on an assumption that humans retain a powerful drive to make sense of their experiences along with an inclination towards self-improvement (Candy, 1991; Tennant, 1997); if we agree with Day's belief that 'teachers have the capacity to be self-critical' (1988: 339); if we add to this the contention that 'people's belief that by their own efforts they can affect their futures' which then provides 'a form of moral and civic courage that fuels the fires of change' (Brookfield, 1993: 231); and if we accept Giddens' more fluid account of agency and structure whereby social systems are conceived as 'inherently transformational', more as 'internal' than 'external' properties and being constituted and reproduced by the 'conduct of individual actors' (1984: 17, 24, 25); then the possibilities of the 'power of one' seem feasible.

In making this claim for the individual, I do not mean to discount the significance of social relationships or institutional contexts. I agree with Kemmis & Wilkinson who envisage practice as 'enacted by *individuals* who act in the context of history and in ways constituted by a vast, historical web of *social* interactions between people' (1998: 31, original emphasis). Nonetheless I support Mezirow's claim that

we must begin with individual perspective transformation before social transformations can succeed (1990c: 363)

and Fullan's conviction that

in the final analysis it is the actions of the individual that count (1991: 77).

This research study thus serves to affirm my own belief that individuals can make a difference. During the course of my research I have witnessed some significant adjustments in how practitioners think about their practice. This has enabled me to see how individual acts of consciousness have the potential to favourably affect children's formal educative encounters. At the same time, the practitioners' discoveries have enriched my own understanding of children's learning and how best to promote it. Through 'cultural action' their experiences should help me to become a better teacher myself. Moreover, the arguments offered here for supporting action research reflect my own personal journey as I have tried to understand how this method of professional development works in practice, particularly its emancipatory intentions. My initial excitement in discovering action research as a teacher, along with a conviction that it offered a powerful means of making children's educational experiences both worthy and just, has led to some tempering in my fervour as I have come to recognise that any revolutionary designs will need to be accommodated within a more evolutionary framework of gradual and minor changes by single practitioners. This more 'liberal democratic' outlook now seems to me to be a more likely prospect if action research is to have an integral place in the educational world. I agree with Dadds that

it may be sufficient, laudable even, that [action researchers] make some small improvements to provision for each generation of children for whom they care as a result of their research. *There will be many who benefit* (1995: 158, own emphasis).

Although it is necessary to be realistic about the trials of conducting action research and the likelihood of it becoming an established form of practice, it is hoped that this study has helped to provide some credibility for supporting action research to become an integral part of teachers' working life. The development of quality in education is undoubtedly a most challenging enterprise requiring a sophisticated and flexible response to confront adequately the conflicts and uncertainties of the educational world. With action research, practitioners can become enterprising, independent learners and self-confident, critical thinkers who consciously and continuously work towards improving the quality of their practice. Through action research they are provided with opportunities to develop their powers of understanding and are actively able to construct

meaning in their educational practice, rather than passively to reproduce it (Blenkin et al, 1992). As they develop a more critical perspective of their practice, they continuously refine the art of becoming 'educational connoisseurs' (Eisner, 1998) and are empowered to promote more egalitarian and just practices. If teachers are learning, thinking and feeling in this way, it is possible that their pupils will do the same, fulfilling their developmental promise and maximising their educational prospects to help them to flourish in the society in which they live. As Fullan contends: 'Teachers must succeed if students are to succeed, and students must succeed if society is to succeed' (1993: 46).

Perhaps the power and potential of action research is best expressed through William James whose words bring to mind an image of pioneering, self-constructing practitioners cumulatively advancing the quality of their pupils' day-to-day educational experiences:

I am done with great things and big plans, great institutions and big success. I am for those tiny, invisible loving human forces that work from individual to individual, creeping through the crannies of the world like so many rootlets, ... yet which, if given time, will rend the hardest monuments of human pride (quoted in Noffke, 1995: 1).

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APPENDIX A

SEMI-STRUCTURED INTERVIEW TO ACTION RESEARCHERS

OUTLINES OF THEMES AND QUESTIONS

The following statement was read before the commencement of each interview (and recorded):

I am going to ask you to talk about the action research you have been doing as part of the Goldsmith's Project. This interview is to form part of the data for this Project, as well as for my own personal research (for the purposes of my PhD). Some of the questions are based upon issues that have been discussed previously between ourselves during the course of the action research. However, this interview will also cover some new ground as well. In agreeing to participate in this interview, I am asking for your consent to use your name and to quote from your responses in my thesis, including from any other data material generated for your research and the PiP Project

Thinking

What has been the impact of the action research on your thinking?

Some practitioners (including yourself - if relevant) have said that the research has challenged their assumptions. Do you think this is true of your own experiences/Can you describe what you mean by this?

Many of the practitioners (including yourself - if relevant) have said that the research has made them 'more focused', 'more aware' or 'more conscious' of their focus area. [If this is true of you] can you describe what you mean by 'more focused', 'more aware' or 'more conscious'?

Do you think that you 'think differently' about anything now, since doing the research?

Do you think the action research has generated new thoughts?

Do you think the action research has generated old thoughts?

How does your post-action research practice compare to your pre-action research practice?

Could you describe the process of your thinking when you did the action research?

Do you think the action research had a retrospective impact?

What do you understand by the term 'critical thinking'?

Has the research helped you to think critically?

Did anything help you to articulate your thinking?

Did discussions with the research partner affect your thinking?

Feelings about action research

What words would you use to describe some of the feelings you experienced when doing the action research?

Some of the practitioners (including yourself - if relevant) have said that the research has made them feel 'more confident'. Does this relate to your own experiences/Can you describe what you mean by this?

Wider impact of action research

During the research, did you find yourself thinking about issues you might not normally think about?

Did the action research make you consider issues outside your immediate practice?

Did the action research lead you to question the internal organisation of your school?

Did the action research lead you to question government policy?

To what extent do you feel you are able to justify your practice since doing the action research?

Do you feel the action research has made you feel more accountable?

Biography and action research

Why do you think you were willing to become involved in the project?

Do you think there are practitioners who might not be so willing?

What characteristics do you think are important for someone to have in doing action research?

Do you think there are any characteristics that may inhibit someone from doing action research?

Do you think there is anything about your own character that has helped you to do action research?

Do you think practitioners need to be 'ready' to do action research?

Biography and practice

Is there anything about your character or personal background that may have affected how you approach your practice?

Why did you choose to work with young children?

Views on reflective practice

What do you understand by the term professional development?

Has your understanding of the term professional development changed since doing action research?

How would you describe a reflective practitioner?

Do you think your training helped you to become a reflective practitioner?

General

Most practitioners (including yourself) have commented that time was a problem. Why do you think there was not enough time?

Are there any other factors that you feel inhibit the action research process apart from lack of time?

What do you think would be the ideal circumstances for doing action research?

Is there anything else you would like to tell me about your experiences of doing action research?

Are there any other comments you wish to make?

How did you find the interview?

Janet Rose
December 1995

APPENDIX B

[For ECERP Office only:

Date received

Ref no.:.....]

Goldsmiths' College, University of London

Department of Educational Studies

**EARLY CHILDHOOD EDUCATION RESEARCH PROJECT
Principles into Practice: Improving the Quality of Children's Early Learning**

Evaluation Questions for Action Researchers

We fully appreciate your cooperation in completing this questionnaire. We would also like to point out that data gathered in this questionnaire will be treated confidentially and presented only in summary form without the name or affiliation of the respondent.

Feel free to continue on separate sheets if necessary.

Please return the completed questionnaire to your research partner.

Name of respondent:

Status:

Name and address of education institution or group:

.....
.....
.....
.....

Telephone number:

Age range of children catered for:

Q1	Why did you choose to be involved in an action research project
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- Q2 What did you think action research would involve?
- Q3 Has the action research deepened your understanding of the aspect of your practice that you chose to focus on? If so how?
- Q4 Has your practice in the focus area developed as a result? In what ways?
- Q5 Have you benefited personally from being involved in action research?
- Q6 If you were asked by a colleague about being involved in action research what would you say were:
- (i) the main advantages?
 - (ii) the main difficulties?
- Q7 How do you think other staff or your workplace as a whole have benefited from your involvement in action research?
- Q8 Have children benefited? Give examples.

Q9 Have parents benefited in any way?

Q10 In what ways have you been involved in communicating your action research:

(i) within your workplace?

(ii) beyond your workplace?

Q11 In what ways did your research partner support you?

Q12 In what ways could your partner have supported you more effectively?

