EMBEDDING RESEARCH AS CORE PRACTICE FOR TEACHERS: A MODEL FOR WHOLE SCHOOL TEACHER LEARNING

Llian Merritt

A thesis submitted to the University of Sydney in fulfilment of the requirements for the degree of Doctor of Philosophy

School of Policy and Practice
Faculty of Education and Social Work
University of Sydney

July 2003

DECLARATION

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person, nor material that has been accepted for the award of any degree or diploma of a university or institute of higher learning, except where due acknowledgement has been made in the text.

Signed _____ Date _____

ACKNOWLEDGEMENTS

I thank my supervisor Professor Judyth Sachs for her support and advice. The challenges she presented to me were important in the development and completion of this study.

I thank the friends and colleagues who provided advice and support including Annette and Ray Onorato, Dr Robyn Gibson, Dr Ken Cruickshank, Prue Brigden, David Reid and especially to Dr Jennifer Simons for her helpful editorial comments and unstinting support. I also owe a huge debt of gratitude to my family, friends and colleagues whose encouragement and belief in me enabled me to complete the loneliest journey.

I also thank the teachers and the Principal who were the subjects of this study. Their support for and interest in my work and their friendship were appreciated. I acknowledge the great contributions that teachers make in schools and to their students. Teachers and teacher professional development has continued to be my ongoing passion through my long career in schools and universities.

This thesis is dedicated to my sisters: Irene, who did not live to see its completion, and, Elaine.

Embedding Research as Core Practice for Teachers: A Model for Whole School Teacher Learning

Llian Merritt

ABSTRACT

This is a study of teacher professional development at the school level using teacher research as a strategy for both teacher professional learning and school change. A qualitative study was conducted to determine the conditions that would develop and sustain teachers researching their own practice in a culture of inquiry. Participant observation in one school over a two year period was used to investigate the issue of how to embed teacher research as a central feature of teachers' work.

As a result of working with teachers as they researched their practice I have developed a model to explain and understand the complexities of schools and their cultures. Teachers researching their practice provided the driving force in the interplay of the elements of the model and had the potential to change school culture.

Relationships, structures and processes are central to this model. Social and professional relationships between the teachers and the university partner developed and were supported by structures and processes. As the research continued these relationships changed and evolved. These relationships help develop a culture of inquiry in schools.

The school/university partnership in this study evolved from an initial symbiotic–cooperative partnership (in which I shared my expertise and supported the work of teachers) into a later organic–collaborative partnership (one based on mutual and shared goals and benefits). The existing team of four teachers and the allocation of time for them to meet provided the essential structures for the teachers to research their practice. The collective leadership style instigated by the school Principal provided important human and financial support for the development of inquiry cultures.

Collaboration and collegiality as forms of association enabled teachers to conduct research which challenged their individual and collective beliefs and assumptions about students' learning and their classroom practice. The content and form of teacher culture mediated the effects of teachers researching their practice. There are critical and transformational effects when teachers research their practice as part of their core work.

Introducing these teachers to research was not without its difficulties. There were events and factors in the school relating to relationships, structures and processes which hindered the development of teacher research in a culture of inquiry.

Because of the time frame of this study there is no evidence that school culture change is permanent. This could be the subject of future research.

TABLE OF CONTENTS

LIST OF FIGURES

APPENDICES

Chapter 1

Introduction

The research problem

This thesis is about teacher professional development using teacher research as a strategy for teacher professional learning and school change. In particular, I focus on the conditions in schools that will develop and sustain teachers researching their own practice to embed teacher research as a central feature of teachers' work.

Teacher professional development is important for a number of reasons. The first is that continuing professional development is necessary for individual growth and for the improvement of classroom practice and, therefore, student learning. The second reason relates to the importance of teachers in reforming, improving and changing schools. There is a well-established body of literature indicating that teachers (and their professional development) are essential to school improvement and change (Fullan, 1993; Fullan & Hargreaves, 1996; Guskey, 1994; Sarason, 1990, 1995; Wideen, 1989) and to the successful continuation of change (McLaughin & Marsh, 1979; McLaughlin, 1993).

Teacher research is an effective strategy for teacher professional development because teachers researching their practice is about teacher–designed, teacher–owned and teacher–controlled research and emanates from a belief in the autonomy of teachers as professionals. Viewing teaching as a profession not only creates responsibilities and expectations for teachers to maintain standards within the profession but also to have input into those standards. Teachers researching their practice is about individual teachers determining their own research problem or concern, then collecting and analysing data to improve their classroom practice. As teachers gain new insights about their work, there are important benefits for schools in the form of school change, reform and improvement. The school context is important for teacher professional development

(Lieberman, 1995) and teacher research is a site-based professional development strategy.

There are important benefits when teacher research, as a professional development strategy, is embedded in teachers' core work. However, teacher research which is central to the work of teachers across whole schools is absent from the literature. To develop a culture of inquiry in schools the complexities and nuances of schools have to be understood. A model for whole school teacher learning was created, therefore, to examine and explain the conditions in schools, which would develop and sustain teachers researching their practice. A model for whole school teacher learning also provided the link to understand the complexities and tensions of teacher professional development and school change, reform and improvement. Teacher research as a strategy for teacher professional development is central for the development of whole school learning.

To explain further the research problem and how it might be addressed, this chapter outlines the rationale for the study. The study aim and research questions are introduced, and the relevance and importance of this study are examined through related literature, including possible limitations of the study. Finally, an overview of the thesis structure is given to explain the framework of the study.

Rationale for the study

The focus of this study is teacher research as a professional development activity and the conditions in schools that will develop and sustain teachers researching their own practices as a central feature of their work. Teacher research is an effective professional development strategy with benefits for teachers, individually and collectively, and for schools.

This study is important for a number of reasons. First, in promoting teacher research as central to the teachers' work in schools challenges models of professional development which focus on the individual teacher. Many teacher professional development activities

relate to the individual teacher's concern for professional growth and to improve their own classroom practice. These professional development activities are usually self-initiated, self-funded and cover a variety of activities including professional reading, membership of professional associations, attendance at conferences and workshops, and undertaking postgraduate study. In some situations, the school in which the teacher works contributes funds for these activities. These activities are; 'one-offs' and based on 'expert-client' transmission models of delivery. Huberman & Guskey (1995: 270) describe these as 'deficit' models of professional development:

> [a deficit model] is based on the idea that something is lacking and needs to be corrected. Typically, these deficits are determined by others … Teachers are, in turn, seen as the objects, rather than the subjects, of their professional growth.

Further, neither deficit nor individual models accrue long-term benefits for schools because learning is individual and teachers leave or transfer from schools. Although teachers might take their learning to their new workplace, there is no evidence that learning is transferred. 'Growth' models of professional development (Huberman & Guskey, 1995) offer potential benefits for schools. Growth models include activities which focus on group activities, such as teacher study groups, curriculum writing groups, program evaluations and teachers conducting research into their own practice.

Second, teachers conducting research into their own practice has been promoted extensively as an important, individual professional development activity because it occurs at the school level and because it requires teachers to work together in a collective activity. Reflection is inherent in teachers conducting research as teachers examine their beliefs, values and assumptions about students, teachers, learning and teaching and engage with other teachers in dialogic and critical reflection.

Finally, teachers collectively researching their practice across a whole school has benefits for schools and for reform and improvement as teachers make explicit their beliefs, values and assumptions about their practice and work together to improve learning for themselves and their students.

There is a plethora of studies in the literature about teachers conducting research into their own practice: for example, in the United States (Anderson et al., 1994, 1996;

Cochran-Smith & Lytle, 1990, 1993, 1998; Gitlin et, al., 1992; Hollingsworth, 1997; Hollingsworth & Sockett, 1994; and Lieberman & Miller, 1994). In the United Kingdom (Elliott, 1991, 1998; Carter & Halsall, 1998; Dadds, 1995; Dadds & Hart, 2001 and Stenhouse, 1975) have worked in the field. Altrichter, 1997; Altrichter, Posch & Somekh, 1993 in Austria were influential, and, in Australia, (Carr & Kemmis, 1986, 1993; Kemmis & McTaggart, 1988; Atweh & Kemmis, 1998; Baird & Northfield, 1992; Baird & Mitchell, 997; Grundy, 1987, 1994, 1999; and Groundwater-Smith, 1996, 1998). All of these have made significant contributions to teachers researching their practice. Cochran-Smith & Lytle (1998) even referred to the 'teacher research movement' as 'a new paradigm' although Huberman disputed this in his trenchant criticism 'I don't think the evidence is there' (1996: 124). However, studies where teachers across a whole school research their practice as teacher professional learning and school change is absent from the literature.

The 'collective' in teacher professional development appealed to me. Teacher research could improve individual classroom practice but, when viewed as a collective activity, it had the potential to change schools and improve learning for all students. During my own work, I had conducted research with my students in education courses at university using web-based discussion rooms to encourage reflective practice. Student teachers, collectively discussing with in excess of 100 critical friends in cyber space, demonstrated engagement in both dialogic and critical reflection (Merritt et al., 2001).

Lawrence Stenhouse (1975) and his work on the teacher as researcher had been highly influential in my own professional development in the early 1980s when I was teaching in schools. Stenhouse defined teacher research as 'systematic questioning of one's own teaching as a basis for development' (1975: 144). Cochran-Smith & Lytle (1990, 1993, 1998) had defined teacher research as 'systematic and intentional inquiry carried out by teachers in their own schools and classrooms'. I wanted to strengthen this definition to also include reflection and the idea that it was a collective activity. If teacher research was to be embedded in teachers' core work, then the definition also needed to include the idea that it was ongoing. My definition of teacher research, therefore, is teacher

research is deliberate, systematic, conscious, continuous, collaborative, reflective inquiry.

In 1998 I became involved with a research project[1] where I acted as a university critical friend for a school. This project was designed to implement an innovation and then involve teachers in research processes to evaluate the outcomes of the innovation. This project benefited the individual teacher and small groups of teachers who were conducting research. It is debatable, however if there had been long-term benefits for other teachers in the school or for the school itself.

When this project ended, the Principal invited me to continue working at the school. Our discussions centred on how teacher research could be used in the school to improve student and teacher learning, especially if it could be embedded in teachers' work practices. The Principal was keen to develop a culture of inquiry in the school as a reform and improvement initiative.

The complexities and nuances of schools and their cultures have to be understood before they can be changed (Schein, 1986; Lieberman & Miller, 1992b; Stoll & Fink, 1996; Deal, 1985). It was Fullan, (1993: 45) who had said that school culture had proved to be a 'tough customer'. Hargreaves (1997) and Darling-Hammond (1994) have suggested that schools have to be re-cultured if teacher inquiry is to become part of teachers' work.

The discussions with the Principal and my involvement with the school assisted in determining the aim of this study and questions.

---

[1] The Innovation and Best Practice Project was a joint project between the Universities of Sydney, Melbourne and Southern Queensland, and Edith Cowan University in 1998-99. It was funded by the Federal Department of Education and Training and involved 100 schools to identify research-based indicators to improve learning.

Research aim and questions

The aim of this study is to determine the conditions which support and sustain teachers researching their practice as a central feature of teachers' work in schools. To do this, a model for whole school teacher learning was developed to understand the complexities and nuances of schools so that a culture of inquiry could be developed.

To achieve this aim, four questions guided the study:

1. What are the structural and cultural conditions that will embed teacher research as core practice for teachers in schools?
2. What are the relationships that will promote a culture of inquiry?
3. What models of leadership are appropriate to the development of a culture of inquiry?
4. How can partnerships between schools and universities facilitate a culture of inquiry?

The research aim and rationale are based on a number of assumptions about teacher professional development, school change, reform and improvement in current educational contexts. In the following section I explain these educational contexts and their relevance to the aims of this study.

Educational contexts

The social, economic and political changes, which occurred in the latter part of the twentieth century, have generated a new interest in teacher professional development. In countries throughout the world there has been a return to conservative governments, regardless of political affiliations, and schools now reflect the priorities of conservative governments (Hargreaves, 1997). Parents and representatives from the business sector have become highly influential in setting educational priorities and directions for schools. Curriculum development reflects the influence of parents and businesses alike. For example, parents have demanded greater literacy, numeracy and technology skills for their children: employers have demanded that student exit outcomes include skills

and proficiencies for the workforce. Schools are mandated to implement centrally developed curricula.

These developments have put pressure on schools to implement a range of changes that reflect government priorities of choice, free markets and competition (Whitty, et al., 1998). A number of external standards have been imposed by governments, such as, benchmarks to measure student performance, and external testing throughout primary and secondary schooling. The outcomes of students' learning are being made visible and schools are accountable for the results. Governments and parents are using these benchmarks and standards to make comparisons between schools, forcing schools to market themselves to compete for students.

Resources for education and schools have also been reduced, demanding greater efficiency and economy in their use. At the same time, resources were allocated to schools and schools along with the responsibility of determining how these scarcer resources were spent. The language of business and economics permeated discussion about education (Hargreaves, 1997; Helsby, 1999) as governments demanded greater accountability from schools.

A significant aspect of devolution of resources to schools is the added responsibility given to schools for funding the professional development of the teachers. These pose new challenges for schools if teacher professional growth is to continue with fewer funds available.

There have been a number of new and significant initiatives in teacher professional development in the United States, the United Kingdom and Australia, as well as in other countries. In the United States, for example, in 1986 the National Board for Professional Teaching Standards emphasised the importance of professional development to 'professionalize' teachers' work and to improve teacher education. Rebuilding teacher professionalism has been a common theme in the United States (McLaughlin, 1997). The Holmes Group (1986, 1990) provided for professional development schools to be set up, and the Coalition of Essential Schools (1984) promoted teacher professional

development using teachers as researchers in collaboration with universities and for schools to restructure and reform (Darling-Hammond, 1994).

In the United Kingdom the Education Reform Act 1988 set new targets for national curriculum and assessment procedures which posed new challenges for the teaching profession. The mandated and external educational reforms intensified teachers' work, undermined teacher contributions to schools and were branded 'anti-intellectual' (Hargreaves & Evans, 1997).

There have been a number of projects supporting teacher professional development which were funded by the Australian Federal Government in the 1990s. The National Project for the Quality of Teaching and Learning (1991), the National Professional Development Project (1993) and subsequently the National Schools Project (1992–1993) and the Innovative Links Project (1994), for example, promoted collaborative partnerships between schools and universities for school-based professional development. Other projects included SCOPE (Self-directed collegial on-going personal professional effectiveness, 1996) which supported workplace learning, and the IBPP (Innovative and Best Practice Project, 1998-1999) which was designed to promote collaborative partnerships between schools and universities as teachers conducted research.

Teachers researching their practice is a significant strategy for teacher professional development for a number of reasons. It gives teachers ownership and control of their research, and their research contributes to the development of a pedagogical knowledge-base for teaching. Teacher research as a collective activity has the potential to permanently change schools if research is embedded in the core work of teachers. Teacher research, therefore, has the potential to act as a powerful professional development strategy with transformational and critical possibilities for teachers. When teachers question and challenge each other and make explicit what and why they do the things they do, they collectively have the potential to change schools, influence policy directions and impact on systems.

Limitations of the study

There are potential limitations to this study that I believe could limit the findings of this study. These relate to the choice of a single site, one school, for investigation. Schools are idiosyncratic and generalisations between schools are difficult. Therefore, in investigating the conditions which would develop and sustain teacher research, the findings might relate to this school only.

However, as Stake (1998: 101) argues we select a case from which there are 'opportunities to learn (or) from which we feel we can learn the most'. Implementing change in schools is difficult (Fullan, 1993) and often superficial (Sarason, 1995). As this school had been involved in reform and improvement since the 1990s and had a national and international profile of change and reform, the school had indicated its receptivity to change. The Principal was also interested in introducing the teachers to research and to use teacher research as a strategy for professional learning as a way to develop a culture of inquiry for improvement across the whole school. The enthusiasm of the Principal and the leader of the group of teachers who were to trial research in their classrooms were important considerations in choosing this school. There were increased possibilities for implementing successful change. Therefore, research findings might provide indications of how other schools might be changed to develop a culture of inquiry.

Study overview

This section provides an overview of the study by describing the main goals and directions of chapters. In chapter 2, I examine literature related to teacher professional development and its purposes. I examine how teacher research is an effective and important professional development activity and its use in different contexts and times. Through examining three distinct periods of teacher research waves, I explain the important developments and differences between the concepts of action research, practitioner inquiry and teacher research.

The theoretical orientation of my study is presented in chapter 3, and a model for whole school teacher learning is developed. I argue in this chapter that the model provides the links between the complexities and tensions of teacher professional development and school change, reform and improvement. Teacher research as a strategy for teacher professional development is central to the development of whole school teacher learning. The elements of the model are relationships, processes and structures and I argue that these conditions in schools can hinder or support teacher research. The model assists in understanding how teacher research can be embedded in the work of teachers and how teachers researching their practice is developed and sustained in a model of whole school teacher learning.

A qualitative–ethnographic approach is the chosen methodology for this study. In chapter 4 I justify why I used this methodology. A qualitative–ethnographic approach was appropriate to this study because it was necessary to understand and interpret both the school and the social world of the teachers as teacher research was conducted in the school setting. During a two year period I conducted interviews, focus group interviews and was involved in participant observation. The multiple methods of qualitative research assisted in uncovering the meanings of the teachers and what conditions would support or hinder them to research their practice. The trustworthiness of the study was subsequently established through data collection and data analysis. Data collection and analysis were conducted simultaneously so that data analysis was both deductive and inductive. The methodology for this study is further elaborated in chapter 4.

The findings in this study are presented in chapters 5, 6 and 7. These chapters examine school culture and the conditions which developed and sustained teachers as researchers to embed research in the core work of teachers. Chapter 5 explains the culture of the school and how this research study evolved from my participation in the school. Chapters 6 and 7 specifically present the successes and failures of developing a culture of inquiry in the school. Chapter 8 discusses the findings through a model of whole school teacher learning, re-visits the questions which framed this study and presents my conclusions of this study.

Summary

In this introductory chapter I have argued that teachers researching their practice can be a significant professional development strategy for teachers both individually and collectively. Importantly, I have argued that teacher research has the potential to change schools when it is central to the work of teachers in a culture of inquiry.

In the next chapter I examine teacher research as professional development activity and its use in different contexts and times. I explore the different conceptions of teacher research through the 'three waves of teacher research' and the aspects in the third wave of teacher research which will assist in developing the conditions to embed a culture of inquiry in schools.

Chapter 2

Teacher research as professional development

_____

Introduction

In the first chapter I argued that teacher research provides opportunities for significant professional development. In this chapter I examine the changing purposes and contexts for teacher professional development. I argue that the different conceptualisations of teacher research have been influential in the current interest and resurgence in activity in teacher research. I delineate the important characteristics which have contributed to the resurgence in interest and activity in teacher research. In particular, the new partnerships between schools and universities provide for different conceptualisations of teacher research. When schools and universities conduct joint research, the types of knowledge generated impact on schools, universities and education systems and inform change, reform and improvement. To further my argument I first discuss the importance of teacher research to current contexts of teacher professional development and describe the different conceptions of action research, practitioner research and teacher research. I then discuss teacher research in three waves of development and the subsequent take up by the teaching profession.

Teacher professional development – changed contexts

Since the 1990s it is acknowledged that teaching is increasingly complex and demanding (Fullan, 1995; Hargreaves, 1994, 1997; Huberman & Guskey, 1995). In changed political, economic and social climates greater demands are being placed on teachers to improve student learning outcomes by improving teaching standards. There has also been criticism from governments and communities and calls for greater accountability of teachers. Standards and benchmarks are proposed and are being

developed for the teaching profession. Pressures from governments and from within the educational system to improve the learning outcomes of students require that teachers examine, update and improve their skills and knowledge. Teachers themselves also play key roles in initiating and changing schools and in implementing change and reform (Darling–Hammond & McLaughlin, 1995; Fullan, 1991, 1993; Fullan & Hargreaves, 1996; Guskey, 1994; Hollingsworth & Sockett, 1994; Lieberman, 1995). It is in these changing contexts that there has been a re–thinking of teacher professional development. Teacher professional development strategies must enable teachers to maximise their roles in school change and reform.

At the turn of this new century there is much greater involvement from various stakeholders, including governments, educational systems, schools and professional associations, in determining professional development activities appropriate for changed teaching contexts and schooling reform and improvement agendas. Teacher professional development is important for a number of reasons. These are its importance for teacher continuous learning; for changing practice; to improve student learning outcomes; for the development of a professional knowledge base; for improving the status and re–professionalising the profession; for school reform and change; and, for contributing to continuing debates about educational directions and policy development.

Teachers have always needed to update their teaching skills and subject knowledge to meet the needs of their students. The increased complexity of teaching and the changing demands of teaching require teachers to constantly improve their practice to address the different abilities, backgrounds and changing needs and motivations of students. Teacher learning must involve both teachers' initial training, in–service courses and activities and learning through colleagues and in the classroom as part of workplace learning (Helsby, 1999).

The change to outcomes–based education and published standards for student achievement has placed further demands on teachers requiring teachers to maximise the

learning of their students. Teacher learning has been shown as important to improved student learning outcomes (Coalition of Essential Schools, 2002). The importance of professional development as part of continuous and ongoing learning for teachers has moved the focus of teacher professional development from a training focus to that of a learner focus (Day, 1999).

Therefore professional development strategies are required which expand and elaborate teachers' knowledge systems (Borko & Putnam, 1995). Teaching must become a research–based profession and move away from teaching as a craft where teachers' main learning about their work occurs through 'learning on the job'. To strengthen the knowledge base of teachers there needs to be greater integration of theory and practice. Teachers and academics each have a role to play in this development. Teaching has to be informed by both established classroom practices and by research. Therefore teachers have to engage in strategies which support the development of researched–based knowledge. These strategies involve engaging teachers in reflective practice and teachers engaging in dialogic conversations to examine and challenge current teaching practices in schools.

Teacher professional development activities which contribute to teaching as a research–based profession can counteract standardizing and de–skilling of teachers (Cochran–Smith & Lytle, 1993); and improve the status of the profession by re–building and re–professionalizing the profession (Cochran–Smith & Lytle 1990, 1998; Darling–Hammond, 1992, 1994; Goodson, 1992, 1997; Hargreaves & Goodson, 1996; Lieberman & Miller 1992a; McLaughlin, 1997). Teachers must develop knowledge and expertise, ethical commitment to clients, and responsibility for setting standards, as these are cornerstones of teaching as a profession and which are currently 'haphazard' and ignored by bureaucracies and employers (Darling–Hammond, 1994). Darling–Hammond (1994: 4) argues that 'professionalism starts from the proposition that thoughtful and ethical use of knowledge must inform practice'.

Theoretical knowledge and educational research must be central to teaching. Governments and reformists have de–professionalized teaching by ignoring theory and turning teaching into an essentially practical activity (Goodson, 1997). Re–professionalizing the teaching profession must come from the 'inside' to develop teaching as a research–based profession (Cochran–Smith & Lytle, 1990).

Throughout the 1990s and into the new century, educational reform agendas have been set by governments, particularly, in the United Kingdom and Australia, challenging the autonomy of teachers (Day, 1999; Helsby 2000). Curriculum and assessment changes imposed on teachers by systems have taken the traditional classroom decision making away from teachers (Day 1999) and contributed to the de–professionalising of the profession (Helsby, 2000).

Teaching is a political and moral act (Day, 1999; Fullan, 1993; Hargreaves, 1994; Hopkins, 1989; Sachs, 2000, 2003; Tom, 1984) and, therefore, teachers' responsibilities extend beyond their work in classrooms and the transference of knowledge to students. Teachers have to contribute to the intellectual debates about teaching and of the influences they have in the care and welfare of their students. As Jackson, et al. (1993, cited in Day, 1999: 14) argue:

> They (teachers) also influence the way those students look upon themselves and others. They affect the way learning is valued and sought after and lay the foundations of lifelong habits of thought and actions. They shape opinion and develop taste, helping to form likings and aversions. They contribute to the growth of character and, in some instances, they may even be a factor in its corruption.

Teachers have an important influence 'in preparing students for adulthood' (Hollingsworth & Sockett, 1994) and therefore must be aware of the 'moral good of every learner…in every teaching situation' (Sockett, 1993). Eraut (1995: 232) suggests that 'it is the moral and professional accountability of teachers which should provide the main motivation for their continuing professional development'. Teachers are 'transformative intellectuals' (Aronowitz & Giroux, 1985), 'change agents' (Fullan, 1993), and 'activist professionals' (Sachs, 2000, 2003) and therefore they must

publicly engage with issues related to teaching, schools and education. Teachers must be aware of the power and control implications in their work and influence and debate the development of policies which affect education and schooling in general. Teachers can participate in discussion and debate and contribute to policy development when they can support and justify their ideas from their experiential and researched–based evidence.

The changed contexts for teaching have placed new and different demands on teachers requiring that professional development be re–conceptualised and new strategies developed. The focus of professional development is the interplay between teachers, schools and systems (Figure 2.1). This dynamic is constantly negotiated and re-negotiated and is further elaborated in Chapter 3.

Professional development

Teachers

Improved student learning outcomes and improved practice

Development of professional knowledge base as teacher continuous learning

Improved status of the profession

Schools

School change and reform

Systems

Policy development

Figure 2.1 Purposes of teacher professional development linking teachers, schools and systems

Teacher research as a strategy for teacher professional development

Teacher research is an important strategy for teacher professional development and for teacher renewal (Sachs, 1999). Teaching organisations have supported teacher research for ongoing professional development of teachers, namely, the Teacher Training

Agency in the United Kingdom; Professional Development Schools in the United States; and, the National Schools Network in Australia. The emergence and re−emergence and re−conceptualisation of teacher research has continued as a strong tradition on research on teaching, teachers and their work for the past 50 years (Cochran−Smith & Lytle, 1990).

Teacher research continues the work of three influential researchers, Dewey, Stenhouse and Schon. Although Schon's research was with professionals rather than with teachers his work has had significant impact on educational research. The influence of these researchers has continued because of their belief in teachers (professionals), the importance of their work, and the contributions which teachers (professionals) could make to their own profession. Teacher research is about teachers engaging in continuous and ongoing learning, reflecting on their practice and researching their practice to generate knowledge about their classroom practice.

Dewey (1938) advocated teachers taking responsibility for their learning and argued that through reflection on their practice they would increase their knowledge about teaching. Dewey (1938: 78) argued that teachers should reflect on their own experiences to generate teaching knowledge and that 'the way out of scholastic systems that made the past an end in itself is to make acquaintance with the past as a *means* (italics in the original) of understanding the present'.

He also argued that teachers should participate in research in schools to develop teacher's knowledge about their practice and use scientific methods (Dewey, 1938). Research about teaching should come from natural settings (not laboratories) and his ideas challenged traditional, natural science experiments and measurement (Noffke, 1996). The theoretical base of teaching and learning could be developed through reflection on practice and integration of teachers' observations of their classroom work. Teachers would be involved in the 'formation of ideas, acting upon ideas, observation of the conditions which results, and organization of facts and ideas for future use' (Dewey, 1938: 88). Collaboration between teachers and the sharing of their

observations about their work were also important. Dewey (1938: 87) argued that theory and practice were interrelated and that teachers produced valuable practitioner knowledge in the course of their work:

> The educator views teaching and learning as a continuous process of reconstruction of experience. This condition in turn can be satisfied only as the educator has a long look ahead, and views every present experience as a moving force in influencing what future experiences will be.

Stenhouse (1975) used the term 'teacher as researcher' to acknowledge the important work of teachers. Stenhouse (1975) proposed that reflexivity and collaboration were essential to curriculum research, development and school reform. Teachers as 'extended professionals' would research their classrooms to better understand and improve teaching practice (Stenhouse, 1975). The teacher as researcher (he was the first to use this term) would investigate their classrooms by engaging in 'reflective questioning and constructive criticism'. (Stenhouse, 1975: 196) argued that 'I am inclined to believe that the key quality needed in a school, if development is to take place, is reflexiveness: a capacity to review critically and reflectively its own processes and practices.'

Schon's work on the nature of the professional and the reflective practitioner (1983, 1987) has been used extensively to developed reflexivity in teachers' work. Reflection−in−action and reflection−on−action 'aimed at helping students (and teachers) acquire the kinds of artistry essential to competence in the indeterminate zones of practice' (Schon, 1987: 18). Professionals were more than skilled technicians and 'problem solvers who select technical means best suited to particular purposes' (1987: 5). He argued that professionals developed through being reflective practitioners, able to generate 'new knowing−in−action through reflection−in−action' (1987:40). Reflection is 'conscious', has a 'critical function, questioning the assumptional structure of knowing−in−action' and 'gives rise to on−the−spot experiment ... think(ing) up and try(ing) out new actions intended to explore the newly observed phenomena, test our tentative understandings of them, or affirm the moves we have invented to change things for the better' (Schon, 1987: 28).

Knowledge generated by the professional through reflection recognises the interrelationship between theory and practice and the ability of practitioners to generate new knowledge in the course of their work. The bridge between theory and practice challenges the separation of theory (generated in universities) and practice (implemented by teachers). Day (1999: 27) argues that Schon's work 'legitimized teaching as a knowledge-based, intellectual activity in which teachers are not only capable of deconstructing but also reconstructing experience'.

In the United States joint research has been encouraged between schools and universities through the establishment of professional development schools. Reflection is integral to these partnerships and encourages, Darling–Hammond (1994: 1) argues, 'a rethinking of practice, thus creating an opportunity for the profession to expand its knowledge base by putting research into practice – and practice into research'. Lieberman & Miller (1992b: 4) contend that the teacher is a reflective practitioner, someone who has a 'tacit knowledge base and who then builds on that knowledge base through ongoing inquiry and analysis, continually rethinking and re–evaluating her own values and practices'.

Teacher research develops a teacher's professional knowledge base and integrates research and practice. Practitioner knowledge is developed and bridges the gap between theory and practice. Schon (1987: 3) argued that the 'indeterminate, swampy zones of practice' were central to professional practice. Teacher research has the potential to effect change in classrooms, leading to improved teaching and learning. The important developments in the purposes of teacher research as professional development are summarised in Figure 2.2.

Teacher research as professional development
     Reflexivity
     Sharing practice
     Development of knowledge base of the teaching
     Bridge theory and practice gap

Development of practitioner knowledge

Improved classroom practice

As **whole school teacher learning leading to**

School change, reform and improvement

Figure 2.2   Teacher research as professional development as whole school teacher learning and school change, reform and improvement

Action research, practitioner research and teacher research

The current resurgence in teacher research has been influenced by action research which emerged early in the twentieth century. The following section examines the important developments and influences of action research and more recently, practitioner research. The terms of teacher research, practitioner research and action research denote research of those in the field into one's practice to distinguish it from university−based research (Cochran−Smith & Lytle, 1998).

Teachers have always reacted to questions or problems which arise in their classrooms and made decisions based on their own experiences and evidence (Gitlin, et al., 1992; Anderson, et al., 1994; Lieberman & Miller, 1992a). This process has been formalised and been made more systematic under the banners of action research, practitioner research and teacher research. It is generally accepted that the essential characteristics of these modes of inquiry include:

- it is grounded in data which have been systematically collected and analysed for a clearly defined purpose;
- it is undertaken by teachers, though sometimes with the support of external critical friends;
- it focuses on professional activity, usually in the workplace itself;

- its purpose is to clarify aspects of that activity, with a view to bringing about beneficial change – ultimately, to improve student progress, achievement and development;
- it may focus on both teaching and learning at the classroom level, and supporting organizational conditions and change management capacity (Carter & Halsall, 1998: 73).

Action research has been used to solve classroom problems and to learn about an aspect or know about something. Action research and educational action research (Carr & Kemmis, 1983; Corey, 1953; Hollingsworth, 1997; Kemmis & Grundy, 1997; Kemmis & McTaggart, 1988; Noffke, 1996, 1997) have been used in a cycle of plan, act, reflect and revise with a view to improvement or change. Other terms have included participatory action research (Fals–Borda & Rahmann, 1991; Kemmis & Wilkinson, 1998; McTaggart, 1999), classroom inquiry (Strickland, 1988); practical inquiry (Richardson, 1994b); educative research (Gitlin, 1990). The terms of practical inquiry and classroom inquiry focus on the individual teacher in the classroom solving problems in one's own practice. Somekh (2000: 119) argues that instances of teachers working together in action research were rare prior to 1990 and action research was 'essentially individualistic'.

However, terms as participatory action research and educative research have been used to focus on research as a group activity and to involve collaborations between teachers and sometimes with university researchers. These collaborations extended action research beyond problem solving to problem posing and teachers and university researchers were 'joined by thematic concern' McTaggart (1999: 3). Subsequently, these collaborations and joint actions had implications and applications to change beyond the classroom (Gitlin, 1990; Grundy, 1998; McTaggart, 1999). As Somekh (2000: 14) forcefully argues the conceptions of action research have been extended to focus 'more upon dialogue and interaction as means of identifying and respecting difference rather than reaching resolution'. Therefore, action research is about involving

teachers as a collective group to engage in reflective dialogue, and, their research can contribute to change, reform and improvement to schools and systems.

Traditional or university–generated research has been challenged as teachers have used their research–based evidence and reflective dialogue as a way to make the beliefs and assumptions about their work explicit. New collaborations between schools and universities have begun to challenge who can develop knowledge about teaching and teachers. Gitlin (1990: 100) argues that teacher research:

> expands the authority to produce knowledge beyond the researcher; attempts to restructure the researcher-subject relation such that both are involved in identifying and examining beliefs, practices, and normative truths; invokes the moral claim against silencing the other in the name of research; fosters a political view of knowledge; and attempts to encourage a more collective approach to research that can mobilize groups typically left out of educational policy discourse.

The term 'practitioner research' has been widely used over the past ten years to distinguish it from university–generated research and from action research. The term is not just a convenience of language but is used to highlight the differences in how the research is conducted, represented and reported. Practitioner research aims to generate knowledge about practice and is generated by teachers in their schools. A range of purposes of practitioner research are suggested: to serve professional practices (Dadds & Hart, 2001), to improve practice (Middlewood, et al., 1999) and for meaningful change (Gitlin, et al., 1992). The use of this term emphasises practitioners (teachers) who conduct research in their schools in classrooms with a view to improvement of that practice (Groundwater–Smith, et al., 1998; Anderson, et al., 1994, 1996). Practitioner research benefits teachers by contributing to their growth in knowledge, skills and understanding and links school improvement and teacher professional development.

The characteristics of practitioner research are that it is undertaken by individual teachers or groups of teachers, conducted in the workplace (school), often supported by an external partner (university–based researchers), with the purpose to improve classroom practice, and, results in shared learning.

The use of 'teacher research' to describe teachers undertaking research into their own practice has been widely used, particularly in the United States (Anderson, et al., 1994; Cochran-Smith & Lytle, 1992, 1993, 1998). Teacher research as deliberate, systematic, conscious, reflective inquiry has similar characteristics as practitioner research and the terms are often used interchangeably.

However, teacher research can be differentiated from practitioner research because teacher research supports the development of new partnerships between schools and universities. Teachers and academics have formed new collaborations in jointly planning, conducting, interpreting and disseminating the outcomes of research. These new partnerships have changed relationships between teachers and academics with mutual aims and benefits as teacher research uses the respective expertise and skills of each partner. The publication of reports of teacher research and teacher narratives has been widespread and joint presentations between teachers and academics have been made in schools and universities. The publication to audiences beyond the individual school has increased the interest in teacher research.

The status and legitimation of knowledge generated when teachers and academics collaborate in research, is widely debated (Carter & Halsall, 1998; Cochran−Smith & Lytle, 1990, 1992, 1993,1998; Fullan & Hargreaves, 1996; Hollingsworth & Sockett, 1994). McTaggart (1999) argues that teacher research satisfies the characteristics of 'research' as it is the intensive study of a situation and the production of knowledge. Supporters of teachers to generate knowledge argue that the insider or 'emic' perspectives of the research are what is important and should be valued (Cochran−Smyth & Lytle, 1990, 1993, 1998). They argue that it is the perspectives of teachers which are of value as they engage in reflection and dialogue about the theory and practice about their own work. As counterpoint, Huberman (1996) has criticised teacher research for its subjectivity, bias and its emotionality and involvement which he argues disqualifies teacher research from being counted as legitimate knowledge. Knowledge which is generated when teachers and universities collaborate to conduct research contributes to the development of teaching as a research−based profession

(Atkinson, 2000) and challenges existing theory and research which is generated by universities alone (Halsall, 1998).

Knowledge production has been traditionally the domain of academic researchers, researching questions determined by them (Gitlin, et al., 1992). Teachers have criticised academic research as inaccessible and irrelevant (Carr & Kemmis, 1986). Teacher research as a new paradigm with its own methodology and epistemology provides a challenge to the traditional and hegemonic research models (Anderson, et al., 1994; Cochran−Smith & Lytle, 1998). Teacher research offers a new challenge to the traditional dualism of knowledge − theoretical research generated by universities and practical knowledge generated by teachers. However, Huberman (1996: 124) applauds the sort of research where teachers research their own questions, interpret research data and formalize and access knowledge but points out that 'teachers are not in the position of inventing a qualitatively distinctive body of understandings, skills and dispositions. I don't think the evidence is there.' Huberman, (1996) also argues that teacher research can only be shared in local contexts as the research findings are specific to a school or institution. Nevertheless, teacher research should not only serve the interests of the research institution but new approaches and methods which accommodate the needs of teachers must be developed (Dadds, 1995; Dadds & Hart, 2001; Hollingsworth, 1997). There are characteristic differences of action research, practitioner research and teacher research which are important influences in current contexts. These characteristic differences are summarised in Figure 2.3.

Nomenclature	Action research	Practitioner research	Teacher research
Focus	Solve problems	Improve practice	Improve practice
Participants	Teacher(s)	Teacher(s)	Teacher(s)/academics
University	Expertise	Support	Partnerships
Outcomes	Theory/practice	Practical knowledge	theory/practical knowledge

Figure 2.3 Action research, practitioner research, teacher research

In this study the use of the term 'teacher research' has been a deliberate choice to acknowledge the new partnerships and collaborations in teacher research. Action research and practitioner research imply a lesser status to academic research (Anderson, et al., 1994; Robinson & Darling–Hammond, 1994) but it is these new collaborations which will change conceptions of theoretical and practitioner knowledge. In the next sections I present the three waves of teacher research and delineate the differences and similarities with have impacted on recent interest and activity in teacher research.

Teacher research: the first wave

Teacher research can be categorised into three waves of development and subsequent take up by the teaching profession. The first wave is characterised by the work of Lewin, Dewey, Collier and Corey in the United States. The second wave spans the period of the 1960 –1980 in the United Kingdom and Australia, while the third wave is the more contemporary evolution of teacher research. I now turn to elaborate each of these waves.

The first wave of teacher research emerged from early work in action research in the United States, described by Hollingsworth & Sockett (1994: 3) as 'a most important ancestor of teacher research'. The features of the first wave were the involvement of groups to solve problems in a cycle of determining needs, planning, collecting data and evaluating data. The purpose was to effect social change through action as groups worked together on issues directly affecting them (Noffke, 1997). Community groups conducted research to inform collective decisions to effect social improvement and inform policy (Huberman, 1996; Cochran-Smith & Lytle, 1990; Noffke, 1997). Collaboration is an important legacy of the first wave (Hollingsworth & Sockett, 1994).

The second impact was the emphasis on action. Lewin (1947) emphasised the dialectical relationship between knowledge and action. As individuals and group engaged in action research processes their understanding would lead to action.

'Research that produces nothing but books will not suffice' (Lewin, 1947: 150). The cyclical dynamic of action research would lead to social improvement and change. Data were used to implement change rather than for the generation of theory (Adelman, 1993; Noffke, 1997) and theory emerged as incidental to the data.

Dewey is usually credited with the beginning and development of educational action research (Noffke, 1996, 1997; Cochran–Smith & Lytle, 1990). He provided two important features of educational action research: the acknowledgement and promotion of the individual teacher in research and the important link between theory and practice. Dewey recognised the intellectual capacities of teachers and therefore the importance of teachers using their ideas and observations to engage in reflection about their work. He argued that reflective inquiry should form the basis of teachers' work. As teachers solved problems in classroom, hypothesising and theorising would result from the integration of ideas and observations from their practice. Reflection preceded change and would generate important knowledge and theory about their work and change their practice.

Following on from the work of Dewey, Corey (1953) working at the Horace Mann–Lincoln Institute placed value on the teachers themselves in problem solving to improve practice in schools. As with Dewey, problems from teachers' practice were the source of data and in judging the value of the worth of the outcomes. He used the term 'cooperative action research' to distinguish this research from traditional research and to focus the research as being conducted by a group. Corey proposed that there was little relative difference between problem solving and research, arguing that as teachers gained experience in problem solving the validity of their research increased. The knowledge and understanding gained would inform and change practice.

The development of action research as a distinct body of research separated from positivist research was influenced by Corey's work in the 1950s (Noffke, 1996). However, action research, as a distinct paradigm with its own methodology, was still a

long time off. Action research was criticised in the 1960s as not being a legitimate form of educational inquiry (Zeichner & Tabachnick, 2001), and it was the continual comparison to positivist research which led to its eventual decline in the United States (Kemmis, 1983; Hollingworth & Sockett, 1994). The purpose of research in this first wave was to solve problems. A cyclical and recursive process of research was used to enable the participation of individuals' problems to improve their practice. The action research cycle continued to be widely used in the United States, United Kingdom and Australia in the 1970s.

The work of Taba (1957) and Shumsky (1958) following on from the work of Dewey was part of the growing body of interest in teacher research. Their work was significant as they used an action research model which was linear rather than a cyclical and recursive process (Zeichner & Tabachnick, 2001). Teachers changed their practices through learning about themselves with a view 'to change those who are making the changes, that is to enhance the insights of the teachers, to alter their attitudes' (Taba, 1957, cited in Noffke, 1997: 11). Action research as a professional development strategy focussed on personal development and individual teacher learning.

In this first wave change was effected for 'democratic ends and social engineering' (Noffke, 1996, 1997). Educational problems were solved and classroom practice improved through group participation and teacher learning. The features of the first wave are summarised in Figure 2.4.

Nomenclature	Action research	Action research	Action research
Exponents	Lewin & Collier	Dewey & Corey	Taba & Shumsky
Focus	Social change	Improved practice	Improved practice
Participants	Community groups	Teachers as groups	Teacher(s)
Process	Cyclical	Cyclical	Linear
Outcomes	Change in practice	Theory and practice	Teacher learning

Figure 2.4   Teacher research: the first wave

Teacher research: the second wave

The second wave covers the developments from the late 1960s to the early 1980s and is characterised by the work of Elliott, Adelman and Stenhouse in the United Kingdom through the Centre for Applied Research, the Humanities Project 1967–1972 and the Ford Teaching Project, and, Kemmis, Carr, McTaggart and Grundy in Australia. There were two significant developments in this second wave. The first was the recognition of teachers as 'professionals' and the expansion of methods, particularly in the use of qualitative methods, as teachers became researchers into their practice. The emphasis on school–based curriculum development allowed the work of teachers to be freely developed in local contexts in the United Kingdom and in Australia. In particular, it was the relative freedom of schools engaging in curriculum evaluation and school–based curriculum development which enabled educational research to emerge as a distinctive field (Elliott & Adelman, 1973).

The involvement of teachers individually and collectively in research processes enabled knowledge and theory about their practice to be developed and contributed to the professionalizing of teachers' work (Elliott, 2000). Educational action research in Australia continued the tradition of teacher autonomy in decision making and problem solving as emancipatory and critical action research through the work of Kemmis, Carr, McTaggart, Grundy and others. Teachers worked collaboratively with other teachers to conduct inquiry into their practice. Action research was an important professional development activity for teachers and became a feature of many Australian schools.

Teacher research as professional development was further developed in the second wave as teachers conducted research into their own practice for the improvement of practice, to increase understanding and their own learning and to integrate theory and practice. Particularly influential at this time in defining the new generation of teacher research was the development of teachers as researchers and as 'extended professionals'

through the work of Stenhouse in the United Kingdom. As Stenhouse (1975: 144) describes:

> the outstanding characteristics of the extended professional is a capacity for autonomous professional self–development through systematic self–study, through the study of the work of other teachers and through the testing of ideas by classroom research procedures.

Stenhouse (1975: 196) developed a 'process' model to enable teachers to investigate their classrooms through 'reflective questioning and constructive criticism'. He proposed that teacher research should be for teachers; was transformative in its intent ; and, teachers were important to effect curriculum change and improve schools. Stenhouse (1975: 165) argued that 'a research tradition which is accessible to teachers and which feeds teaching must be created if education is to be significantly improved'.

Teacher research as a significant part of Australia's educational change history as part of a critical and emancipatory tradition in Australia has been led through the work of Kemmis, Carr, McTaggart, Grundy and others from the 1970s. Teachers participated in action research at the 'grass roots' to effect change through school based curriculum development. Participatory decision–making, teacher–initiated curriculum development and participatory action research became widespread features of Australian schools (Grundy, 1999). Kemmis & Grundy (1988: 321) describe educational action research as:

> a term used to describe a family of activities in curriculum development, professional development, school improvement programs and systems planning and policy development. These activities have in common the identification of strategies of planned action which are implemented and then systematically submitted to observation, reflection and change. Participants in the action being considered are integrally involved in all of these activities.

Educational action research in Australia continued the tradition of teacher autonomy in decision making and problem solving. Teachers initiated projects and worked collaboratively with other teachers to conduct inquiry into their practice. Grundy (1999: 137) argues that action research in Australia in the 1970s was 'grounded in the practice of teachers and supported by critical theorems'. However, a critical theory of action was developed through the activity in universities rather than from teachers although Grundy

(1999: 143) argues that 'teachers were engaged in theorizing as well as recording their work'. The activity in action research led to arguments that action research was a form of emancipatory social action so that teachers participated in action research to challenge inequities of access and participation in education.

The development of critical praxis in action research, although widespread, was related to change in local contexts. Teachers shared their research between teachers within their own schools. Universities advised and supported the work of teachers in schools, although their involvement was limited to that of facilitating rather than collaborating (Elliott, 1998). Kemmis & Grundy (1997) argue that the contribution of university academics was variable, if they contributed at all.

Throughout its history there has been a lack of acceptance of action research as 'real research'. The paradigm wars of qualitative versus quantitative methods continued to plague educational research during the 1980s. Action research emphasised problem solving in a cycle of plan, act, reflect, revise rather than generating research or theory. The use of quantitative methods in research also limited the scope for teachers to research their practice as the quantitative methods were too limiting and inappropriate to research the complexity of schools and classrooms (Stenhouse, 1975). He argued that the use of qualitative methods would encourage systematic self–study and were more appropriate to the social reality of their schools and classrooms. As Elliott & Adelman (1973: 162) proposed 'research reports and hypotheses must be addressed to teachers, that is, they must invite classroom research responses rather than laboratory research responses'.

The use of qualitative methods to investigate teachers' work included the use of participant observation involving both teachers and students, unstructured interviews, journals, diaries, biographical data, photography, video, tape recordings, and logs. These methods were used to triangulate data as different perspectives were elicited. The audiences for much of this research were other teachers, principals and school officials which led to changes in the way that teachers' research was presented and disseminated.

Teachers wrote for journals, presented at conferences, appeared on radio and television (Elliott, 1998).

The second wave of teacher research continued through until the 1980s and there were extensive developments in action research, particularly in Australia and in the United Kingdom. The characteristics of action research and critical action research are summarised in Figure 2.5.

Nomenclature	Action research	Critical action research
Focus	Understanding and improvement	Emancipatory/critical praxis
Participants	Individual and groups of teachers	Individual teachers
Process	Individual and collaborative	Individual
Outcomes	Theory/practice	Curriculum/policy/change
Role of university	Support/consultants (limited)	External expert (limited)

Figure 2.5   Teacher research: the second wave

There was renewed interest and activity in teacher research at the beginning of the 1990s. There were important developments which characterise this period. The third wave of teacher research is elaborated below.

Teacher research: the third wave

A number of changed political, economic and social conditions in the early 1990s heralded a third wave of teacher research. There are a number of significant differences in this third wave. Interest in teachers researching their practice as important professional development continued the traditions of the first and second waves of teacher research. In the first two waves the purposes and processes of teachers as researchers as important teacher professional development were extended. The second wave in particular placed teachers researching their practice as central to school–based change and reform. The difference in the third wave is that interest in teacher research

has come from the diverse sectors of school systems and universities as well as from the teaching profession, individual teachers and schools. A number of projects where teachers have become researchers into their practice have attracted funding from governments, universities and school systems. The renewed emphasis on teacher professional development as central to the improvement of schools and learning is a feature of this third wave in the United States, United Kingdom and Australia.

I discuss the third wave of teacher research under three headings; political projects; school and work organisation; and, school–university collaborations and partnerships as I believe that teacher research as professional development has emerged with these three distinct emphases. The first of these is categorised as political projects since external influences (or political agendas) have been highly influential. The second is categorised as work organisation as school restructuring and reform initiatives have impacted on teacher research, and, the third as school–university school collaborations and partnerships as new involvement of universities in teacher research has emerged and developed.

Political projects

The involvement of governments in the professional development of teachers has arisen from public scrutiny and the resultant concerns about the standards of teaching and greater concerns for accountability for learning outcomes of students. Parents and employers have increasingly become involved in determining directions for teaching, schools and education, and, governments have intervened in improving the quality of teachers and teaching. For example, in the United Kingdom the centralising of school curriculum was justified because of what were called 'failing schools' (Hargreaves & Evans, 1997) and attempts at 'weeding out poor teachers' (Somekh, 2000). Described as 'moral panics' (Pollard, 2002) these developments undermined the professionalism of teachers. In the United Kingdom teacher professional development has been an implicit push for school improvement, reform and effectiveness and collaborations developed between the Office for Standards in Education (Ofsted), Teacher Training Agency (TTA) and the Department for Education's School Effectiveness division. In the push

for 'quality' and teacher competency the promotion of teachers as 'reflective practitioners' has been the popular model of professionalism (Furlong, et al., 2000).

In these contexts teacher professional development requires strategies which acknowledge the skill and expertise of teachers and teachers as agents as change in school improvement (Elliott, 1991). In the United Kingdom, United States and Australia funding strategies to assist school–based teacher development to change and transform schools have been implemented by governments. Governments (and therefore education systems) have funded schemes for school self–evaluation, teacher appraisal, teacher professional development strategies to meet targets and standards (Halsall, et al., 1998). Teachers were encouraged to be involved in their own professional development rather than development from mandated change or from outside experts (Elliott, 1991). The work of Somekh (1994, 2000) in action research to support the process of change 'regardless of the political context' (2000: 115) has continued the focus on teacher autonomy and self–critical reflection in implementing change. Similarly, Dadds (1993, 1995); Dadds & Hart (2001) have developed new methodologies in action research to accommodate the needs of teachers and which have created a powerful professional development tool for teachers to improve teaching and to effect change in curriculum and in schools.

In the United States the influence of the corporate world has been reflected in the National Center of Education and the Economy (NCEE) and its development of 'human capital' as the aim of schools (Hursh, 1997). Teacher professional development has been supported through initiatives in the United States through the Coalition of Essential Schools and the establishment of Professional Development Schools. Teachers in the United States are encouraged to participate in teacher research, to participate in the development of knowledge about their practices and to contribute to their own professional and policy development through the model of professional development schools (Darling–Hammond, 1994). In this model teacher professional development plays a political role in providing solidarity against public criticism (Goodson, 1997)

and in changing public perceptions about the teaching profession. It also serves to improve the status of the profession and the negotiating strengths of the profession to determine education agendas and future directions for schools. As Goodson (1997: 29) argues:

> theoretical bodies of knowledge, action research studies and reflective action are central to the development of teacher professionalism and are also crucial in confirming the public's perception that teaching is a professional activity.

Teacher research as a strategy for teacher professional development has emerged from changes in thinking about teacher professional development and the dissatisfaction of top down models of in–service from teachers themselves and from those involved in training. In–service (top–down) models of teacher professional development have been criticised as being inappropriate for an experienced and ageing teaching force and research on student learning have been applied to teacher learning (Darling–Hammond 1994, Lieberman & Miller, 1992a). Funding for external professional development activities has been reduced and the responsibility for teacher professional development has been transferred to schools from insights and research about teacher professional development occurring in the context of the whole school (Lieberman, 1995; Burnaford, 1996; McLaughlin, 1997)

In Australia, from the early 1990s the federal government has funded a number of local and national projects aimed to improve student learning outcomes through focussing on teacher professional development. One of the impacts of the document 'Strengthening Australian Schools' (1988), published under the auspices of the then Federal Minister for Education, John Dawkins, was the promotion of collaborative practices between teachers and universities as part of school–based educational change. The 1991 National Project for the Quality of Teaching and Learning (NPQTL) funded a number of different projects, notably the National Professional Development Program including the Innovative Links between Universities and Schools Project for Teacher Professional Development (1994–1996); and, Self–directed collegial on–going personal professional effectiveness (SCOPE, 1996).

The Innovative Links project involved 14 universities and over 100 schools representing the state, independent and Catholic school sectors across all states and territory of Australia and aimed to develop school–based professional development using 'collaborative inquiry between practising teachers and academic teacher educators' (Yeatman & Sachs, 1995: 5). The core feature of the project was partnerships between teachers in schools and university–based teacher educators 'as central to the renewal and development of teacher professionalism' (Sachs, 2003: 104). Teachers in schools and university–based teacher educators met in local 'roundtables' comprising five schools and one university–based associate to facilitate the professional development of both partners. Teacher learning was enhanced as teachers conducted research in their classrooms and schools to improve student learning outcomes and shared their learning with other teachers and university–based teacher educators. The new partnerships facilitated new relationships between schools and universities. Sachs (2003: 108) explains:

> The collaboration between the school and university academics has led to field-based teacher research and to the development of different kinds of relationships (professional and social) between the two parties concerned with teacher preparation and development.

SCOPE used action inquiry incorporating reflective practice and action research to support teachers to improve professional effectiveness in teaching and learning. SCOPE contributed to teacher professional development, workplace learning, curriculum change and the 'further professionalisation and career enhancement of teachers' (Tripp, 1996). The program involved state, religious and independent school systems and unions, school subject and other professional associations, the community and universities in over 20 projects related to specific curriculum and generic projects. The features of SCOPE come from its acronym:

- Self-direction – teachers choose the direction and focus of their action inquiry
- Collegiality – builds an environment which enables teachers to work together, support and challenge each other as they learn about their practices and implement change

- On-goingness – teachers use action inquiry to make changes and to meet the continuous changes they face
- Personal–professionalism – teachers take responsibility for their own growth and development, act expertly in situations and share their learning with others
- Effectiveness – teachers change their practice to more efficiently achieve excellent outcomes (Tripp, 1996).

The SCOPE program (1996: 9) was:

> specifically targeted at teachers taking charge of their own professional development of themselves as curriculum makers, not at teacher or curriculum development. …. When teachers change they change what they teach and the way the (y, sic) teach it; that the means and content of learning change, so curriculum change takes place.

One of the aims of SCOPE was to provide an excellent practice for general professional development in education through workplace learning. The acknowledgement that teachers were part of an 'experienced' workforce focussed professional development activities on teachers in schools determining their own professional development needs and controlling their own professional learning (Tripp, 1996).

School and work organisation

A further development during the 1990s has been the conceptualisation of teacher professional development in the context of school organisation and teachers' work. Teacher research as a strategy for teacher professional development has integrated teacher reflection, understanding and change to improve student learning outcomes. Teacher research effects changes at both the institutional and classroom level. In Australia the National Schools Project was established 'to investigate how the organisation of work in schools might be restructured to improve students' learning outcomes' (Ladwig, et al., 1994: 4). The National Schools Network and its precursor the National Schools Project was a school reform network. Ladwig, et al., (1994: ii) described the aims of the National Schools Network:

> to promote the improvement of teaching and learning for all Australian students through the reform of work organisation and related pedagogy and the establishment of a more supportive cultural, regulatory and industrial environment.

The National Schools Network promoted the concept of critical reflection as part of teachers' work practice and the need for teachers to develop research skills to develop their knowledge, skills and practices.

In Australia there have been a number of local projects which promote teachers as researchers under the banners of action research, participatory action research and teacher inquiry. These projects have included PEEL (Project for Enhancing Effective Learning, 1985) and its offshoot PAVOT, 1994 (Perspective and Voice of the Teacher, and PARAPET (Participatory Action Research for the Advancement of Practice in Education and Teaching, 1994). These projects have been funded by the federal government and have involved academics and teachers working together in a range of teacher research projects.

PEEL as an teacher action research project, supported by academics, involved teachers in a cycle of collecting data, sharing their experiences, reflecting on the outcomes in order to change classroom practices. PEEL developed nationally and in recent years has expanded internationally with PEEL groups existing in schools across Australia, Canada, New Zealand, Sweden and Denmark. Loughran, et al. (2002: 7) describe the aims of PEEL to:

- foster students' independent learning through training for enhanced metacognition
- change teachers' attitudes and behaviours to ones that promote such learning
- investigate processes of teacher and student change as participants engage in action research
- identify factors that influence successful implementation of a program to improve the quality of classroom learning

PAVOT began in 1994 as an offspring of PEEL to collaborate more closely with academic supporters in more systematic research although led and controlled by teachers. PAVOT aimed to assist teachers to research aspects of their practice and in

particular to investigate issues relevant to teachers' daily work and to document and communicate more widely a range of improved teaching and learning practices. PAVOT supported by the Australian Research Council (ARC) 'has given teachers opportunities to develop their individual voices and to document and portray their research findings − and thus to share their pedagogical knowledge with other educationalists' (Loughran, et al., 2002).

The projects of PEEL and PAVOT in Australia provided important opportunities for teachers to control their own professional development through teacher ownership of classroom innovations and problems (Baird & Mitchell, 1997; Baird & Northfield, 1992; Mitchell & Mitchell, 1997). These projects were teacher led and controlled as teachers used a cyclical and iterative process of reflection and action to improve teaching practice. Data collection included the recording of critical incidents and journal writing and some teachers supported their initial data collection with more systematic research, such as, surveys and questionnaires (Loughran, et al., 2002). Research outcomes included critical incidents and case study accounts. There were important contributions to individual teacher's practical knowledge including new classroom knowledge in the form of a range of teaching ideas for the classroom. The emphasis was on the teacher perspectives and on teacher voice in the development of teacher's practical knowledge. Practical knowledge provided guides on the 'so what' 'how do you use these findings' (Loughran, et al., 2002: 257). However, teachers researched their practice for improvement rather than for communication and publication to a wider audience. These projects as important professional development promoted teacher professionalism as teachers willingly accepted that one's own experience is the major source of improvement in practice (Loughran, et al., 2002).

The contributions of these projects have been the acknowledgement of teachers' knowledge bases as being significant as teacher professional development and highlighted the mismatch between teacher knowledge and academic knowledge (Mitchell, 1999). Teachers have increased their understanding and knowledge, attempting to bridge the gap between research and practice (Mitchell, 1999) and to link and hence enrich theory and practice (Baird & Northfield, 1992).

PARAPET was a university initiative which involved schools and universities in a range of participatory action research projects. The project connected people in a network to facilitate the exchange of experience designed to cross the 'so-called pure/applied divide in university research, linking university researchers with people in the professions' (Atweh, et al., 1998: 3). The purposes of PARAPET (Atweh & Kemmis, 1998: 4–5) were:

- to create a forum in which members could act as critical friends for one another in the process of exploring participatory action research in and through practice
- to act as an information exchange, and as a resource for group members: (1) to exchange information about how the different participatory action research projects being conducted by members of the group contribute to the improvement of education and teaching at different levels of education from school to university and (2) to share the group's resources of expertise
- to act as a study group, developing a programme of study into the improvement of education and teaching through participatory action research, and sharing reading resources among the various projects with group members
- to promote the development of expertise in and a culture of participatory action research beyond the group, and to raise consciousness about the role it can play in educational cultural and community development

PARAPET aimed at groups of teachers moving beyond their own focus on individual classrooms to examining their work organization as part of educational improvement. Its focus on social justice as an issue for teachers was reminiscent of the critical praxis of action research in Australia during the 1970s (Grundy, 1999).

In this third wave the purposes of teacher research have been expanded beyond the individual teacher's professional practice to improve that practice for the benefit of others (Dadds & Hart, 2001). In the United States, Anderson, et al. (1994, 1996) developed a range of practitioner research processes which although initially concerned

with classroom problem solving through informal questioning of practice within the individual classroom have led to far reaching outcomes through making teacher research more systematic and intentional. Teachers also used their research to engage with other teachers and critical friends including university collaborators about wider educational issues. Anderson, et al. (1996: 75−76) describe the diverse processes of teacher research:

> University−school collaborations; research across authority lines such as students and teachers; research as part of professional development; and seasoned teachers studying their own classrooms, exploring the theoretical implications of their studies.

Much of teacher research has been an individual teacher activity, therefore having limited wider application (Richardson, 1994a), being context specific (Huberman, 1996) and limited contributions to knowledge (Fenstermacher, 1994). Teachers collaborating in teacher research disseminate the outcomes of their research locally through meetings and dialogue. However, making it meaningful more widely for other teachers has been problematic (Mitchell, 1999) although some generalizations to other schools and contexts have been possible (Mitchell & Mitchell, 1997). Mitchell (1999: 145) argues:

> It does not mean that the wisdom generated by relevant and valid research such as the findings of the teacher (and academic) researchers cannot be usefully accessed by other teachers, but it does provide advice as to when and how this can and cannot be done. It also suggests that bridging the gulf between practice and relevant research will require changes to the structures of how teachers work. These changes would provide teachers with more and more regular opportunities for ongoing professional development, collaboration, reflection and action research.

The important contribution that teacher research has made to teacher professional development has been that teachers have initiated, conducted and disseminated their research findings. However, the outcomes of teacher research have been more widely disseminated in the third wave (Anderson, et al., 1994). This dissemination has promoted a 'teacher voice' in educational reform and decision making (Gitlin, et al., 1992) and challenged the hierarchical dichotomy of teacher generated knowledge and university generated knowledge. Changed thinking about knowledge has been effected through the associations formed between universities and schools in collaborative and cooperative partnerships.

School−university collaborations and partnerships

In this third wave of teacher research important partnerships have been formed between teachers in schools and university academics. In theUnited Kingdom, for example, there has been, *Improving the Quality of Education for all Project (IQEA)*. In the United States *Professional Development Schools* were developed and, in Australia, *the Innovative Links Project* and *National Schools Network* created and supported networks and associations between teachers and academics. As Yeatman & Sachs (1995: 16) point out in their evaluation of the first year of the Innovative Links Project 'for the first time.... the relationship between teacher education faculties and universities and schools has come onto the school reform/restructuring agenda in Australia'.

A significant feature of the third wave has been that the networks and associations have been developed between teachers and universities as teachers have become researchers into their practice (Anderson, et al., 1994; Carter & Halsall, 1998; Cochran−Smith & Lytle, 1993; Dadds, 1995; Sachs, 2003; Yeatman & Sachs, 1995). These networks and associations have involved two−way collaborations with each partner contributing expertise and skills and, receiving mutual benefits from the partnership. These partnerships are predicated on the fact that the partnership cannot exist without the other's input (Yeatman in Sachs, 2003).

These partnerships have developed new social and professional relationships between schools and universities with shared and common commitment. Mutuality and interdependence are features as academics and teachers are equal in status. Collective reflection and decision making regarding the nature and progress of the research is central to these new collaborations. Teachers and university academics together have determined research questions, collected data, analysed and interpreted data and engaged in mutual writing and communicating of research outcomes.

An important aspect of new collaborations has been teachers and academics writing together to report the outcomes of their research (Dadds & Hart, 2001; Gitlin & Hadden,

1997; Halsall, et al., 1998; Loughran, 1999; Ulichny & Schoener, 1993). Teacher voice has been a feature of the dissemination of the research outcomes (Anderson, et al., 1994; Connelly & Clandinin, 1994; Gitlin, et al., 1992). Academics and teachers have jointly presented at conferences in a number of university and school forums and in publications (Dadds, 1995; Dadds & Hart, 2001; Gitlin & Hadden, 1997; Grundy, 1998; Merritt & Campbell, 1999; Sachs, 2003; Yeatman & Sachs, 1995).

Teacher research is political (Carr & Kemmis, 1986; Gitlin, et al., 1992; Noffke, 1996, 1997) and the explicit political methods of teacher research includes the political dimensions inherent in teachers' work (Gitlin, et al., 1992; Gitlin & Hadden, 1997). Teacher research empowers teachers through the publication and dissemination of their findings as they come to understand and change their practice and legitimise the development of their knowledge through research rather than 'correcting societal problems' (Noffke, 1997: 22). This collaboration is important as a counteraction to current contexts of government policy and its imposing of outside change in schools (Elliott, 1998). Gitlen & Hadden, (1997: 34) argue:

> Universities as critical friends have assisted in the development of knowledge and assisted in finding ways to point to the political dimensions of schooling that sometimes become hidden within more technical discussions of educational practice.

The professional knowledge base of teaching has developed from propositional or theoretical knowledge emanating from universities and practical or craft knowledge of teachers. Teachers involved in research have helped to bridge the traditional divide of theory and practice in teachers' knowledge bases. However, when academics and teachers collaborate in research there is reciprocity and mutuality in the development of knowledge. Academics and teachers together have the potential to challenge the power and status of propositional or theoretical knowledge. As teachers and academics write together and produce their findings in conferences both for the profession and for universities then teacher research has a legitimate claim to the contribution of knowledge.

The third wave of teacher research has promoted teacher research as teacher professional development as a response to new contexts in schools and universities. The new collaborations between teachers and universities have strengthened teacher research and expanded the ways that research is conducted and disseminated. Teachers and academics gain mutual benefits in these new partnerships. Teacher research has the potential to be a significant professional development strategy to link teacher professional learning with school change, reform and improvement.

Summary

This study examines the conditions which will embed teacher research as core practice for teachers. I have argued that teacher research is a significant professional development strategy linking teacher professional learning and school change. I contend that teacher research which is embedded as core work for teachers has the potential to change school culture and impact on school change, reform and improvement. Teachers as central to change in schools can use teacher research as a significant professional development strategy to effect change. Accordingly, in this chapter I have examined the changing purposes and contexts for teacher professional development. To further my argument I have examined the different conceptualisations of teacher research and delineated the important characteristics which have contributed to the resurgence in interest and activity in teacher research. In particular, the new partnerships between universities and schools have provided important developments in teacher research. Therefore teacher research as a strategy for teacher professional development is particularly relevant to current contexts where 'the focus and purpose of enquiry is increasingly constrained by centralized control over educational policy and practice' (Somekh, 2000: 113).

In the next chapter teacher research as professional development is developed in a model of whole school teacher learning. Teacher research is central for the development of whole school teacher learning and provides the link between teacher professional

development and school change, reform and improvement. In chapter 3, I argue that a model of whole school teacher learning will provide a framework through which the conditions to embed teacher research as core work for teachers can be analysed.

Chapter 3

A model for whole school teacher learning

_____

—

Introduction

It will be recalled that the problem of this thesis is the conditions which will embed teacher research as core practice for teachers. In this chapter a model for whole school teacher learning is developed. Such a model provides the link between the complexities and tensions of teacher professional development and school change, reform and improvement. Teacher research, as a strategy for teacher professional development, is central for the development of whole school teacher learning.

An understanding of the complexities and nuances of school culture is fundamental to the implementation of whole school teacher learning. A school culture which is open, flexible and responsive provides the context in which whole school teacher learning can be established, sustained and then flourish.

Whole school teacher learning

Schools are social and political sites of struggle between competing micro–political and macro–political priorities. They involve a myriad of interactions between teachers, students, parents and community interests. At the same time, they respond to political systems where governments and education departments organise priorities for schools. As part of this study I am proposing a model for whole school teacher learning which attempts to grapple with that complexity. I have used this model for whole school teacher learning in order to examine and explain the complexity of schools.

At the core of whole school teacher learning is teacher research which is deliberate, systematic, conscious, continuous, collaborative and reflective inquiry. This strategy of

teacher research as teacher professional development provides the key to school change, reform and improvement in a model for whole school teacher learning. Figure 3.1 demonstrates the links that my research has discovered to explain whole school teacher learning, teacher professional development and school change, reform and improvement.

Teacher research as professional development

Whole school teacher learning

School change, reform and improvement

Figure 3.1. Whole school teacher learning links teacher professional development with school change, reform and improvement

School culture

Anthropological theories of culture distinguish between the phenomenal and ideational orders (Goodenough, 1963). The phenomenal order refers to what is observable while the ideational focuses on the knowledge people use to interpret experience and to generate behaviour (Spradley, 1980).

When examining school culture these distinctions are significant insofar as the phenomenal order helps us to observe 'what is happening' at the behavioural level. This includes school ritual and routines undertaken by students and staff alike. The ideational order helps us to understand, as Goodenough (1963: 258) suggests:

> Culture consists of standards for deciding what is, standards for deciding what can be, standards for deciding how one feels about it, standards for deciding what to do about it, and standards for deciding how to go about it.

When thinking about school culture it is necessary, therefore, to examine both the ideational and phenomenal orders.

Following Goodenough, any examination of school culture needs to take into account an individual teacher's private culture, teachers' operating culture and the community culture. Private culture refers to an individual's generalised view of how people will behave. Operating culture is about how teachers behave collectively; their shared norms, expectations and beliefs – all of which enable teachers to anticipate others' behaviour and to learn how to behave appropriately themselves in schools as teachers. Finally, the community's culture for teachers enables them to interact and operate in ways that are both understood and accepted by people who may not be teachers, but who have an interest in schools.

As suggested earlier, change is the dominant metaphor and driver of contemporary life. Teachers, too, are subject to change – both at the social and cultural level, and inside and outside of schools.

Again, drawing on Goodenough (1963), change occurs when an individual's private culture is re-organised and added to, dependent on his/her confidence, ability and opportunity to learn. For teachers, this can occur through their own individual professional learning, through state sponsored or mandated reform strategies, or through individual school initiatives such as teacher research. A change in a teacher's private culture allows the operating culture to change when new standards or imperatives are imposed by those seeking change – usually employment authorities. Finally, change occurs in a community's public culture by:

- modifications made in the generalised cultures that the communities members mutually attribute to one another, and
- agreement in selecting the form and content of the modification.

The change to a school's public culture occurs through the accumulation of small changes introduced by individuals from their private cultures. The phenomenal world

conditions, which change expectations, create new values and, as a consequence, change operating cultures.

Whole school teacher learning: the elements

Structures, processes and relationships (Figure 3.2) are central to understanding whole school learning. Schools are complex organisations and, therefore, each of these elements needs to be understood in a model for whole school teacher learning. The elements do not necessarily stand alone, rather there is a constant interplay between each of the elements to create a constant form of motion and a dynamic professional culture within a school. When structures, processes and relationships in schools work together, schools can develop as whole school learning communities.

Relationships are central to the model. Relationships are the central linkage between structures and processes. The way teachers relate to each other within a school will be influenced by the structures and processes implemented in the school. When structures and processes support the development of relationships in schools, teacher learning can be developed and supported.

School culture

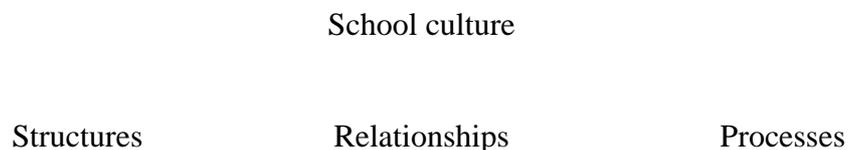Structures   Relationships   Processes

Figure 3.2   Elements of whole school teacher learning

These elements can be both independent of each other and, at other times, one element becomes dependent on another for optimal learning to occur.

Relationships

Relationships are a fundamental element of school culture. They are formed in the interactions and communication between teachers, and they provide the social conditions for teachers' work. It is these relationships which develop, change, support and sustain teachers in the course of their work. Teaching is a social act (Dadds, 1993,1995; Dadds & Hart, 2001; Hargreaves, 1992) and relationships contribute to social cohesion in schools. Relationships depend upon both the patterns of meaning which teachers have as part of their beliefs and attitudes, and how these relationships are articulated and played out in the course of teachers' work. The complex and affective nature of professional and social relationships in schools impacts on both the formal and informal, individual and collective interactions between members of the school community. An understanding of the relationships in schools serves to interpret teachers' behaviours and actions in school settings. Lieberman & Miller (1992a: 27) suggest that:

> These [interpersonal relations] are difficult to capture because they are so ubiquitous but they are important determinants to teachers' feelings about self, about work, about peers, and…principal.

Hargreaves (1994), Huberman (1993) , Lieberman & Miller (1992a) and Nias (1989), have all discussed *social relationships* in various school contexts. Lieberman & Miller (1992a), for example, have argued that teachers form close friendship with each other outside of work and engage in a number of informal social relationships within the school. Lortie (1975) maintains that teachers are expected to be sociable and the friendship bonds predicate the sorts of professional relationships in which individuals engage, and that these bonds are both a response to the controlled nature of classrooms and pure sociability and enjoyment of interactions (Simmel, 1950 in Lortie, 1975). Social relationships also evolve through social functions organised by the school, for example, end of term functions and dinners. In turn, these social relationships support and enhance professional relationships. As Lieberman & Miller (1992a: 11) explain:

> If teaching is to be understood as a 'lonely profession', then the source of that loneliness lies outside of the realm of children. It is posited in the realm of interactions with other adults, especially one's peers. While relations with students tend to be immediate, direct, and engaging, relations with peers may be characterized as remote, oblique, and defensively protective. The rule of privacy governs peer interactions in a school. It is all right to talk about the news, the weather, sports, and sex. It is all right to

complain in general about the school and the students. However, it is not acceptable to discuss instruction and what happens in classrooms as colleagues.'

The tradition of isolation and the insulating environments of teachers in classrooms (D. Hargreaves, 1994) works against teachers forming relationships and contributes to the 'unfocused conversations in the staff room' and the 'meandering exchanges in formal meetings' (Huberman, 1993: 3). Huberman (1993: 3) believes that:

> Isolation feeds the continuous insecurity about one's pedagogical capacity because one's work is wrought alone, never subjected to outside scrutiny, and deflated by fantastic images of better teachers lurking in other classrooms or other schools. Isolation in infant settings or adolescent settings breeds infantile behavior in adult settings outside the school. Isolation intensifies the pain of temporary setbacks or breakdowns, even when institutional conditions have clearly contributed to the problem.

Lortie (1975) distinguishes between *professional relationships* which are based on individual autonomy and shared equality, although he warns that 'relationships among teachers are complex; we should avoid the simplification of describing them in either/or terms' (1975:194). Relationships based on *individual autonomy* are characterised by distance or boundedness and relate to the individual right to choose between association or privacy. In relationships of *shared equality* the expectation of assistance and cooperation forms the norm between teachers.

Professional relationships have been variously described as involving collaboration, cohesiveness and tolerance for diversity (Huberman, 1993); colleagueship, openness and trust (Lieberman & Miller, 1992b); and kindness, generosity and care (Dadds, 1993). As Dadds (1995: 155) points out:

> Care, regard, compassion, community inoculate us from out natural inhumanity and our tendency towards selfishness and neglect of others. With human effort and determination these benign qualities reproduce themselves, as do their violent counterparts.

Relationships are also formed through the alliances and associations which occur within the school setting. These alliances and associations are the result of perceived and formalised groupings which occur in schools. In particular, groupings in secondary schools, constitute faculty, cross-faculty and specific interest groups. These groupings contribute to the isolation and insulation of teachers as they work in small specialist groups rather than forming allegiances to the school as a whole. These relationships

work against social and professional cohesion in schools and influence attitudes toward change. Relationships have political and temporal dimensions. Lortie (1975) best captures the nature of alliances and associations as being shaped by conservatism, presentism and individualism. *Conservatism* relates to a preference for both continuity and for maintaining current practices rather than change. *Presentism* relates to a focus on present outcomes and practices rather than a future orientation. *Individualism* relates to a preference for autonomy in work practices in which relationships are based on limited, specified and circumscribed cooperation.

Structures

The second element of the model for whole school teacher learning is structures. Structures are the organisational features which define a school. They set the limits for what can be done and cannot be done by teachers and students. A number of structures have been proposed for schools to facilitate teachers working together. For example, schools as learning communities create opportunities and support teachers working together (Chapman, 1996; Fullan, 1993; Senge, 1990) and are promoted for school change and reform (Fullan, 1993; Fullan & Hargreaves, 1996; Hargreaves, 1994, 1997; Hargreaves & Fullan, 1992; McLaughlin, 1997; Stoll & Fink, 1996). The organisation of teachers into teams also facilitates teachers working together (Fullan & Hargreaves, 1996). Time is an important dimension of teachers' work and the way time is organised in schools affects and supports teachers' work (Dadds, 1995; Hargreaves, 1994). Each of these structures is an enabling factor in providing opportunities for teachers to work together and to develop relationships with each other in a model for whole school teacher learning. These aspects are elaborated in the following sections.

School as a learning community

A learning community is defined as an organisation that learns and as an organisation that encourages learning in its people (Handy, 1991, in Stoll & Fink, 1996). For Senge (1990: 3), 'a learning community is an organization that is continually expanding its capacity to create its future', and, 'where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are

nurtured, where collective aspiration is set free, and where people are continually learning how to learn together' (1990: 14).

The school as a learning community creates opportunities and supports on-going, workplace learning. Teachers become continuous learners as they challenge each other, take risks, experiment and share their learning in a supportive environment. Teachers strive to improve the learning opportunities for themselves and their colleagues in a collaborative and cooperative environment. Strategies of teacher reflection and teacher research are essential to learning communities. Teachers research their practice and work together to promote change and improvement in schools and classrooms.

A school as a learning community, therefore, is characterised by an interest in social processes and interactions to support pedagogical practice. Schools as learning communities focus on the development of individuals and groups as they work together for common purposes. The promotion of skills and competencies necessary for the development of general capabilities and specific performance in given tasks assists schools to work towards continuous institutional, curriculum and professional improvement (Chapman, 1996).

Following Chapman (1996: 45-46), schools as learning communities will need to demonstrate the following characteristics:

- opportunities created to encourage all their people in all their functions as employees, members, professionals, or students of the organisation; as ambassadors for the organisation to its customers, clients audiences and suppliers; as citizens of the wider society in which the organisation exists and as human beings with the need to realize their own capabilities;
- share their vision and sense of mission with their people and stimulate them to challenge it, to change it, and to contribute to it;
- mobilise all their human talent by putting the emphasis on learning and planning their education and training activities accordingly; and
- respond proactively to the wider needs of the environment and the society in which they operate and encourage their people to do likewise.

Teams

Teams are proposed as a way to facilitate teachers communicating and working together as a professional learning community (Fullan & Hargreaves, 1996). The use of interdependent work structures enables higher levels of cooperation and collective responsibility to be taken (Fullan & Hargreaves, 1996). They facilitate consensus decision-making and the development of a common set of values, particularly where there are large numbers of professional staff (Fullan & Hargreaves, 1996). Teams link structures and relationships.

Organisational time

For Lortie (1975: 177), time is 'the single most important, general resource teachers possess in their quest for productivity and psychic reward.' Hargreaves (1994: 95) argues that time is an important dimension of teachers' work as it structures the work of teaching and is in turn structured through it. He sees time as a 'subjectively defined horizon of possibility and limitation'. He conceives of time as having four constructs which he maintains aid understanding of how teachers structure their work, how they relate to the use of time and who controls its use. These are technical -rational time, micropolitical time, phenomenological time and socio-political time.

Technical–rational time separates means and ends; that is, time can be adjusted and allocated according to administrative requirements. How teachers see their work will depend on how administrators allocate time in order to meet the objectives of the school.

Micropolitical t ime distributes time according to the dominant configurations of power and status within schools. Time away from the classroom is an indication of status and power within schools and promotion positions remove teachers from the classroom.

Phenomenological time is a subjective construct. Each individual has a different sense of time depending on the quantity and type of work they undertake. The subjective variations depend on the number and range of interests, activities, roles and

responsibilities. Administrators may show little regard for teachers' work and their subjective time.

Socio-political time is dominated by administrative requirements and, therefore, controls teachers' work. There are two dimensions to this: separation and colonization. The former suggests that work is controlled by administrators who have certain expectations of what teachers' work should consist. Administrators and teachers have different perspectives and understanding of what teachers should be doing. Colonization suggests that administrators take up or 'colonize' teachers' time with their own expectations and objectives. This causes conflict and expectations about how non-contact time should be used. Indeed, here time is also closely linked to relationships.

The organisation of time is imbued with hierarchical power implications (Cochran-Smyth & Lytle, 1990). Changing the rigid structures in schools is advocated to develop whole school learning through the support of teachers' work as researchers (Cochran-Smyth & Lytle, 1990); for teachers to acquire skills, perspective and confidence for systematic investigation (Lieberman & Miller, 1992a); and, to increase opportunities for meaningful work relationships and collegial support (Hargreaves, 1994).

The allocation of time in school structures indicates management support and formalised time, which is seen as the norm of the school, enhances the professional responsibility of teachers (Dadds, 1995). Formalised time supports teachers researching their practice and other professional development activities, for example, cross-visitation between schools and universities, teacher study groups, schools within schools, writing projects and on-site courses and seminars (Cochran-Smith & Lytle, 1992).

Processes

The third element of the model of whole school teacher learning is 'processes'. Processes are a series of actions implemented in schools which support the school's purpose. Leadership and school–university partnerships are two processes that are fundamental to whole school learning. Both leadership and partnerships involve

relationships and structures. Without effective relationships in a school, leadership, either by members of the school administration or teachers is impossible. Similarly, partnerships between schools and universities require collegial and collaborative relationships between all stakeholders. Structures between schools and universities have to be facilitative so that the work and intentions of the partnership can be achieved. For this to occur, strong leadership from both parties is essential.

Leadership

Leadership involves *influence* within an organisation (Leithwood, et al., 1999; Yukl, 1994). Yukl argues that this influence is intentional influence exerted by one person (or group) over other people (or groups) to structure the activities and relationships in a group or organisation (Yukl, 1994, in Leithwood, et al., 1999: 6). The form, style or type of leadership is a means of explaining who exerts the influence, the nature and purpose of the influence and outcomes of that influence.

Leadership in schools can be described as either *managerial* or *humanistic*. *Managerial* approaches relate to positional power reinforced through traditional, hierarchical structures. The leader influences the members of the school community to achieve the goals of the school and to fulfil the expectations of the leader. Responsibility and control remain with the leader and the hierarchy is maintained with teachers in subordinate positions. *Humanistic* leaders distribute power to enable wide participation in decision-making through the utilisation of teachers' knowledge and expertise. Humanistic leaders require relationships to be developed between members of the school community. As schools have responded to new challenges and change, there has been a shift away from hierarchies, power and control towards more interactive and humanistic approaches. These humanistic leadership styles include instructional (pedagogical), transformational, normative-instrumental facilitative and/or empowering leadership styles .

Instructional (pedagogical) leadership aims to improve student learning through improvement of classroom practices of teachers. Leaders develop a school climate to improve the 'social and academic capital for students, and intellectual and professional

capital for teachers' (Sergiovanni, 1998: 40). Schools become caring, focused and inquiring communities within which teachers work together as members of communities of practice (Sergiovanni, 1994, 1998, 2000). The leader is a resource provider, an instructional resource, communicator, and has a visible presence (Stoll & Fink, 1996). Pedagogical leadership supports teachers inquiring into their practice, and knowing and sharing their practice. Pedagogical leadership creates conditions for reflection, open dialogue, and mutual respect for professional and institutional growth (Duignan, 1989; MacBeath, et al., 2001).

Transformational (cultural pluralism) leadership aims to develop a productive school climate to encourage organisational learning. The leader motivates, inspires and empowers individuals to increase their capacity for change. Teachers assume leadership roles (Lieberman & Miller, 1992b), engage in collaborative work practices to problem solve and participate in decision-making (Fullan, 1993). The leader assists in building school vision and establishes school goals, provides intellectual stimulation, gives individual support, models best practices, demonstrates high performance expectations, develops structures to foster participation in school decision-making and creates a positive school culture (Leithwood, et al, 1999).

Normative-instrumental leadership, as used by Blasé &Anderson (1995), focuses on the influence of the principal to persuade teachers to articulate the principal's vision, goals and expectations. The principal exercises power through motivating teachers to implement goals. Teachers continue in roles of subordination rather than promoting teacher autonomy and professionalism (Day, 1999).

Facilitative leadership aims to empower teachers according to Blasé & Anderson 1995 (in Day, 1999: 85) and involves the following:

- demonstration of trust in teachers,
- developing shared governance structures,
- encouraging and listening to individual input,
- encouraging individual teacher autonomy,
- encouraging innovation,

- giving rewards, and

- providing support.

Empowering leadership is based on participation, equity and social justice. Leadership aims to distribute power and to organise the workplace on democratic principles to enable members of the school community to participate in the 'common good'.

Effective leadership to develop and sustain whole school learning communities demands principals and others modeling and practising these kinds of leadership attributes.

School–university partnerships

School–university partnerships are the second element of 'processes' and are essential in the development of whole school learning. Teacher research, as supported by such partnerships, is fundamental to this. Such research assists the development of professional knowledge production by teachers (Robinson & Darling-Hammond, 1994) because the teachers bridge the theory–practice divide through the development of grounded broadly informed practice (McLaughlin, 1997; Merritt & Campbell, 1999).

Universities as critical friends are also able to find ways to point to the political dimensions of schooling that sometimes become hidden within more technical discussions of educational practice (Gitlin & Hadden, 1997).

School–university partnerships have been characterised as involving two kinds of relationships: symbiotic and organic; (Schlechty & Whitford, 1988; Sirotnik & Goodlad, 1988), or as cooperative and collaborative partnerships (Sachs, 1997b; Yeatman &Sachs, 1995). *Symbiotic and cooperative partnerships* are based on self-interest. These partnerships are 'inherently fragile, temporary, and even given to fickleness' (Schlechty & Whitford, 1988: 191), are the norm of traditional school–university partnerships and require 'resolve, commitment, planning, creativity, leadership, sacrifice and endurance' (Sirotnik & Goodlad, 1988: 14). These partnerships

develop as an expert–client model of association, initiated by one party with a one way flow of information and service.

Organic and collaborative partnerships are based on equality and use the complementary strengths and expertise of schools and universities. These partnerships are based on mutuality and reciprocity as mutually-owned problems are developed and each partner commits and contributes to ensure desired outcomes. Partnerships develop through trust, respect, communication and joint decision-making. Research is conducted jointly and there is mutual exchange of ideas and expertise. Partners provide different perspectives and expand and develop practical and theoretical knowledge-bases for both teachers and universities. Partners bring their own meanings, make mutual contributions and engage in reciprocal learning.

Teacher culture

Relationships, structures and processes are the three essential dimensions of a model for whole school teacher learning. Relationships which are central to the model are developed and supported by processes and structures. The relationships enable teachers to work together to research their practice. Teacher culture influences how teachers respond to researching their practice. The form and content of teacher culture mediates to what extent teacher research becomes embedded in their core work.

Teacher culture includes the patterns of relationship, modes of association and behaviours between members of the school community. Teacher beliefs, attitudes, values, assumptions and perceptions are demonstrated in the way in which teachers operate both in their classrooms and in the wider school context. It includes the different realities that people construct for themselves (Nias, et al, 1989) and explains why teachers use the practices they do. 'It is the learned pattern of unconscious thought, reflected and reinforced by behaviour, that silently and powerfully shapes the experience of people' (Deal, 1985).

Hargreaves (1992, 1993) distinguishes between *content* and *form* in teacher culture. The *content* of teacher culture is the substantive attitudes, values, beliefs, habits,

assumptions and ways of doing things that are shared between teacher groups and the wider teacher community. It is visible in what teachers think, say and do (Hargreaves, 1993). The *forms* of teacher culture are the patterns of relationship between members. Forms are not fixed and teachers move between them depending on circumstances. Hargreaves (1992, 1993) identifies four forms of teacher culture. The norms and behaviours affect how teachers work with one another and how they go about their work. The cultural forms have spatial, political and associational dimensions.

At the individual level, through *individualism,* teachers work alone, insulated and isolated in classrooms. This serves 'to mask teacher's evaluative apprehension and serve as a rationale for excluding observers' (D. Hargreaves, 1982: 206), and is distinguished from individuality which is commonly presented in the pejorative language of individualism.

At the collective or group level through *balkanization* teachers form allegiances based on sub-groups, identify with and are loyal to the sub-group rather than the school as a whole. Differentiation and divisiveness are the features of balkanization as sub-groups compete for status and priority.

Also, at the collective level, *contrived collegiality* involves teacher associations that are formalised and imposed administratively, requiring or 'persuading' teachers compulsorily to meet and work together to implement the priorities of others. Contrived collegiality, where teachers are deliberately organised to work together, may be a starting point for collaboration (Day, 1999).

Finally, with *collaboration*: teachers voluntarily and spontaneously work together on initiatives which have been either individually or school generated. Teachers direct, control and determine the pace of initiatives.

Through these various cultural forms of association, the interplay of structures, relationships and processes set the conditions for teacher research to be an effective strategy for the development of whole school learning.

Helsby (1999: 173) correctly maintains that 'teachers who are professionally confident have a strong belief not only in their capacity but also in their authority to make important decisions about the conduct of their work'. The form and content of teacher culture mediate acceptance or resistance to change. When teachers' beliefs, values, assumptions are in concordance with forms of association there is acceptance to change; when teachers' beliefs, values, assumptions are in dissonance with forms of association there is resistance to change. Teacher culture, therefore, provides the filter by which teacher research can be embedded in the core work of teachers in my model of whole school learning.

When teachers research their practice in a model for whole school teacher learning they participate in and contribute to the production of knowledge. As they engage in reflection and research their professional practice, new insights about the various professional, intellectual, social, emotions dimensions of their work emerge. The theory/practice divide becomes blurred as part of the dynamic described by Schon (1983, 1987) as reflection and knowing-in-action.

Teachers working in the context of whole school learning contribute to the production of knowledge through research into their practice. The knowledge produced contributes to the professional knowledge-base of teaching. Knowledge produced can also have wider effects as schools seek to improve and change the outcomes for their students. Schools as contributors to knowledge capital have to take account of the political and social consequences of schooling and how schools contribute to social inequality and equality (Lingard, et al., 1998). Schools as idiosyncratic and local provide a micro-politic of possibility to improve schools and schooling as teachers research their practice and produce knowledge about their work. The capacity for schools to make a difference and/or perpetuate or change existing social inequities will determine a range of effects.

A model for whole school teacher learning

In this chapter I have developed a model of whole school teacher learning. The model has three fundamental elements – structures, relationships and processes – that need to work together in harmony but not necessarily in synchronous time. The model, when working to its full capacity, contributes to the development of whole school teacher learning. Teacher research, it has been argued, is a key strategy in the enactment of the model. Teacher culture provides the filter by which teacher research is embedded in the core work of teachers in the model. The model is represented in Figure 3. 3.
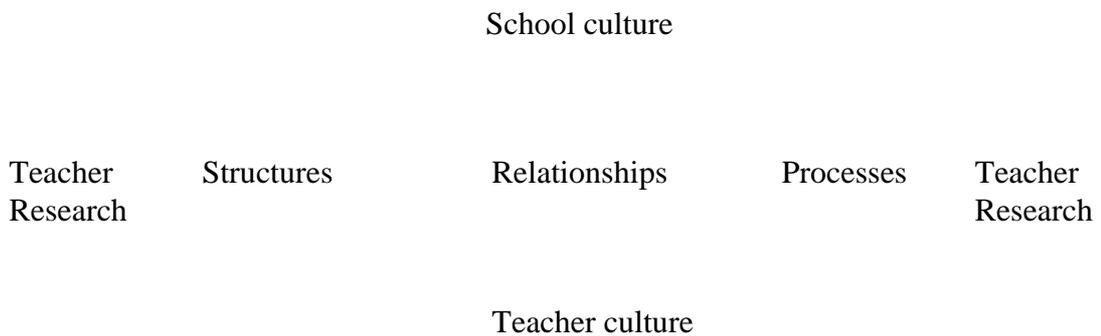
School culture

| Teacher Research | Structures | Relationships | Processes | Teacher Research |

Teacher culture

Figure 3.3   A model for whole school teacher learning

Summary

Chapter 3 has outlined the theoretical orientation of the study. In this chapter I have developed a model of whole school teacher learning to examine and explain schools and their culture. An understanding of school culture is fundamental to the implementation of whole school teacher learning. The model provides the link between the complexities and tensions of teacher professional development and school change, reform and improvement. The model has three fundamental elements – structures, relationships and processes. Teacher research is a key strategy in the enactment of the model and the form and content of teacher culture mediates the effects of embedding teacher research in the core work of teachers. The model, when working to its full capacity, contributes to the development of whole school teacher learning.

The data gathered and analysed in this study through a model of whole school teacher learning are presented in chapters 5, 6 and 7. In the following chapter I present the research methodology.

Chapter 4

Methodology

Introduction

It will be recalled that this thesis is about teacher professional development using teacher research as a strategy for teacher professional learning and school change. In particular, this study is concerned with the conditions in schools that will develop a culture of inquiry and embed teacher research as a central feature of the work of teachers. This chapter presents and justifies the methodological approach and describes the conduct of the research to investigate the problem of the thesis. This chapter addresses the research methodology, the research design, the methods of data collection, and the data analysis techniques used in the study.

Research methodology

The chosen research methodology provides the framework which guides the conduct of the study and supports the theory that underpins its methodology. Qualitative approaches were the most appropriate ways to conduct the research because the aim of the study was to investigate the conditions which would embed teacher research in the core work of teachers. Interpretation, therefore, was central to the investigation as the teachers conducted research into their own practice. Following Denzin & Lincoln (1998a: 3), qualitative research is the study of 'things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them'. The strength of qualitative research is that it occurs in 'natural settings' and its 'local groundness' gives confidence to provide 'richness and holism' (Miles & Huberman, 1994). In this study, the emphasis is on a single focused case, one particular school, integrating the context and community provided the 'thick description' (Geertz, 1973). The use of qualitative research methods in education carry assumptions about the

natures of knowledge, the self, social interaction, culture and society (Metz, 2000). The person conducts research based on how she views knowledge production, and the best way to determine that knowledge through research.

Qualitative research has the following characteristics:

- It is the study of people and things in natural settings.
- It interprets both things and people's lives and experiences.
- It uses a variety of empirical materials to provide rich, in-depth and contextualised data.
- It explains and understands social phenomena from the participant's perspective.

Qualitative methodology has been criticised as 'navel gazing', and for its 'naive humanism', 'its elevation of experience to the level of authentic' and as 'a dialogue of the deaf between itself and the community' (Silverman, 1997, in Denzin & Lincoln, 2000). It was the valuing of the teachers' experiences and the dialogic conversations between themselves and with me as they conducted their research that produced the 'rich description'. The reflexivity of the teachers and myself of the effects of their research are represented in the findings of the study.

In qualitative research the primary aim is to collect substantial and rich data (Denzin, 1997). Therefore I was required to spend extended periods of time in the school and use multiple and recursive data collection methods to analyse and interpret the events and actions of the teachers in the school as they conducted their research. The experiences of the teachers as they conducted research were essential to determining the conditions that would develop and sustain the development of a culture of inquiry in the school.

Ethnography

Ethnography as a sub–set of qualitative research is appropriate to conduct research on schools as a way of understanding their unique cultural perspectives (Spindler &

Hammond, 2000) and research in educational settings has successfully used ethnographic methods (Burgess, 1985a; Knapp, 1999; Taft, 1988).

Ethnography provides a detailed description of the actions and activities of the members of the school and gives an account of their culture (Burgess, 1985a). Ethnography seeks to describe, analyse and interpret the behaviours and actions of people in a particular setting to ascribe meaning to their actions; to learn why people do the things they do. Such an approach is appropriate to study schools because of the relative self-containment or bounded social structures (Taft, 1988).

Hammersley (1990) captures the spirit of ethnography by arguing that it is comprised of the following elements:

- people being studied in everyday contexts,
- it is focused on a single setting or group,
- data come from a range of sources,
- analysis of data involves the interpretation of the meanings ascribed by the participants.

This study sought to represent the school and to capture a phenomenon of a group of teachers in their own setting, their school. In particular the study sought to interpret and give meaning to the behaviours, ideas, views, beliefs, motivations (including the tacit assumptions and patterns in the teachers' behaviours) and actions as they researched their practice. Schools are complex places and it is the meanings that are ascribed to people in schools that provide understanding of what happens in schools.

A single school was chosen for intense study as the context in which the actions took place was central to the interpretation. Understanding came from extensive contact over a two year period with the school community and eliciting their insider views. Cultures of school are complex so understanding could only come from investigating those school complexities and intricacies, and the people who make up the school community

over a period of time. By participating in the school, observing what people did, and hearing what they had to say, meanings could be ascribed to the behaviours, events and activities in the school.

I chose this particular school as the focus for this study as I was interested in exploring the multiple perspectives of a particular school situation. The willingness of the Principal and the teachers to accept me in the school and its receptive and facilitative environment (Morse, 1998) were also important considerations in choosing this particular school. The school's history of change and reform throughout the 1990s and its interest in developing a culture of inquiry in the school made it an ideal site to uncover the conditions which might facilitate or hinder the development of such a culture.

To change and embed a culture of inquiry in a school requires the teachers, as agency, to examine the structures that shape and influence their work. In this study, as teachers conducted research into their practice, questioned, reflected and made explicit their beliefs, values and assumptions which underpinned their work, there were transformative and critical possibilities for these teachers. The research process which the teachers implemented assisted them to understand the world, the way it is shaped, and how they might transform it in a way that was both about self-understanding and self-directed (Kincheloe & McLaren, 2000). Therefore, **critical ethnography** is also relevant to this study. Schools are sites of struggle as they strive to change and re-dress inequalities inherent in social systems (Carspecken, 1996; Kincheloe, 1991). Critical ethnography seeks to question the structure and agency of power that dominate and shape consciousness. Schools are sites where knowledge is produced and re-produced and teachers through their research are able to question and challenge inequities which are inherent in schools. In this study teachers directed and controlled their research, collectively made explicit the beliefs, values and assumptions about their work and used their agency to question and challenge the structures and cultures in the school.

The characteristics of critical ethnography include:

- general, flexible research questions,
- research conducted in social sites (specific spatial and temporal regions where people interact),
- the collection of monological and dialogical data,
- reconstructive and recursive analysis, and
- the discovery and explanation of system relations and theories (Carspecken, 1996).

One of the strengths of ethnography is the immersion of the investigator in the physical setting, collecting artifacts and documenting the perspectives of the participants. Theory is constructed recursively and is refined, defined and re-defined throughout the intensive and prolonged study. The investigator has to determine at which point she has collected sufficient information to interpret and draw some conclusions, normally through a profound conversation between the data and the theory (Metz, 2000).

In ethnography, the investigator is the primary instrument for data collection and the immersion enables 'an insider view' to be presented. A snapshot of a particular time and place and the individuals within it would provide limited and false interpretations (Tedlock, 2000). It is the length of time spent in the research site and the roles and characteristics of the researcher which presents the insider view (LeCompte, et al.,1999) . 'Comfortable interactions' (LeCompte & Preissle, 1993) had been established with both the teachers and the Principal in the school. I had been involved in the school for six months as university consultant before this study began and I had been accepted into the school community. I had been invited to continue to work as their 'research-in-residence' for a further two years.

One of the key assumptions in ethnography is that a relatively prolonged interaction with a group of people in their everyday lives can assist in understanding better their beliefs, motivations and behaviours than any other approach (Hammersley, 1993, in Tedlock, 2000). The interpretation or representation of those people to 'capture lived

experience' has been questioned because representation occurs through interpretation in the narrative of the investigator (Denzin, 1997; Tedlock, 2000). This study accepts that there are multiple realities and that this interpretation is only one possible interpretation. The use of the voice of the teachers within the narrative, however, enriches the representation of their experiences.

The second major strength of ethnography is that it uses multiple and recursive techniques to collect data. Multiple perspectives are gathered through listening, observing, recording, then comparing and contrasting to confirm and assist data analysis. Data collection methods are multi-layered and overlapping and the multi-modal data strategies in this study included observation, interview and review of documents. Ethnography has been criticised for the sheer volume of data which multiple methods generate (LeCompte & Schensul, 1999). What is relevant, what will be included or discarded, and how the data will be analysed have to be addressed. Data reduction (Miles & Huberman, 1994) is central to analysis. In this study, an iterative, recursive process of simultaneous data collection and data analysis enabled data to be condensed and refined over a two year period. Gaps were identified which were then supplemented with further data collection. The interviews, in particular, provided a range of changing perceptions and views of the teachers as they planned, implemented and reviewed the research into their practice.

Another strength of ethnography is its flexibility of methods. Understanding, through inductive and deductive processes, builds and refines a theoretical framework. The iterative process informs the methods of data collection and subsequent analysis. The interplay of data collection and the creativity and critical thinking in the analytic process, is 'the science and art of analysis' (Patton, 1990). Possibilities are able to be explored, a range of options generated, and new perspectives gained by moving back and forth between data and analysis. In this study this was done by simultaneously collecting and analysing data as an 'interactive, cyclical process' (Miles & Huberman, 1994: 12). In this way, early patterns and explanations could be confirmed or refuted as

further data and analysis were undertaken. It also allowed 'surprises' and 'the unexpected' to be followed up through further data collection and analysis. This continuous and iterative process was repeated many times before determining and verifying conclusions.

Judging the worth

The traditional criteria for judging the worth of research has been validity, reliability and generalisability. That is, the research methods, data analysis and interpretation, and presentation of findings must be an accurate representation, able to be verified and applied to other groups, situations and contexts. These criteria have been challenged and conceptualised differently for qualitative research as against quantitative as its aims and assumptions are different (Chambers, 2000; Denzin & Lincoln, 2000; Guba & Lincoln, 1989; Hammersely, 1992; Kincheloe & McLaren, 2000; LeCompte & Preisle, 1993; Merriam, 1998). The primary aim of qualitative research is the understanding and interpretation of social phenomena. Therefore research findings must be trustworthy. 'Plausibility', 'authenticity', 'representativeness', 'verisimilitude' have also been suggested for the conduct of the research and the presentation of findings (Denzin & Lincoln, 1998a, 1998b, 2000; Guba & Lincoln, 1989; Hammersley 1999; Kincheloe & McLaren, 2000;Lincoln & Guba, 2000,; Miles & Huberman, 1994; Woolcott, 1990).

In this study the aim was to capture lived experience (Denzin, 1997) and to represent the 'truth' or 'reality' of the school and the participants in that school. One of the key assumptions of this study is that there is 'no single, fixed, objective phenomenon waiting to be discovered' (Merriam, 1998: 202), only interpretations of people's constructions of reality and their understandings. This study aimed to interpret and understand the complexities of the school and the perceptions and behaviours of the teachers as part of its culture. The criterion for judging the worth of this study was conceptualised as trustworthiness. This concept is explained below.

Trustworthiness

Research must represent an accurate representation of the phenomenon under investigation and, in particular, represent the perspectives and interpretations of the people involved. In this study, validity was replaced by 'trustworthiness' of both the data and its interpretation as accurately representing the school and the participants. Accuracy or truthful representation gives rise to authority and legitimation. Authority derives from the truthfulness of the interpretation. With truth comes trust in the text's claim, and this gives rise to legitimation, and with legitimation come power (Denzin, 1997).

Trustworthiness in this study came from the amount of time spent in the field, the range of events and behaviours observed on different occasions and at different times, and the volume of material collected. As Spindler & Hammond (2000: 42) explain, 'one must see things happen more than once, hear the same things said by people about themselves and others, and experience the same feelings about things people do repeatedly'. The multiple and recursive methods of qualitative research provide a large quantity of material to verify the accuracy of the data. 'Often one doesn't know specifically why a given item has been collected, and much of what is brought back is never used, but enough is used, and unpredictably, so that the collection is worthwhile' (Spindler & Hammond, 2000: 42).

 Interviewing and observing produce particular, situated understandings and the validity or authority is determined by the nature of the critical understandings it produces. These understandings are based on glimpses, or slices, of that culture in action. This study accepts that the interpretation of the data contained in this study, is but one of multiple possible interpretations. There can never be a final, accurate representation of what was meant or said, only different textual representations of different experiences. I acknowledge, therefore, that my interpretation could be one of many interpretations.

Generalisability

The intention of this study was to represent a single case in depth, studied over a period of time, in order to arrive at an adequate description of it as a complex phenomenon. Schools are idiosyncratic and unique places so it is difficult to make generalisations about them. Rather, the intention was to portray this one school in all its realities, and to extract from it themes and patterns which might give indications of the conditions that support or hinder whole school teacher learning. However, this school was selected (as discussed in chapter 1) from which there are 'opportunities to learn (or) from which we feel we can learn the most' (Stake, 1998: 101). This school was keen to develop a culture of inquiry and had implemented processes and structures which would facilitate change. Therefore there were increased possibilities for implementing successful change and hence possibilities for extending findings beyond the confines of this specific study (Lincoln & Guba, 1985). Conclusions from this study are idiographic or 'working hypotheses' but to understand this particular school might provide indications of how other schools might be changed and generalisations to be made. The accuracy and clarity of representation would enable others to make comparisons about characterisitics of schools and change processes to determine similarities and differences, to match other situations and, therefore, to enable meaning to be transferred to other contexts.

My role in this research study

Ethnography relies on the researcher as the 'primary tool for collecting primary data' (LeCompte, et al., 1999: 1). The researcher's presence and immersion in the phenomenon under investigation is fundamental to the research, and this enables collection of data that more richly represents the experiences of the participants (LeCompte & Preissle, 1993; Marshall & Rossman, 1995). The researcher attempts to see reality as the participants see it and the informants teach the researcher (Burgess, 1985b). Guba & Lincoln (1981) explain the characteristics of the researcher:

> The researcher is responsive to the context; he or she can adapt techniques to the circumstances; the total context can be considered; what is known about the situation can be expanded through sensitivity to nonverbal aspects; the researcher can process

data immediately, can clarify and summarize as the study evolves, and can explore anomalous responses. (cited in Merriam 1998: 7).

As I had a prolonged period of participation in the school, I also had to be aware of researcher effects (Wellington, 2000). As trust and respect developed between myself and the school community, I had to be conscious of bias in both data collection and analysis. Miles & Huberman (1994) describe this as 'going native' and, therefore, able to be influenced by the views and versions of the locals. Bias can be overcome by spreading out the visits (Miles & Huberman, 1994). In this study I made weekly visits to the school and visited other times by request. Interviews were carried out both in the school and also away from the school. Interviews were sometimes conducted in my home.

After the data collection was complete, analysis continued away from the site. There was, for me, an unexpected outcome: when I changed the name of the school and the names of the teachers and Principal as part of the ethical considerations of the research I created greater distance between myself and the data.

The features of research in this study were that:
- the research was conducted in a single setting,
- there was a collection of monological data,
- there was a collection of dialogical data using multiple methods,
- inductive and deductive cyclical analysis was used, and
- development of theory and a model of whole school teacher learning ensued.

The school
This secondary school, in New South Wales, named Hamden Hill High School[1] for the purposes of this study, was studied in depth to understand the structural and cultural conditions which assisted teachers to research their practice. The school was selected for long-term study because the Principal had expressed interest in teachers researching

their practice as a way for changing both the school culture and to improve student and teacher learning. Teachers researching their practice would be an important professional development tool to change school culture and embed teacher research as core teacher practice. Hamden Hill High, further described in the next chapter, is a government secondary school situated in suburban Sydney and was close my work place and home. This was important as I spent on average one day per week in the school for two years. The energy, enthusiasm and willingness of the Principal for the topic of my study were key factors in my selection of this school site for my study. The research questions which framed my study evolved from involvement in the school during 1998-1999 when I was involved in an initial project[2] . As a result of this project the Principal and I had discussed the merits of teachers researching their practice for both school reform and change, and to improve student and teacher learning in the school. The Principal was keen that teacher research would become a central feature of teachers in the school.

The participants

The participants in this study were four teachers and the Principal in their own school setting. According to Goetz & Le Compte (1984), participants are individuals who possess special knowledge, status, or communication skills, who are willing to share their knowledge and skills and who have access to perspectives or observations denied the investigator. The ideal participant is 'articulate and culturally sensitive' (Fetterman, 1989: 58). The participant needs to be thoroughly and currently active within his or her own culture in order to present that culture accurately.

The school had a system of teacher teams in Years 7 and 8 and the four teachers who were selected made up one team in Year 7. The teams continued with their group of students into Year 8 the following year. The four teachers, one each from the Science, Mathematics, History/Geography and English faculties, were responsible for the

---

[1] Hamden Hill High School is the pseudonym used in this study
[2] Innovation and Best Practice Project (IBPP) is described in Chapter 5

academic and social development of the students in their team. The school had been involved in a number of reform initiatives and research projects conducted by

universities and through the National Schools Network[3] and three of the teachers had been involved in these projects. One of the teachers had participated in the 1998- 1999 IBPP project in which I was the university partner. The other criterion for this team's selection related to the Principal's perceptions about their receptivity to change and innovation and the respect they were given by the other teachers in this school, the students and their parents. In my discussions with the teachers they also expressed a willingness to be involved in research.

Reflection forms an essential part of teachers' participation in conducting their own research. Teacher reflection, as a dialectical process, involves teachers reflecting as cognition (reflecting in action as a process of decision-making; reflecting as critique (questioning beliefs, values, perceptions inherent in power relations, structures and processes); and reflecting as narrative (teachers telling their stories and writing about their practice). Therefore, reflection was important as power and inequality are inherent in ethnographic studies (Carspecken, 1996) for both myself as the investigator and for the teachers as they conducted research. Reflection in ethnography maintains that the ethnographer is not separate from the object of investigation. Therefore I had to be mindful that in selecting the events and behaviours to represent the school and the teachers I did not 'fracture the data' (Conrad & Riesman, in Charmaz, 2000).

Methods of data collection

In this study the methods of data collection included participant observation, interviews and focus groups. These methods enabled data to be triangulated through comparing,

---

[3] Universities and The National Schools Network had conducted research in the school from1994-1996

contrasting, refining, discarding and checking data. Triangulation improves the trustworthiness of data and adds rigour, breadth, complexity, richness and depth (Denzin & Lincoln, 2000).

In ethnography the investigator is a 'collector of artifacts' (Spindler & Hammond, 2000). I was given a large number of materials by the Principal and teachers in the school, including school's philosophy, school policies, minutes of meetings, videos which had been made in 1996 and publications relating to their previous research projects. These materials provided me with important background information to understand the school's period of reform and change before I began this study. These documents and artifacts gave me a picture of the school culture and the assumptions, values and beliefs which underpinned activities and events in the school.

Data collection methods in this study are described in the following sections.

Participant observation

Observation, and particularly participant observation, are popular and frequently used methods of data collection in ethnography. Participant observation is the systematic noting and recording of events, and behaviours, and collecting artifacts in the social setting (Marshall & Rossman, 1995). Participant observation requires the investigator to become an insider and to make observations while interacting with the subjects of the study. It is the insider stance which also contributes to dilemmas relating to ethical and authorial issues in ethnographic methods. Tedlock (2000: 464–465) describes this as the observation of participation so that 'the ethnographer can present both self and other, together, within a single narrative frame that focuses on the process and character of the ethnographic dialogue'. In this study I described and interpreted my own actions and behaviours as well as the participants in this study. My role as participant observer revolved around attending the weekly meetings of the team, staff meetings and other informal meetings with the Principal and with individual teachers. Observation of incidental conversations in staffrooms and in the school playground also provided contextual information about the school and provided particular insights about the

relationships between staff and students. These observations were also useful to understand how the school operated and the culture of the school to confirm and disconfirm what the Principal and teachers had revealed in their interviews.

Interviews

Interviews were conducted with the four teachers and with the Principal of the school. The Principal was interviewed at the beginning of the study. The interview was unstructured and was designed to gain an understanding of the culture and background of the school, and took the form of an autobiographical account of the Principal's involvement at Hamden Hill High School. The Principal was asked to describe the process of reform and change which had occurred in the early 1990s and to talk about her current perceptions of the school. This interview lasted for 90 minutes with little prompting from me. The Principal was eager to share her ideas and revealed her passion for the school in this interview.

The four teachers who were members of the teacher research team were also interviewed. Two interviews were conducted, once in the early stages of their project and at the completion of the project, using a semi-structured interview. The semi-structured interview covered themes involving the questions in my research study. The sequence of questions changed for each interviewee depending on their responses. Each of the questions in the study was answered, but, depending on the direction taken by the teachers, this meant that some interviews lasted 20 minutes and others 90 minutes. As I became more involved with the school, and deeper relationships developed between myself and the teachers, the second interview was more open-ended and lasted longer. As Kvale (1996: 125) describes:

> The research interview is an interpersonal situation, a conversation between two partners about a theme of mutual interest. It is a specific form of human interaction in which knowledge evolves through a dialogue.

The interviews aimed to elicit factual information, as well as meanings, to enable interpretations to be made about school cultures and the factors that inhibit and promote

teacher learning. In-depth, unstructured interviews were designed to describe the participants' perspectives, to provoke thinking, to produce further questions to encourage critical interpretation by both researchers and participants, to reconceptualise issues and to challenge taken-for-granted assumptions (Marshall & Rossman, 1995). The data collected from the interviews would be used to prove and/or disprove the sufficiency/adequacy of data collected by other data collection methods.

Each interview began with set questions relating to the teacher's career, length of time in current school, and subjects taught. One question related to how the teacher had become involved in the teacher research project and was designed for the teacher to talk about his/her experiences. The responses aimed 'to yield spontaneous, rich description where the subjects themselves provide what they experience as the main dimensions of the phenomena investigated' (Kvale, 1996: 133). With the consent of the teachers, each interview was taped. In line with research protocol the tapes were transcribed and the transcripts returned to the teacher for checking and confirmation. The teachers made minor grammatical alterations to the transcripts. A sample interview schedule is included in Appendix 4.1.

The second interview was conducted at the end of the project to re-visit the questions of the study. It was also an opportunity to follow up on responses from both their first interview and issues from the focus group interviews (described below) and to determine if their perceptions had changed as a result of their experiences as teacher researchers. A sample teacher interview transcript is included in Appendix 4.2.

Focus groups

Focus groups were conducted on six occasions while the teachers were planning and implementing their own research in their classrooms. These focus groups represented

different phases in their research as they planned, conducted, analysed and determined their research findings.

A focus group is a group discussion exploring a specific set of issues (Barbour & Kitzinger, 1999) and to elicit a range of ideas, perceptions, concerns and opinions of the participants in the group as they talk about a collective activity. In this study as the teachers conducted research into their practice they shared what they were doing in classrooms, the planning and conduct of their research and their reflections on the effectiveness of the research process. The teachers as members of a team interacted and responded to each other and with me as a social group (Wilkinson, 1999) and provided an audience for each other (Barbour & Kitzinger, 1999).

A focus group is more than a group interview where participants in a permissive, non−threatening environment, may change their views and ideas after hearing others share their opinions (Krueger, 1988). In focus groups, insights are gathered from participants by the observations and participation of the investigator, which can reveal emotions not attainable from other methods of data collection (Krueger, 1988).

There were no specific questions which guided the focus groups so that the teachers were able to determine the agenda and to discuss freely their perceptions and reactions as they conducted research. I participated in the discussion only when I was asked a question or occasionally to make a comment. This reduces the influence of the investigator and places greater emphasis on the participants' point of view (Wilkinson, 1999). Although focus groups reduce the power and control for the investigator because of irrelevant, unfocussed digressions (Krueger, 1988), and for the relatively the chaotic data collection in a focus group (Kvale, 1996) I found that the teachers were candid in their responses as they talked about their research. I was also able to observe them as they revealed their perceptions about their research. Reflections about their research in classrooms also yielded 'spontaneous and emotional statements' (Kvale, 1996).

As with the teacher interviews the focus group meetings were taped with permission of the teachers. The transcripts were transcribed and returned to the teachers for confirmation. A sample focus group meeting transcript is included in Appendix 4.3.

Field notes, research diary and teacher journals
The collection of data for this study also included my field notes and research diary, and the journals maintained by the teachers. Journals and diaries are used extensively in ethnographic research to assist in providing detailed descriptions of the actions and activities of the members of the school and give an account of their culture (Burgess, 1985a).

My research diary recorded events and activities that were observed by me as part of my participation in the school, and questions, themes and directions that emerged throughout the study. I made notes and comments during and after each school visit. The research diary also recorded perceptions and emotions about my involvement in the school as I assisted the teachers to conduct research in their classrooms.

The field notes aided my interpretation of both the taped data from the interviews and focus groups. My field notes were unstructured but were important for me to understand the complexity of interactions and the myriad of factors to be examined and observed throughout the course of the research. Field notes included observations on body language, atmosphere and facial expressions. Field notes aided my interpretation of the text transcriptions from interviews and focus groups and to assist the accuracy of my perceptions (Woolcott, 1990).

The teachers were asked to keep journals while they were conducting research in their classroom to record their perceptions and reactions. Some investigators are partners with participants, keeping dual accounts of their own observations alongside participant comments (LeCompte & Preissle, 1993). Journals, as individual recordings of work and activities of the teachers, provide access to 'activities which they [the investigators] do

not witness' (Burgess, 1999). The teachers' use of their journal was varied, although two of the teachers voluntarily referred to their journals during the interviews.

Ethical considerations

This study meets the guidelines set out by the Human Ethics Committee of the University of Sydney and approval was received from the Committee. In line with both the University Guidelines and Department of Education and Training guidelines, informed consent was sought from the school principal and the teachers in the study. Participants were given a copy of the Participation Information Statement and Consent Form (Appendix 4.4) which outlined the purpose of the study. The participants signed the consent form, thus agreeing to be part of the study, but understanding that their involvement was voluntary and they could withdraw at any time. Participants were informed of confidentiality protocols and understood that their names and the name of the school would not be used. The school and participants' names used in this study are pseudonyms.

Data analysis

Data analysis is 'the process of making sense out of data, involving consolidating, reducing, and interpreting what people have said and what the researcher has seen and read – it is the process of making meaning' (Merriam, 1998: 178). In this study, the data were examined, categorised and recombed many times to detect meaningful patterns and to elicit evidence to address the aim of the study. Data analysis was recursive and involved reading and re-reading the transcripts of interviews and focus groups, the observation notes, the field notes and diary. This process was designed to create order, structure and meaning to the data and to check and verify my interpretations and to

satisfy claims of truthfulness of ethnography and relevance for theory (Atkinson & Hammersley, 1998; Hammersley, 1990).

The role of theory in data analysis

The role of theory in data analysis is to explain and aid understanding of phenomena. Theory can be viewed from two perspectives. The first is the deductive (or top-down) approach where theory is applied to test a hypothesis (Kerlinger, 1973). Ethnography is a deductive approach that involves determining a pre-conceived framework into which data is sorted (LeCompte & Schensul, 1999). An inductive (or bottom–up) approach, on the other hand, examines the data first and then chooses concepts to help explain why they fall that way (LeCompte & Schensul, 1999; Marshall & Rossman, 1995). In this study, both deductive and inductive analysis were used in a cyclic process of immersion, reflecting and interplay between researcher and data (Strauss & Corbin, 1998). I had determined broad categories from the research questions which provided a focus for the study (deduction) and as I read, re-read the data, and collected further data, other categories and sub-categories emerged (induction).

Data management

Ethnographic studies generate a large volume of material to be analysed, condensed and interepreted (Agar, 1986). Analysis, therefore, 'requires an intensive personal involvement, an abandonment of traditional scientific control, an improvisational style, to meet situations not of the researcher's making, and an ability to learn from a long series of mistakes (Agar, 1986: 12). To focus the analysis Miles & Huberman (1994) identify three stages in data analysis – data reduction, data display and conclusion drawing – which constitute the interactive, cyclical process of research.

Data reduction is the process of selecting, focusing, simplifying, abstracting, and transforming the collected data (Miles & Huberman, 1994). Broad categories of leadership, relationships (teachers, students, community, Principal), school structures,

school climate and ethos, and school–university partnerships emerged and I tentatively divided these broad categories into negative and positive because I was trying to build meaning about the school culture. These categories were determined by reviewing documents, observing participants and from the transcript of the interview with the Principal. Once the teachers began to plan and conduct their own research, additional categories which related to their own research were added.

Data display is the organisation of the data into a form that is accessible and compact so that hypotheses are developed and conclusions drawn (Miles & Huberman, 1994). LeCompte & Schensul (1999) call this process 'fine-tuning' and suggest assembling the components, structures and constituents to find consistent links between them. For example, I sub-divided the broad category of 'relationships' into relationships between: the research team teachers and; other teachers; and students; and the Principal; and the university partner; and also a category of other teachers and the university partner. I placed examples under each of these categories which might be representative or typical for each of the categories of what was happening in the school.

Conclusion drawing and verification is interpreting and giving meaning to data by 'noting regularities, patterns, explanations, possible configurations, causal flows, and propositions' (Miles & Huberman, 1994: 11). Explanations and changes were noted by comparing the examples and looking for repeated events to determine if the teachers' perceptions were consistent or not. A set of propositions about the barriers and facilitators for teacher research was developed from these examples.

The three stages of the analysis
Stage 1 analysis

The purpose of stage 1 analysis was to build a picture of the school and its culture. In this early phase, data had been collected through participant observation, review of documents and an interview with the school Principal.

Each time I visited the school I observed and recorded what was happening. I recorded the demographic features of the school, and its social and physical environment. I made notes, recording my first impressions about the climate in the school, and the relationships between students, between teachers, between teachers and students, and teachers/students and the Principal, at the end of each visit I systematically noted my impressions, ideas and hunches. These impressions were invaluable later when I began my systematic data collection.

I was given a number of documents by the Principal relating to the school, which included

- S*chools' Student Welfare and Discipline Policy,*
- *The Green Paper* (4.5),
- *The Learning Habits* (Appendix 4.6),
- *The Purpose of learning teams* (Appendix 4.7),
- *Our Philosophy* (Appendix 4.8), and
- Department of School Education Quality Assurance: *School evaluation report* 1997.

The Principal also provided me with a copy of a *keynote speech* she had given at a conference and two videos in which both she, as Principal, and the school featured. These videos had been made by the Department of School Education for use in the training and development of Principals. These videos were: *Enhancing School Culture: Community and Culture*, and *Enhancing School Culture: School Profiles*.

The review of documents, the Principal's interview, and my own observation notes were the bases of important early categories of data. The review of documents related to the preliminary reconstructive analysis which assisted me in describing and understanding the school's context and in uncovering values and beliefs in the schools (Marshall & Rossman, 1995). As I had been invited to assist in working in the school to develop a 'culture of inquiry' (Principal's words, November, 1999). I had to understand

what had previously occurred in the school and also what constituted the present school culture. I looked for examples which were representative of the school's present culture, including school philosophy, values, and ethos.

Stage 2 of the analysis

The categories that I had identified became the focus for the second stage of the analysis which was using the data from the teacher interviews and focus groups as well as participant observations.

The broad categories which had emerged from the earlier stage of analysis now became the focus of the analysis. New categories emerged as the teachers researched their practice and reflected on the process. These new categories were school–university partnerships, teacher research perceptions, teacher culture. I divided each of these into two categories, 'negative' and 'positive', which I later changed to 'facilitators' and 'barriers'. I noted a range of words, phrases and examples under each of these headings. The purpose was to identify new domains associated with the topic, to describe them, find associations among them, and interpret the relationships (LeCompte & Schensul, 1999). The preliminary themes and patterns were checked through explanations of behaviour and relationships over a period of time (Marshall & Rossman, 1995) and they verified that individuals were doing what they believed and said they are doing (LeCompte & Preissle, 1993).

It was during this time that the most exciting part of the analysis, for me, began to occur and which continued after the formal data collection was complete. As I moved back and forth through these diverse data, I was beginning to discern connections and relationships between the constituent categories, described by Miles & Huberman (1994) as 'bins', and by LeCompte & Schensul (1999) as 'boxes'. I began to develop a graphic picture of interrelationships and began to integrate the various components, described as structural or constitutive analysis by LeCompte & Schensul (1999). I

began to develop a model for whole school teacher learning which involved the elements of relationships, organisational structures, leadership and the partnership between the school and the university. It was these categories which emerged and which became either facilitators or hindrances in developing teacher research in the school.

Stage 3 of analysis

The third stage of the analysis was to test the categories of the model which had emerged to ensure that they were exhaustive, mutually exclusive, made sense, and were conceptually congruent (Merriam, 1998). This was achieved by re-combing the data from the interviews, the focus groups, and my observations. I also referred to my own research diary to look for both confirming and refuting evidence as to whether I had accurately represented what was happening in the school as teachers researched their practice. I created collections of quotations from the interviews, focus groups and observations to demonstrate the categories, interrelationships and connections. I re-visited the research questions, focusing on the conditions that developed and supported (and hindered) teachers in researching their practice.

Summary

In this chapter I have justified the methodology and described the methods used in this study. I indicate how qualitative and ethnographic methods were used to develop **a** description of a school and its culture. I have discussed the strengths and weakness of this methodological framework to validate its use in the current study, as well as justifying the criteria for judging the worth of the study as trustworthy. I have described the research design, the methods of data collection, and how the data was analysed. The next three chapters present the findings of the research. Chapter 5 presents a description of the school and its culture when I first became involved in the school. The Principal and four teachers who participated in this study are introduced. In Chapters 6 and 7, I

present the data through a model for whole school teacher learning which was developed to examine and explain the complexity of schools.

Chapter 5

Hamden Hill High School: school culture

_____

–

Introduction

In this chapter I present a description of Hamden Hill High School. I discuss the school culture which I observed when I first became involved in the school. I then introduce the four teachers who participated in this research study. These teachers participated in researching their practice as a trial process which was designed to be implemented across the whole school to re-culture and develop a culture of inquiry so that teacher research would be become central to the work of teachers at the school.

Hamden Hill High School – school culture

Changing school culture requires an understanding of how school culture develops and how it is passed on. School culture is understood through the actions and meanings of school members. As Henry (1993: 42) states 'the events and social constructions of time past need to be known. They affect the present.' I first became involved in the school through a research project (Innovation and Best Practice Project – IBPP) during 1998. At the invitation of the Principal my involvement in the school continued for a further two years. It was this participation which became my current research study, and the questions which frame this study evolved from this involvement.

The school culture had been transformed as a result of the changes and reforms which had been instigated in the school in the early 1990s, and was described in the Innovative and Best Practice Report (1999: 2) as a 'a gradual process of re-culturing and restructuring'.

Hamden Hill High School is a government secondary school situated in suburban Sydney. At the time of this study there were approximately 610 students drawn from a diverse geographical and socio-economic background. A significant number of students are socio-economically disadvantaged and, in recognition of this, the school was classified by the Education Department as a disadvantaged school in the now defunct Disadvantaged Schools Program. The Disadvantaged Schools Program was significant in Hamden Hill High's history as it allowed access to additional funding and resources in the early 1990s.

The school site was originally a public[1] school but became a boys' technical high school in 1913. The school's population has increased from the low 300s in the 1980s, to approximately 400 students in the early 1990s, and to its current level of over 600 in 1999 when this study began. The school had a waiting list of students wishing to enrol but the school's capacity cannot be extended further.

The majority of the school buildings were built in the 1940s and the school grounds are small for the number of students now. The school is situated on a main road but is visually attractive, having had a major refurbishment in the mid 1990s. The lack of playing areas for students, however, has led to active lobbying by the school community for improved sporting and playing facilities, especially a school gymnasium. In 1998 I was conducting interviews with Year 8 students and asked them to talk about their learning. Each of the 8 students interviewed expressed, unprompted, strong support and a plea for a school gymnasium.

In 1998 when I first became involved in Hamden Hill High School it was characteristic of suburban Sydney that it had a student population where approximately 60% of students were from non-English speaking backgrounds. Over 56 different languages were spoken as the first language in homes. (In the early-1990s the number of students from non-English speaking background was over 80%). A large proportion of students are bilingual and a significant proportion of them are multilingual.

In 1998, the school had a teaching staff of 60, comprising 35 females and 25 male teachers. Support staff included specialist ESL, learning difficulties, gifted and talented, and technology support teachers. The female Principal was initially appointed as Deputy Principal in 1987, became Acting Principal in 1988 and was promoted to Principal in 1989.

The Innovation and Best Practice Project

My first involvement with the school was through the Innovation and Best Practice Project in late 1998. The school had received funding to evaluate the five learning habits which were the focus for learning, assessment and reporting in the school (presented in Appendix 4.6). These learning habits had been developed as part of the reforms of the early 1990s and the Principal was keen to evaluate their effectiveness. I suggested to the Principal and the four teachers who were to conduct the evaluation that the only important learning habit was 'reflection and evaluation of learning' and that, if students were reflecting and evaluating their learning, then the other learning habits would occur. As this was the first experience the teachers had in researching their practice, we agreed that they needed to research something 'smallish' so that the collection of data, the analysis and writing up of findings could be completed in the 6 months that had been allocated for the research. In this way the teachers would feel a sense of achievement and success in completing the research cycle of problem identification, data collection, analysis and reporting on findings. It was also important that we integrated teachers researching their practice into their daily work rather than adding to their workload.

In our discussions about the learning habits, the Principal and I agreed that, although there were only four teachers who would be conducting the evaluation, all the teachers in the school should be involved in the discussion. The Principal, in an interview in November 1999, stated: 'I'll call staff meeting – we never have them at this school'.

The staff meeting had two purposes: the Principal was keen that I should be introduced to the teachers, and that they could be informed of the purpose of the project. As she

---

[1] Public schools in NSW cater for students from (Years 1-6); secondary schools (years 6-12)

explained, 'the teachers will see the importance of this project and the significance of your involvement in the school'. The meeting had multiple effects as the teachers contributed to the discussion about the meaning of the learning habit and the indicators if students were reflecting and evaluating their learning. I received in excess of 60 pieces of paper at this meeting which I collated, framing the learning habit as a question and making a list of teacher and student indicators. This draft response was taken back to the teachers for further comment and amendment. The two page paper (Appendix 5.1) which was entitled 'Research issue: do our students reflect upon and evaluate their learning?' became the focus for discussions and research for the next two years.

The Principal had selected a group of four teachers who were members of one of the Year 7 teams to be involved in the IBPP. I was explicit that I wanted the research design and implementation to be teacher designed, teacher directed and teacher controlled. The research was designed to improve learning outcomes for both students and teachers through encouraging teachers to engage in dialogue about their practice. To facilitate this, each of the four teachers was asked to identify an area of practice which he/she wanted to improve in relation to the learning habit, and data would be collected, analysed and findings reported. The teachers would undertake to research their practice using the 'research issue' as a guide. I would offer advice about research and assist as required. Not only did I suggest some data collection methods which they could use, but I also undertook some of the analysis for them to demonstrate 'that it wasn't so hard'. We used timetabled meeting times to design, implement and discuss research findings.

During the implementation of the research project I received an invitation from the Principal to continue to work with teachers to assist them to conduct research for the next two years as a way of 're-culturing' the school. The Principal expressed her concern that, although the school had undertaken some major reforms in the 1990s, many of the teachers who had been part of the reforms of the 1990s had left the school. New staff, who had either been appointed to the school or 'won' positions into the school, had not been 'encultured' into the beliefs and values of the school. The Principal revealed her concerns:

> …sometimes I do think the culture is only skin deep. The old culture is
> there, ready to rear its head again lots of time, especially now under stress
> when we are doing reports and things like that. (Interview, November 1999)

The teachers had accepted my presence in the school and, as the Principal pointed out, they needed 'someone who fits in with this school's philosophy'. I agreed to become involved and suggested that, if teacher research was to become a feature of the school, the IBPP could be used to develop and trial a process that might be used by all teachers at the school. I had accepted the challenge to encourage teachers to research their practice, to be reflective and to increase the pedagogical dialogue in the school.

One of the outcomes reported by the four teachers was that 'professional development has been one of the unexpected but beneficial outcomes of the IBPP' (IBPP Report, 1999: 23). This report also foreshadowed the commitment of the school to begin a two year process of facilitating teachers researching their practice.

Teachers researching their practice would be the focus as the school revisited its beliefs and values, its learning competencies and the learning habits. The Principal expressed her excitement:

> But we are about to move and that is why I am a bit excited about some of the things
> that came from you and the people involved in the project. I think we have got the meat
> to sit down and try to put together, either a revised statement of philosophy again or
> something like a charter, just depending on which way the staff would like to go with
> it…we are going to commit reality to the rhetoric again. (Interview, November 1999)

The school had begun a period of new challenge in its history. The Principal and I were committed to the concept of teachers researching their practice, both as an important professional development strategy, and as the key to improving student learning outcomes. I had also found my topic for my thesis and my greatest challenge. What were the conditions in this school that would facilitate the development of teachers researching their practice as core work for teachers?

To create a culture of inquiry amongst teachers in the school I needed to understand what the school culture was when I first began to participate in Hamden Hill High School in 1998. To understand the school culture which existed in the school, I briefly

describe the changes and reforms which had occurred at the school during the early 1990s.

The 1992–1994 reforms

The school had experienced a rapid decline in enrolments in the late 1980s and early 1990s. One reason attributed for the decline in school population was the 'loss of confidence in the school by the local community' (Principal, keynote address, National School Reform Conference, June–July 1996).

Evidence of this loss of confidence was low staff and student morale and poor student performance, especially in School Certificate and Higher School Certificate examinations. Truancy, absenteeism, classroom misbehaviour and disenchantment with learning were commonplace within the school. The Principal observed that 'The students thought they were automatic failures and there was a view amongst the kids that we were second rate' (Interview, November 1999).

In preparation for reform and change, the Principal spent time 'getting things back which should have been there'.

> There was a whole lot of that basic stuff…it was getting programs into place, getting some documentation, doing some planning, getting some priorities and just trying to get some of that general stuff back into place (Interview, November 1999).

School culture – symbolic systems

School culture is reflected in its symbolic systems such as rituals, metaphors, icons, myths and legends. Symbols are used by the school community to convey meanings about the school, to guide behaviour, and to show what the school is really about (McLaren, 1986). Symbols include facilities and equipment, artifacts and memorabilia, crests, mottoes, and uniforms.

As part of the reforms, a number of 'tangible, symbolic things' were put in place. For example, school uniform was re-introduced. The Principal did this because 'the kids needed some traditional things to grasp onto because they didn't even have a uniform, things that we take for granted (Interview, Principal 1999). School ties and badges also

94

became part of the school uniform as important symbols of the school. Staff and students learned to tie a Windsor knot for the school tie:

> And these kids did respond very nicely to a uniform and a tie. These kids are such now that someone brought a little badge for them and they all want this badge on their tie. This Principal would have taught 200 or 300 kids how to tie their tie. When it was first introduced it was this ritual – come to the front office and Miss Robinson will tie your tie for you, teach you how to tie a Windsor knot, all those sorts of things. Things they had never heard of in their life and I think they might have got a pretty good response when they walked down the street. I used to tell them they would have a lot of trouble with all those women down at the station too once they started dressing like this. We keep using the word 'class'. This is a pretty classy group of people (Interview, November 1999).

Resources were provided to improve grounds and facilities and to make the school visually attractive. The front entrance of the school became welcoming, with signage and well-tended trees and shrubs in the garden gracing the entrance. Photographs and testaments of student and teacher involvement in projects, and seminars were part of the welcoming front entrance. Extracts from local newspaper about the school's sporting and academic successes, and certificates of appreciation from various service and charitable organisations were prominently displayed. The school improved the working conditions of staff through the purchase of coffee machines and refrigerators, so food and beverage were integral parts of staff meetings. The smell of freshly percolated coffee was part of every meeting at which I was present. There had been a genuine attempt to develop pride and ownership in the school community.

Through its concentration on making visible improvements, the school displayed both covert and overt messages to students, teachers, parents and the wider community. Overt messages were placed around the school and the staff was reminded daily of the school's purpose: 'time for you and your child' and 'we succeed when they succeed'. Noticeboards in corridors and classrooms celebrated students' successes through photos and displays of student work.

School structures – teams and meeting times

At Hamden Hill High School the structures in the school were changed to reflect the school's purpose of learning and community. A structure of teams for the junior school (Years 7 and 8) was introduced and the school timetable was re-structured into longer

periods (40 minute periods became 80 minutes). The teaching teams provided a structure in the school to enable teachers to work together to improve student learning. A group of four teachers took responsibility for a group of approximately 20 students for Years 7 and Year 8.

One 80 minute period per week was allocated to each team as part of the timetable structure to enable those teachers to meet, discuss, plan and make decisions about the academic and social development of the students who were their responsibility. Funding to enable team time to be structured into the timetable was obtained through the Disadvantaged Schools' Program. The continuation of the school's allocation of team time beyond the Disadvantaged Schools' Program funding period was enabled through the elimination of formal roll call and by reducing the number of inter-period breaks.

The Principal acknowledged the importance of the team structure:

> I think the most significant thing we have ever done...is having people work in the teaching teams. I think it is so simple that if I had to say, if I had to name the one thing I think has had the biggest influence on the changing culture of the school it would have been that (Interview, November 1999).

Leadership

Through its reforms, Hamden Hill High School had a high public profile both locally and internationally from 1994 to 1998. The school had been lauded as an example of successful innovation, change and improvement and the Principal, Rosemary, had become the organisational hero of the school. Her influence in 'turning the school around' had been acknowledged:

> The principal has been the change-maker and my attitude to that is that in many ways that is how it has to be. She's unusual in the sense of her vision and in terms of her intellectual understanding of things...and I think that is a rare ingredient (Teacher interview, in Peters et al ,1996: 28).

Rosemary's leadership style is discussed in detail in chapter 6 so I provide only a few details here. Rosemary had adopted a humanistic leadership style which had elements of instructional (pedagogical), transformational, facilitative and empowering leadership qualities. Students and their learning were the core of the school's purpose and practice, and the Principal had implemented a number of strategies which would improve student

learning. These included an emphasis on teacher growth through professional development. For example, teacher professional reading was distributed and discussed by staff, and teachers attended workshops and seminars conducted by educational experts from intrastate, interstate and overseas. Teachers gave presentations resulting from courses, visits and discussions to individuals and small groups at staff meetings and staff development days. Rosemary had led the change process in the school during the 1990s and she had inspired her teachers to make change happen.

Rosemary encouraged the teachers' participation in matters relating to students. The teams were autonomous in that the teachers in the team managed resources and made decisions affecting the students for whom they were responsible.

Rosemary also placed a high value on her teachers. Her trust and belief in them is revealed in a vignette in which she cited a teacher who had challenged her stereotypes of teachers. In telling the vignette she also revealed so much about her own leadership.

> James Kennedy who people those days viewed as a bit of an educational dinosaur. He was the Head Teacher, Industrial Arts. But people called him that because that is one of those stereotypes that is almost expected of those nuts and bolts men. But I got to know him and to see what an incredible array of knowledge that he had about things that I will never, ever know anything about. But to also hear the way that he talks about kids and their learning and how kids learn and how it is really, really important to acquire a whole set of basic structured skills before you can do anything advanced at all. And how those little modules of learning don't necessarily work for them. He was speaking the same sort of philosophy that I was beginning to believe, that there had to be this kind of close relationship between a kid and their teacher, that had to be fairly strongly developed over time with a lot of trust, with a lot of understanding, with a lot of thinking and a lot of reflecting. He was talking about that stuff and almost ruing the fact that schools were no longer spending the time to develop these fairly complex skills that kids needed to have in his particular subject area. I realised then that there was so much that all of them had to offer. But it was a long, long, hard road. (Interview, November 1999).

School–university partnerships

The school had been involved in school–university partnerships. These had involved university personnel and the National Schools Network[2] from 1994-1996. The Principal has encouraged the involvement of the school in research:

---

[2] National Schools Network is a joint venture between national educational employers and teacher unions. It aims to promote the improvement of teaching and learning for all Australian students through

> This welcoming attitude to research and critical friend feedback was not part of our old culture. We have also been able to gather data on improved student outcomes as part of our accountability as a disadvantaged school (Principal, Keynote address, National Schools Reform Conference, 1996).

Teachers had accepted the presence of university researchers in the school and there had been an acceptance of the school as a research site.

> We've been in everything that goes and tried to use those things to serve our purpose but at the same time realising that we had to serve the purpose of the people who are doing those projects (Interview, November 1999).

At the same time the Principal admitted that the funds which became available as a result of the school's involvement in research were an added bonus. The teachers became willing subjects for university research but their enthusiasm was pragmatic. Rosemary revealed what one teacher had said that 'we've [the teachers] got to talk because Rosemary [the Principal] is trying to get us another $10,000 (Interview, Principal 1999).

School culture – Cognitive systems

School culture partly operates as a cognitive system in the values and beliefs about the school. The school had implemented a new philosophy and ideology by re-visiting the school's purposes. The new philosophy of the school had focused on student and teacher learning and the language of learning was used in both the verbal and the written documentation about the school. The question 'How can we improve learning?' continued to be re-visited throughout the period that I was involved in the school.

The school implemented a range of changes in 1994 which focussed on learning for teachers and students within the school. The Principal explained that the need for teacher learning had come from her and the teachers' desire to teach students more effectively. Teachers talked about learning in their staff meetings; teachers talked about learning with their students. Students and teachers alike talked about 'how they learned best'. A culture of learning had become part of the school. As the Principal explained:

---

the reform of work organisation and related pedagogy and the establishment of a more supportive, cultural, regulatory and industrial environment

> Teachers went on learning because it made their job more interesting, they felt more effective and had an enhanced sense of achievement, and it contributed to their personal development (National Schools Network conference papers, 1996: 15).

The Principal had encouraged teachers to talk about teaching and learning and she provided opportunities for them to do this. For example, she encouraged teachers to talk to each other and their students, to parents and to visitors to the school and to 'explain themselves' and to network with teachers outside the school. But the Principal was realistic about the changes and the 'thousands of disasters that occurred along the way'.

When I first visited the school, the Principal expressed interest in continuing to support the professional development of the teachers. She was interested in teachers researching their practice as a new and essential professional development strategy. She was also interested in using this strategy to re-culture and change the school's culture.

The Principal also expressed her concerns about the team structures and how they were being used. She indicated that there was a marked variability in how much was happening in teams and that 'some teams don't function at all'. Although the teams had been developed for teachers to discuss pedagogy she was concerned that this was not happening. She expressed her concerns thus:

> I have been very, very scared in this school from time to time that the rhetoric can leap ahead of the reality by such a gap that it scares me. You have got to restrain people because some people will use the jargon, use the rhetoric and keep telling people how fantastic we are. And they will use expressions about we are this, we are holistic and they just say things at random, like we are into a cooperative student centred learning. And I think 'Does it?' They are the times when I really get scared because the reform has also been part of the re–selling of the school to the community. It is a moral issue whether we are really doing the things we say we are doing because by saying that we are doing these things we are attracting people (Interview, November 1999)

Opportunities for teachers to talk to each other had been provided through implementing a team structure and in providing a weekly meeting time for them. At my first meeting with the Principal, she expressed her desire to introduce the teachers to research and that she was interested in using the team structures to do this. Rosemary was interested in evaluating the effectiveness of the teams to support student and teacher learning. Although the team structure had made significant differences to the school in enabling teachers to work together in Years 7 and 8, Rosemary identified

some of the difficulties of the structure. One difficulty was that not all teachers worked in teams because of timetable and financial considerations. Teachers could be both members of faculties and teams, or faculty members only. Teachers who taught as both faculty and team members generally identified with teams first. Conflicts arose when teachers were allocated to a faculty only, because these teachers were excluded from the leadership opportunities offered by teams. Other problems identified in the IBPP Report (1999) included:

- Team member's obligation to faculty learning programs at the expense of the team's autonomy to implement curriculum change
- Exclusion of particular subject areas from the teams model providing some faculties with fewer professional development opportunities
- Barriers created between key learning areas for students, impeding skills transfer
- Staff turnover which necessitates ongoing induction of new staff into the culture

The Principal described her own feelings about the school and its culture:

> But you get these tensions. There is this tension here in this place all the time though, which you have to be wary of, when people will come and tell you that it is falling apart...so people see me, and this is what always worries me from a leadership point of view, that I am this really vital keeper of this culture and that that they have to come and tell me if something looks serious (Interview, November 1999).

In summary, the culture of the school had the following characteristics:

- tangible and visible symbols to promote the school within the school community;
- structures to enable teachers to work together;
- a record of involvement with universities in research projects;
- a philosophy emphasising learning for both teachers and students;
- opportunities for individual and collective teacher professional development;
- the humanistic leadership of the Principal focussing on the development of relationships within the school community and the valuing of work and expertise of teachers;
- flatter organisational structures to provide opportunities for teachers to participate in decision-making and to assume leadership positions.

Teachers researching their practice – a trial

At the completion of the IBPP a new team became involved in researching their practice. Four teachers who had been selected to work with me to trial a process of teacher research formed a new Year 7 team. To begin the process the teachers were invited to implement the process which had been developed the previous year to enable teachers to research their practice. The teachers were briefed on the purpose of teacher research and as a starting point were asked to bring examples of their practice to discuss with the other members of their team. From these discussions, the teachers were to identify a research topic, plan data collection methods, analyse data, and write up their findings.

In the following section of this chapter, the four teachers are introduced – Wendy, Rebecca, Ruby and William– and, in order to provide a context for the teachers' participation in this research, I present a short biographical account of each teacher. I discuss their beliefs and perceptions about students, teaching and learning, research and their own professional identity.

The teachers

Wendy

Wendy, the Head Teacher in English, was 45 years of age, and had taught English and History at Hamden Hill High School for five years. She had begun her teaching career in 1977 after four years at university. She had not spent time continuously in schools. Throughout her career Wendy had also spent two years overseas, taken two years leave without pay to complete her Masters degree and she had worked in Head Office as the State Coordinator, Debating and Public Speaking, for four years before moving to Hamden Hill High. Wendy's varied experiences had given her confidence in herself and her professional abilities.

She explained that, after four years in Head Office, she began to apply for Head Teacher positions because she wanted to return to schools and she 'hated Head Office so much'. Hamden Hill High School was her first appointment as a Head Teacher.

Wendy was a committed and dedicated teacher and her interviews with her indicated that she clearly enjoyed her work; her energy and enthusiasm was palpable. After spending four years out of the classroom she stated that 'it was time to go back to school because I really missed interaction with the kids'. Her focus for teaching was on actively involving students in their learning. She held strong beliefs about her role as a teacher, as a facilitator and as a mentor. In any discussion, interview or contact with Wendy, she talked about students and how she might improve the learning of her students.

Wendy used a range of student-focussed pedagogical tools in the classroom and involved students in every aspect of teaching and learning. For example, her students participated in their learning through negotiation of outcomes, peer assessment and peer teaching and small group work. She was confident about her own teaching abilities and she displayed enthusiasm and energy as she willingly experimented within the classroom.

Wendy's sense of self and teacher identity was very strong, and throughout her teaching career she had sought new experiences and challenges. She was proud of her achievements, and her own learning was an important part of her professional life. She expressed it as being 'lucky' to be involved in a number of research projects since arriving at Hamden Hill High School.

She believed that she had won her present Head Teacher's position because of her experiences with outcomes-based teaching and learning. Laughing, she explained that not long after her arrival in the school she had been responsible for introducing 'new things' at Hamden Hill High: introducing an outcomes-based approach to teaching and learning and subsequent changes to assessment and reporting practices.

Wendy was keen to participate in researching her own practice because she saw it as an important way to improve student learning. She was 'excited' but 'apprehensive' about being involved, but saw her involvement in research as 'an opportunity to reflect on the

'how and why' because you get so bogged down in what, that you forget about the 'how and why'.

Ruby

Ruby was 27 years of age and had taught English and History at Hamden Hill High School for three years, for the first year in a part-time capacity and full-time for the next two years. She had begun her teaching career in 1994 following four years at University and this was her second teaching appointment. After her university degree she had been appointed to a co-educational school in the western suburbs of Sydney where she taught for two years. She had then applied for a transfer from that school but was unsuccessful, so she had taken a year's leave without pay. She explained that she had requested a transfer because 'I didn't like the school very much. I did not like the culture of the school; I didn't have a lot of respect for the leadership of the school'.

Her desire to teach at Hamden Hill High School was a result of insights gained in discussions with a current member of staff at Hamden Hill High with whom she had worked at her previous school. In order to gain a placement at Hamden Hill High School, she had taken leave without pay and taught there in both casual and part-time positions, before securing a full-time permanent position the following year. She had been at the school for a further two years.

Ruby was a committed teacher who was self-deprecating about her skills. Although she talked very little about herself she was keen to improve her teaching skills and believed she needed to continue to learn the craft of teaching. She revealed:

> I don't think that I am very good at getting kids to act, or motivating kids to act on the feedback that I give them. I tend to mark a lot but it is generally after they have finished the piece of work that I will have a close look at the finished product and give them some feedback (Interview 2).

Ruby preferred to spend her time planning and working in the classroom rather than socialising with other members of the staff. I learned more about Ruby from the other teachers who described her as 'dedicated', 'able', 'a great teacher', 'highly organised' and 'a thinker'. Ruby was very organised, very task oriented and she spent little time in idle chit chat. She stated that 'I don't enjoy philosophising; I prefer to sit down and just do it' (Interview 1).

Ruby was younger than most of her teacher colleagues and she was relatively inexperienced in comparison. However, her colleagues held her in high esteem. The respect for her skills by the other team members and by the Principal of the school had resulted in her appointment as team leader. Ruby had accepted what she thought was a purely administrative position. Rebecca explained that 'nobody is ever asked to be on a team – they are just put on a team. Ruby was just made the leader and she was told that is what she would be doing' (Interview 1).

At team meetings Ruby showed her concern for, and knowledge of, all her students and she provided opportunities for discussion relating to students' social and academic development. At each meeting there was a strong focus on welfare issues. Decisions were followed up through progress reports, telephone calls and letters to parents. Minutes of meetings were detailed and all documentation regarding students was completed. Ruby ensured that team meetings were always focussed on the students.

However, she began to question her own work effort and professional life. Ruby was concerned that work was all–consuming. As she explained:

> I spend a reasonable amount of time at home working but I am at a point in my personal life at the moment where I don't want to be completely absorbed by work and I am finding that I am having to go home and do more work. (Interview 1)

Although reluctant to be involved in the research project, Ruby was interested in her own learning and had a desire to continue to expand and improve her teaching practice. She explained that her involvement in researching her practice was a way to examine her own practice, to maximise student outcomes through critically reflecting, and to 'hopefully be a better teacher'. She added 'but I don't think you will ever be a master teacher, that is something you are always going to be learning'.

Rebecca

Rebecca was 39 years of age and she had taught Mathematics at Hamden Hill High School for five years. She had begun her teaching career in 1983 after four years at university and had been appointed permanently to the teaching force after one year of casual work. She had taught for 16 years, in four different schools, but not continuously,

having spent two years in London on leave without pay. Although she taught mainly Mathematics, she had also taught some computing and been involved in welfare and curriculum at her previous school.

During this research study, the Head Teacher Mathematics transferred to another school. Rebecca applied for the position of Head Teacher within the school and, based on her application and interview, she was successful.

Rebecca was interested in and committed to her students and their learning and she was interested in any innovation or change which would improve students' participation and learning. She explained her reasons:

> It is really, really easy to just do the day-to-day, and turn up and teach a mediocre lesson. And sometimes you have planned it and sometimes you haven't. And sometimes it is good and sometimes it is not. But I just find that really, really boring. If I was to keep teaching I want to be doing some interesting and things and some innovative things in the classroom. And to me this involves the things that I am really interested in, which is in giving kids more choice and control (Interview 1).

She was also interested in using different pedagogical tools away from the traditional Mathematics classroom and in building on the skills from primary schools. She demonstrated this in the way she talked about her Year 7 Mathematics class:

> It is just giving kids opportunities to do peer assessment because they have done it; they have done it in primary school. They come into high school and it is like suddenly they don't know anything any more (Interview 2).

Rebecca's experiences in a number of schools had helped to inform her thinking about students and learning. But she acknowledged that Hamden Hill High School had given her opportunities for continuing her professional development and to change her thinking. She compared her experiences at this school with those of teachers from other schools:

> There are quite a lot of people that I have known for years and I taught with them originally, so old colleagues. In some cases they taught me a lot about teaching. But now when I talk to them about some of the stuff we are doing at this school or just bits about their attitudes about change, about kids and what kids are capable of, I think, 'I have gone so far ahead of you; you are the people I once looked up to as great teachers. You still are in so many ways but I have had opportunities to think about things that you're not getting. You are really good teachers but you are narrow. You are still controlling and in your school that's exactly the way that everyone is '(Interview 2).

At the same time, Rebecca had continued her own professional development and she was completing her Masters degree in education. It was through the Masters degree that she had become interested in research. Her particular interest was in qualitative research methods and in using action research as part of school improvement. She expressed her interest:

> I was extremely interested in action research and looking at research as trying to develop teacher and student skills. So I guess I just started to look at a whole different view of research where you are actually incorporating into the training and development, staff improving teaching practice and, as well, talking to kids (Interview 1).

Rebecca was keen to be involved in researching her practice as she believed it would be a mechanism to force her to think about what she did in the classroom and that 'it is changing practice for me because that changes things for the students'.

Her recent involvement in a previous research project had provided her with the opportunity for integrating research outcomes into her practice. Although she was interested in her own professional learning she was also interested in how the whole school might change to improve learning for all students and teachers. She explained how she was keen to involve other teachers in the school:

> I was interested in following up on some of the ideas and developing common understandings which came from the IBPP. The IBPP had changed the way that I taught and I could see that it had great potential if we could somehow get everyone to look at it (Interview 2).

William

William was 32 years of age and he had taught Science, including Biology and Physics, at Hamden Hill High School for seven years. He had been teaching for 11 years and Hamden Hill High School was his second appointment since finishing his four year university degree. He had spent the first four years of his teaching career teaching in a secondary school in the western suburbs of Sydney. He described himself on his arrival at the Hamden Hill High School 'as a fairly inexperienced teacher, just four years of survival in the west'.

His experiences in the two schools were quite different, although they had both been important for him in formulating his views about teaching and learning. He described his previous experiences:

> I was in a very stagnant, traditional boring western suburbs school where it was just simply survival every single day – 1600 kids and 30 kids in every single classroom. I realise now what a nightmare it was. I didn't then [Laughter] (Interview 1).

William had a strong sense of self and his own teacher identity and he held strong beliefs about the importance of knowing his students and how they learned. He explained his experiences on transferring to Hamden Hill High:

> I went from the most basic baby sitting, trying to keep your class under control and hopefully some content gets across somewhere to suddenly *explicitly* [William's emphasis] thinking about how you get kids to make links and understanding. It was quite a big difference for me (Interview 1).

Though he was committed to teaching, he found the pressures of work difficult to reconcile with his personal life. The intensity, pace, teaching load, and the consuming nature of teaching had threatened to overwhelm him. William had two young children and he felt that he was missing out on their development[3]. William described his dilemma:

> I went through a really bad time when I had to learn to stay at work to do my work because as a teacher I was going to die. I could not separate my teacher life from my other life. I was just totally freaking out. That's when I drew barriers. I decided that I would stay at work until 5 o'clock then I could go home like a normal worker. My work was finished. As long as I could get those important things like lessons planned by the end of the day I could actually go home with an empty head. Now I am starting to take little bits home with me again. I tend to have a habit of doing a little bit at home, then a bit more…Once you have broken the rules…(Interview1).

William's dedication to, and interest in, students and their learning was evident. He had continued his own professional development and showed his receptivity to his own learning and his involvement in a 'few pedagogical type sort of things, like accelerated learning, multiple intelligences' (Interview 1).

He was pleased that his professional development had continued at Hamden Hill High:

---

[3] Four months later William took leave to enable him to fulfil his parenting responsibilities.

> I was very fortunate I was in the first, in that first year of teams. My team leader was the year adviser and the person who was effectively running the teams' development so I was right in the thick of it (Interview 1).

Because of his involvement in these pedagogical activities in his previous school he was able to appreciate and be part of Hamden Hill High's emphasis on professional learning. William felt that he 'was at the same level of the staff at that point' as he had been involved in, and 'exposed to, a fair bit of stuff' (Interview 1).

William was keen to be involved in the research project because he saw his involvement in research as an opportunity to look at his practice to improve it. He viewed research as:

> ...a means of looking at your own practice with a slightly different point of view. It is looking at practice to actually improve it in a structure rather than haphazardly because that is what most of us do because we haven't got time (Interview 1).

Teacher self-identity

Teacher self-identify provides a framework for shaping the actions and behaviours of teachers (Nias, 1989; Wenger, 1998; Sachs, 2003) and the self is a crucial element in the way teachers themselves construe the nature of their job (Nias, 1989: 13). Teacher identity is formed from repeated experiences within and outside the school and from the teachers' own beliefs. These belief systems include the moral and social conceptions that teachers have about the standards for teaching and the type of teachers to which they aspire (Nias, 1989; Sachs, 2003). Teacher identity is not predicated on distinguishing between the personal and professional but a 'fusion of the personal and occupational self image' (Nias, 1989: 26). Wenger (1998: 145) describes identity from a social perspective so that identity includes 'our ability and our inability to shape the meanings that define our communities and forms of belonging.'

The teachers in this study had varying experiences and were at different stages in their teaching careers but they all demonstrated a strong sense of self, teacher identity and self-efficacy. They had diverse skills, expertise and talents which they were keen to utilise in their classrooms and in the school. They also had strong beliefs about teaching, teachers, schools, students and learning and the purposes of their own work.

Their teacher identities had been formed through construction and re-construction of meanings about their personal and professional selves. Identities had been built through the construction and negotiation of meanings of their individual and collective experiences of the social community of the school.

The profiles of the four teachers show a level of commitment to their own and student learning. Each had a commitment to pedagogical practice and revealed strong beliefs about students, teachers and learning. Learning and knowing as the integration of teacher identity (Wenger, 1998) was reflected in their receptivity and openness to new learning.

It was this strong sense of self and teacher identity, through active participation in the practice of social communities and construction of identities in relation to these communities (Wenger, 1998), which facilitated their engagement to research their own practice. Research provided each of the teachers further opportunities to re-negotiate, adapt and reconstruct identity, through individual and group experiences. The dynamic of individual, collective and new experiences was instrumental in the creation of a community of practice (Wenger, 1998) and in embedding teachers researching their practice in the school.

Summary

In this chapter I have described how teachers researching their practice became a focus for teacher professional development at the school. I have described the school culture of Hamden Hill High to highlight the idiosyncratic features of the school which were present when I became involved in the school. In the next two chapters I present the findings of the study. Teachers researching their practice provided the driving force to re-culture the school and embed research as a central feature of their work.

Chapter 6

Hamden Hill High School – a model for whole school teacher learning – the successes

_____

Introduction

In this chapter I present a case account of Hamden Hill High School as the school undertook a process to embed teachers researching their practice as a central feature of the work of teachers in the school. First I examine the school–university partnership which developed through teachers researching their practice. Then I examine the elements of structures, processes and relationships which facilitated the teachers researching their practice. Each element of the model is analysed and discussed in order to establish the successes of the research project. I analyse teacher culture which acts to mediate teachers' interpretation and integration of research into their practice and the subsequent effects. In the following chapter I discuss the failures in the model as it was developed.

School–university partnerships: cooperative to collaborative

The development of the partnership presented in this study was no less problematic. It developed, evolved and changed throughout the two year involvement in the school. Two distinct phases of partnerships emerged which I have called symbiotic–cooperative and organic–collaborative partnerships.

The notion of school–university partnerships was not new to the school as they had previously formed partnerships with universities, but these partnerships were essentially symbiotic – short-term and based on mutual self–interest. Since the 1990s, when the school had first embarked on a period of reform, research had been encouraged in the school. Teachers accepted the presence of university researchers in the school and the school had been used as a research site. The involvement of teachers in research had

been as research subjects with a one–way flow of information. The teachers had agreed to participate largely because of the monetary benefits to the school: 'we've [the teachers] got to talk because Rosemary [the Principal] is trying to get us another $10,000' (Interview, Principal, 1999).

The school had received a range of benefits from their involvement in a number of research projects with universities and with the National Schools Network. Research findings had been used to inform change and development in the school. These symbiotic partnerships were based on mutual self–interest. The Principal explained the school's focus:

> HHHS is characterised by its ongoing drive for improvement effectiveness and there is an acceptance of continuous inquiry into their work. This acceptance of continuous inquiry into our work, why we do things the way we do, whether the things we do are successful. In this process of inquiry – this collective and individual inquiry – that takes place in the school (Videorecording, Principal, 1999).

She also commented on the school's mutual self–interest in partnerships:

> We've been in everything that goes and tried to use those things to serve our purpose but at the same time realising that we had to serve the purpose of the people who are doing those projects (Interview, November 1999).

In developing a new, sustained partnership between the school and university the views of the teachers themselves had to be considered as they had well-formed views about what should constitute research projects. The uselessness of schools 'forced into projects which aren't working for them' and 'the need for practice oriented research' was echoed by the teachers. Rebecca expressed a commonly held view:

> It is important they don't try and impose their own view of research, or their own agenda on us because teachers are extraordinarily sensitive to that and that never, ever works (Interview 2).

Symbiotic–cooperative partnership: foundational and continuation

The first type of partnership which developed during this study was **a symbiotic–cooperative partnership.** In this type of partnership university academics share their expertise and support the work of teachers. This expert–client model of partnership involves a one way flow of information and service (Yeatman & Sachs, 1995).

Although universities support the work of teachers, this model does not necessarily lead to a sustainable and prolonged partnership. In the foundational phase of this partnership the teachers clearly saw me as the university partner as a source of expertise, believing that I would support their work and 'collect all this data' for them. The inequality in the partnership was reflected in the views of teachers. Rebecca expressed her opinion about the role of university partners:

> I think we needed information and we needed somebody with research expertise, or even just a sounding board where we could say, 'well, this is what we would like to do. Is that research? Is that okay?' And I think we needed someone to get us started because we talked for a long time about answering the question 'are we doing what we say we are doing?' But I think for a start, teachers felt a bit intimidated and there was lots of argument about research. We all thought we all probably didn't know enough (Interview 2).

The time spent clarifying the purpose, processes and outcomes was important in these early stages. Developing trust between the teachers and myself was essential. Trust was developed by the commitment I showed the school. I did this through frequent visits at least once a week in the first two months to attend team meetings and at other times to talk with individual teachers. My visible presence in the school, willingness to attend and be present at meetings, provide expertise and information and participate in informal discussions demonstrated my commitment. The teachers demonstrated their commitment by preparing descriptions of their classroom practice and bringing examples of their work to the meetings. At these meetings they discussed their practice, identified areas where they wanted to improve or change their practice and planned data collection methods. As trust was developed between the teachers and myself, they became receptive to ideas and more candid in their discussions. Rebecca commented on the changed views:

> And so I think one of the things that you as the critical friend also did for us was to remind us of the fact that we had to be involved in it, that you just can't have a researcher come and in and do jobs for you. We had to be involved in creating that process and continuing it and eventually working on it on our own. So I changed my point of view about research (Interview 2).

The foundational phase of the partnership established the trust and commitment and a more equal partnership began to develop. The partnership moved from the **foundational phase** into the **continuation phase.** In this phase different roles and relationships were required to sustain and maintain the partnership. The teachers were confident about their

work and they began to plan and conduct research in their classrooms. I no longer attended weekly meetings. The teachers contacted me to attend meetings when they required my assistance for example, to suggest ideas for data collection and for data analysis and presentation of their findings. They owned and controlled the process and after a hectic involvement with the school I was able to fulfil my commitments to the university. William captured the spirit of the benefits to the school:

> I think it makes a big difference having someone from outside helping you. I find it personally difficult to see outside of the situation I am in and I think the whole idea of having somebody who is not really *inside* (his emphasis) helping you to look at your practice and helping you to stay on track is really important (Interview 2).

The foundational and continuation phases of the symbiotic cooperative partnership involved spending time to clarify roles and purposes of the research. The trust and commitment developed between the teachers and myself was essential if teachers were to continue researching their practice in the school. The development of trust and demonstrated commitment provided the groundwork for moving into an organic–collaborative partnership.

Symbiotic–cooperative to organic–collaborative partnership

The partnership which evolved was an organic–collaborative partnership one. Its features were that it was embedded in the school's processes and there were mutual purposes and benefits for both partners. Shared values and understandings which had developed trust between the partners were important factors in the partnership. An organic–collaborative partnership was essential if the teachers were to make researching their practice a central feature of their work. One of the reasons that the partnership became embedded in the school's processes was that the Principal invited me to make a long-term commitment to the school (for at least two years) with remuneration, and my position designated 'researcher-in-residence'. The long-term commitment and the status ascribed to the position were important factors in moving the partnership from symbiotic–cooperative to organic–collaborative (Figure 6.1).

Symbiotic–cooperative   Organic–collaborative

       foundational   continuation

Figure 6.1   School−university partnerships – a continuum

At this time there was an important pragmatic and symbolic shift and the teachers
began to refer to me as 'our critical friend' not as 'the university partner'. Critical
friends imply a more equal emotional, intellectual and interdependent relationship
which occurs over a long period of time (Day, 1999). For Wendy this meant:

> Probably the biggest thing is that in teaching you see the big picture and you go for big
> ideas and big issues. But with our critical friend we needed you to actually help us
> synthesise it down and distill the essence of that into one idea that is actually practical
> and applicable. I think that this is what happened with us (Interview 2).

A number of factors constituted the organic−collaborative partnership. They included
shared values and understanding; common purpose, shared commitment, trust and
continuity; common and shared learning; generation of theoretical and practitioner
knowledge.

Shared values and understanding

An essential component of this organic−collaborative partnership was to share and
exchange our common values and philosophies about schools, teachers, students, and
teaching and learning. The Principal commented that 'a shared ethos was important for
the acceptance of a university partner by teachers in the school' (Interview, Principal).
The teachers also commented on the need to have someone who 'understands our point
of view'. Rebecca reflected the views of the teachers:

> I have thought this and I have discussed this with other teachers as well that it is just so
> important that whoever you have from the university understands how schools operate
> and how teachers operate (Interview 2).

At our meetings the teachers and I spent time sharing our views about learning, students
and schools. The teachers were keen to hear of my experiences in schools and
universities and I was able to question and engage with the teachers about their
experiences and ideas. In particular, by being a participant observer at their team
meetings I witnessed their concern for the welfare of their students and the importance
of providing the conditions for learning in their classrooms. Ruby was often keen to

share her feelings about her work and her changed understanding about the school–university partnership:

> It took me a while to realise that you were on our wavelength and that was nice to have someone who understands how hard we work and what teachers have to do, that we have to attend to the problems in our classes and that the welfare issues have to be addressed before we can do anything (Interview 2).

William showed how his idea of the role of the university partner had changed and the different conditions under which I worked:

> I was a bit impatient at the start and I wanted you to be here all the time to tell us what to do. It took me awhile to realise that you couldn't always be here and you wouldn't be telling us what to do (Interview 2).

Common purpose, shared commitment, trust and continuity

Common purposes for teacher research were articulated, made explicit and embodied through dialogue. Understanding of, and respect for, each other's expertise and skills developed. Discussions occurred about how the strengths and expertise of universities and schools could complement each other and how contributions although different could be equal. Rebecca commented on the importance of this understanding:

> I guess what I am trying to say is that is just would not work with just anyone. It has to be someone who respects what you are doing in schools, understands teaching and is prepared to listen to what we are saying and making our work valid (Interview 2).

As I continued my involvement with the school the confidence and trust grew. Trust was demonstrated by the school in requesting my assistance in matters which were unrelated to the research. In my capacity as 'researcher-in-residence' I provided assistance by giving advice about a failing practicum student from another university and working with the School Council to develop a parent survey for them. I could readily provide assistance since I could travel from the university to the school in 20 minutes. The close proximity of the school and university was an important factor in the development of our organic–collaborative partnership.

As leader of the teacher research project Rebecca was enthusiastic and she committed much time and energy to planning and maintaining the continuity of the project. Rebecca often phoned me at home to discuss the other teachers' reactions after the meetings which I attended and to talk through some ideas. She used me as 'a sounding

board' and we often discussed strategies for future meetings. Rebecca and I also met in each other's homes and walked the dog together to continue our conversations. Her trust and confidence was indicated in her interviews and her interviews were often over two hours long! Rebecca explained how the trust and confidence of the teachers had developed:

> Wendy, William and even Ruby have each indicated to me how they now enjoy your visits to the school and are much more relaxed in the meetings. We even miss you if you don't come to the meetings? [laughter]. I feel that my own ideas have been clarified just by talking to you and I know you say that this is our project and we are to lead and control it but I don't think it would happen if you weren't so enthusiastic and just being there so we can say 'is this all right?' I know people are feeling much more confident and don't look to you for approval all the time now … not that we want you to stop coming to our meetings [laughter] (Interview 2).

This trust and confidence had a flow-on effect and contributed to the cohesion of the group. The teachers were much more animated during meetings and began to show their willingness to take risks in their planning and in developing units of work together. Rebecca admitted it was 'pretty radical for me as a Maths teacher' and 'it is such a nice way to teach'. Ruby captured the mood of the teachers:

> I am more willing to do new and different things in my classroom. Just by spending time talking with each other about our classrooms I have developed the confidence to try things which I have 'borrowed' mainly from William and Wendy. It is nice when we all like each other and respect and trust each other to have a go (Interview 2).

Common and shared learning

As the teachers engaged in research and as I participated in the process we shared our learning from the research. The teachers enthusiastically discussed their classroom practice and the outcomes of their research. For example, Wendy had conducted systematic observation in her classroom by developing a checklist to use when the students were doing peer evaluation in groups. She talked about her own learning in relation to collecting data and what she had learned about the group:

> I was just going to write down my observations but I realised I had to come up with a key to make it clearer. I watched the first group doing it to actually help me do this before I decided on the key. I had to add a few more things like 'interrupting comments' and 'sought clarification', 'responded to criticism'. It has been good because I have been able to use the information to write comments on them. I got a bit of a surprise as Robert turned out to be the 'carer' in the group and Michael was the 'leader'; he kept them on task, kept them moving, kept them thinking about the process. It was fantastic (Focus group interview 4).

Wendy was impressed that the students had noticed the changes in teaching practices:

> I think the students really like the way that we talk to them about outcomes and negotiating what they are going to do with them. A student said to me the other day that he really liked the way that what he was learning in English was followed through in Science. They loved the unit of work on fantasy and ended up making sherbets in Science (Interview 2).

The teachers were also enthusiastic to 'spread the message' to other teachers in their school and to other schools. The teachers talked about their data collection methods (observation, questionnaires, check-points and interviews) at staff meetings and talked about what they had learned about their classroom practice. At the next meeting the teachers discussed the reactions and Ruby explained:

> I was delighted that there was so much interest from the staff. I think, Wendy, it was your enthusiasm which did it. I have a number of teachers saying that they want to get involved. It is so important that we keep sharing our learning if we want to get others on board (Focus group interview 5).

The team teachers also volunteered to share their knowledge at the University and with other teachers in other schools. Two teachers were invited to given a presentation at an interstate teachers' conference and they were delighted at the response. Wendy indicated how well it had been received:

> I thought it was going to be a bit of a drag although it was good to have a couple of days away from the school. The teachers at the conference responded well and said they thought we were doing really good stuff getting the students to reflect on their learning and we collecting data on it. I think our idea to show not tell by making and using the video was a really, really good idea. I don't like seeing myself on the telly though but if we want to get our message out there I will have to just put up with not looking glamorous (Focus group interview 7).

They also made presentations to universities and to teachers in schools. Rebecca commented that 'I don't think we should just be doing things within your own school and only for ourselves' (Interview 2).

My involvement as the university partner with the school also enabled me to inform my own knowledge base and to expand my understanding of schools and the changing realities of schools (Seller & Hannay, 2000). I also presented papers and lectures at two local schools and at my university. This dissemination generated interest from teachers in other schools wishing to research their practice. Both the school and I were contacted about our work. Wendy recognised the importance of this dissemination:

It will always be important to share our research with other people. It might be someone from another school; it might be someone from a university. But it is important to spread the message (Interview 2).

Rebecca also expressed her views about sharing their research:

I think that is crucial that we share our work with other schools and universities in the long-term. Our work here can help other schools, other teachers and universities because our work is important. But overall it is still about kids. It is still about producing something for a better community (Interview 2).

Ruby, likewise commented on her participation:

I never thought I would ever be willing to tell other teachers about my work. But I really have to say that it is the best thing I have been involved in during my career so I guess the more we spread the message the better it is going to be for our students (Focus group interview 7).

Generation of theoretical and practitioner knowledge

In this study practitioner knowledge was generated when teachers became researchers and shared their insights in dialogic conversations in team meetings, whole staff meetings and in the written narratives by teachers. The teachers shared their learning enthusiastically with each other and other teachers in the school and gradually came to a belief that by sharing they were able to make a contribution to knowledge about teaching. William commented on the importance of their knowledge:

You always take it for granted what we know about teaching. But now that we are sharing what we know and conducting research, we are learning so much more about our work. So I guess we owe it to the teaching profession to write down what we have learned about our practice and share it around. Teachers never realise just how much knowledge that generate but this is making us be open about it (Interview 2).

Wendy reiterated the teachers' feelings about the importance of their knowledge about their work:

It means that we are valued as having something to contribute to education and that there is a whole lot of really, really good stuff going on in school. It happens every day in lessons across the state. It is never recorded, it is never listened to; it is never valued (Interview 2).

The organic–collaborative partnership continued and enthusiasm and energy were maintained. The teachers continued to research their practice although my visits were less frequent. Ruby reflected on the role of the university partner:

You were there as our critical friend for guidance, advice, suggestions in terms of establishing research direction, useful strategies and data collection. We need the

support of the University to continue. We need you as our critical friend to come in occasionally and make sure we are on track and on targets and stuff (Interview 2).

Rebecca expressed her views about the partnership between the school and the university:

I think it is good to have an outsider's view. I think you are silly if you don't try and get some outsider view because it helps you to really clarify what you are trying to say but it also spreads the message (Interview 2).

William was reflective about the reciprocal benefits for schools and universities:

I think we can learn so much from each other. We like to know what is happening in the University world and we think we can offer a lot to them if they will let us. It takes time to develop that kind of relationships but I think we have shown here how it can work (Interview 2).

Teachers as researchers – the research project

The four teachers described in Chapter 5 had been nominated by the Principal to be involved in the teacher research project because she believed that this team would be the most receptive to 'something new'. The chosen team was involved in designing a process for researching their own practice (Appendix 6.1) in consultation with me as the university partner. I saw my function as enabling them to own and control their research. At the same time the teachers were trialling a process which would be used as a model for other teachers in the school. As William said 'I was excited about this project. I like anything which looks at your practice and I think that is what it is all about' (Interview 1).

The teachers wanted to make teacher research 'real, not just rhetoric'. Wendy was keen that it would improve both her teaching and the impact she had on the students and their learning. She expressed her views:

Whether or not it would impact on teaching and the way I teach and how to make it work for the kids so that it was effective for them, that they actually developed new learning skills and are actually able to chart how they were learning (Interview 1).

Over the twelve month period the teachers developed a plan and a time line. The process involved the teachers in sharing their current practice; determining the gaps in their practice; formulating a research problem or question; collecting data using a range

of data collection instruments including questionnaires, interviews and observation; and, sharing their findings through dialogue and narrative. Focusing on the fact that this was a pilot study intended to embed teachers researching their practice across the school, the teachers formulated three questions which became the focus of their dialogic conversations. These questions were:

- What did we learn about our own practice?
- What would be valuable to pass on to other teachers?
- What did we learn about the students and the way that they learn?

By conducting this trial the teachers were able to identify problems and refine the process which would be used for the next group of teachers. Eventually the process would filter throughout the school so that, as teachers researched their practice, a culture of inquiry would be embedded in the school. We decided to extend the trial and continue it over a 12 month period. The teachers had agreed to work with other teachers at the conclusion of the trial in a trainer-trainee model. In the second year, the teachers and I worked with the other four teams of teachers. Three of the four teachers, Ruby, Wendy and Rebecca, continued to conduct research in their own classrooms. The second stage of my involvement as the university partner was working as a critical friend in a support and mentor role to the teachers.

The research issue for the teachers was 'do our students reflect upon and evaluate their learning? Initially the teachers discussed their practice with the intention that the teachers would identify 'gaps' or an area where they wanted to improve their classroom practice. Ruby, William and Wendy decided that they wanted to involve the students in giving and receiving feedback on their learning. Ruby and William were keen that the students could assess their learning during rather than at the end of a unit of work. Wendy was interested in using student groups to encourage students to be involved in peer assessment. Rebecca wanted the students to negotiate how they would achieve the outcomes of the next unit of work and to involve the students in pairs to give feedback. The teachers planned a unit of work which incorporated new teaching and learning strategies. They then planned the data collection methods they would use. Ruby devised check-points where the students had to write comments on their learning; Rebecca used

a questionnaire to evaluate the effectiveness of her strategy and William planned to conduct interviews with students in focus groups. Wendy devised an observation checklist to enable her to observe and record the extent to which the students were able to receive and give feedback.

Their comments indicate the differences in approaches. For example, Wendy said 'I just planned the unit of work as I usually do and structured in the observation. It was easy' (Interview 2). Rebecca commented that 'I am really unhappy with the way we are teaching year 7 Maths so I'm trying to be a bit radical and having fun' (Interview 2). William said 'I'm enjoying trying something different' (Interview 2), and, Ruby although reluctant initially said 'it really wasn't so hard after all' (Interview 2).

There were a number of factors which facilitated their research and which were important in the development of a model for whole school teacher learning. The elements of a model for whole school teacher learning are elaborated below.

Structures to facilitate whole school teacher learning

Since 1994 a team structure had been established in the school with the provision of a timetabled weekly meeting for the teachers. This team structure and meeting time were essential for these teachers to be able to research their own practice.

The school had put in place a range of structures which promoted teacher participation in decision making and which were different from the traditional, hierarchical set up of most schools. For example, there were no formal committees in the school; rather, ad hoc working, special purpose groups with a life of between 6 months to 2 years were formed when needed. There were also no formal, regular staff meetings but staff did meet to give presentations, often following professional development activities. Staff also took responsibility for staff development days, often in the absence of the executive.

On several occasions during this study the Principal and the four teachers built on these structures by gathering together the whole staff to share ideas and to inform what was happening about the teacher research project. At these meetings the teachers presented the findings of their research, discussed the research process as it was being implemented and gained input from other teaching staff.

The school had an executive structure largely imposed by the central departmental system consisting of head teachers[1], deputy principal and principal. This executive did not meet as a group and the Principal stated that the role of executive positions was to 'monitor not control'.

Rebecca was supportive of the team structure which had been implemented in the school and indicated the difficulties with the Faculty structure:

> Most faculties are too large and too large to operate as professional development. Faculty meetings are run by the Head Teachers but I think there is so much administration, communication of what happens in Executive meetings, people all wanting to have *their* [her emphasis] say about whatever is coming up [Laughter]. You always get interrupted by things that you have to do like the year six visits. Whereas the team is a nice, contained area where you can sit down and talk about learning. It does not always happen but with some integration of the people in that team you can change the focus. The structures in this school enable us to do that (Interview 1).

Wendy also supported the team structure:

> The team structure is important for this school. Faculties meet only lunch time or part of recess. You can't always get access to every member of staff and there is always a pretty full agenda with just the day-to-day routines of reports, parent teacher nights, communication from the Executive (Interview 1).

As part of the school's leadership structure, teachers were encouraged to volunteer and participate in leadership positions. Individual teacher expertise and skill was recognised and often the Principal nominated or invited individual teachers to assume leadership positions. Teachers were appointed to leadership roles regardless of their formal position or length of experience in the school. The Principal expressed her feelings about the importance of the school's structures.

> It has been difficult to organise and the teachers had to agree that they would accept less teaching time with the students if we were going to change the structures. But I really think it is worth it as teachers need time to talk (Interview, November 1999).

---

[1] A head teacher is a promotion position and leads a group of teachers within a subject faculty

Ruby was appointed to team leader in her second year at the school and she reflected on her appointment:

> I was flattered about being appointed as team leader but I'm working with Rebecca, Wendy and William who have had heaps more experience than me. I really look up to them so I could only hope that I could do a good job. I guess they will tell me if I wasn't. Still it is good to be given these opportunities and that doesn't happen in other places (Interview 1).

Management of teaching in years 7 and 8 in the school made use of the structure of teams. Each team consisted of a core of four teachers who collectively were responsible for the academic and social welfare of a group of approximately 20 students. The teachers represented the key learning areas of English, Mathematics, Science and History/Geography. This core of teachers remained with their team of teachers for two years and with students for years 7 and 8. One of the teachers continued with the student group into years 9 and 10. This maintained continuity for the students since for the continuing years (years 9-12) traditional structures of 40 minute periods (usually in blocks of 80 minutes) and individual subject teachers remained.

The team structure was designed to encourage teachers to discuss a range of pedagogical issues, to integrate curriculum, to communicate and determine action plans on issues concerning the academic and social welfare of their students. Collectively, the teachers took responsibility for communicating with other teachers, parents and the Executive on all matters relating to this group of students. It was this structure which provided an important condition for teachers to conduct research into their own practice.

The teachers were committed to the concept of the team. William described it as a 'total revolution for me, absolute, complete revolution'. Through his involvement in the teams he had gained new insights about teachers and students. He expressed his enthusiasm about his learning:

> I learned heaps. I had never realised before I started teaching in teams that you could know kids so well, know a class of kids so well. All of a sudden I was talking to other teachers about these kids and getting to know them. I can't imagine doing it any other way. I don't know what will happen if I go back to a traditional school again. But at least I know how important it is. Not all teams have done that but the ones I have felt most happy in have done that (Interview 1).

Wendy was committed to the concept of the team:

> Working in teams has been the best thing that I have come across in all my years of teaching. I couldn't imagine teaching any other way. It is the first time that we have got a structure and a time to talk to each other and that is really, really important for teachers (Interview 1).

The allocation of an 80 minute period per week, incorporated into the school's timetable, is important to the team structure. This time allocation enables teachers to meet for discussion and dialogue about the students.

Teaching in teams and structuring a period of 80 minutes per week as part of the school timetable had enabled the school to use time to fit the purposes of the school. Time had been adjusted and allocated in the school to enable teachers to meet, discuss and exchange ideas as part of student and teacher learning. Technical-rational time (Hargreaves, 1994) as the best fit between allocations of time, was an important contributor to how teachers viewed their work in the school. The Principal of the school had introduced a team structure to the school and commented on their significance.

> The team structure enables teachers to talk and work together. They [the teachers] have had to develop new relationships with each other as they all have equal status and power. The Faculty is no longer the most important structure. It came as a bit of a shock to some of the Head Teachers who had built up their little empires (Interview, November 1999).

The allocation of time demonstrated to teachers the importance of their dialogue and sharing as integral to their work. Wendy explained the importance of time to the development of teacher research within the school:

> I think the most valuable thing is time and if a school decides this research is really valid and it is relevant to what we are doing they have got to build it into their timetable structure (Interview 2).

A professional learning community

The work of teachers revolves around a common commitment to pedagogy and community. Members of the school community assume collective responsibility to ensure that learning is the core and the school is structured to support that commitment. Establishing the idea of schools as professional learning communities has been suggested as a way to change, reform and improve schools (Fullan, 1993; Sergiovanni, 2000). This framework promotes understanding of professional practice and lives of

teachers (McLaughlin & Talbert, 2001). Seeing a school as a community draws attention to its holistic nature with shared and common commitment to the values and beliefs of the school. The focus on pedagogy is to place learning at the core of the community. As the Principal explained:

> We have been experimenting in altering the way we go about our work, how we view our work and how we approach our work. The teams promote a different type of learning as teachers learn from each other and the teams enable frequent and varied interactions between the teachers. The teachers work and plan together and share ideas together. As part of that learning, the staff have to accept that they are all at different levels of development, have different skills and different things to offer. We are all learners in this place – staff, students, me (Interview, November 1999).

The teaching teams became centres for teachers to discuss pedagogical practice, and contributed to the sense of cohesion and community. Hamden Hill High supported its commitment to pedagogy and promoted community between teachers. The commitment to improving learning outcomes for students at Hamden Hill High School was strong. Wendy expressed her views about the sense of community at the school:

> Here at Hamden Hill we have a teams' approach which is about we as teachers working collaboratively to ensure that our students are learning. We get to know the students really, really well and we can work together to solve problems so that we can focus on learning which is our business. Now that we are doing this research we share a lot more at our weekly meetings. I keep learning from the others. It has made us all open up a bit more (Interview 2).

Rebecca indicated the responsibility she felt to the system and to education in general:

> We look at it as something for Hamden Hill but most people are interested in the future of public education. I guess everyone is a little bit scared of the lack of teachers, lack of people going into teaching, the average age of teachers and certainly the lack of confidence in the state system by the community. There is a broader issue of better education for all students definitely. And I think Hamden Hill has been a school that has been about doing that. We are a government school so we owe that to help other government schools and other teachers because it is still about kids. It is still about producing something for a better community (Interview 2).

Implementing teachers researching their practice

During the period of this study the four teachers – Ruby, William, Wendy and Rebecca formed one team commencing with students in year 7 and continuing with them into year 8 the following year. Wendy described the team:

They put together a team that they thought would work well together. And I like to think they put the brains together [Laughter], No, but that is why William was put in there because he has got such a good brain (Interview 1).

The four teachers used the structure and their time in the team to begin to engage in discussions about their work. Self and critical reflection is an important requirement of teacher research (Somekh, 1994, 2000). Dialogic reflection as a deliberative, cognitive and narrative process (Hatton & Smith, 1995) became a feature of the teachers' conversations. Wendy explained:

> It (the research process) has provided us with opportunities to reflect on what we are doing and to actually challenge ourselves a bit more about why we do things. I think you will find that everyone will say that it has helped them. I'm thinking more about how I involve the kids in their learning and what opportunities I give them. I've been thinking more about how they learn too (Interview 2).

Ruby expressed her views about the research process:

> I freaked out in the beginning but I enjoy coming and sharing what I am doing. It has make me take a step back and think about what is happening in my classroom and how I can work more closely with the others in making the learning better for the students. The others [teachers in the team] keep asking me questions in our meetings and that has made me think more about what I am doing (Interview 2).

The teachers engaged in dialogue exploring alternative solutions to solve problems and challenging beliefs and viewpoints. Rebecca commented on the importance of that exchange and dialogue:

> The team is where you get the time to actually sit down and think about what you are doing. The teams give that exchange, the dialogue, and the time to develop something worthwhile. When you have a team of people who are really sincere and dedicated to improving their practice then they will continue that dialogue because it becomes the most interesting and most important thing for them (Interview 2).

During this research project the four teachers and I used the team meeting time to discuss a range of pedagogical issues related to the teachers researching their own practice. Wendy revealed what she had learned about researching her own practice:

> I thought that I knew all the kids in my group but I have now found out that when I used the observation sheet there were a few surprises. Ben was really good at giving his comments but refused to accept the comments or the marks that the students gave him. I was really surprised. It was time consuming but worth it and I can't wait to observe some of the other groups. I'm going to do this all the time now (Interview 2).

The teachers in this team shared their current practice, discussed their research plans, methods of data collection, their analysis of the data collected and wrote narratives of their research. They also documented the procedures which they had used to research their practice so that the next group of teachers to be involved in conducting research would benefit from their experience. William commented that 'I have learned so much from my first little foray into research. I hope the others get as much out of it as I have' (Interview 2).

The teachers all commented that important gains for evaluation and learning had been made through self-reflection. William discussed his learning:

> I am discovering now, part way through the project, that I can actually learn a lot more than I thought I could learn by just doing self-reflection and evaluating that as an area where I could make some gains (Interview 2).

Wendy also was keen to reveal her learning and reflection:

> I think that I have realised that it is just providing me time to step back and reflect on what I am doing. It is providing me the time to actually think more about the process and to look at how I am engaging the kids, what opportunities I am giving them, how involved they are in the process. So it has given me time, or rather given me the opportunity, to reflect on what I am doing (Interview 2).

The teachers all commented on how the process had encouraged them to take risks, changed their practice, 'done things we wouldn't have done otherwise' (William, Interview 2), and transferred what they had learned with one group to other students in other years. Their involvement also generated interest from other teachers in the school. Wendy made the following observation about the process:

> So at least with this we do have the pedagogical focus and that means that we've learnt to deal with the other issues really effectively in five or ten minutes and just get on with the business which is learning. It is increasing the quality of the work we do (Interview 2).

William showed his excitement about how the structure had transformed his work practices and how he thought about his work:

> I have noticed a big difference. It is not just a 'one off' project. It affects everything; it affects they way you do things. My year 8 class were doing something else and we had a little post box activity where they could write down some issues that were concerning them or things they wanted to say to me. And the comments in there were things already about how much better Science is when they have been doing this activity and they know what the outcomes are and they know where they are going. I thought, 'far

out'. It was the change to my language and everything as well because it made it conscious and explicit (Interview 2).

The structures in the school were used by the teachers to engage in dialogue about their practice and their research. The teachers challenged each other and learned from each other about their practices. These structures had enabled the teachers to fundamentally alter the way they approached their work practices and how they thought about themselves as teachers and learners. The weekly timetabled meeting and the allocation of teachers to teams were essential for this to happen. Structures supported the work of teachers to enable them to work together to research their practice and change the way that teaching and learning was constructed in the school. Leadership and school–university partnerships are also essential conditions for teachers researching their practice. I explain these in the section following.

Processes

Processes are the second element of a successful model for whole school teacher learning. Leadership and school–university partnership were features of processes and were important facilitating factors in teachers researching their practice at this school.

Leadership support for teachers researching their practice

The Principal was keen that a process promoting teachers researching their practice would develop a culture of inquiry in the school and thereby changing the culture of the school. By instituting a process of teachers researching their practice into the school the Principal believed that a culture which challenged the learning of teachers and students would reflect the ethos of the school and be 'reality' not just 'rhetoric' (Interview, Principal, 1999). The Principal invested resources in this process, and, gave the teachers time to trial and develop a process with the intention that teachers researching their practice would be embedded throughout the whole school over a period of time.
The leadership style of the Principal was a facilitative condition in enabling this to happen. Rebecca reflected on her leadership style:

> Rosemary has always encouraged us to focus on learning and I see that this research project is another one of her ideas for us to learn. She has always encouraged us to be involved in professional development activities and encouraged us to keep learning. She

130

gives us the freedom to develop our ideas and gives us a bit of money to spend how we like. She gives us responsibilities and autonomy and most of us – there are a couple of exceptions – like her approach (Interview 1).

Collective leadership

Rosemary had been Principal of Hamden Hill High School for a period of over 10 years. During that time she had instituted widespread changes in the school. She had a clear sense of what she wanted to achieve in the school. She had been described as a change-maker and with a clear vision for the school:

> The principal has been the change-maker and my attitude to that is that in many ways that is how it has to be. She's unusual in the sense of her vision and in terms of her intellectual understanding of things…and I think that is a rare ingredient (Teacher interview in Peters, et al 1996:28).

Rosemary had been previously Deputy Principal of the school for a period of two years and for the second year she had been relieving Principal. Her leadership style had evolved and developed over a period of time. She admitted that she had to take 'some enormous leaps' in changing her leadership style as she was a 'natural controller'. Her leadership style had changed after some initial experiences:

> I tried bouncing a few people into line and all I did was wear myself out…I realised pretty early that was not going to work and that I had to move into other ways of dealing with people (Interview, November 1999).

She saw herself as a learner. Her experiences as part of the network of Principals, Principal meetings, membership of the National Schools Network had changed her thinking about leadership. She admitted that 'I was smart enough to know that I've got to be careful not to slip into some kind of benevolent, maternalistic, dictator model of leadership (Interview, Principal 1999).

In developing a model of collective leadership in the school, the Principal challenged and changed traditional, hierarchical models of leadership. She believed that hierarchical structures promulgated a culture of dependency. She expressed her feelings about hierarchical structures:

> I have got a lot of strong feelings about how traditional cultures in school and how hierarchical ways of doing things are just so flawed. We have this culture of people who are really dependent. It is this dependency; everyone dependent on the next level and not wanting to assume responsibility because every time that something happens you

pass it on and upwards, right down to little welfare and discipline issues and all those sorts of things which to me are just really, really flawed (Interview, November 1999).

Although the Principal maintained ultimate responsibility and control as leader in the school, she had re-conceptualised the roles of the Executive. She acknowledged and utilised the skills and abilities of the Executive in inclusive and participatory ways:

And there were things like taking the risk, realising that people could [take the risk]…accepting that when we sit down as six members of the Executive … accepting that we are all different and accepting that some of us will never, ever be good at some things, and others will be really, really good at other things. Accepting that very difficult thing…to accept when you have been used to working as an individual, and used to being a controller that six of us are going to work better together than we are individually. And if we work well together we can achieve a lot more than we can on our own (Interview, November 1999).

The Principal had been responsible for providing a vision for the school and viewed her leadership role as having responsibility for the ideas, the 'provider of the big picture' (Interview, Principal 1999). As part of that role she saw that she was responsible for communication, development and learning that took place within the school. She described herself as the 'vital keeper of this culture' (Interview, Principal 1999) and as being responsible for the overall direction of the school. The Principal made the following observation regarding her leadership role:

I have had to be steadfast and strong all the way along about 'this is where we are going and this is why we are doing it'. So I have had to get my head around it exactly what it is and why we are doing things (Interview, November, 1999)

The Principal and the teachers constantly re-focussed on the questions of 'are the students learning?' and 'are we doing what we say we are doing?' The focus of the school was on learning – students, teachers and Principal – and the Principal had continued to provide a climate where learning took place. The setting up of a process which would encourage the teachers to research their practice was one tool to encourage reflective practice and focus on learning.

Her expectations of the teachers were high but this emanated from her beliefs about, and in, teachers and the importance of their work. She demonstrated her belief in teachers and the importance of their work:

We [the Principals] decided that more than 90% of them (teachers) were really good, devoted, altruistic kind of people, but not necessarily going about their work in the most

> sensible kind of way. But it's there. And they are different to me. But they have what it takes, they have the drive, they have the heart for what the job needs (Interview, November 1999).

The Principal believed that all teachers had 'incredible knowledge and expertise' (Interview, Principal 1999) and it was her responsibility to not only to utilise that knowledge and expertise but also to continue to stimulate intellectual discussion within the school. To assist in this she provided professional development opportunities for the staff, both within the school and outside. The staff had been encouraged to attend conferences, regional meetings, network with other schools and to use the resources provided by the school system, universities and other education service providers. Staff were encouraged and expected to share their acquired expertise and knowledge from professional development activities at staff gatherings.

Making use of the expertise and knowledge of staff she shared and dispersed decision making responsibilities to her teachers because for her 'expertise, knowledge and enthusiasm are more important than seniority'. Through the team structure the teachers were encouraged to be autonomous decision-makers in relation to pedagogy, student welfare and management; they were responsible for the decisions about their students' learning. For the Principal the importance of the teaching teams was:

> I think the most significant thing we have ever done…is having people work in the teaching teams. I think it is so simple that if I had to say, If I had to name the one thing I think has had the biggest influence on the changing culture of the school it would have been that (Interview, November 1999).

Rosemary had a highly visible presence in the school. She continually engaged within classrooms, participating in discussion with students and teachers. Often it was difficult to find her in her office. She gave time to the students, parents, teachers and other community members. She was well respected and admired in the school community.

William described Rosemary as 'a supportive boss who believes in teacher research and who needs to ensure that it happened' (Interview 1).

Collective leadership is about the leader providing the vision, the ideas and direction for a school and communicating it to the school community. Collective leadership focuses

on change and establishing the conditions to implement a vision. It is about the leader being prepared to take risks and make change happen. Collective leadership places students, pedagogy and community as central to the school. The human and financial resources of the school are used to support pedagogy and the development of relationships. Teachers' learning is ongoing, continuous and reflective. Collective leadership demonstrates a trust and belief in teachers through autonomous decision making about student welfare and academic progress. Collective leadership uses the skills, expertise and experience to fulfill the goals of the school. The teachers all indicated their respect for Rosemary's leadership and William commented on Rosemary's visibility in classrooms:

> Rosemary always knows what is going on as she is always in classrooms talking to teachers and students. It took me a little while to get used to it. But now I am disappointed if I haven't seen her for a few days. The kids like her coming in and talking about their work (Interview 1).

Ruby had applied for a transfer to the school because of what she had heard about its leadership. She made the following observation about Rosemary's vision and expectations:

> Rosemary has a clear vision for this school and high expectations of us all. We all seem to respond because she gives us heaps of support, like money and time, although we are expected to give presentations to the other teachers. I guess there has to be a pay−back. But I don't mind and like talking to other teachers about what I am doing or have done. After all, it is about student learning and that is what this school is on about (Interview 2).

Relationships – social and professional

Social and professional relationships were formed, evolved and changed between the teachers and myself as they researched their practice. Relationships form the central dimension of a model for whole school teacher learning. Social and professional relationships between teachers are both essential to teacher research. At Hamden Hill High School these relationships had been formed and were enhanced through the opportunities that had been created for teachers to engage in interaction and communication. The structures and leadership of the school had been important and enabling factors for the teachers to be part of the school's changed ethos and philosophy.

The teachers who had been part of the 1990 reforms had voluntarily and compulsorily engaged in interactions and communicated about their work. They had developed shared purposes and shared their learning. They all agreed that their students and learning were central to the work of teachers. During the period of reform the Principal and the teachers had placed great importance on relationships between teachers and teachers, and, teachers and students. The Principal expressed her views about those relationships:

> I had to sit down and genuinely intellectualise about the sort of relationships that would have to be developed in a school if people were going to feel proud of things. If they were going to feel involved, feel ownership, feel accountable and feel responsible for things (the one we want most of all) I had to do a lot of thinking about these relationships. This was to me very, very significant (Interview, November 1999).

The vision of the Principal – the focus on learning and community and the structures of teaming – had created opportunities for teachers to form associations and to develop social and professional relationships. The sense of community had blurred the boundaries between social and professional relationships. Teachers socialised together as part of their involvement in the school community. Food and beverage were part of teachers' meeting and gathering together and teachers showed an interest in each other's personal lives. Food and beverage were also part of students' celebration of success and working together. Teachers socialising together during the course of their work created relaxed and close bonds in a school climate of helping and caring toward common goals. Interpersonal relations are ubiquitous (Lieberman and Miller, 1992a) but were important for the teachers to feel valued and for their own self efficacy.

Lortie (1975) describes relationships between teachers as predicated on teachers working with individual autonomy and shared equality. Individual autonomy relates to the privatism of classrooms; shared equality relates to the expectation that assistance will be given when requested. Both these relationships were evident at Hamden Hill High School. As Lortie explains, relationships are not an either/or but the type of relationship depends on the circumstances and the nature of teachers' work. Teachers have a choice whether to work alone and in private but at the school the team structure had provided opportunities for teachers to meet together. The teachers on this team had formed relationships through working together and when given individual choice the

teachers preferred association. Shared equality was evident in the cooperation and assistance which the four teachers gave each other. This shared equality involved volunteering to do each other's photocopying, taking a class to enable free time to be made available, sharing the tasks in matters relating to students, for example, phoning parents and writing students' reports. Ruby's views on the shared norms of the team of teachers are captured in the statement below:

> I am the junior one in this team but I have been told I am the leader. But I couldn't do it if I wasn't working with these teachers in the team. We have formed really strong bonds so we all just help each other out. We think it is normal to discuss our work, the students and do things for each other. I couldn't bear to have it any other way (Interview 2).

The teachers acknowledged that working within the structure of a team was important for the building of relationships. William explained that the 'support of his colleagues' was essential to his practice and ' having a go at something different' (Interview 1). The teachers commented on the learning from other members of the team. Rebecca observed that she had 'probably learnt more from William and Ruby in her career than anyone else' (Interview 1).

The teachers in the team trusted and respect each other. The lack of hierarchical structures drew this comment from Rebecca:

> The other part of the relationships is the relationships between the teachers. Wendy and I are now head teachers. She has been head teacher for some time and I am now and that makes no difference at all in that team because it is the relationships that you build up with each other (Interview 2).

The relationships between the teachers were important for creating a climate which would enable teacher research to occur. The teachers supported, trusted, respected and were confident in their interactions with each other. William saw relationships about 'belonging, ownership and stuff' and he believed in the importance of relationships:

> Relationships enable you to open up your practice, to open up, to air your doubts. So it is a completely non defensive and open relationship. I don't think it would work if you didn't have that. I don't know of many schools where people have those relationships between the teachers and between the teachers and students. I guess what we are trying to do as well is build relationships between students and students (Interview 2).

As the four teachers engaged in the process of planning, implementing and sharing, their research relationships became more open and trusting. They commented on the changes that had occurred. Rebecca described how relationships had changed:

> Relationships between the team members have changed. Definitely. More relaxed, more ownership, probably more focussed on understanding what we are doing and trying to achieve and because they are starting to see things working, maybe things they tried, that they didn't think would be that important. The teachers are all quite excited about the changes they have noticed in students and in their own learning (Interview 2).

The changing of the meeting agenda was an indicator of how relationships had developed and the growing confidence and understanding of teacher research processes. The teachers used the 80 minute meeting each Tuesday afternoon to discuss the research project. However, in the early stages Ruby announced that the project was taking up the majority of the time and that she was concerned that the administration and student welfare matters were not being addressed. Ruby expressed her concerns:

> I know this research project is important but we still have to get through the administration and send out the welfare letters. We haven't discussed who is going to get certificates either. I am feeling very frustrated and a little bit annoyed that I can't get through the agenda (Focus group interview 2).

The teachers agreed that student academic and welfare matters should be addressed first in the meeting. I was concerned that these matters would take up most of the meeting time and that the research project would not be discussed at all. However, as relationships developed between the team members, administrative and welfare matters were addressed more and more quickly as the teachers expressed their enthusiasm to talk about research. They wanted more time to engage in pedagogic dialogue about their practice and their research plans. Ruby commented on the development of the relationships and the importance of team meeting time:

> Those relationships have developed in the sense that I talk more about the work that I am doing and the methods that I am using with the people in the team more than I did with the people on the team I was working with last year. I am enjoying talking about my practice and using the team time to discuss research and practice (Interview 2).

The teachers had moved from 'cooperation' where the teachers worked together for individual purposes and benefits to 'collaboration' where joint decision-making, trust and communication led to conversations which focussed on pedagogy. Pedagogic

dialogue became the focus of the team meetings. Rebecca discussed the change in attitude:

> And I know that because people actually say to me − they are honest people and they do say, − 'Well at the start I was a bit sceptical or I really didn't know what I was going to do'. And *now* [her emphasis] 'I understand and it was the ongoing dialogue which helped me to work out what I wanted to do. *Now* I am really enjoying it and *now* I can see why we spent so long talking about it and trying to work it out' (Interview 2).

Ruby's attitude to the research changed and she spoke of her changed attitude:

> It took me awhile to get used to hearing what other people were saying about their work and having to talk about mine and being asked questions about what I was doing. But the relationships between us in team were good and they have got better since we have developed this openness (Interview 2).

William also revealed how the research process had encouraged the teachers to ask questions of each other:

> I have enjoyed being challenged by the others in the team. Sometimes they ask difficult questions but they make me think about what I am doing. Wendy always asks the trickiest questions but it is good for me (Interview 2).

As the relationships developed between the teachers they were more open with each other and they shared their learning. The teachers integrated the learning from each other into their pedagogic practice. They acknowledged how much they had learned from each other during the research project. Rebecca described her learning:

> A lot of the particular tasks I have designed have come from listening to Ruby, William and Wendy. There is probably a little bit of their ideas and their practice throughout what I do and I don't enjoy working on my own (Interview 2).

Teachers changed their relationships with their students as new relationships developed between the teachers. The teachers used their learning from research to involve the students in their learning. For example, the students negotiated learning outcomes and tasks, worked on group projects, discussed their learning and gave feedback to each other on their learning during and at the end of a topic of work. For Wendy the changes were of the following nature:

> I have noticed that the students are getting on better with each other too. They are accepting the feedback from each other and they are taking the ideas into consideration into their work. It is really powerful for them and for us. I think it is worked too because the students know that we [the teachers] are working together on this. It is amazing how communication works (Interview 2).

The teachers also discussed common learning outcomes in their respective subject areas and integrated topics from Maths, Science, English and History. The teachers also organised a 'team's day' when the students showcased and talked about their learning to the Principal, parents and teachers in the school. A video was made of the 'team's day' which demonstrated the changed relationships between the students and the teachers and students. For Rebecca there had been benefits for both teachers and students:

> But the benefits are that the kids respond so you don't have those draining lessons where you are just trying to force them to do the work. I don't see anyone who successfully hands out sheets and gets them to do them and actually enjoys what they are doing. So certainly it builds better relationships with the kids (Interview 2).

The teachers observed that they wouldn't be changing their practice if they weren't working with other people. Wendy stated that 'acknowledging that teachers had a voice was terrific'. Rebecca also made mention of the changed relationships:

> There is the aspect of sharing what you have got with other people. But I wouldn't enjoy doing this if I couldn't get some feedback from people that I trust. So those particular people have a lot that they can contribute to my ideas and I know it is a reciprocal relationship. We trust each other, we talk about things and I know they will be honest (Interview 2).

The relationships in the team were based on trust, respect and reciprocity. Ruby captured this spirit when discussing the other members of the team:

> I have always respected Wendy, William and Rebecca for their expertise. I think they are really great teachers but they say the same about me. But now we are learning lots about our work and changing the way we do things in our classrooms. I think we all trust each other and respect each other even more for being open to learning (Interview 2).

The opportunities for learning had been enhanced through these relationships. The pedagogic dialogue between the teachers became integral to the team meetings. Ruby expressed her feelings:

> When we actually started doing something and we started looking at what people were doing and discussing. I found that really helpful, talking to Rebecca, William and Wendy about what they were doing and having a think about what I was doing. I found that getting ideas from the others was really helpful because teaching is very isolating and you don't often see other people's ideas. You don't see what other people are doing. So that was very helpful. It is making me a better teacher through examining my own teaching strategies and the way I approach things and thinking more about outcomes (Interview 2).

Relationships between the teachers in the team developed and were enhanced as teachers researched their practice. Relationships were essential and central to create the conditions for teacher and student learning.

Relationships in school and university partnerships

In the literature it is established that the development of social relationships between teachers and academics are essential if schools and universities are to work together successfully (Merritt & Campbell, 1999; Sachs, 1997b;. In this study the development of social relationships between the four teachers in the pilot research project and myself as the university partner was also a major contributing factor in the development of an organic−collaborative partnership between the school and the university. A common interest in teacher research was established and understanding of mutual goals for their teacher research project developed through communication and interaction. The relationships were based on shared equality and were enhanced through engagement of ideas in formal and informal situations. As well as the formal school meetings, I often met with one or two teachers away from the school for coffee or for lunch. These social situations afforded opportunities for mutual understandings and philosophies to be discussed. The trust which developed between these teachers had a flow-on effect to other teachers in the school. Rebecca had begun to talk to the other team leaders about becoming involved in the research. She received this reaction from Bill, one of other team leaders in year 7:

> Bill commented to me that he thought we had been very successful in our teacher research. He said that he has been using our examples in his team and the teachers have been very enthusiastic. He has noticed that the teachers seem to be getting on better and more open and trusting when they talk about what they are doing in their classrooms. He said he hadn't seen that before (Interview 2).

The processes, structures and relationships form the elements in a model of whole school teacher learning and provide the enabling conditions for teachers to research their practice. Relationships form the central dimension as it was the strong social and professional relationships between the teachers, and the teachers and myself which were important in teachers conducting research. Teachers researching their practice also

changed and enhanced relationships between these teachers and other teachers in the school.

Teachers' interpretation and integration of teacher research into their practice – form and content of teacher culture

Teachers' work is about the day–to–day necessities of classroom practice, managing the diversity and difference in their students (McLaughlin, 1993) and building on their existing practice and relationships (Helsby, 1999). Teachers' work becomes a struggle between the multiple, conflicting and competing demands from schools and systems. At Hamden Hill High School Ruby, William, Rebecca and Wendy individually and collectively exercised their autonomy through the choices that they made within their school and classroom. Through exercising freedom and control, teachers interpreted and created their individual and collective ways of working.

Teacher culture – content and forms of association

Reflective and critical inquiry were central to the teachers working together on this research. The teachers made explicit their beliefs about students and learning and how these informed their practices in the classroom. They discussed their shared beliefs about students and learning and their conversations were about students and the role of teachers as facilitators of learning. As the teachers conducted their own research they began to question and challenge themselves and each other about their assumptions and beliefs about students and learning and their classroom practice. Therefore, their research provided a focus for the teachers to change both their practices and their beliefs and attitudes. Ruby was open about her learning:

> I really started to think about what I really believe about kids and learning, and my own learning while doing this research. There was much more noise in my classroom than I usually allow but I could see that the students were all engaged and learning (Interview 2).

William described the important outcomes of their research:

> I think we have all demonstrated how important the kids are as we have all tried to do something different and involve the kids. Rebecca said she had never negotiated

outcomes with her Maths students before and she was surprised how well they responded (Interview 2).

Rebecca described the changes to her practice:

> I have had to learn not to be scared of losing control. The students all wanted to build their house to show the skills they had learned. I wasn't happy but I had to let it go. They did demonstrate their learning even though the houses took too long to build (Interview 2).

The sharing and challenge to their beliefs, values and attitudes contributed to the school as community and facilitated the teachers working together.

Forms of association for teachers working together were both 'collegial' and 'collaborative'. The team structure was important for the teachers to work together and the time that had been administratively organised and allocated allowed the teachers to implement their research. The teachers were expected to use the mandatory time for teachers to meet to discuss pedagogy and matters relating to their students. Day (1999) describes this 'contrived collegiality' as a starting point for collaboration. Ruby commented that 'we are just put in a team and it is never questioned'. However, Wendy observed how the Executive had organised the team:

> They put us in a team and I always suspected that they did it because they knew we would work together. I guess there has to be a bit of deliberate organisation if we are going to work together, especially on something as important as this research (Interview 2).

In the early day of planning this research the teachers discussed what they were doing in their classrooms. They listened to what was happening in each other's classrooms and encouraged each other to share ideas about their practice. These exchanges were 'not spontaneous, voluntary, development oriented, but fixed in time and space and predictable' (Hargreaves, 1994: 195). Clarifying questions were needed and the teachers commented that this sharing was slow. Rebecca indicated the teachers' concerns:

> The teachers said they were a bit frustrated about the whole process. They want to move a bit faster than what we are. But I agree that we need this process if they are going to own it. We just have to keep hanging in there and letting them talk about their little annoyances. Ruby said the other day that she is not sure where we are going (Interview 2).

The teachers planned units of work that involved their students in negotiating outcomes, skills and processes, and in utilising peer and self evaluation in their work. A feature of

the planning process was the focus on the collection of data during and at the end of, the implementation period. Individually and collectively the teachers planned what data collection strategies they would use.

As they became more familiar with teacher research processes, the teachers became more enthusiastic about sharing their practice. They implemented units of work in their classrooms, collected data and shared the outcomes of their research. According to Rebecca there had been changes for both teachers and students:

> We have changed the conversations the students are having with each other in the classroom. They almost do it as a natural thing. The students are used to talking about their problems and asking someone for help. The same way we have changed the conversations in the team (Interview 2).

The following statement reveals Ruby's changed attitude:

> Let's get the admin out the way quickly today so we can talk about our research. The kids are really loving what we are doing and I want to share it with you all (Focus group interview 3).

As teachers moved to collaborative processes there was openness and trust in their conversations in the teams. The collaboration resulted from the teachers organising, directing and controlling their research processes. Collaboration in voluntary and spontaneous associations became a feature of their work. Teachers shared their individual attitudes and beliefs about teachers and students. An extract from a focus group interview when the teachers were asked to indicate any changes to their practice. Rebecca explained:

> The most significant change in my practice was that I really learned how students can negotiate outcomes, what Maths would be involved in this unit of work, what the end product would be and how they like to be assessed. So really I took up the ideas of the other teachers in the team and tried this. These are things that are quite new to me. Obviously the difference for me was that the students had a great deal of ownership about what they were doing and they were really enthusiastic. That made me think very, very differently about what I normally do in the classroom (Focus group interview 4).

William commented on the student interactions:

> The effect on the students was amazing. Their conversations focussed on planning, improving and negotiating. These were the discussion they were having in the classroom. They learn a lot from each other. They solved problems, they shared roles and this carried over to other tasks that they have done subsequently (Focus group interview 4).

Engaging in teacher directed and teacher controlled research helped Ruby, William, Rebecca and Wendy to develop as independent thinkers and learners. The research improved individual and collective confidence about their work. Rebecca observed 'we wouldn't be doing this if we were working on our own'. As the teachers made their beliefs, values and assumptions about their work explicit they began to challenge each other and to make changes in their own classrooms and to view their work against wider contexts. The research had provided the teachers both individually and collectively with the authority and capacity to challenge and change.

The beliefs, attitudes, values, assumptions and propositions as content of teacher culture and collegial and collaborative practices as forms of association of teacher culture influenced the ways that teachers responded and produced positive effects for teacher and student learning.

Whole school teacher learning: effects

The effects of teachers researching their practice in a model of whole school teacher learning are the individual and collective power which teachers have to transform or reproduce the structures in their classrooms, in schools and in wider social and political contexts of education. Teachers researching their practice provided a mechanism for Ruby, William, Rebecca and Wendy to consider the implications for their practice and of the wider implications for the outcomes of their research. The effects for the four teachers included changes to their individual and collective classroom practices and consideration of the outcomes of their research for other teachers in their school. Effects also included the contributions of their research to knowledge and the transformative power of the research to contribute to policy and educational directions in the wider system.

The teachers at Hamden Hill High School perceived a number of benefits accrued from their participation in research. The benefits included the changes that they made in their individual classrooms. The teachers had all identified 'gaps' or 'problems' in their practice which they wanted to improve. A willingness to experiment and to trial new

pedagogic strategies resulted in changes to their individual practice. The benefits also had filtered through into their teaching with other students and at other year levels. Wendy made the following observation about the benefits:

> Initially, I thought it was really onerous. I thought of all the things I had to do and would I have time to juggle all of it? The interesting thing is that everything you do actually acts on and expands what you are doing in another area. Like I find the approach that I am taking in senior school has been informed by what I am doing in year 7 and I am now doing that in year 12. So it is all sort of interactive and I guess that is the beauty of it. It is not a 'one off' thing that you only use on one occasion. The learning from it can be applied in a number of different situations (Interview 2).

The teachers all agreed that the professional development element of teacher research and the gains they had each made in their own learning had changed their thinking. For William his own professional development was characterised as:

> One of the big complaints about training and development in schools is that someone comes in, shows you something exciting and then they go away and it falls off the back of the truck and you forget about it. So the concept that possibly we can develop a tool here that will stay with us, that is what is really exciting me. It is a change of thinking that we actually have a tool we can use by ourselves forever and ever. That is what teaching is all about for me (Interview 2).

The teachers also perceived that the benefits of teacher research would have positive benefits for other teachers in the school. Teacher research processes had been developed and implemented as a plan to embed teacher research across the school. Rebecca indicated the long-term possibilities:

> We are not trying to create 'one offs'. We are trying to change a culture and embed a culture of research. We are changing the culture so that the whole school benefits. We want the teachers to see that *they* [her emphasis] can improve their teaching to improve student learning. They will do it if they see a good reason for it (Interview 2).

The teachers were excited about the learning that had developed as a result of their sharing and dialogue. They believed that other teachers in the school would perceive similar benefits. William described the benefits for the teachers:

> This research opportunity gives us the time to talk to our staff members and other people from different faculties and to learn from them. Hopefully people will come on board because they will see the benefits of learning from each other (Interview 2).

The teachers had demonstrated that reflective practice and pedagogic dialogue were essential for teacher research. Through reflection and critical inquiry the teachers had produced knowledge about teaching and learning. They were enthusiastic that this

knowledge would inform others' practice within their school, other schools and universities. They were keen that their knowledge 'get out there'. Wendy explained the importance of sharing their knowledge:

> If we are going to change schools and systems to make things better for the students we have to get out there and share our experiences and tell what we have learned. We also have to write it down. And most importantly we have to celebrate what teachers do (Interview 2).

William also expressed his view:

> I think that schools and universities can learn a lot about what we have learned about our work. The more we know about teaching and learning the better it has got to be for students and for teachers. We have got to keep doing this if we are going to continue to make schools better (Interview 2).

The teachers viewed teacher research as not only a mechanism to improve their own practice and the learning for their student, but also to inform other teachers' practice and learning and across schools and systems. Rebecca was committed 'to seeing that we don't lose those really valuable parts of teacher research when new people move in and others move out.' The teachers accepted a collective responsibility to ensure that teacher research became embedded in their school culture. Rebecca made her views about the collective responsibility clear:

> There is the responsibility bit, a responsibility to the faculty, to the school, to the system. When I look around and just see ineffective teaching which leads to classroom rebellion. That has always annoyed me. I have always felt that we have a responsibility for kids to have a better deal (Interview 2).

As teachers researched their practice they challenged and changed their beliefs about teacher and student learning. They also changed the way that they worked as teacher research became integral to their practice. The teachers shared their learning with other teachers by writing narratives and making presentations at state and interstate conferences. They decided that they also wanted to (in Wendy's words) 'show not tell' and so commissioned an external video producer to record two videos. The first video showcased the students discussing their learning as a model for classroom practice. The second video was a team meeting as a demonstration of how teacher engage in pedagogic dialogue. The videos have been used extensively in school meetings and at state and interstate conferences. Collectively the teachers were influential in dispersing their knowledge about the outcomes and value of their research. They shared their

practice and the research strategies they used to formalise knowledge about their work. The teachers developed agency about their work practices and a confidence in their work as teachers. They demonstrated the benefits of teachers researching their practice as important professional development and teacher learning.

Summary

In this chapter I have presented a case account of Hamden Hill High School through a model of whole school teacher learning. The data was presented through a discussion of the elements of the model. Relationships, structures and processes supported teachers researching their practice. Teacher research was mediated by the content and form of teacher culture. In this chapter I have presented the successes of the model as teachers implemented research processes. In the next chapter I discuss the failures in a model for whole school teacher learning.

Chapter 7

Hamden Hill High School – a model for whole school teacher learning – the failures

_____

Introduction

In the preceding chapter, I examined the conditions which supported and sustained the implementation of teachers researching their practice as core practice for teachers at Hamden Hill High School. The structures, processes and relationships were presented as the elements of a model for whole school teacher learning. Teacher culture mediated the ways teachers interpreted and implemented research into their practice. The analysis of the data was presented as the successes for the integration of research into teachers' work. Introducing teacher research to the school was not without its difficulties. There were events and factors in the school which hindered both the implementation of teacher research processes and embedding research in the core work of teachers. This chapter analyses the failures through a model for whole school teacher learning.

Resistance and frustration – the teachers and the research process

There were a number of factors which contributed to resistance by and frustration of the teachers conducting research. Resistance and frustration related to both the teachers and the research process. As the teachers engaged in research, they were required to engage in open discussion about their taken-for-granted assumptions and beliefs about teaching and learning. In the team meetings the teachers were challenged to talk about their practices in classrooms. Reflection was integral to teacher research and required the teachers to discuss what was happening in their classrooms and whether their practices reflected their beliefs and assumptions about learning. Although a process had been developed which would facilitate this, getting them to open up and critically reflect about their own classrooms practices was met with resistance.

The research process which had been developed required the four teachers to talk about their work in classrooms. To facilitate this process we used the indicators of the learning habits (the indicators were presented in Appendix 5.1) to guide the discussions. The purpose of using these indicators was to give the teachers confidence about sharing their pedagogic practices with the other teachers in the team. At our meetings we described such discussion as pedagogic conversation to emphasise learning. The purpose of teachers talking about their practice was to identify individual areas or concerns which they wanted to improve. Through learning what other teachers were doing in their classrooms the teachers were able to share the understanding, beliefs and assumptions which underpinned their work. With each other's support, the teachers were to encourage each other to 'take some risks', as Wendy described it. Once individual teachers had decided what they each wanted to do to pursue a concern, methods of data collection and analysis were discussed. The research process had been developed by them and the timeline agreed to by the teachers, but there was frustration and resistance from them.

Ruby explained her resentment and frustrations about being told that it was her team which was to trial the research process and the time spent in discussions:

> I kind of got stuck with it. I had no idea I was going to be involved in it. I was asked last year whether I would like to be a team leader and I thought that it was going to be all about administration. And last year the two teams I was in were very efficient but there was nothing like this going on. So it was a bit of a shock to me when I found out I was going to be involved in this. I needed time to get my head around what it was that we were actually doing. I wasn't willing to put in the extra work that I thought it was going to require. Maybe we needed to go through that process but that was initially why I was a little bit resentful. I think it possibly could have been done a lot faster than what it was. And that is what I found very frustrating because I had quite a heavy work load with other subjects and I just felt that a lot of time was wasted at first (Interview 2).

Throughout the study Rebecca assumed responsibility for continuing the momentum for the teachers engaged in research. Rebecca frequently phoned me at home and discussed her concerns and frustrations:

> I think it has been a fair bit harder to communicate to other people what you really want them to do and to keep them focussed on that than I ever thought it would be. I thought they would understand what we were trying to do and they would maybe think about it in between team meetings. It has been a lot harder to get people to keep thinking about it and to believe that this is more important than working out who is going to run the bullying and teasing survey for example (Interview 2).

As the four teachers came to new understandings about their beliefs and practices they also expressed their concerns about the expected difficulties of working with the next group of teachers. There were three difficulties expected. The first was that the teachers would be required to engage in conversations which would challenge their beliefs and assumptions about students, learning and teaching. William expressed 'getting people to open up a bit just isn't what teachers normally do. I think we will have some problems' (Interview 2).

The second difficulty was that the next group of teachers would have to be convinced of both the value of research and that it could be integrated into their normal work. The four research team teachers believed that there would be 'resistance' and a perception that teachers researching their practice was about more work. Ruby explained:

> I now think it [teacher research] is an important thing but I think you are going to probably encounter the same sort of resistance as you got with me initially. Generally people here do work fairly hard and this is one more thing. And if it is presented as being a whole lot of extra work then people are going to resist it (Interview 2).

A further difficulty anticipated in getting the other five teams in year 7 to be involved was the lack of continuity of staff. The reality of schools is that staff turnover is normative. These changes affected the composition and dynamic of the teaching teams. In this first team there were lack of continuity of staff as William took parenting leave during the second term of the trial and Wendy received a promotion and left the school before the end of the second year. There was difficulty in finding replacements during the school year but the replacements had transferred from schools where traditional structures and processes prevailed. The team meetings began to revert to being used to resolve administrative matters rather than engaging in pedagogic dialogue. The new staff members, Veronica and Brian, used the team meetings to air their immediate concerns about students and to gain support in adapting to new classroom environments. Their immediate and pressing concerns rightly needed to be addressed, but the usurpation of the team meetings was resented by the two longer-standing members. As Rebecca commented, 'it's like starting all over again' (Interview 2).

Teams and time

The teams structure had been embedded in Years 7 and 8 at Hamden Hill High School since 1994 and had been aimed at creating 'a culture of autonomous decision-making' (Interview, Principal 1999). Teachers in teams had opportunities to discuss students' academic and social progress through working with a team of four teachers with one class of 20 students for two years. Although the teams had been set up to enable teachers to work together and to share pedagogical practice, the Principal admitted that 'some teams function better than others'. Each of the four teachers in the research team expressed their concern about the use of the team time. The pressures experienced by teams was revealed by William:

> At the beginning it was legitimised at the beginning of 'let's talk about what we are doing' but probably doesn't feel legitimised any more. There is a bit of an element that has come into the teams over the years that there is too much other stuff to do and a feeling you have to produce end products on papers (Interview 1).

The pressures of 'not enough time', 'there are other things to do' and 'we've only got 10 minutes' had pervaded the operation of all the teams in years 7 and 8. The team time was used to address the tasks imposed by the Principal and from outside the school by the education system rather than set by the team. The importance of the use of the team structure and the meeting time in the school's timetable was acknowledged by Rebecca:

> They [the teachers] actually forget that it is a great privilege to have those eighty minutes a week. But it is so easy to misuse them and spend a half hour time talking about some kid's particular discipline problems. They see that as more important than trying to change the whole atmosphere in the classroom so you won't have that problem (Interview 1).

A formal evaluation of the team structure in 1996 had identified the positive effects that teachers working in teams had on the academic and social learning of students in Years 7 and 8. However, the school had traditional structures in Years 9–12. The impact on the students in Years 9 and beyond caused difficulties within the school. The teachers expressed concern that the benefits of the team structure in years 7 and 8 were lost in the subsequent school years. Wendy described this conflict:

> One thing we have noticed here with boys is that in 7 and 8 they work really well together. Then at Year 9 they go feral and with our current Year 10 a lot of them are off task in a whole range of subject areas across the curriculum. And it would be good to find out what it is that contributes to this sudden disinterest in school. We say here that

we are building independent learners and we want them to turn out as autonomous but the number of letters that we are sending home in Year 10 would suggest to us that we are failing. And why are we failing? What has gone wrong? If these kids are doing all these wonderful things in Years 7 and 8 why do they start to lose it in Year 9? (Interview 2)

The team structure was essential to the establishment of teachers researching their practice in the school because the team structure afforded opportunities for teachers to meet and work together. Because only the teachers in Years 7 and 8 had this structured time, there would be difficulties implementing research across the rest of the school without it. Similar opportunities for teachers in the remainder of the school to work together were limited. Teachers' meetings were scheduled before and after school, and during break times. The perception that research would increase teachers' work loads in an already busy schedule was prevalent. The restraint of time for teachers is both a reality and a phenomenological construct for teachers.

Time is a major element through which teachers construct and interpret their work. Time provides a 'subjectively defined horizon of possibility and limitation' (Hargreaves, 1994: 95). Time is required for teachers to meet and share their practice as part of teacher research. Teachers also need to accept its value as core practice in their classrooms. To understand how teachers individually and collectively interpret time therefore, can assist in changing their interpretations of time. Within the school the Principal and the teachers had different constructions and interpretations of time and these created barriers for embedding teacher research. Time for these teachers was viewed as both a socio-political and phenomenological construct (Hargreaves, 1994).

Socio-political time
Socio-political time defines time as being administratively dominant. At this school, the Principal placed great expectations on teachers to implement the school's goals and priorities, whereas Lortie (1975) found teachers' concerns were essentially about what was happening in their individual classrooms and to their students. The conceptions of time were, therefore, different or 'separate' between teachers and the Principal

Time is also conceived as being taken over or 'colonised' by administrative requirements. As goals and priorities changed, teachers were often expected to undertake a number of different tasks, often imposed by the education system; for example, to implement technology and literacy projects, and, to administer surveys. These tasks imposed greater expectations and demands on teachers and it was the team structure which had been used to introduce any new goal or priority. What the teams were expected to accomplish was revealed by Rebecca:

> Teams are the most important structure for school improvement. This means we are looking at every school priority wanting their piece of the teams whether it is technology, literacy, welfare, bullying and teasing surveys, parent interviews (Interview 2).

The teachers in the research team complained that there was 'too much on the agenda' and that there is 'just not enough time to do all the things we have to do'. William described the project as 'another thing imposed by the Principal' and an indication of how much was going on in the school:

> This school is a busy place and seems to get busier. Maybe I am just getting older [laughter]. There is always something happening, either imposed by the system or the Principal. Sometimes we all feel as if we are drowning and that we haven't got time to teach. (Interview 2).

Ruby thought that the research project was about 'the university and about the Principal leaving something behind when she retires at the end of the year' (Interview 2).

The Principal also 'colonised' teaching time by determining the composition and personnel in each of the teams. The Principal also nominated who would be the leader in each of the teams.

The Principal had determined that the team structure would be the vehicle to introduce, and promote teachers researching their practice. There was conflict between the school's directions and the introduction of research. The teachers expressed their concerns that, unless their research was demonstrated as important and that there was commitment by teachers, it would be relegated as low priority. Rebecca echoed the concerns of the team members:

But if it is something that people feel that they are just doing it because they have to, then they are not really committed to it. Then it is so easy to be sidelined because you can really believe that you are too busy to do that (Interview 2).

William also expressed his views about the colonisation of teachers' time and the expectations of what was to be accomplished through the team structure:

There has been a feeling out there that we have got so many things to do now as part of a team. The first thing we have to do is we need to throw some things off the back of the truck to make space for this. If we don't, they will see it as 'I am drowning' (Interview 2).

At Hamden Hill High time is interpreted differently by teachers. The difference in the perceptions of time relates to the monochronic perception where classrooms become sites to implement a range of priorities imposed by the Principal, and the polychronic perceptions of teachers who implement their multiple priorities. Within their own classrooms, however, teachers manage the rate and pace of that implementation and can demonstrate their resistance by working slowly (Hargreaves, 1994). For example, when Wendy was asked to talk about her classroom practice she would use excuses such as 'I have forgotten to bring my folder with all my resources in it' and 'I'm sorry I haven't had time to think about the project'. On one occasion the other members of the team were persistent in their intellectual engagement with Ruby who was showing her resistance to discussing her planning of the topic which would be the subject of her research by working slowly:

Ruby: I have decided that I am going to talk about the topic of Ancient Greece and I am interested in creating conditions for students to act upon feedback to improve their learning. I have not decided in detail what I am going to do so that is why I am going to be reasonably quick. I have got the outline but I haven't sat down and thought that much about it.

Wendy: What are you outcomes?

Ruby: Things like chronological order, sequencing, describing. I should have brought all my stuff but I didn't.

Rebecca: You probably don't need it. How are you going to structure the criteria, the purpose and the feedback so you can help the students to act on it?

Ruby: Honestly, I haven't thought that much about it. I need to go home and sit down in the holidays and have a look through what I have got.

William: Would you use the sort of stuff you showed us a couple of weeks ago?

Ruby: Yes, I would still be doing something like that but again I haven't decided anything concrete and I really want to sit down and get my own head around it. And maybe come at the start of next term in our first team meeting and show people what I have got and ask for feedback when I know more myself.

Wendy: I think you are probably further ahead than you think you are.
(Focus group interview 2)

As the composition of the research team changed, new members of the teaching team used the team time to learn more about the students and their backgrounds and to discuss a range of problems they were experiencing in the classroom. Both Veronica and Brian used the team time to ask questions and the longer-term members of the team supported and assisted their newer colleagues. When the teachers placed their research on the agenda, Veronica and Brian were often absent from the meeting, or raised issues which were not on the agenda. Rebecca expressed her concerns to me:

I know they feel threatened by this process but I can't help but feel they are trying to boycott the whole process. I think we are feeling really frustrated by their opposition (Interview 2).

The change in team composition and the added tasks of implementing the technology, literacy and numeracy projects added to the agenda of the team meetings for discussion conflicted with the implementation of research. On several occasions the agenda item of teacher research was deferred to other meeting times or not placed on the agenda at all. Concern was also expressed by Ruby and Rebecca about how other teams were using their time to discuss matters unrelated to their students. Ruby captured their feelings:

In my view a lot of things that are happening in teams are busy work for teachers. If you have got two periods you have to use it. We've got to show we are using the time. (Interview 2)

Rebecca also expressed her concerns:

We have got to keep the pedagogical focus in our meetings. Many of the teams I have been on previously haven't worked and we have spent our time complaining about the kids. We have got to remember that it is a real privilege in this school to have this time to meet and talk (Interview 2).

Ruby had been involved in the teams on previous occasions and she was surprised when she became involved in this research project:

> There was nothing like this going on in the other teams in which I have been involved. All we did was administrative stuff – I thought that is all it was all about, making sure we filled in all the forms and making sure we looked after the welfare and discipline issues of the students (Interview 1).

The teachers all had views about the socio-political dimensions of time but their perceptions of time in their work also varied.

Phenomenological time

Phenomenological time views time as a subjective construct and therefore conceptions of time vary between people. Time is perceived and interpreted differently between teachers depending on the amount and type of work undertaken, individual interests and responsibilities. At Hamden Hill High School the subjective perceptions of time by teachers were influenced by the school's priorities. The teachers commented that there was 'a lot going on' and teachers were expected to participate in a range of activities which were occurring across the school.

Subjective time varies with occupation and preoccupation (Hargreaves, 1994: 101) and teachers' perceptions of time were grounded in the extensive number of activities. In two month period during the study, the teachers in the teams were involved in technology, literacy and numeracy projects as well as fulfilling the day-to-day responsibilities of teaching, planning and preparing lessons, organising excursions and 'a team's day' where the parents were invited to attend the school for the students to showcase their work. Assessment and reporting was also perceived as a 'busy time' and a time when 'other things don't get done'. Ruby described what she thought would be the reaction of teachers to research:

> Generally people here do work fairly hard and this is one more thing. If teacher research is presented as being a whole lot of extra work then people are going to resist it. (Interview 2)

The different perceptions of time also related to the number of responsibilities that were imposed by the Principal. Ruby was the team leader of the research team and William was a team leader in year 8. For William the time needed for these added responsibilities meant:

> I had a bit of trepidation in that I was finding the Year adviser's job already fairly daunting as I had to pick up the Year 8 team leader's job. So I thought I hope it [teacher research] is not going to be too much (Interview 1).

The 80 minute period which had been allocated for the teams by the Principal had been a device to structure teachers' time to enable pedagogical discussions and, in this study, for teachers to research their practice. The Principal commented that the time was not always used for the intended purposes. The teachers in the research team reinforced this view. Wendy echoed their feelings:

> I think teams were meant to discuss pedagogy. We are meant to discuss learning and all that sort of stuff and you so often get bogged down in the administrivia or the welfare of the kids. You find you have spent eighty minutes and you actually haven't addressed anything high order (Interview 2).

The research process in this study was designed to embed research into the core practice of teachers in the school as part of their day-to-day work in classrooms. However, the teachers perceived that research was extra work, an added responsibility and 'overwhelming'. In my discussions about research with the team I frequently heard the comment, I'm doing my job, I'm teaching and I haven't got the time'. Wendy expressed concern before the research project started about 'how much extra it was going to be on top of what she was already doing'. Ruby was concerned about time:

> I think the main thing for me has been time. I would like more time to do it There is just not enough time to reflect about what we are doing and on how I am going to approach it and what I need to do. I don't think it is going to be easy because it will always take a little bit more time (Interview 2).

The realities of school activities and teachers' work lives provided obstacles to the continuation of teachers researching their practice. The intensification and pace of teachers' work (Connell, 1985; Smyth, 1995) and the expansion of the number of tasks expected of teachers was evident at the school. The diverse and multiple tasks undertaken by teachers which were imposed by the school's priorities and systems added to teachers' work loads. It is in these circumstances that these mandated priorities became the focus of team meetings and teachers discussing their research was often sidelined at meetings.

Over the 12-month period of introducing research to the teachers, the frequency of meetings to plan and discuss their research was subject to large variations. In the

beginning, research was discussed at every meeting. At 'busy' times, for example, assessment marking and report writing, research was relegated to last on the agenda or omitted altogether. There were often periods of several weeks when teachers suspended their planning and implementation of research. Although the teachers continued to be involved in researching their practice, their conduct of research was subject to the realities of the day-to-day professional lives of teachers.

It was the Principal's goals and expectations which were the impetus to develop teachers researching their practice in the school. The features of the Principal's leadership style were influential in the school and are elaborated in the following section.

The Principal and her leadership

There were a number of features of the leadership of the Principal which affected the participation of teachers in research. One of these was that the Principal had articulated her vision and 'persuaded' the teachers to participate in teacher research. She had selected a group of teachers whom she believed would willingly and enthusiastically engage with her vision. She recognised that gaining acceptance for the remainder of the school might be more difficult. She saw teachers researching their practice as important professional development but that it was about 'bracing ourselves and taking the bigger leap into the harder part' (Interview, Principal 1999)

In articulating her vision, goals and expectations, the Principal had used her individual personality and powerful influence amongst the teachers. She admitted teachers were accountable to her and that if they weren't going to be involved in research they 'would have to deal with me'. Rosemary demonstrated characteristics of normative–instrumental leadership because it was her influence and persuasion which motivated the teachers to participate. The Principal of the school had determined that teacher research was a school priority. She had committed financial support to facilitate the process of embedding teacher research and she had determined that the teams and the team time would be the vehicle for the development of the process. Rosemary

provided strong moral and generous financial support for teacher research, describing her vision for the school as 'a genie that has been released' (Interview, Principal 1999).

Rosemary was a powerful and influential leader but there was initially a lack of ownership in this research project because teachers in the research team felt that this project had been imposed on them by the Principal. The lack of participation of teachers in the relevance or worth of the teacher research is a criticism of normative–instructional leadership (Blasé & Anderson, in Day, 1999). Over time, the four teachers who were involved in the trial of teacher research developed ownership and control of the project, and they were positive about its importance and relevance for them. They expressed the concern, however, that 'not everyone will take this on as willingly as us' (Ruby, Interview 2).

At Hamden Hill High School, the Principal had inherited a hierarchical leadership structure – the appointment of an Executive consisting of the Principal, a Deputy Principal and eight Head Teachers of faculties was imposed by the public school education system.

As described in Chapter 6, the Principal had changed the hierarchical structures in the school. She admitted that she had made a shift in leadership because 'you just couldn't be an obsessive, controlling type leader' (Interview, Principal 1999). She acknowledged that:

> It took a bit of intellect because I suppose when I was first thrust into it I thought I could change it all myself. Being a natural controller I think my initial reaction was that I could do all this on my own. I could bombard people into it. (Interview, November 1999).

Rosemary was a strong leader who had a well-articulated and clear vision of the school and goals for achieving that vision. Ongoing change was part of that vision and a feature of her leadership, so she continued to implement and support structures to transform that vision into reality. She conceded that change had created tensions and that she was concerned that her leadership depended on her individual personality, characteristics and behaviours. The Principal relayed her fears about the dependence on her leadership:

> There is this tension here in this place all the time though, which you have to be wary of. People will come and tell that it is falling apart. People see me, and this is what always worries me about leadership is that I am this really vital keeper of this culture and they have to come and tell me if something looks serious. And they [were] really, really worried when I went away for six months; they really worry that when I'm not here it is all going to fall apart. I would hate to think that I could walk away and have it all fall apart in the first three months. There is half of me that believes that this culture needs the right kind of leader or it all could change very quickly. (Interview, November 1999)

The leadership of the Principal's strength and influence impacted on the development of a culture of inquiry in the school. There were also difficulties and problems in the development of the school–university partnership. These difficulties and problems are elaborated below.

School–university partnerships

The partnership between the school and the university that developed from a symbiotic–cooperative to an organic–collaborative partnership was discussed in Chapter 6. A long-term, sustained partnership was required to embed teacher research as core work. During the foundational and continuation phases of the symbiotic–cooperative partnership, however, there were difficulties and problems, such as distrust, suspicion and resentment. Subsequently, there was difficulty in maintaining the impetus and momentum for both teachers and myself as the university partner.

The difficulties of developing and sustaining partnerships between schools and universities have been well documented (Furlong, et al., 2000; Grundy, 1998; Robinson & Darling-Hammond, 1994; Sachs, 1997b, 2003; Sellar & Hannay, 2000; Yeatman & Sachs, 1995). These difficulties relate to the different cultures and structures of the respective workplaces, and perceptions of the 'university as a site of abstracted expertise and school as a site of practice' (Brennan & Noffke, 1997: 28). They relate to the structural and cultural differences of the respective work places. There was early confusion about the roles, responsibilities and expectations, and a challenge to teacher's work practices.

Distrust, suspicion and resentment

The distrust, suspicion and resentment of the teachers to my involvement as a university partner had to be confronted in the early weeks of establishing the partnership. I attended weekly meetings and talked about research but there was often silence and no comment or questions from my presentations. The teachers were invited to talk about their practice using the learning habits as a guide but for a time there was avoidance and excuses. Comments included 'I'll get around to it soon', 'it's been a very hectic week, sorry', 'I haven't had time to think this week' and 'I haven't had time'. Ruby admitted that she thought 'it [the teacher research project] was about the Principal and the University, not about us [the teachers]'. Wendy's experiences with a previous research project had been negative and she explained, 'It just sort of disappeared and there was no follow-up from it. It came to an end. The money ran out and that was it. It was over'. (Interview 1)

Distrust between teachers and universities arise from an historical tradition. Schools have been viewed both as a site for research by universities and as the recipients of research (Cochran-Smith & Lytle, 1993). Teachers and students are the providers of research data without being informed of the outcomes of the research. University faculties of education in particular have used schools for student teacher practicum visits, for observation visits, and as data sources for university-based research. Teachers view these as one-way arrangements with benefit accruing directly to universities, and not schools.

Despite the commitment to attend the weekly team meetings and to support the school at other times, for example, attendance at staff meetings, informal chats and telephone calls, it took time to overcome the distrust and suspicion about the purposes of my involvement. The acceptance of me as university partner differed between the teachers. It was much later, when open communication and friendly relations were established, that some of the teachers admitted their 'resentment', 'suspicion' and 'distrust'. Ruby was candid about my involvement:

> I thought you were pressuring us, turning up every week, asking us to talk about our practice. I wondered what was in it for you. I realise now what you were trying to do (Interview 2).

William also revealed his feelings about his previous involvement with universities:

161

> You always feel that universities are in for themselves. You never hear back when they
> come in and do their research. I guess we had to work around those ideas and move
> forward (Interview 2).

Confusion – roles, responsibilities, expectations

There was also confusion about the roles, responsibilities and expectations about the teacher research project. The Principal, Rebecca (the teacher who had assumed leadership for the project) and I had prepared a tentative research timeline and process. We had wanted it to be flexible so that the other teachers could have some input into the trial. The Principal and Rebecca were keen for the research project to be successful and had spent time informing the other teachers in the school about what was happening.

Although there had been information sharing and teachers had been invited to discuss the teacher research project, convincing the teachers of the value of research took time and patience. Teachers believed both that 'the university will do it for us' (Rebecca, Interview 1) and there was a perception that researching their practice was 'just more work' (Ruby, Interview 1). There was a reluctance to get started on the part of the teachers and there needed to be continuing explanations of the process. This 'feeling-out time' although important created frustrations for the teachers and for me. My own research diary commented that 'No-one said all that much. I felt uncomfortable. Ruby in particular appears impatient and reluctant' (Research diary, February, 1999). Ruby explained her frustration:

> I don't understand why this is taking so long. Last week we took the whole meeting
> time to talk about what we were doing. We could have done that in 5 minutes. Anyway
> we still have to do the administration and I'm getting frustrated that we are not getting
> through the welfare matters. (Focus group interview 2)

When the composition of the teams changed – William left in the middle of the first year; Wendy at the end of the year – the roles, responsibilities and expectations had to be explained again to the new team members. The distrust, resentment and reluctance of the new members of the team had to be confronted. Although the two remaining teachers assisted in the explanation of what they were doing to research their practice, they expressed their concern that the process had been slowed down and that 'we don't seem to be getting anywhere'. Rebecca conveyed her disappointment with the new team members thus:

162

They don't seem to want to be involved. Veronica told me that she doesn't need this and she is too busy coping with her classes to come to meetings. I think she thinks she knows it all. She certainly is finding this place a bit of a shock (Interview 2).

Structural differences of the school and the university

The different structures in the school and university were also a difficulty in maintaining the impetus and momentum of the teacher research project. In particular, timetable structures operating in the school and in the university caused difficulties. Timetables had to be juggled to enable mutually convenient times for meetings to be established. The relative flexibility of my university timetable contrasted with the inflexibility of the school timetable. I was able to organise blocks of time to attend team meetings and to respond to individual requests from teachers to meet with them. However, there was a perception that the university had limitless flexibility. Although timetables in schools are relatively inflexible, they do vary from semester to semester and year to year. This caused problems for my long-term commitment. I had difficulty in accommodating school timetables changes but I knew that responding to school requests and my visibility in the school would demonstrate my commitment and support. On more than one occasion I released a tutorial group at university a few minutes early to enable me to attend the school.

Teachers' work lives are governed by immediacy and reaction to what is happening in their school. Teachers' work days are frequently disrupted by unplanned occurrences, so I had to understand the complexity and realities of teachers' daily work. I had to accept that teachers had to react to immediate and urgent demands. But there were frustrations for me. On several occasions meetings were cancelled at short notice, or the agenda for a meeting was changed to accommodate some urgent matter. Meeting places were also subject to change and, on more than one occasion, I had difficulty locating the teachers for their meeting or, in the middle of a meeting, we would have relocate to accommodate another meeting. At one stage there was a period of 8 weeks when there was no contact with the school because teachers were involved in parent interviews and with assessment and reporting matters. Rebecca explained that 'it's been a topsy−turvy term; lots of problems and things to do'.

The frustrations of 'not a lot seems to be happening', 'we're don't seem to be getting anywhere', 'how can we keep up the momentum?' were recorded in my research diary (Research diary, March 1999). I had to understand that the intensity and pace of teachers' work was not necessarily an indication of their lack of interest or progress. The momentum for the teachers conducting research in their classrooms was hugely variable. I just had to be patient.

Journal writing, reflection and knowledge

When teachers become researchers, dialogic and critical reflection enables teachers to challenge their own beliefs and assumptions. For some of the teachers in the team, sharing their practice and being reflective about their work was a new experience. I gave each of the teachers a journal to use to record their thoughts, ideas and to document their journeys in research. Journals have been used to encourage reflection and dialogic conversations (Dietz, 1998; Holly & McLoughlin, 1989). Although it was established that their journals were private, but that they might want to share their reflections with each other, some of the teachers were either reluctant or remiss in their usage. The teachers either kept promising that they would write up their journal or resisted making entries. Ruby expressed her feelings about journals:

> I have not enjoyed keeping the journal. I can do the same thing by throwing everything in a folder and having a page on top on where I am at so far. I did not need to read back through my diary to tell you about what my frustrations and concerns have been (Interview 2).

Wendy, on the other hand, admitted she used journals 'all the time' with students in her classes and that she had used journals in the past. She was keen to use the journal but she admitted:

> I've been a bit naughty about writing up my journal. I think it is a great idea and I keep meaning to do it. I did it a couple of times but then I forgot about it. I promise I will use it, I promise (Interview 2).

The varied use of journals indicates that teachers will use journals depending on their own individual personalities, their past experiences with journals and whether they see the importance or relevance in the use of journals. Journal writing is a device to encourage teachers to engage in reflection about their practice. Their reflections were important for both reviewing the process used to conduct research and to analyse and

interpret data which they collected in the course of their research. Journal writing would assist the teachers to understand their work and make explicit reasons for their actions. Knowledge generated by teachers has been criticised for its unreflective nature, its lack of validity and its situatedness (Huberman, 1996); that is, it is relevant only to a quite specific time and place. The divide between theoretical knowledge and practical or professional knowledge has been a source of much discussion and disagreement (Cochran-Smith & Lytle, 1993; Huberman, 1996). The knowledge generated by universities has not been perceived as useful or relevant by teachers (Day, 1999). Wendy revealed her feelings about theoretical knowledge:

> We don't have time to read the stuff that comes out of universities; it doesn't seem to have relevance to my work. I am too busy worrying about lesson preparation and the kid's behaviour to read the theory. I know it is important though. (Interview 1)

The tradition that only university–generated theoretical knowledge 'counts' (Cochran-Smith & Lytle, 1993) undermines the knowledge generated by teachers in the course of their work. Rebecca reiterated a common view of teachers that 'we don't seem to be valued for the work and what we know, learn and understand about our work' (Interview 1).

During this study, the four teachers who researched their practice demonstrated change and improved practices for their individual classrooms. The teachers engaged in pedagogic conversation about their practice and they shared their collected data and subsequent analysis. However, the teachers sometimes found it difficult to write up their findings because the intensity and pace of their daily work also acted as a disincentive to write. I had to remind them that, while the knowledge which they generated as a result of their research was valuable for their individual classroom practice, the benefits of wider dissemination of their practitioner knowledge would be lost unless they found time to write up their research.

Social and professional relationships

The social and professional relationships which developed between the four teachers in the team as they began to research their practice took time to establish and develop.

There were also tensions and frustrations as the teachers began to plan and implement their research. These tensions and frustrations in relationships related to the nature of teachers' work and are elaborated below as conservatism, presentism and individualism (Lortie, 1975).

The four teachers had varied reactions to being involved in research. William expressed his feelings about his teaching, 'If you think you know how to do it then you have to get out of teaching' (Interview 1). He also expressed his concerns that teachers needed to see the benefits of being involved in research and of challenging perceptions of 'I know how to teach; I don't need this stuff' (Interview 1). William articulated his concerns:

> The hardest thing was thinking about 'Where am I heading?' 'Where is it going to actually end up at?' So a lot of my confusion comes from that. I need to see that it is really going to help my teaching if I am going to dedicate my heart and space to it (Interview 1).

Ruby also indicated her misgivings about being involved and her feelings about the project and that she 'saw it in terms of being something that wasn't going to be a whole lot of use, something that was more about other people than about me' (Interview 2). Ruby voiced her concerns that she was 'not really happy about the workload. I feel I am going to be overwhelmed. And yes, I am very cynical about whether it can help my practice (Interview 1). As leader of the research project Rebecca was aware of how much time was spent in getting the teachers started on research:

> We were asking people to be involved, to look at the document and expect that people would sit down at a meeting at look at the research issue and pick out what they were doing and what they weren't. And I thought that seemed quite reasonable. But I guess I realise now that there are going to be different reactions. It takes time before it all makes sense. And it *was* [her emphasis] overwhelming and it will continue to be overwhelming until I suppose people start to get used to the idea of research (Interview 2).

The teachers commented that they thought the process was slow, and doubted whether the time being spent on teacher research would reap benefits for them. Rebecca commented on the effects of developing the research process:

> I loved the discussion but for at least two other people in the team they are far more tick the boxes and task oriented and they wanted a quicker process. They wanted to see where they were going and whether it was going to be of benefit. That would have made them more secure. Then they probably could have stood the prolonged discussion (Interview 2).

Teachers' work is about attending to the daily and busy demands of teaching. The participation of teachers in research conflicted with the immediate and urgent needs of teachers. The involvement of Ruby in a cross-country carnival, Rebecca preparing for her job interview, parent meetings at short notice, teacher absenteeism and school excursions were some of the events which delayed teachers researching their practice. Rebecca explained the difficulties:

> There is so much to do. The faculty meetings are large, too large and I am not quite sure that they all really operate very well. There is so much administration, communication of what happens in executive meetings, people all wanting to have their say about whatever is coming up and has to be done. You get interrupted by things that you have got to do. We have Year 6 visits coming up, parent teacher nights, reports and just the day-to-day routines. So things like professional development get sidelined (Interview 1).

Teachers had to attend to the 'dailyness' of their professional lives but these occurrences slowed their own research implementation. Wendy explained her feelings about being involved and her work load:

> I thought it [the research project] was going to be really onerous. I thought of all the things I had to do like the Stage 6 curriculum[1] and this new assessment process and would I have time to juggle all of it? (Interview 2)

Ruby was also candid about her involvement:

> I found the whole process of deciding exactly what was going to be done very time consuming and very frustrating because I *don't* [her emphasis] enjoy sitting around philosophising. I don't have the time and I prefer to sit down and actually do it (Interview 1).

The action plan for the implementation of the research by teachers had deadlines set to ensure that teachers maintained the focus amongst their busy schedules. We had attempted to make the timeline realistic so had taken into consideration the various 'busy' times in their work lives, such as assessment and examination times, Year 6 primary school visits, literacy tests, and the school's technology project. Rebecca supported the need for deadlines:

> You have to be a little bit disciplined about meeting deadlines. I am not always that good at that and you get caught up in other things you have to do. You have to remind yourself that you have set this action plan. The action plan is really good but we can't be too casual about it and be distracted by all the things we have to do. (Interview 2)

167

The teachers had expressed their concerns about ways to involve the other teachers in research. Rebecca was pleased that there had been some reaction to teachers researching their practice:

> There was one person, maybe two people, who have talked to me as a result of our presentation at morning tea. There are others who I think they would be right into it but, yes, it is always going to be, people thinking that other things are more important and then fitting it in (Interview 1).

Teachers' work occurs mainly within the confines of the classroom so the requirement that teachers work together to plan, implement and share their findings from researching their practice conflicts with teacher individualism or autonomy. Teacher individualism, therefore, had to be confronted. Ruby demonstrated her interest and commitment to her own individual work:

> But I have always worked by myself and that's where I get most of what I do done. I need time where I can sit down somewhere and focus on what I am doing and just block everything out (Interview 2).

At the school, the team structures of teachers in different subject areas working together created opportunities for faculties to transcend 'bounded, protected space' (Lortie, 1975: 171). In Years 9–12, as in most secondary schools, the traditional structures were maintained with teachers working in subject departments. As McLaughlin & Talbert (2001) report, teachers' attitudes and perceptions of students and classrooms vary widely and is dependent on individual subject departments or faculties. To embed teacher research across the school, the differences between the subject departments would have to be addressed, and conservatism, presentism and individualism of relationships would have to change.

As discussed in Chapter 6, teacher culture shaped and mediated the ways teachers interpreted and integrated teacher research into their practice. The variability in teacher's social and professional relationships created barriers for teachers sharing collegial and collaborative practices. Teacher relationships could be characterised as being balkanized (Hargreaves, 1992, 1993) and individualistic. These types of relationships certainly acted against the development of a sustainable research culture for this research.

---

[1] Stage 6 refers to the final two years of secondary schooling in NSW

Much of teachers' work is conducted alone, in the confines of their individual classrooms. The classroom isolates and insulates teachers from working together and promotes teacher autonomy and individualism. When teachers research their practice in teams, they work together to share and learn from each other. The team structure created an environment where teachers could work together. William described the conflict he felt:

> I think that trying to do something in isolation is very difficult when schools aren't set up where you can go, guilt free and in safety go to somebody else and say 'look I want you to give me some suggestions for how I can improve my practice'. It doesn't happen. We're used to working on our own. There is too much pride and closed doors and stuff at stake (Interview 1).

Rebecca was concerned that teachers still needed some convincing of the benefits of researching their practice:

> I don't think that people have got to the stage of really believing that we have a tool here that will enable them to be pro-active with working with kids. If we can convince them of that then they won't have as many disengaged students. But they are going to have to work together (Interview 1).

William also identified individualism as a barrier that would have to be overcome if teachers were to implement research practices in their classrooms:

> If the rest of the staff feel that things are going on behind closed doors they feel excluded. They think 'I don't belong to that group and I am not part of it and I will continue with what I am doing. We are going to have to change this (Interview 2).

At the school there was the structure of teams, working in parallel with subject departments. Teachers who worked in teams formed allegiances with their team but remained loyal to their subject specialty and department. The structures of subject departments in secondary schools create balkanization (Hargreaves, 1992, 1993; McLaughlin & Talbert, 2001). Although the forms of association operating in subject departments were not investigated in this study the Principal was aware of the allegiances operating within the school:

> I must have been to fifteen lectures about balkanization and it was a word that stuck in my head a lot and I used to laugh at it as I thought there had to be a better expression than that – it's a bit insulting to these people. But I knew we would have to change the structures if people were going to work together in the school. (Interview, November 1999)

When teachers become researchers into their practice, individual teachers and groups of teachers change their practice and use their knowledge generation to engage in critical analysis of their work. Teacher research requires collegial and collaborative associations for teachers to generate the benefits for students, teachers, schools and systems.

Summary

This chapter has described the events and factors in the school which hindered the implementation of teacher research processes and the development of teacher research as central to the work for teachers. I have presented the events through a model for whole school teacher learning. In the next chapter I discuss the findings through the model and the conditions which develop and sustain teachers researching their practice.

Chapter 8

Discussion and findings

Introduction

In this chapter I use a model for whole school teacher learning to theorise the thesis findings. A model for whole school teacher learning provides the framework to examine and explain the interrelationships between the structures, processes and relationships which are central to the model. I argue that structures, processes and relationships are essential, do not stand alone and that there is a constant interplay between the elements. I further argue that the form and content of teacher culture mediates the impacts of teachers researching their practice. When the elements of the model work together schools can develop as whole school learning communities.

The aim of this study was to determine the conditions that would develop and sustain teachers researching their own practice across a whole school in a culture of inquiry. Therefore an understanding of the complexities and nuances of schools was fundamental to the development of a culture of inquiry. These conditions, defined as structures, processes and relationships are analysed through the model of whole school teacher learning.

Analysing structures in a model of whole school teacher learning

The data in this study identified structures as an element which was essential for teachers to research their practice. Structures are the organisational features which define a school and set the limits for what can and cannot be done. A range of structures has been suggested to facilitate teachers working together (Chapman, 1996; Dadds, 1995; Fullan, 1993; Fullan & Hargreaves, 1996; Hargreaves, 1994; Senge, 1990). In this study the structures in the school were the school as a learning community and teams.

A learning community

A learning community is an organisation that learns and encourages learning in its people (Handy, 1991 in Stoll and Fink, 1996). Schools as learning communities are characterised by social processes which support pedagogical practice. At Hamden Hill High School there were a number of features that developed the school as a learning community. The school supported ongoing and continuous learning of the teachers by structuring opportunities for teachers to engage in dialogue about learning and to be involved in research.

Individual professional development activities had supported ongoing and continuous learning by the teachers. Individually, the teachers had undertaken a number of professional development activities throughout their teaching careers. Wendy had completed her Masters in Education and Rebecca was completing her Masters degree. The school had provided opportunities for the teachers to be involved in professional development through a number of research projects involving universities and the National Schools Network. Rebecca, William and Wendy had been involved in these projects. However, for Ruby it was her first experience with a research project and she was apprehensive and initially reluctant to participate.

Teachers researching their practice created further opportunities for teacher professional development in the development of a learning community. The strategies of reflection and dialogue, as features of learning community, were used by the teachers as they conducted research into their practice. The teachers worked cooperatively and collaboratively. Cooperation between the teachers was shown as the teachers brought examples of their classroom practice to the meetings and talked about their practice. Dialogue about learning became a feature of the team meetings. They talked about how they would collect their data and made suggestions to each other about they might collect data. As the research project evolved they willingly talked about their data, compared their analysis and findings and talked about what they had learned. The members of the team questioned each other and made observations about each other's research findings and practice. The teachers also helped each other with teaching

strategies and shared their teaching resources, often volunteering to photocopy for each other to prepare for lessons.

As teachers engaged with the research project, collaboration was evident as the teachers made joint decisions about how the research process would proceed. William, Ruby, Wendy and Rebecca talked about what they were doing in their classrooms and identified in what areas they wanted to make changes or to try something different. The realisation that they had common areas of interest resulted in them planning joint units of work which would be the subject of their research project. The synergy between members of the group enabled them to be more open in their comments and questions of each other when they shared their data and the findings of their research. In this environment they were able to challenge and change their beliefs and their practices. They also made a joint decision to make two videos about their research which they were keen to use as a professional development strategies for other teachers and for universities. The first one was an example of a pedagogic conversation between the members of the team and myself as university partner, and, the second was a demonstration of students reflecting and evaluating their own and other students' learning as the students talked about what and how they had learned. The teachers made explicit their beliefs, values and assumptions about their practice, challenged and changed their practices in a supportive environment. However, it was the structures of the team which supported the development of a learning community between the teachers.

The school had a structure of teams in years 7 and 8 where the four teachers were responsible for a group of students. The teachers from cross faculty groupings participated in autonomous decisions about the welfare and learning of their students. These structures were used for the teachers to enable teachers to conduct research into their practice. William, Ruby, Rebecca and Wendy all supported the structures of teams which created an interdependent work structure which enabled cooperation and collaboration between the team members to conduct research into their practice.

At Hamden Hill High the Principal placed great expectations on teachers to implement the school's goals and priorities. To achieve them each team had been allocated an 80 minute weekly meeting time as part of working in a team structure and the teachers were expected to use that time to discuss students and their learning. It was this meeting time that the Principal had determined that the teachers would use to engage in dialogue about their practice.

Time

Time is a major element in teacher's work involving possibility and limitation (Hargreaves, 1994) and is an important resource for teachers (Lortie, 1975). The perceptions of time varied between the teachers and for the teachers in the team their perceptions of time changed throughout the research project. The teachers used the meeting time to plan and discuss the research project but initially Ruby expressed frustration at not being able to complete the administration, particularly, the welfare responsibilities of the team. The teachers agreed to change the meeting time to enable those matters to be attended to first. As the research project proceeded, the teachers talking about their research became the focus of their meetings and other administration matters took less and less time. The teachers changed the use of the weekly time to enable more time to be spent on discussing their research. As well, the teachers postponed discussions about their research at other times, notably assessment and reporting times.

The meeting time had been 'colonized' by administration to implement a range of school priorities, including the bullying and teasing survey, parent interviews, technology and literacy projects, and to communicate information from the Executive. However, as teachers perceived the importance of their research, they placed their research as central to their work and to their discussions at meetings. Teachers' perceptions of time as a phenomenological construct (Hargreaves, 1994) changed as teachers perceived the importance of their research and placed their research as central to their work.

The meeting time was an essential part of their teacher research as it provided opportunities for dialogic and critical reflection. The meeting time was also to be used

by the new teams as Rebecca, Ruby, William and Wendy assisted these teams to research their practice. However, as only years 7 and 8 worked in teams there would be difficulties in developing a whole school culture of inquiry for those teachers who did not work in teams and did not have a weekly meeting time.

At Hamden Hill High time was interpreted differently by the teachers. The difference in perceptions of time relate to the monochronic perception where classrooms become sites to implement a range of priorities imposed by Principal and administration, and, the polychronic perceptions of teachers who implement the multiple priorities. However, within their own classrooms teachers manage the rate and pace of that implementation and can demonstrate their resistance by working slowly (Hargreaves, 1994). As the composition of the team changed, new members of the team 'resisted' becoming involving in the teacher research project by being absent from meetings and by using the meeting time to discuss their own concerns and to gain information about matters related to the school and the students.

The team structure and the meeting time were important vehicles through which the teachers conducted their research. However, there were difficulties in continuing and maintaining the momentum for teachers researching their practice given the realities of schools and intensity and pace of teachers' work (Connell, 1985; Smyth, 1995). At busy times the teachers deferred discussions about the research project contributing to its loss of momentum. Although the teachers continued to be involved in researching their practice, their conduct of research was subject to the realities of the day−to−day lives of teachers.

In summary, the structures which had been formalised at Hamden Hill High supported and promoted the school as a learning community. The team structures provided opportunities for teachers to develop teacher research processes during their work day. These structures are demonstrated as being important conditions for teachers to research their practice. Structures by themselves, however, do not develop a culture of inquiry to embed teacher research as core practice for teachers. Processes in a model of whole school learning interconnected with the structures to facilitate teacher research.

Analysing processes in a model of whole school learning

The study data revealed that processes were the second essential element for teachers researching their practice. Processes are the series of actions which a school implements to support the school's purpose. In this study the leadership and school–university partnerships were processes which were fundamental in the model of whole school teacher learning.

Leadership

Leadership involves influence in the school (Leithwood, et al., 1999; Yukl, 1994) and is demonstrated in the form, style or type of leadership and who exerts the influence, the nature and purpose of the influence and the outcomes of the influence. At Hamden Hill High the Principal exerted a powerful and strong influence in the school and she was highly respected in the school. Rosemary (the Principal) had provided a vision and clear sense of direction for the school. She had communicated her vision of school with a focus on students, learning and community and she had implemented strategies to facilitate this.

Rosemary's humanistic style of leadership utilised the expertise and skills of the teachers by encouraging autonomous decision–making about students and learning. She did this by embedding a team structure in years 7 and 8 and through the use of ad hoc and interest groups rather than using the traditional hierarchical structures imposed by the education system.

Teachers had been involved in professional development activities through research projects involving Universities and through the National Schools Network. Rosemary encouraged the teachers to form networks with teachers in other schools and to talk about their work with parents, university researchers and other teachers. The allocation of resources to improve the conditions for students and teachers through allocating a meeting time in the school's timetable, providing funds for professional development activities, and, in improving the physical features of the school were ways she facilitated and supported the school's purposes.

The Principal's concern to improve learning for the students was at the core of her commitment to the school. Teacher research as a significant professional development strategy for her teachers was designed to develop a culture of inquiry across the whole school. The Principal's leadership style which I have called 'collective leadership' was a facilitating condition for the teachers to conduct research into their practice. Rosemary had supported teachers researching their practice through the allocation of resources for the teachers and the university partner to develop a teacher research process using a trainer–trainee model to be implemented across the whole school. Rosemary had provided the financial and moral support for teachers researching the practice but she allowed the teachers to control and direct the development of their research.

As a strong leader it was Rosemary's influence which had 'persuaded' the teachers to be involved in research. Ruby, as team leader, was initially resentful and critical of being forced into being involved in the research. Rebecca, as leader of the research project, and the other team members were pleased to be given the opportunity, particularly as they had been involved in previous projects which had given them insights about teaching and learning. Rosemary had determined that teacher research was a school priority and that the teams were the vehicle for this to be implemented. There was a early lack of ownership in the research project because it had been imposed on the teachers and for three of them there had been little participation in discussions about it.

Partnerships
School–university partnerships are fundamental to the establishment and development of teachers researching their practice. The school–university partnership began as a symbiotic–cooperative partnership and later developed into an organic–collaborative one.

Distrust, suspicion, resentment and cynicism of the school–university partnership was evidenced at the beginning of the partnership which I have called the foundational stage of the symbiotic–cooperative partnership. Ruby, in particular, was critical of my involvement in the school and of Rosemary imposing something which she was asked to do. The confusion about the purpose of the research project, what the roles and

responsibilities of the teachers and myself were and the expectations of the project contributed to the distrust and resentment. There was also distrust of universities who were seen to be gaining a benefit without reciprocal benefits for the teachers or the school. The partnership was perceived as based on self interest and a one way flow of information and support (Sachs, 2003).

When the roles, responsibilities and expectations had been clarified the partnership moved into the continuation phase. Openness and trust was developed between the teachers and myself so that there was a constant questioning of each other and of the process so that the teachers began to assume ownership of the research project.

There were a number of factors which were instrumental in developing the partnership. The structural differences between the school and the university had to be understood to enable the partnership to develop. Timetable structures operating in the school and in the university had to be juggled to enable mutually convenient times for meetings to be established. Although my university timetable was relatively flexible and I was able to organise blocks of time to attend team meetings and at other times, changes between semesters caused difficulties. My willingness to attend the school and to accommodate changes to meetings times were essential to maintain the visibility and presence to demonstrate long–term commitment to the school.

Teachers have to respond to the immediacy and priorities of their daily work and to unplanned events which occur. As the university partner I had to be flexible and accommodate urgent and unexpected occurrences in the work of Ruby, Rebecca, William and Wendy. Changes to meeting times, location of meetings, cancellations of meetings and periods of little or no contact had to be accepted. Flexibility and understanding from both partners was important to developing the partnership through the continuation phase.

The partnership evolved into an organic–collaborative partnership where the partnership was embedded in the school's processes and there were mutual purposes and benefits for both the school and the university. Trust, shared values and understandings had

developed so that decisions made related to common interests and purposes. Trust and shared understandings had developed into a 'two-way model of reciprocity' (Sachs, 2003: 66). There was common and shared learning and commitment and continuity to the partnership.

The school had given me a two year, remunerated position in the school and called me 'researcher-in-residence'. The teachers began to call me 'our critical friend' rather than 'the university partner' indicating an important shift in teachers' perceptions. The Principal and the teachers requested my assistance in a number of matters which were unrelated to the research project matter. Through discussions and exchanges Ruby, Rebecca, William and Wendy and myself learned that we had shared values and understandings about schools, teachers, students, and teaching and learning. We trusted each other and were confident in our exchanges. We all understood and respected our respective strengths and expertise which we could bring to the research project.

The research project now took on a new direction as teachers were confident about the purposes of their research and assumed ownership of the research. We shared common and mutual directions and outcomes for the research. There was mutual learning from the research as teachers shared their research findings in meetings. The knowledge and understanding I gained understanding about the realities of schools expanded my own knowledge which I was able to use in my own lectures at the universities and in presentations to other universities and to schools. Rebecca also made a presentation at my university and Wendy and Rebecca were invited to an interstate conference to present their research. Theoretical and practitioner knowledge was generated when the four teachers and myself worked collaboratively in planning, implementing and conducting research. This knowledge was evidenced in the dialogic conversations between the teachers and in the narratives which the teachers wrote.

In summary, the processes of collective leadership and the organic–collaborative partnership between the school and the university were essential to the development of teacher research across the school. The leadership of the Principal supported teachers researching their practice through her clear vision and focus for the school. A belief in

the importance of teachers to improve their work was demonstrated in the provision of professional development opportunities for the teachers. She promoted teacher research as a new challenge for her teachers and provided financial and moral support.

The school–university partnership which developed from a symbiotic–cooperative partnership to an organic–collaborative one was formalised and embedded as part of the school's processes. These processes have been demonstrated to be essential conditions to facilitate and support teachers researching their practice. The Principal had created the structures and established the school–university partnership to develop a culture of inquiry at Hamden Hill High School.

Structures and processes were important elements in a model of whole school learning. However, it was the interconnection of structures and processes which developed relationships as the third element in a model of whole school teacher learning. The interplay of structures, processes and relationships provided the conditions which had the potential to develop a culture of inquiry at Hamden Hill High.

Analysing relationships in a model of whole school learning

Study data identified social and professional relationships as an important element for teachers researching their practice. The interactions between the teachers as they planned, implemented and shared research about their practice evolved and changed throughout the study.

Teaching is a social act and it is the interactions between teachers which contribute to social cohesion in schools (Dadds, 1995; Dadds & Hart, 2001; D. Hargreaves, 1982). Relationships between teachers are important in determining how teachers feel about themselves, their work and their peers (Lieberman & Miller, 1992a). Relationships are also essential to create the climate where change and reform can take place in schools (Fullan, 1993).

Traditionally, teachers work in isolation and insulation in classrooms and work against teachers forming relationships (D. Hargreaves, 1982; Huberman, 1993). Teachers researching their practice required teachers to talk about their work in classrooms and to engage in dialogue and to discuss their beliefs and values about teaching and learning. Strong relationships were essential for this to happen. William, Rebecca, Ruby and Wendy were of varying ages and at different stages of their teaching careers but they all had a strong sense of their teacher identity and self efficacy. They were confident in talking about their teaching roles and the importance of their work for students and teachers.

One of the reasons that the teachers had well−formed teacher identities was that the school had an emphasis on teacher professional development and had provided ongoing strategies for teacher involvement. The teachers were receptive to change and anything that would improve their teaching. Teacher research as a professional development strategy provided a new challenge for them.

Professional relationships have been variously described as involving collaboration, cohesiveness and tolerance for diversity (Huberman, 1993); colleagueship, openness and trust; (Lieberman & Miller, 1992b); kindness, generosity and care (Dadds, 1993). The relationships which developed between the teachers were based on openness, trust, respect and reciprocity. The teachers were open to new ideas and challenges; trusted each other to share their practice and engage in pedagogic conversations; respected each other's skills, abilities and expertise, and, learned from each other about their research and practice.

However, the relationships which developed between the four teachers took time to establish and develop. There were tensions and frustrations as the teachers began to plan and implement their research. Ruby, in particular, expressed her resentment about being involved in the project without consultation. William, Wendy and Ruby were frustrated by the slowness of the planning stage and there were tensions when teachers did not come prepared to talk about classroom practice. Their resistance was shown by the silence at meetings and reluctance to talk.

The relationships between the teachers developed over time and they developed greater confidence to talk about their work and discuss their beliefs, attitudes and values about students, learning and their respective subject areas. Relationships developed so that the teachers were able to question and challenge each other about their beliefs and gain new insights and understandings both from their research findings and learning from each other.

Relationships are also formed through the alliances and associations which are created in schools through both perceived and formalised groupings. Hamden Hill High School had created a cross–faculty team structure in years 7 and 8 although teachers were also members of a subject faculty. These cross–faculty groupings had created opportunities and challenges for teachers to work in new formations and to transcend 'bounded, protected space' (Lortie, 1975: 171). The teachers who trialled the teacher research process, Wendy, Ruby, William and Rebecca, represented English, History, Science and Mathematics respectively and the differences in the pedagogy promoted by individual subjects and the operation of subject faculties. Teachers' attitudes and perceptions of students and classrooms vary widely and are dependent on individual subject departments or faculties (McLaughlin & Talbert, 2001). New relationships had to be formed between the teachers from working in these cross–faculty groupings. As the teachers engaged in dialogue about their teaching practices they talked about the differences in teaching approaches in their respective subjects. From sharing and dialogue they learned from each other and started to 'borrow' ideas from each other for their teaching. There was often much laughter and joking about the traditional teacher–centred practices of Science and Maths and Rebecca and William were keen to try new approaches in their classrooms which were more student–centred.

The tensions and frustrations in relationships also relate to the nature of teachers' work described as presentism, conservatism and individualism (Lortie, 1975). Presentism, as focus on the present concerns and activities, was evident when teachers' participation in research was postponed because of the immediate and urgent demands placed on teachers. The attendance of teachers at meetings to discuss their research project fluctuated as on occasions teachers were absent because of the school's priorities

(parent–teacher interviews, cross country carnival) or absent because of illness or other activities. Conservatism, as the preference for continuity and preference for maintaining current practices rather than change, was demonstrated when the teachers expressed concern whether the extra work load would be concomitant with the benefits and Ruby's initial reluctance to participate in discussion about her classroom practice. Teachers' work occurs mainly within the confines of the classroom and the requirement that teachers work together to plan, implement and share their findings from researching their practice conflicts with the teacher individualism or autonomy of teachers' work in classrooms (Hargreaves, 1992, 1993).

Strong, respectful, open and trusting relationships were essential for these teachers to question and challenge each other. Relationships developed as they engaged in dialogic and critical reflection. They openly talked about what they were doing in their classrooms and brought examples of their programs and students' work. They questioned themselves and each other about the assumptions and beliefs implicit in their practices and discussed ways that they could improve their teaching. They talked about taking risks and were willing to experiment in the classroom, often using the ideas and suggestions of the other teachers on the team.

Relationships also evolved and changed between the teachers and myself as the university partner throughout the teacher research project. The teachers revealed that they were initially suspicious about my involvement in the school which Ruby suggested was based on self–interest. Through willing, frequent and ongoing contact, our relationship evolved and was developed through communication and interactions in a number of informal and formal situations in the school and away from the school. Our relationship developed into one of mutual trust and respect where we understood and valued the expertise and skills of our respective work practices.

The improved relationships between the teachers also changed relationships with the students with whom the research had been conducted. There were also changes to relationships with all the students that the four teachers taught as they transferred what they had learned with one group to other students in other years. The teachers had

developed warmer, more open and respectful relationships with their students as teachers explained the purpose of their research and experimented with different pedagogical practices. As the teachers implemented a range of student–centred teaching and learning strategies and assessment practices the students became more responsive to the teachers and to their fellow students. Cohesive relationships developed and there was tolerance and respect for the differences in learning of the students.

Teachers' work is about the day–to–day necessities of classroom practice, managing the diversity and difference in their students (McLaughlin, 1993) and building on existing practice and relationships (Helsby, 1999). At Hamden Hill High School Ruby, William, Rebecca and Wendy individually and collectively exercised their autonomy through the choices that they made within their school and classroom. Through exercising freedom and control, teachers interpreted and changed their individual and collective ways of working.

In summary, I have synthesised the findings in relation to the structures, process and relationships. Each of the elements was analysed through a model of whole school teacher learning to address the focus of this study which was to identify the conditions which would embed teacher research as core practice for teachers in a culture of inquiry. The findings indicate that structures, processes and relationships are essential to teachers researching their practice. The elements are interconnected and would not, on their own, develop a culture of inquiry. The interplay of structures, processes and relationships assisted the teachers to research their practice and was central to their work.

To change teachers' work practices requires the concept of teacher culture to be examined. Examining teacher culture enables an examination of the acceptance or resistance of teachers to change. The form and content of teacher culture were analysed to determine the acceptance or resistance to teachers researching their practice.

Teacher culture – content and forms of association

Teacher culture is a powerful determinant of what, how and why teachers operate in their classrooms (Deal, 1985; Hargreaves, 1992, 1993; Nias, 1989; Nias, et al, 1989). Teacher culture enabled an examination of the ways in which the teachers engaged with researching their practice. Teacher research enabled the teachers to examine and make public their beliefs and assumptions about teaching, students and learning. The teachers changed their practices through researching their practice. The content of teacher culture as the substantive attitudes, values, beliefs, habits, assumptions and ways of doing things were shared between these teachers and the wider teacher community (Hargreaves, 1993). Structures and processes changed the relationships between the teachers but it was teacher culture which mediated the engagement of teachers with research.

The forms of association identified by Hargreaves (1992, 1993) were used to examine the ways in which teachers engaged with teacher research. The study data revealed that the teachers moved between individualism, contrived collegiality and collaboration when they conducted research into their practice.

Individualism

Much of teachers' work occurs in individual classrooms and teachers work alone, insulated and isolated in classrooms. Therefore, the classroom isolates and insulates teachers from working together and promotes teacher autonomy and individualism. At Hamden Hill High the structures of teams had forced teachers to work together and it was this team structure which was used for teachers to conduct research. However, when first invited to participate in the research project, there was reluctance and resentment from some of the teachers. Sharing practice and discussion between teachers is implicit in teachers researching their practice. However, although it was suggested that the teachers bring examples of their classroom practice as a way of talking about their practice this did not occur in the first few weeks. Excuses were made for not bringing examples of their classroom practice and ideas about what they wanted to research, to the meetings. Ruby, in particular, avoided talking about her work or about research issues. Ruby maintained that she enjoyed being in the classroom by herself and

that she did not see the purpose of doing research. Her reluctance slowed the planning stage and affected the other team members. The team structure had created an environment where teachers could work together but teachers researching their practice was a new challenge for the teachers to change their work in classrooms. William also identified individualism as a barrier that would have to be overcome when other teachers in the school particularly for those teachers who worked in subject departments and not teams.

The research data indicates that cultures of individualism are a barrier in the development of a culture of inquiry for teachers to research their practice.

Balkanization

Although members of one team, Rebecca, William, Wendy and Ruby, were also members of subject faculties. The structures of subject departments in secondary schools create balkanization (Hargreaves, 1992, 1993; McLaughlin & Talbert, 2001). Balkanization are the sub–groups which form in schools and to whom teachers form allegiances, identify with, and, are loyal to rather than the school as a whole. The teachers in the teams identified with the team first but remained loyal to their subject specialty department. Veronica and Brian, as new members of the team, indicated loyalties to their subject departments rather than the team. However, as Veronica and Brian did not participate in teacher research given the time restraints of this study (and expressed their reluctance to do so, when invited) there is no data which indicates that balkanization was present. Relationships between Rebecca, Ruby, as the original members of the team, and Veronica and Brian, had not yet developed sufficiently for there to be openness and trust. Veronica and Brian often subverted the agenda of team meetings when teacher research was to be discussed by raising matters relating to the team and students. The Principal indicated that there were various sub–groups in the school who competed for status and priority and which created some divisiveness and differentiation. She indicated that these balkanized cultures would be barriers to developing and sustaining a culture of inquiry in this school although there is no research data which can confirm or refute her opinion.

Contrived collegiality

There were examples of contrived collegiality in the school. First, Rebecca, Ruby, William and Wendy were members of a team which had been administratively organised. The process by which teachers were allocated to the teams was not publicised. Second, it had been the Principal who had invited them to participate in the teacher research project. In reality, the Principal had selected this team as she trusted and believed that these teachers would be willing to try something new. These examples of contrived collegiality served as a starting point for collaboration (Day, 1999). The Principal had deliberately structured the teams to work together and, in particular, had encouraged these teachers to participate in researching their practice as a school priority.

There was apprehension shown by the teachers when first confronted with the teacher research project. Clarification was required on the expectations, roles and purposes of the research. The teachers were reluctant to talk about their classroom practice and identifying areas for them to undertake research took time. At times, it seemed as though there was no progress at all. Rebecca was frustrated at the slowness; Ruby was resentful at being involved; Wendy and William listened attentively but did not contribute much to the discussions. However, as relationships and collegiality developed between the teachers and with me as the university partner there was openness and trust as the teachers talked about their classroom practice. Collegiality had developed and as they began to talk about their beliefs, values and assumptions collaboration was evident.

Collaboration
Ruby, Wendy, Rebecca and William had developed social and professional relationships from working as a team and used the meeting time to discuss issues and to make joint decisions about matters which related to the welfare and academic progress of their students. Collaborations were evidenced in their support for each other, their sharing of resources and willingness to help each other out.

Collaboration resulted from the relationships which had been formed through the processes and structures in the school and Wendy, William, Rebecca and Ruby

voluntarily and spontaneously worked together to plan, implement and discuss their research. The visible support of Rosemary as the school principal and the development of relationships through the school–university partnership created openness and trust for the teachers to talk about their practice and about research. Reflective and critical inquiry are central to teachers working together and as they conducted their own research they began to question and challenge each other about their assumptions and beliefs about students and learning and their classroom practice. Ruby, Rebecca, William and Wendy were keen to conduct research and shared what they were already doing in classrooms and identified areas where they wanted to improve. They showed ownership of the research processes as they jointly developed units of work together and were excited when they shared what they learned from their research. The teachers jointly organised, directed and controlled the research. They controlled the pace of the research by determining the timeline for their research and on occasions suspending their discussions when school priorities and demands threatened to overwhelm them. Collaboration between the teachers which were spontaneous, voluntary and development oriented (Hargreaves, 1994) was evidenced.

The forms of teacher culture influence the ways teachers operate inside and outside their classrooms. Contrived collegiality and collaboration supported the teachers to research their practice. The content and forms of teacher culture enabled the teachers to collaboratively make their work in classrooms and the beliefs, values and assumptions which underpinned their practices explicit. Through researching their practice in collegial and collaborative ways the teachers developed individual and collective confidence about their work. Teachers who are professionally confident have the capacity and authority to make decisions about their work (Helsby, 1999). Teacher research provided teachers individually and collectively with the authority and capacity to challenge and change. The form and content of teacher culture mediates the acceptance or resistance to change. Collegiality and collaboration as forms of association enable teachers to question their beliefs, values and assumptions and make and accept change. Individualism works against teachers researching their practice resulting in resistance.

When teachers research their practice in a model for whole school teacher learning they participate in and contribute to the production of knowledge. As these teachers engaged in reflection and research about their professional practice new insights about the various professional, intellectual, social, emotions dimensions of their work emerged. Through dialogue and narrative they made explicit the changes they had made to their practice and to their beliefs about teaching and learning. They enthusiastically shared their learning with other teachers in the school and disseminated the knowledge to other schools and universities.

A model for whole school teacher learning

A model for whole school teacher learning brings together the elements of structures, processes and relationships. The model was developed to understand the complexities and nuances of schools so that cultures of inquiry can be developed. Study data indicated that the elements of structures, processes and relationships do not stand alone, but rather the interplay of these elements develops and sustains teachers researching their practice. Relationships were supported by the structures of teams and time and by the processes of leadership support and the school–university partnership. Teacher research as the driving force in the model was mediated by the forms and content of teacher culture. The thesis has provided evidence to support the claim that teacher research which is developed and supported by structures, processes and relationships had the potential to change school culture.

Summary

Chapter 8 has synthesised the study findings. Using a model for whole school teacher learning the conditions which would develop, sustain and hinder teacher research being embedded as core practice for teachers have been identified. Structures, processes and relationships, as the elements of the model develop, sustain (and hinder) a culture of inquiry, and support teachers researching their practice. Teacher culture acts to mediate the effects of teacher research. Teacher research which is developed and supported by structures, processes and relationships had the potential to change school culture.

Chapter 9 provides the conclusion to this thesis. I highlight the major findings and theoretical contribution of this thesis and identify areas for future research. I also examine implications for future research.

Chapter 9

Major findings and conclusion

Introduction

In this final chapter I highlight the major findings and theoretical contribution of this study and identify areas for future research. First, I revisit the research questions and evaluate the effectiveness of the theoretical orientation and methodology in addressing the research questions. Second, I restate the major research findings in light of the literature and theory and emphasise the contributions that the study makes to teacher professional development and teacher professional learning and school change. In the final section, I examine the implications of the study for future research.

Research questions, theoretical orientation and methodological issues

This study has sought to identify the conditions which would develop and sustain teachers researching their own practice in a culture of inquiry. Specifically, the issue of how to embed teacher research as a central feature of teacher's work was the focus of the investigation. Four research questions guided the study. They were:

- What are the structural and cultural conditions that will embed teacher research as core practice in schools?
- What are the relationships that will promote a culture of teacher inquiry?
- What models of leadership are appropriate to the development of a culture of inquiry?
- How can partnerships between schools and universities facilitate a culture of inquiry?

A model for whole school teacher learning was developed and provided an effective framework to address the questions. This is because it enabled the complexities of this

school and its culture to be explained and understood through the elements of structures, processes and relationships.

In current contexts, there are greater demands on schools and teaching is increasingly complex and demanding (Hargreaves, 1994, 1997; Huberman & Guskey, 1995; Fullan, 1995). Schools are accountable for their actions and schools have looked for new ways to improve the teaching and learning of their students. Teachers play key roles in initiating and changing schools and in implementing change and reform (Fullan, 1991, 1992, 1993; Guskey, 1994; Hollingsworth & Sockett, 1994; Darling–Hammond & McLaughlin, 1995; Lieberman, 1995; Fullan & Hargreaves, 1996). In these new contexts a model for whole school teacher learning was proposed to understand the intricacies and nuances of schools which would develop teachers researching their practice as a central feature of their work.

Data analysis was an iterative, recursive process of simultaneous data collection and data analysis and the model was developed through participant observation, focus groups and interviews as the teachers planned, conducted and reflected on their research. As the interconnectedness of each of the elements of the model became evident, this model provided a consistent basis for data analysis. This model has application beyond the current study as a way of analysing schools and their cultures. The model demonstrates how the interplay of structures, processes and relationships and teacher culture worked with these teachers and might be further developed to change schools and embed teacher research across a whole school in a culture of inquiry.

Methodological trustworthiness of this study was evidenced through the prolonged engagement in the field, the use of multiple methods of data collection and member–checks. However, as I was the university partner assisting and supporting the teachers to conduct their research, I had to be aware of bias as a potential limitation of the study. The Principal, the teachers and myself all spent extended periods of time together in both social and professional engagements and I was aware that my judgements about them might pose difficulties in making judgements. I found that by changing their names to pseudonyms, including the school, early in my analysis I was more removed from the

data. The trustworthiness of the study relies heavily on inferences made from the data collected over the two year period and the multiple methods used to corroborate early research findings and the conclusions of the study.

Major findings and theoretical contribution

The findings of this study relate to the conditions which develop and sustain teachers researching their own practice as a central feature of teachers' work in schools. The findings also relate to teacher research as a significant professional development strategy in the development of a culture of inquiry for both teacher professional learning and school change. A summary of the main findings is as follows:

1. Teacher research as a central feature of the work of teachers
Teacher research as a central feature of the work of teachers is a significant professional development strategy for teachers. Professional learning is an important outcome for teachers to research their practice. The teachers engaged in reflection and critical inquiry about their practice and challenged and questioned their beliefs, values and assumptions about their work. They came to make explicit, the knowledge they used in their everyday interactions, to understand experience and generate behaviour (Spradley, 1980). The teachers learned from each other and shared their insights and understandings with other teachers and with other schools and universities. Teacher research was a powerful professional development strategy for the four teachers in study. Teachers viewed teacher research as important core work and came to understand the potential transformational and critical effects as they developed knowledge about their work.

2. Structures develop and sustain teachers researching their practice
 Structures, as the organisational features which define a school, are essential to facilitate teachers working together (Chapman, 1996; Dadds, 1995; Fullan, 1992, 1993; Hargreaves & Fullan, 1992; Hargreaves, 1994; Senge, 1990). A team structure was embedded in the junior years of the school (years 7 and 8) and it was this structure which enabled the teachers to work together in a cooperative and collaborative environment.

The team structure and the 80 minute meeting time which was part of the school 's timetable was utilised for the teachers to plan and discuss their own research.

Time as an important resource for teachers (Lortie, 1975) is essential for teachers to engage in dialogic and critical reflection about their work. Meeting times structured into the school's timetable creates both possibility and limitation (Hargreaves, 1994). Teachers' perceptions of time as a phenomenological construct (Hargreaves, 1994) changed as teachers acknowledged the importance of their research and made their research central to their work. Study data indicate that the school supported ongoing and continuous learning of the teachers by providing opportunities for teachers to engage in dialogue about learning and to be involved in research. These structures enable the development of a professional learning community where student and teacher learning are the focus of teachers researching their practice.

3. *Processes develop and sustain teachers researching their practice*
Leadership: The leadership of the school principal facilitated the development of teacher research as a central feature in the school. Study data indicate the Principal had a humanistic leadership style which valued and utilised the skills and expertise of the teachers in improving learning across the school. Her 'collective' leadership style provided a vision and clear direction for the school and a demonstrated belief in the importance of teachers to improve learning in the school. Teachers were autonomous decision makers in students' welfare and learning and were given structures to develop collegiality and collaboration between teachers. Financial resources and moral support and commitment of the Principal develop teacher research cultures.

School–university partnerships:
Organic–collaborative partnerships embedded in the school's processes develop and sustain teachers researching their practice. These partnerships provide mutual purposes and benefits for both schools and universities. Study data indicate that the partnership developed from a symbiotic–cooperative partnership in two phases – foundational and continuation – into an organic–collaborative partnership one. Clarification of roles,

responsibilities and expectations of the partners was a feature of the foundational phase between the school and the university. The continuation phase enabled openness and trust to develop through shared understandings about the work practices and individual skills and expertise of schools and universities. The partnership evolved into an organic–collaborative partnership where the partnership was embedded in the school's processes and there were mutual purposes and benefits for both the school and the university. Trust, shared values and understandings, common and shared learning, and, commitment and continuity to the partnership are features of an organic–collaborative partnership which support teacher research.

4. *Relationships develop and sustain teachers researching their practice*
Social and professional relationships which are based on openness, trust, respect and reciprocity are essential for teachers to research their practice. Study data indicate that structures and processes in the school enabled the relationships to develop through the associations developed through the team structure and time allocation for meetings. The organic–collaborative partnership based on mutual trust and respect supported the teachers in their research. Study data indicated that presentism, conservatism and individualism (Lortie, 1975) hindered the development of relationships. Relationships develop as teachers talk about their work in classrooms, share their ideas and make joint decisions about their work. Strong, supportive relationships enable teachers to be open to new ideas and challenges; trust each other to share their practice and engage in pedagogic conversations; respect each other's skills, abilities and expertise, and, learn from each other about their research and practice.

5. *A model of whole school teacher learning to change school culture*
A model for whole school teacher learning was developed to understand the complexities and nuances of schools. Structures, processes and relationships were the elements in the model of whole school learning. The constant interplay of these elements provides the conditions to develop teacher research in the school. Study data indicate that the elements of structures, processes and relationships do not stand alone, but rather the interplay of

these elements develops and sustains teachers researching their practice. Collegiality and collaboration as forms of teacher culture mediate the effects of teacher research.

Re–culturing of schools will only occur over a longer period of time. This study was conducted over a period of two years and it cannot be concluded that school culture had changed permanently. This study makes a methodological contribution in that a model for whole school teacher learning identifies the conditions that develop and support teachers researching their practice as a central feature of teacher's work. Teacher research as the driving force in the model has the potential to develop a culture of inquiry.

Implications for future research

This study has taken a first step in conceptualising teacher research as a significant professional development strategy as the driving force in a model of whole school teacher learning. The model of whole school learning provides a framework for future research to change school cultures into cultures of inquiry. Future research needs to:

Further conceptualise a model for whole school teacher learning to consider questions such as: Are there are elements in the model which can be further developed to develop and sustain teachers researching their practice? Consider questions of how schools might be re–cultured in the longer term. Are the conditions different over time and how the model might be re–conceptualised to accommodate significant changes in schools, teachers and systems? How can new teachers in schools be encultured into their schools? And whether teachers researching their practice can change school culture permanently?

In current educational contexts of teacher bashing and teachers as failures (Hargreaves & Evans, 1997) where there is criticism of the teaching profession for its lack of critical reflection about its ideas, values, assumptions and current practices these suggestions could yield some beneficial results. First, teachers researching across a whole school can utilise their professional learning and knowledge to change, reform and improve schools.

Second, a model for whole school teacher learning can assist to understand school cultures and change them.

In closing, this study has conceptualised teacher research as the driving force to develop and sustain a culture of inquiry in schools. Through the model of whole school teacher learning the study has highlighted the conditions which will embed teacher research as core practice for teachers. I hope that future study will further explore and critique this model in the fields of school change, reform and improvement.

APPENDIX 4.1

Interview schedules

Interview 1

Areas for discussion
Qualifications, teaching experience, other relevant experiences, teaching philosophy, current teaching context, professional development experiences, research project, university involvement, teacher research

Questions to guide the interview

Qualifications, teaching experience, other relevant experiences

- Would you talk about your qualifications and your teaching experiences?
- What other experiences related to teaching have you had?
- When and how and in what capacity were you appointed to Hamden Hill High School?
- What subjects do you teach and what year levels?

Teaching philosophy

- Why did you become a teacher?
- Would you talk about your classroom practice and what guides your teaching?
- What are your views about students and their learning?

Current teaching context

- Would you describe Hamden Hill High School?
- Its students?
- Its philosophy?
- Its teachers?
- Principal?
- Community involvement

Professional development

- In what professional development activities have you been involved?
- How effective (or ineffective) were they?
- Why is professional development important?

Research project

- What do you know about this research project?

- How did you get involved in this research project?
- Your reactions to being involved in this research project?
- What do you want to achieve through this research project?
- What do you see are the advantages and disadvantages about being involved?
- What factors will assist you to achieve the outcomes of the research project?
- What might be barriers to you achieving the outcomes?
- What is your reaction to being involved in developing a research process which is to be used with other teachers in the school?
- What is your reaction to being asked to work with other teachers at the completion of this trial?

University involvement

- Have you had experiences of working with universities?
- Describe your experiences.
- Have you been involved previously in research?
- In what capacity?
- What was your reaction to the university being involved in this research project? Why?

Teacher research

- What does teacher research mean to you?
- What do you see as the purposes/benefits of teacher research?
- Are there any difficulties you anticipate with teacher research?

Interview 2

Areas for discussion
Research project, successes, problems, role of university partner, leadership (Principal), team structures, outcomes of teacher research, working with other teachers

Questions to guide the interview

Research project

- What did you plan to research?
- How did you decide that was what you wanted to do?
- How did you implement your research?
- What data did you collect?
- What analysis did you do of the data?
- How did you analyse the data?
- What did you learn?
- Did you make changes to your practice?

- What did you do with the information?
- What will you do now?
- Will you continue to research your practice?

Successes

- What were the factors which contributed to you implementing research in your classroom?
- Is there anything else which would have helped you to implement research in your classroom?
- Would you change anything if you did it again?
- Have relationships changed between you and your fellow teachers? How?
- How did the team structure affect your research? How was it used?

Problems

- What were the factors which hindered you implementing research in your classroom?
- How could these be overcome?
- What were the effects of these problems?

University partner

- What did you see as the role of the university partner?
- Did this change?
- In what ways?
- How important is university involvement for your research?
- Have relationships between you and the university changed?

Leadership (Principal)

- Has there been support for you to research your practice?
- In what ways has the Principal supported your work?
- Would you change anything?
- How can this support continue?
- How important is this support for you to research your practice?

Team structure

- In what ways has the team structure been used to implement teacher research?
- Have there been changes to the way the team structure has been used?
- What effects have there been of using the team structure?
- Are there any changes to the team structure which would support teacher research?
- What difficulties have you encountered in using the structures of the school?
- How important has the team structure been to teacher research?

- Are there other ways teacher research can be implemented (without using the team structure)?

Teacher research

- What is teacher research to you?
- Have your ideas changed now that you have conducted research?
- What do you see the purposes of teacher research?
- What will you do with the knowledge you have gained?
- Can others learn from your research?
- Can and will teacher research become part of your core practice? How?
- What is your reaction to now being asked to work with the next team of teachers to research their practice?
- What did you think of the process which was developed to help you (and the next group of teachers to research their practice)?
- What changes to this trial do you think need to be made?
- How important is the role of the university?
- What support is needed from the Principal?
- How do you think the teachers are going to react?
- Do you see any problems with working with the next group of teachers?
- What are the benefits of all teachers across the school conducting research
- Can this happen?

APPENDIX 4.2

Sample interview transcript

(first 5 pages only)

Rebecca (RJ) Hamden Hill High School: Interview 1 Transcript 15 & 21 June 2000

LM: How long have you been teaching, what are your teaching qualifications, your teaching experiences and what do you teach?

RJ: Okay, I have been teaching since 1983. I did my initial training at Sydney University in Mathematics and I have taught at (...5) four schools. I did a year of casual on and off before my first permanent appointment. Um, in that time I had two years off without pay when I went to London. So I have to do a subtraction (laughter) because I lose count, say seventeen, sixteen years but not ... continuously. I've always taught Maths. At one stage I did teach a little bit of computing and some sort of welfare and curriculum in the junior years at my previous school and I am at Hamden Hill High School. I have been there .... this is my fifth year (..2) in the Maths Department. Have I answered those four questions? Okay (laughter). I teach Maths in all year levels across the school.

LM: Why did you become a teacher?

RJ: I guess I have always wanted to do something for kids. I know it all sounds a bit altruistic, but I have always had a belief in kids and that they all can learn. Somehow I have always thought we could be doing things a little bit better. I guess that is what has always driven me. And being at Hamden Hill High School I have had opportunities to really see what we can do for kids?

LM: Can you talk a little about your classroom practice?

RJ: Well, I'm a Maths teacher (laughter). I really think there is a lot of bad teaching out there and I really think we should be doing a lot more with kids, like involving them in their learning, rather than just do exercise 7.3. So my love of Mathematics is just a small bit – it is more about trying to make things better for the kids, so that they learn. And the way that Maths is taught in most classrooms is just too boring. I'm bored; the kids are bored. So we need to change a few things. I guess that is what I am on about.

LM: What you talk a little bit about Hamden Hill High School, its philosophy, its students and teachers?

RJ: Hamden Hill High School has been great for me as I have had the opportunity to be involved in so many things. This school has been on about change and trying to make things better for the kids so the whole philosophy has been about learning. We try and

make learning the focus. You get opportunities here – we're always getting involved in something, trying to make things better for the kids.

LM: In what professional development activities have you been involved and would you comment on them?

RJ: Okay, well I have been involved in a few projects which have involved the school. But I have been doing my Masters and I got interested because of some of the stuff I had done in the Masters Degree at Uni.

LM: Can you talk a little about that?

RJ: I suppose I had started, I had done a course on qualitative research methods and I was interested in ... In fact quite a lot of the stuff I had written in my Masters was about teams and collaboration, school improvement and that was the one area where I looked at sort of researching - a particular learning habit actually.... but not the one we have chosen. (laughter) So I wrote an action research project in 1998 for um determining, improving responsibility for learning - the second learning habit. And so that was really an interest area, professionally and personally. So I was starting to read about the sort of things we could do. I guess since then you know I started off doing something as an essay because I needed to and realised that I had really found something that I was extremely interested in – teacher research and looking at research as trying to develop skills, rather than prove them. So I guess I just started to look at a whole different view of research where you are actually incorporating into the training and development, staff improving teaching practice and, as well, talking to kids. (.10). I guess it was then that Rosemary talked to me about the research project.

LM: That was going to be my next question. Would you talk about you got involved in this research project?

RS: I got involved in this current project through the somewhat related project - the Innovation and Best Practice Project. And I became involved in that because I was on a Planning Committee to submit a proposal a couple of years ago and the Principal basically asked me (laughter) if I was interested. But I think what, I think probably what um made me interested was that this particular project was a natural extension of the first one - do our students reflect upon and evaluate their own learning? - and I was interested in following up on some of the ideas and developing common understandings. But particularly I suppose in talking to the Principal and other staff about that research issue document, working out a way that we could put that into practice because ever since it had been written as part of the IBBP it had changed the way that I taught and I could see that it had great potential if we could somehow get everyone to look at. And I don't think it seemed possible that we could do that through Faculties because I think it would have lost its credibility and so developing some um, (..3), I suppose some way of teams looking at it.

LM: Would you elaborate on your statement 'some way of teams looking at it'?

RJ: The teams are the logical place for it to happen. Some important professional development can happen through the teams. The Faculty meetings are large, too large and I am not quite sure that they all really operate very well. There is so much in administration, communication of what happens in Executive meetings, people all wanting to have their say about whatever is coming up and has to be done. You get interrupted by things that you have got to do. We have year six visits coming up, parent teacher nights, reports and just the day-to-day routines. So things like professional development get sidelined. So the team is just this nice, contained area where you *can* [her emphasis]sit down and talk about learning and bring the focus around. It does not always happen but with some integration of the people in that team you can do that with some focus.

LM: Could you talk a little more about the Faculties not operating as professional development?

RJ: I guess I mean that in terms of professional development nothing much happens. Yes, in terms of actually having meetings, you don't get that focus on learning. Faculty meetings are when you should be doing it, but it is part of lunch time, part of recess. It is a time thing - you can't always get access to every member of staff and there is always a pretty full agenda with just the day-to-day routines of reports, (laughter) parent teacher nights, communication from Executive meetings, feedback on professional development days.

LM: Okay so in terms now tell me a little about what you are planning to do in terms of this project. And what are the outcomes for you and the project in terms of this current work?

RJ: The outcomes for me are to really start assessing students in a different way in the classroom, to give students more opportunity to demonstrate what they have learned in oral communication as well as written communication. I am also really interested in developing peer assessment. So I see every time I think it is changing practice I come back to the thing that I am really doing is assessment and involving ..... . I certainly see that it is a way that I can involve students or work with students more in the process of deciding on the outcomes and moving towards the assessment of those outcomes.

LM: What do you want to achieve from this?

RJ: I think it is changing practice for me because that changes things for them. I mean I just see that students make changes when I make changes. (Laughter) I don't see the students as having the deficit model here; I think teachers have. For me when I talk to them..... To me it is just giving kids opportunities to do peer assessment because they have done it; they have done it in primary school. They come into high school and it is like suddenly they don't know anything any more and they haven't done anything before. So it is part of working with them and keeping up that initial enthusiasm they have for

learning which I actually think the majority of kids have when they come to year 7. I have seen some groups maintain it and others not.

LM: So you see this as a mechanism....(interrrupted by teacher)

RJ: I'm jumping all over the place a bit here. I suppose.... so it is a mechanism for me, to force me to think about what I do in the classroom. It is really, really easy to just do the day-to-day and turn up and teach a mediocre lesson. And sometimes you have planned it and sometimes you haven't. And sometimes it is good and sometimes it is not. But I just find that really, really boring. If I was to keep teaching I want to be doing some interesting things and some innovative things in the classroom. And to me this involves the things that I am really interested in, which is in giving kids more choice and control. So that is why I really looked at negotiating the outcomes and negotiating how they would be assessed and just sort of taking a few risks, saying 'Well, I don't really have this completely sorted out but I am going to give them a couple of questions and see what they come up with'. They come up with exactly what I would have given them, but they feel they own it and I am really enjoying saying to them 'Well, what do you think?' And actually appreciating, and I suppose not appreciating, but actually incorporating their ideas. I have changed a couple of things that I was going to do in the house because kids have said, 'oh, why can't we build the model this way?' And you go, 'right, why not? Yes, why not?' So I am trying to be more flexible, trying to take some risks because when you have been teaching this long 'why not?' It is just not interesting if I don't, because the Maths you can do and you can make it, you can get the kids to do it in lots of ways. But I am bored. (Laughter) And if I am bored, they are going to be bored.
And I guess the other part is the research. Like .... that's something that I could be doing on my own if I really wanted to be, in the classroom. But somehow along the way I feel that ... I just feel some sort of responsibility towards improving things at a whole school level because it really does annoy me, and that just not a word, it really does annoy me when I see people teaching, particularly Maths, in a really boring way. It really annoys me when I see all they prepare is what exercise they are going to do in the textbook.

LM: What else do you need in order for this project to happen? Can you see any barriers or any problems?

RJ: I think it going to be hard to communicate to people what you really want them to do and to keep them focussed on that. I hope people will look at the document and straightaway understand it. (laughter). Having said a fair bit at the staff meetings and involving people in the planning I think they will understand what we are trying to do and they will maybe think about it in between team meetings.

I think that people probably haven't got to the stage of *really* [her emphasis] believing they can be pro-active and that they can work with kids and that then you won't have as many of those disengaged students. I don't think it is just a fact of having a good class. I think you start off the year with that. Maybe that's going to be the problem that we are coming into a team that has already had a few months to maybe be functional or not; to maybe teach well or not. It is going to be very hard for people, who in some cases haven't

built up a really good - I am not saying there is negative relationships with the students - but I see that there are some teachers that are having trouble with kids in their class and that can be - because they have got some difficult kids. But it is going to be so much harder for them to sit back and say 'oh well, okay, now I am going to negotiate the learning with these kids when they haven't done it for the first few months' because it is going to be harder.

LM: How can teacher research help?

RJ: I think that if teachers start to be open and honest about what is happening in classrooms and we can help them to collect some data to show what is really happening n their classrooms then there can be some change. And I guess I have given that a lot of thought because it isn't going to be easy and I did think it would be easier but I now realise it is going to take time.

LM: Why do you say that?

RJ: I think that teacher don't really question what they are doing. They sort of think backwards and think 'what is it? why are these kids mucking up?' but they don't think is it because I am not involving them in the learning. Is it that I am telling them what to do. They think they are good teachers but they don't think of the kids and see their roles as being a good facilitator or collaborator which is really going to involve kids. That is a very negative view of teachers because there probably are people, a large number of people who will also look at that document and see some things in it that they can start to do and think that research might be beneficial.

LM: You're painting a fairly black picture here.

RJ: I know but I know that there is going to be more resistance and more 'we are already too busy, more on the agenda when we try to move this on to other teams. I don't get the impression that there are hundreds of people out there - there were a few people after - there was one person, maybe two people, who have talked to me as a result of our presentation at morning tea. There are others who I think they would be right into it but, yes, it is always going to be, people thinking that other things are more important and fitting it in. They should be able to fit it in because they actually forget. They actually forget that it is a great privilege to have those 80 minutes a week. But it is so easy to misuse them and spend half an hour time talking about some kid's particular discipline problems. They see that as more important than trying to change the whole atmosphere in the classroom so you won't have that problem

LM: Do you think there are going to be any problems or difficulties that you anticipate in implementing this research project?

RJ: I think we will have to be very focussed about disciplined with out deadlines. I am not always that good at that, but we will have to just remind ourselves that we have set this action plan. The action plan is really good but we can't be too casual about it. We sort of try to say to people 'it's okay if you are not going to finish that unit of work'

because you don't want them to feel pressured by it and you want it to be part of what the team is doing. But yes, you have got to at least be assured that you are going to move past the different stations if you like, or check points because otherwise it becomes small and only affects that small group of people. So I suppose problems I see are that teacher research can become a priority for these people because we are all really, really busy. Teams get to implement a lot of the school's priorities, including teacher research, so how do we make this so that this is the most important. I am worried that it will be sidelined if people can't see how important it is for our work.

APPENDIX 4.3

Sample focus group interview transcript

Focus group meeting 4 – (first 6 pages only)

24 October 2000

RJ: I thought what we would do quickly today is talk about the data collection that we've done so far. We said we would do an initial stage of data collection before the end of term. I've revised the questionnaire that LM designed to fit my topic and WB has done some observations. So I might talk about the questionnaire first and then hand over to WB.

Last Wednesday I was probably through the initial stages of the topic I am doing on designing your own home, and we've certainly done most of the skills work and I've been making a conscious effort to involve the kids in what we are doing, what the purpose, using an outcomes sheet which they've got stuck in their book. Now what I was interested in, in this questionnaire, was to see, well, in making this conscious effort to make the purpose of their learning clear to them, was it really happening? So I've, I issued the questionnaire - I was a bit concerned about whether some of the questions would be understandable to the students but I was hoping that the language I have been using in the classroom would be consistent with the language in the questionnaire and I actually found that that was true. I do need to make a summary of the student responses but I could probably just say, from having flipped through them, that kids are using the language of the subject. So just on a very quick overview - they do understand what they are learning about in the topic, every kid said that 'yes, they were clear about the purpose of the learning' but the answers to the, or the sentence completions below actually demonstrated that they *do* [her emphasis]. So the 'yes' is validated by their responses. They've talked about the content - the scale, the area, the perimeter, the mathematical content that they are learning, they understand what the end product is going to be. They did have a little bit of trouble trying to work out where they were going, where they might *use* [her emphasis] the learning in the topic but I think most of them were able to say 'Well, you know I might have to design a house one day' (laughter). Maybe there is a comment about making it a little bit relevant to them in the immediate future. The responses I was most pleased with because it is the completion I was most worried about was 'I review the purpose of this topic by...' - complete that statement - just because I didn't know whether they would understand what that meant. Now, kids did ask - we didn't have a class discussion but - and I certainly didn't lead them on because I just told them 'Well, look, I don't think that is a very hard statement, I really just want to know how you know what you are up to. How do you know what you have got to do next?' I didn't really want to write that in the questionnaire (laughter) but I had responses like 'checking my outcomes sheet', 'book work I have done", 'other people's books", 'if I

don't know, ask the teacher', (flipping through the surveys) to 'looking at the outcomes' and 'checking my book' is quite common, 'go back to my book and look', 'looking back through my book', 'checking my book', 'reflecting on what I have learnt'; quite a lot 'looking at my book'. I had hoped more would say that they were checking their outcomes sheet but they may not have realised that. But quite a few did say 'check their assessment sheet'. On the whole I am, I was really pleased with their responses to that. I think it made me realise that the effort I had made to make the purpose of their learning clear *to them* [her emphasis] had actually had some positive results, and that they did feel involved in what they were doing and they felt enthusiastic about it. Anyone got any questions, anything they don't know?

WB: I was looking at that and wondering how I would have done it with my class. What about the purpose of my learning - doing fantasy, what are we going to do with fantasy in the future but I am sure I can come up with something (laughter of whole group). I developed a check list and re-created it for our peer evaluation of writing. And they are doing it in - do you want to have a look?

The first task is they have all written their stories and they conferenced with me, or with their friends and they had to publish them. And then they got into groups and they sought feedback on them and it was peer evaluation of writing. We decided the outcomes as a group in terms of (1) the writing and (2) their interaction in the group. And as I was doing it I realised that I had to come up with a key - make the key clearer. So for instance, what they did in their groups was they read the stories to themselves and they passed them around the group and they took notes as they read to themselves. Then each author read the story back. So that's (1) presents - reads story to group. Then I noticed. I watched the first group doing it to actually help me do this before I decided on the key. Then I noticed that they were seeking clarification. Some of them would interrupt the story and ask for advice on 'what did you just say?' or 'where was the story going - I missed the name of the character?'. Whereas others would wait until the story was finished and the author might actually seek clarification on the advice, criticism given when they were number (4) suggesting how to improve the writing. And they responded to criticism, they listened carefully, they compared the stories and then also I've put in one for explaining, criticism, suggestions. And I added 'interrupting comments' when I actually went to another group and noticed that one person was interrupting all the time and it wasn't necessarily positive. And I found that - I had been taking notes on each group - and it has been good because I have been able to then use the information to write comments on them. For instance, in Simon, Stuart, Grant and Adam's group – Simon and Grant gave very good advice, explaining their ideas and asking pertinent questions to clarify points. They tended to dominate discussions though. Adam offered few remarks; he needs to be more assertive in expressing and sharing opinions with the group and *Stuart* [her emphasis] came out as the *caring* [her emphasis] person in the group because he kept asking, trying to include Adam, 'what do you think, Adam?' 'Did you like that story?' And asking Adam to contribute - Adam wasn't contributing until Mark made him inclusive, included him in the group. There was a real problem in the second group due to the different levels of understanding of English and their different competencies in terms of their expression. And that's really interesting too. That's the one when I decided that

Shaun is not going to work with those kids again because he lords it over them – I had never realised that before.

Then we moved on to the next lot of group work and once they had done that and everybody's gone through their process the next thing is in the group they have to decide which is the best story to share. And *that* [her emphasis] was really interesting because I sat with Paul, Alex, Lee and Tony and ..... We went back to the outcomes and I said, 'these are the outcomes, remember the outcomes for the writing, so when you decide the best one you've got to keep referring to the outcomes. You tell me, you decide the process you're going to follow'. Well, they had real trouble with the process. Lee was fantastic; he is a really good leader and he said, 'how about we do it this way?' and he went to each of them and said, 'what do you think?' He actually kept them on task, kept them moving, kept them thinking about the process. In the end they asked me, 'what should we do, we're a bit stuck?' So I suggested a process that they could follow. And it was interesting in terms of their feedback. Tony got very, very defensive with his story when he could see that it was actually going to become the bottom story in the group and that it wasn't going to be chosen. And he sort of stepped in and said, 'I think you guys are making a decision based on your friendship not on ....'. And we had to remind him, the group had to remind him that the markers said were going on the outcomes and the marking criteria does not include friendship. And then he offered to take his story away and to finish it, to take on board their further criticisms and to change it. And they said, 'No, we are past that point. We are at this point now. You can do that if you like but it is not going to help you at this point now. *Now* [her emphasis]we are choosing the best one and we think the best one is Peter's for the following reasons'. And he got really defensive and really argumentative and started to give reasons why his story was as good as the others and they just said, 'No'. (laughter) So that was interesting.

RT: Very interesting.

WB: But we haven't all been through the second process yet, that's still happening. I haven't actually observed them all doing the second process.

RT: Yes. So how many groups did you have and how did you actually structure your lesson to be able to get *that* [her emphasis] much observation in different groups?

WB: Well, because they are all working on this, they are all doing peer evaluation. If they have finished the peer evaluation and the stories are all published they then go on to other activities. They've got extension activities to go on with. So there is three things happening in the class at the same time. There's kids still publishing their stories in groups; there's kids doing the peer evaluation. Those who have finished are then on to doing some fantasy poems or doing some language and fantasy.

RJ: (interrupting) That means you can stagger it and freed up to do the evaluations - you can just go and watch them.

WB: (continuing talking during the interruption) That means you are freed up, yes.

I have watched some but I was trying to spend 15 or 20 minutes watching each group but sometimes it took longer. Like, the first one took me half an hour at least. But it is okay.

RJ: (interrupting) But it's about that they were talking about that for half an hour.

WB: (continuing to talk) There's a lot of noise and stuff happening. Yes (responding to RJ's interruption).

RJ: ....which is extraordinary (laughter).

WB: But it's difficult to get it all down too.

RJ: I mean in a group of what four or five students.

WB: Four or five, yes (affirming).

RJ: For them to be talking about their work and focussed on that, giving that peer evaluation half an hour is remarkable.

WB: But the rest of the lesson gets so loud too because of all the other kids. And then other kids will yell out and say to that group, 'You be quiet, we can't hear because you are so loud'. And it is just because of the interactions. The dynamics are so loud and the kids all want to be heard. But it is interesting so I am going to do this again when we do the picture books because we haven't even started creating monsters and doing picture books yet.

LM: And the schedule worked? Would you change it all?

WB: Now that I have done this I think probably what I would add to it would be, I would give an outline of the task at the top, so room to write the task and also underneath, more room for writing comments on each of the kids. And to get the kids involved.

RJ: Yes, definitely, for them or to have a discussion about - you are obviously going to give them feedback - so to have a discussion where they can match up what they have written down on how they went with what you said, actually comparing...

WB: I think it is interesting the way the personalities are really, really coming to the fore. Yes, I would've expected Tony to be defensive. He surprised me from the beginning from the year when he was so sort of quiet and accepting of what everybody said. But he is really asserting himself now. He has really come out which is good to see. And he loves group work. Look I was saying to LM the other day that there have been definite spin-offs in *my* [her emphasis] classroom from you doing so much group work and talk the language you are using with them. I can say. 'Okay, everyone just sit with somebody different. Sit with somebody different today so you can have a look at their house plans and each person just can have a couple of minutes to talk about the house plans to get some ideas about before you go off to work on it again'. And they just do it like that.

They are developing that process where that is what they will now do. We have structured it but they will now think this is really fun and this is the way we learn.

RT: It sounds to me that there's a group there that we could video that would be a really good model that we could use.

RJ: Yes.

WB: We might think about that. They would like that anyway. They'd like to perform for a video, wouldn't they?

RJ: Yes, I think they would. Yes. And that would be really quite powerful for other teachers.

WB: Well, that's what I'm thinking about in terms of using with the next team when they get to do some research.

RJ: This HSC Big Event thing yesterday and there was a *lot* [her emphasis] of emphasis on group work in the senior school as an important and powerful assessment tool. Now the Drama people were comfortable with it. I mean certain faculties are really comfortable with it. Other faculties, particularly Maths (laughing), don't do it in the senior school *at all* [her emphasis] and for us to sit down and write a protocol of how you do it would be quite silly. I mean we can actually use some of the stuff across the school that we have learned and changed in the junior years with other faculties.

WB: We *have* [her emphasis] to do this in the Senior years, because the kids - especially in the area of study. They have to get an understanding of the different points of view that come out of one text and how it positions you. So if you have got a whole group of them looking at it, it positions each of them in a different way.

RT: Can we have some sort of team's day about four weeks in because that's when I want my Olympic games project to be done and to have the Olympic games. When will your house be ready?

RJ: My house? (laughing). We've finished all the two dimensional stuff - the floor plans but I thought that this week we would be able to build the 3D - they're only doing one 3D model per group; floor plans are individual. But I am not going to see them because of the Drama. So we're going to have to do the 3D models, so really probably I've got no more than two weeks of work to do with them and after week 3 they will have the technology display. So yes, week 4 would be fantastic.

RT: So a possible team day, late week 4, early week 5.

RJ: It doesn't matter. When are the trials, week 4 or 5? Do you teach year 12? I don't, but it might mean we've got more time. Are you thinking about a half day or a whole day?

RT: I think a whole day. I mean we should do something nice with them as well. By the time they have their picture book launch, they could do something with their house and they hold the Olympic games. Then maybe we can organise lunch for them and have some fun.

RJ: You can come too, LM.

WB: We could get them to write procedure texts and they could create sherbet and all sorts of horrible fantasy food. I asked William and he said 'no'.

VS: We can do invisible ink and that sort of thing; they love it.

WB: Oh, good, okay, maybe they can do some invisible ink for their picture books.

VS: We were going to do that today; I'll leave that until you are ready.

WB: Or even if you're going to do it today say that you've been speaking to me and this is something you can all incorporate into your fantasy work.
.
RT: This is good, this is great (indicating observation schedule).

RJ: Yes, it is great. It really is. I'd like to try something like this. Can I get a copy of that?

WB: Sure, I just ran out. I have to take one of the originals back...

RJ: I can do this on the way down.

RT: I can do it for you because I've got to walk down there anyway.

APPENDIX 4.4

- **Participant Information Statement**

- **Consent form**

APPENDIX 4.5

- **Hamden Hill High School – The Green Paper**

APPENDIX 4.6

- **Hamden Hill High School – Learning Habits**

APPENDIX 4.7

- **Hamden Hill High School – The Purpose of Learning Teams**

APPENDIX 4.8

- **Hamden Hill High School – Our Philosophy**

APPENDIX 5.1

- **Hamden Hill High School – Research issue**

APPENDIX 6.1

- **Hamden Hill High School – Action plan**

REFERENCES

Adelman, C. (1993). Kurt Lewin and the Origins of Action Research. *Educational Action Research*, Vol. 1 No. 1, pp.7-24.

Agar, M. (1986). *Speaking of Ethnography*. Beverley Hills, California: Sage.

Altrichter, H., Posch, P. and Somekh, B. (1993). *Teachers Investigate their Work. An Introduction to the Methods of Action Research*. London: Routledge.

Altrichter, H. (1997). Practitioners, Higher Education and Government Initiatives in the Development of Action Research: The Case of Austria, pp. 30-39. In S. Hollingsworth (Ed.), *International Action Research. A Casebook for Educational Reform*. London and Bristol: Falmer Press.

Altrichter, H. and Elliott, J. (2000). *Images of Educational Change*. Buckingham: Open University Press.

Altrichter, H. and Gstettner, P. (1997). Action Research: A Closed Chapter in the History of German Social Science, pp. 45-78. In R. McTaggart (Ed.), *Participatory Action Research*: *International Contexts and Consequences*. Albany: State University of New York Press.

Anderson, G. and Herr, K. (1999). The New Paradigm Wars: Is there room for rigorous practitioner knowledge in schools and universities? *Educational Researcher,* Vol. 28 No.5, pp. 12–21.

Anderson, G. ,Herr, K. and Nihlen, A. (1994). *Studying Your Own School: An Educator's Guide to Qualitative Practitioner Research*. Thousand Oaks, California: Corwin Press.

Anderson, G., Herr, K. and Nihlen, A. (1996). What does Practitioner Research Look Like? *Teaching and Change,* Vol. 3, No. 2 (Winter 1996), pp. 173–206.

Aronowitz, S. and Giroux, H. (1985). *Education under Siege*. New York: New World Foundation.

Atkinson, E. (2000). In Defence of Ideas, or Why 'What Works' is Not Enough. *British Journal of Sociology of Education,* Vol. 21 No. 3, pp. 317–330.

Atkinson, P. and Hammersley, M. (1998). Ethnography and Participant Observation, pp. 110-136. In N. Denzin and Y. Lincoln (Eds.), *Strategies of Qualitative Inquiry*. Thousand Oaks, California: Sage.

Atweh, B. and Kemmis, S. (1998) PARAPET: from meta-project to network, pp. 3-18. In B. Atweh,, S. Kemmis, and P. Weeks (Eds.), *Action Research in Practice. Partnerships for Social Justice in Education*. London and New York: Routledge.

Baird, J. and Mitchell, I. (1997). *Improving the Quality of Teaching and Learning: An Australian Case Study − The PEEL Project* (3rd ed.). Melbourne: PEEL Publications.

Baird, J. and Northfield, J. (1992). *Learning from the PEEL Experience*. Melbourne: Monash University.

Baldridge, V. and Deal, T. (Eds) (1983) *The Dynamics of Organizational Change in Education*. Berkeley, California: McCutchen.

Barbour, R. and Kitzinger, J. (1999). *Developing Focus Group Research. Politics,Theory and Practice*. London: Sage.

Bascia, N. and Hargreaves, A. (2000). *The Sharp Edge of Educational Change: Teaching, Leading and the Realities of Reform*. London: Routledge Falmer.

Blasé, J. and Anderson, G. (1995) *The Micropolitics of Educational Leadership: From Control to Empowerment*. London: Cassell.

Borko, H. and Putnam, R. (1995) Expanding a Teachers' Knowledge Base: A Cognitive Psychological Perspective on Professional Development, pp. 35-65. In T. Guskey and M. Huberman, (1995). *Professional Development in Education. New Paradigms and Practices*. New York: Teachers College Press.

Brennan, M. and Noffke, S. (1997). Uses of Data in Action Research, pp. 23-43. In T. Carson and D. Sumara (Eds.), *Action Research as a Living Practice*. New York: Peter Lang.

Bryman, A. and Burgess, R. (1999a). *Qualitative Research*. London and New Delhi: Sage.

Bryman, A. and Burgess, R. (1999b). *Methods of Qualitative Research*. New Delhi and London: Sage.

Bryman, A. and Burgess, R. (1999c). *Analysis and Interpretation of Qualitative Data*. London and New Delhi: Sage.

Bryman, A. and Burgess, R. (1999d). *Issues in Qualitative Research.* London and New Delhi: Sage.

Burgess, R. (1985a). *Field Methods in the Study of Education*. London and Philadelphia: Falmer Press.

Burgess, R. (1985b). *Issues in Educational Research: Qualitative Methods*. London and Philadelphia: Falmer Press.

Burgess, R. (1999) Keeping a Research Diary, pp. 256-262. In A. Bryman & R. Burgess (Eds.), *Methods of Qualitative Research*. London, Thousand Oaks and New Delhi: Sage

Burnaford, G. (1996). Supporting Teacher Research: Professional Development and the Reality of Schools, pp. 137-150. In G. Burnaford, J. Fischer and D. Hobson (Eds.), *Teachers Doing Research: Practical Possibilities*. New Jersey: Lawrence Erlbaum Assoc.

Burnaford, G., Fischer, J. and Hobson, D. (1996). *Teachers doing Research: Practical Possibilities*. New Jersey: Lawrence Erlbaum Assoc.

Burns, R. (2000). *Introduction to Research Methods* (4th ed.). Frenchs Forest, NSW: Pearson Education.

Carr, W. (1989). *Quality in Teaching. Arguments for a Reflective Profession*. London: Falmer Press.

Carr, W. (1995). *For Education Towards Critical Educational Inquiry*. Buckingham and Bristol: Open University Press.

Carr, W. and Kemmis, S. (1986). *Becoming Critical: Education, Knowledge and Action Research.* Brighton: Falmer Press.

Carr, W. and Kemmis, S. (1993). Action Research in Education, pp. 235-245. In M. Hammersley (Ed.), *Controversies in Classroom Research*. (2nd ed.). Buckingham: Open University Press.

Carson, T. and Sumara, D. (1997). *Action Research as a Living Practice*. New York: Peter Lang Publishing.

Carspecken, P. (1996). *Critical Ethnography in Educational Research A Theoretical and Practical Guide*. New York: Routledge.

Carter, K. and Halsall, R. (1998). Teacher Research for School Improvement, pp. 71-90. In R. Halsall (Ed.), *Teacher Research and School Improvement. Opening Doors from the Inside*. Buckingham, Philadelphia: Open University Press.

Chambers, E. (2000). Applied Ethnography, pp. 851-869. In N. Denzin and Y. Lincoln (Eds.), *Handbook of Qualitative Research*. Thousand Oaks, California, London and New Delhi: Sage.

Chapman, J. (1996). A New Agenda for a New Society, pp. 27-59. In K. Leithwood, J. Chapman, D., Corson, P. Hallinger and A. Hart (Eds.), *International Handbook of Educational Leadership and Administration*. Part 1. Dordrecht, Boston and London: Kluwer Academic.

Clandinin, J. and Connelly, M. (1995). *Teachers' Professional Knowledge Landscapes*. New York: Teachers' College Press.

Charmaz, K. (2000). Grounded Theory: Objectivist and Constructivist Methods, pp. 509-535. In N. Denzin and Y. Lincoln (Eds.), *Handbook of Qualitative Research*. Thousand Oaks, California, London and New Delhi: Sage.

Coalition of Essential Schools (2002). <http://www.essentialschools.org/pub/ces_docs/about/phil/10cps/print10cps.html

Cochran-Smith, M. (1994). The Power of Teacher Research in Teacher Education, pp. 142-165. In S. Hollingsworth and H. Sockett (Eds.), *Teacher Research and Educational Reform*. Ninety–third Yearbook of the National Society for the Study of Education Part 1. Chicago, Illinois: The University of Chicago Press.

Cochran-Smith, M. and Lytle, S. (1990). Research on Teaching and Teacher Research: The Issues that Divide. *Educational Researcher,* Vol. 19 No. 2, pp. 2–11.

Cochran-Smith, M. and Lytle, S. (1992). Communities for Teacher Research: Fringe or Forefront. *American Journal of Education,* Vol. 100 No. 3, pp. 298–324.

Cochran-Smith, M. and Lytle, S. (1993). *Inside Outside Teacher Research and Knowledge*. Columbia University, New York: Teachers' College Press.

Cochran-Smith, M. and Lytle, S. (1998). Teacher Research: The Question that Persists. *International Journal of Leadership in Education,* Vol. 1 No. 1, pp. 19–36.

Cohen, L. and Manion, L. (1989). *Research Methods in Education* (3rd ed.). London: Routledge.

Connell, R. (1985). *Teachers' Work*. North Sydney: George Allen and Unwin.

Connelly, M. and Clandinin, J. (1994). The Promise of Collaborative Research in the Political Context, pp. 86-102. In S. Hollingsworth and H. Sockett (Eds.), *Teacher Research and Educational Reform*. Chicago, Illinois: The University of Chicago Press.

Corey, S. (1953) *Action Research to Improve School Practices*. New York: Teachers College.

Dadds, M. (1993) Thinking and Being in Teacher Action Research, pp. 229-242.

In J. Elliott (Ed.), *Reconstructing Teacher Education: Teacher Development*. London and Bristol: Falmer Press.

Dadds, M. (1995). *Passionate Enquiry and School Development A Story about Teacher Action Research*. London and Bristol: Falmer Press.

Dadds, M. and Hart, S. (2001). *Doing Practitioner Research Differently*. London and New York: Routledge Falmer.

Darling−Hammond, L., Lieberman, A., McLaughlin, M., Miller, L. (1992). *Professional Development and Restructuring*. New York: National Centre for Restructuring Education, Schools and Teaching, Columbia University.

Darling−Hammond, L. (1992). Accountability for Professional Practice, pp. 19-42. In L. Darling−Hammond, A. Lieberman, M. McLaughlin and L. Miller (Eds.), *Professional Development and Restructuring*. New York: National Centre for Restructuring Education, Schools and Teaching, Columbia University.

Darling−Hammond, L. (1994). Developing Professional Development Schools: Early Lessons, Challenge and Promise, pp. 1-27. In *Professional Development Schools: Schools for a Developing Profession*. New York and London: Teachers College Press.

Darling−Hammond, L. (Ed.). (1994). *Professional Development Schools: Schools for Developing a Profession*. New York and London: Teachers' College Press.

Darling−Hammond, L. and McLaughlin, M. (1995). Policies that Support Professional Development in an Era of Reform. *Phi Delta Kappan,* Vol.76. No. 8, pp. 597−604.

Day, C. (1999). *Developing Teachers. The Challenge of Lifelong Learning*. London and Philadelphia: Falmer Press.

Day, C., Fernandez, A., Hauge, T. and Moller, J. (2000). *The Life and Work of Teachers. International Perspectives in Changing Times*. London: Falmer Press.

Deal, T. (1985). Cultural Change: Opportunity, Silent Killer or Metamorphosis, pp. 292-331. In R. Kirkman, M. Saxton and R. Serpa (Eds.), *Gaining Control of the Corporate Culture*. San Franscisco: Jossey−Bass.

Denzin, N. (1997). *Interpretive Ethnography. Ethnographic Practices for the 21st Century*. Thousand Oaks, California: Sage.

Denzin, N. and Lincoln, Y. (1998a). *Strategies of Qualitative Inquiry*. Thousand Oaks, California: Sage.

Denzin, N. and Lincoln, Y. (1998b). *The Landscape of Qualitative Research. Theories and Issues*. Thousand Oaks, California: Sage.

Denzin, N. and Lincoln, Y. (2000). Introduction: The Discipline and Practice of Qualitative Research, pp. 1-28. In N. Denzin and Y. Lincoln (Eds.), *Handbook of Qualitative Research* (2nd ed.). Thousand Oaks, California, London and New Delhi: Sage.

Denzin, N. and Lincoln, Y. (2000). *Handbook of Qualitative Research* (2nd ed.). Thousand Oaks, California, London and New Delhi: Sage.

Dewey, J. (1938). *Experience and Education*. New York: Collier.

Dietz, M. (1998). *Journals as Frameworks for Change*. Cheltenham, Victoria: Hawker Brownlow Education.

Duignan, P. (1989) Reflective Management: The Key to Quality Leadership, pp. 74-90. In C. Riches and C. Morgan (Eds.), *Human Resource Management in Education*. Buckingham and Bristol: Open University Press.

Egan-Robertson, A. and Bloomer, D. (1998). *Students as Researchers of Culture and Language in their Own Communities*. Cresskill, New Jersey: Hampton Press.

Eisner, E. (1984). Can Educational Research Inform Educational Practice? *Phi Delta Kappan*, Vol. 65. No. 7. pp. 447–452.

Eisner, E. and Peshkin, A. (Eds.). (1990). *Qualitative Inquiry in Education The Continuing Debate*. New York and London: Teachers College Press, Columbia University.

Elliott, J. (1991). *Action Research for Educational Change*. Buckingham: Open University Press.

Elliott, J. (Ed.). (1993). *Reconstructing Teacher Education: Teacher Development*. London and Bristol: Falmer Press.

Elliott, J. (1998). *The Curriculum Experiment. Meeting the Challenge of Social Change*. Buckingham: Open University Press.

Elliott, J. (2000). Towards a Synoptic Vision of Educational Change in Advanced Industrial Societies, pp. 175-220. In H. Altrichter and J. Elliott (Eds.), *Images of Educational Change*. Buckingham and Philadelphia: Open University Press.

Elliott, J. and Adelman, C. (1973). Reflecting where the Action is: The Design of the Ford Teaching Project. *Education for Teaching*. 92, pp. 8-20.

Eraut, M. (1995). Developing Professional Knowledge within a Client–centred Orientation, pp. 227-252. In T. Guskey and M. Huberman, (Eds.), *Professional*

Development in Education. New Paradigms and Practices. New York: Teachers College Press.

Fals−Borda, O. and Rahman, M. (1991). *Action and Knowledge: Breaking the Monopoly with Particpatory Action−Research.* New York: Apex Press.

Fenstermacher, G. (1994). The Knower and the Known: The Nature of Knowledge in Research and Teaching. *Review of Research in Education*, 20, pp. 3−56.

Fetterman, D. (1989). *Ethnography: Step by Step*. Newbury Park, California: Sage.

Finnan, C. and Levin, H. (2000). Changing School Cultures, pp. 87-98. In H. Altrichter and J. Elliott, (Eds.), *Images of Educational Change*. Buckingham and Philadelphia: Open University Press.

Fullan, M. (1990). Staff Development, Innovation, and Institutional Development, pp. 3-25. In B. Joyce (Ed.), *Changing School Culture through Staff Development*. Alexandria, Virginia: Association for Supervision and Curriculum Development.

Fullan, M. (1991). *The New Meaning of Educational Change*. (2nd ed.). London: Cassell.

Fullan, M. (1992). *Successful School Improvement: The Implementation Perspective and Beyond*. Buckingham, Philadelphia: Open University Press.

Fullan, M. (1993). *Change Forces: Probing the Depths of Educational Reform*. London: Falmer Press.

Fullan, M. (1995). The Limits and the Potential of Professional Development, pp. 253-267. In T. Guskey and M. Huberman (Eds.), *Professional Development in Education: New Paradigms and Practices*. New York: Teachers College Press.

Fullan, M. and Hargreaves, A. (1996). (2nd ed.). *What's Worth Fighting for in Your School. Working together for improvement*. Buckingham: Open University Press.

Furlong, J., Barton, L., Miles, S., Whiting, C., and Whitty, G. (2000). *Teacher Education in Transition. Re−forming Professionalism?* Buckingham: Open University Press.

Geertz, C. (1973). *The Interpretation of Cultures*. Hammersmith, London: Fontana Press.

Gitlin, A. (1990). Educative Research, Voice and School Change. *Harvard Educational Review,* Vol. 60 No. 4, pp. 443−466.

Gitlin, A., Bringhurst, K., Burns, M., Cooley, V., Myers, B. and Price, K. (1992). *Teachers' Voices for School Change − An Introduction to Educative Research*. London: Routledge.

Gitlin, A. and Hadden, J. (1997). Educative Research: Acting on Power Relations in the Classroom, pp. 70-99. In S. Hollingsworth (Ed.), *International Action Research: A Casebook for Educational Reform*. London: Falmer Press.

Goetz, J. and LeCompte, M. (1984). *Ethnography and Qualitative Design in Educational Research*. Orlando, Florida: Academic Press.

Goodenough, W. H. (1963). *Cooperation in Change*. New York: Russell Sage Foundation.

Goodenough, W. H. (Ed.) (1964). *Explorations in Cultural Anthropology. Essays in Honour of George Peter Murdock*. New York: McGraw Hill.

Goodenough, W. H. (1970). *Description and Comparison in Cultural Anthropology*. Chicago: Aldine Publishing Company.

Goodenough, W. H. (1981). *Culture, Language and Society*. (2nd ed.). Menlo Park, California: Benjamin Cummings.

Goodlad, J. (1988). School–University Partnerships for Educational Renewal: Rationale and Concepts, pp. 3-31. In K. Sirotnik and J. Goodlad (Eds.), *School–University Partnerships in Action. Concepts, Cases and Concerns*. New York and London: Teachers College Press.

Goodson, I. (1992). Sponsoring the Teachers' Voice: Teachers' Lives and Teacher Development, pp. 110-121. In A. Hargreaves and M. Fullan (Eds.), *Understanding Teacher Development*. London: Cassell.

Goodson, I. (1997). Trendy Theory and Teacher Professionalism, pp. 29-43. In A. Hargreaves and R. Evans (Eds.), *Beyond Educational Reform. Bringing Teachers Back In*. Buckingham: Open University Press.

Goodson, I. and Hargreaves, A. (Eds.) (1996). *Teachers' Professional Lives*. London: Falmer Press.

Grimmett, P. (1995). Developing Voice through Teacher Research. Implications for Educational Policy, pp. 113-129. In J. Smyth (Ed.), *Critical Discourses on Teacher Development*. London: Cassell.

Gronn, P. (1999). *The Making of Educational Leaders*. London: Cassell.

Groundwater-Smith, S. (1996). *Let's not Live Yesterday Tomorrow: A Study of Curriculum and Assessment Reform in the Context of Reculturing.* Ryde, NSW: National Schools Network.

Groundwater-Smith, S. (1998). Putting Teacher Professional Judgement to Work. *Educational Action Research,* Vol. 6. No. 1. pp. 21–28.

Groundwater-Smith, S., Ewing, R. and Dobbins, R. (1998) *Teaching: challenges and dilemmas*. Sydney: Harcourt Brace.

Grundy, S (1987) *Curriculum: Product or Praxis*. London: Falmer Press.

Grundy, S. (1994). Action Research at the School Level. *Educational Action Research,* Vol. 2. No. 1. pp. 23–38.

Grundy, S. (1998). Research Partnerships: Principles and Possibilities, pp. 37-47. In B. Atweh, S. Kemmis and P. Weeks (Eds.), *Action Research in Practice. Partnerships for Social Justice in Education*. London and New York: Routledge.

Grundy, S. (1999). Participatory Educational Research in Australia. The First Wave – 1976–1986, pp. 125-149. In R. McTaggart (Ed.), *Participatory Action Research*. Albany: State University of New York Press.

Guba, E. and Lincoln, Y. (1981*). Effective Evaluation: Improving the Usefulness of Evaluation Results through Responsive and Naturalistic Approaches*. San Francisco: Josssey–Bass.

Guba, E. and Lincoln, Y. (1989). *Fourth Generation Evaluation*. Newbury Park, California: Sage.

Gunter, H. (2001). *Leaders and Leadership in Education*. London: Paul Chapman Publishing.

Guskey, T. (1994). Results–oriented Professional Development: In Search of an Optimal Mix of Effective Practices. *Journal of Staff Development,* Vol. 15. No. 4. pp. 42–50.

Guskey, T. and Huberman, M. (1995). *Professional Development in Education. New Paradigms and Practices*. New York: Teachers College Press.

Halsall, R. (Ed.) (1998). *Teacher Research and School Improvement: Opening Doors from the Inside*. Buckingham, Philadelphia: Open University Press.

Halsall, R., Carter, K., Curley, M. and Perry, K. (1998). School Improvement: The Case for Supported Teacher Research. *Research Papers in Education,* Vol. 13. No. 2, pp. 161–182.

Hammersley, M. (1990). *Reading Ethnographic Research: A Critical Guide*. London and New York: Longman.

Hammersley, M. (1992). *What is Wrong with Ethnography? Methodological Explorations*. London: Routledge.

Hammersley, M. (1993). *Controversies in Classroom Research* (2nd ed.). Buckingham: Open University Press.

Hammersley, M. (1999). *Researching School Experience: Ethnographic Studies of Teaching and Learning*. London: Falmer Press.

Hargreaves, A. (1992). Cultures of Teaching: A Focus for Change, pp. 216-240. In A. Hargreaves and M. Fullan (Eds.), *Understanding Teacher Development*. London: Cassell.

Hargreaves, A. (1993). Individualism and Individuality: Reinterpreting the Teacher Culture, pp. 51-76. In J. Little and M. McLaughlin (Eds.), *Teachers' Work: Individuals, Colleagues and Contexts*. New York: Teachers' College Press.

Hargreaves, A. (1994). *Changing Teachers, Changing Times. Teachers' Work and Culture in the Post Modern Age*. London: Cassell.

Hargreaves, A. (1997). From Reform to Renewal: A New Deal for a New Age, pp. 105-125. In A. Hargreaves and R. Evans (Eds.), *Beyond Educational Reform Bringing Teachers Back In*. Buckingham: Open University Press.

Hargreaves, A., Earl, L. and Ryan, J. (1996). *Schooling for Change*. London: Falmer Press.

Hargreaves, A. and Evans, R. (1997). *Beyond Educational Reform. Bringing Teachers Back In*. Buckingham: Open University Press.

Hargreaves, A. and Evans, R. (1997). Teachers and Educational Reform, pp.1-18. In A. Hargreaves and R. Evans (Eds.), *Beyond Educational Reform: Bringing Teachers Back In*. Buckingham: Open University Press.

Hargreaves, A. and Fullan, M. (Eds.) (1992). *Understanding Teacher Development*. New York: Teachers College Press.

Hargreaves, A. and Goodson, I. (1996). Teachers' Professional Lives: Aspirations and Actualities, pp. 1-27. In I. Goodson and A. Hargreaves (Eds.), *Teachers' Professional Lives*. London: Falmer Press.

Hargreaves, D. (1982). *The Challenge for the Comprehensive School. Culture, Curriculum and Community*. London, Boston and Henley: Routledge.

Harradine, J. (1995). *Collaboration for School Reform Reading Guide*. Ryde, NSW: National Schools Network.

Hatton, N. and Smith, D. (1995). Reflection in Teacher Education: Towards Definition and Implementation. *Teaching and Teacher Education,* Vol. 11. No. 1, pp. 33–49.

Helsby, G. (1999). *Changing Teachers' Work. The 'Reform' of Secondary Schooling*. Buckingham and Philadelphia: Open University Press.

Helsby, G. (2000). Multiple Truths and Contested Realities: The Changing Faces of Teacher Professionalism in England, pp. 93-108. In C. Day, A. Fernandez, T. Hauge and J. Moller (Eds.), *The Life and Work of Teachers: International Perspectives in Changing Times*. London and New York: Falmer Press.

Henry, M. (1993). *School Cultures: Universes of Meaning in Private Schools*. New Jersey: Ablex Publishing.

Hitchcock, G. and Hughes, D. (1995). *Research and the Teacher. A Qualitative Introduction to School–based Research* (2nd ed.). New York: Routledge.

Hollingsworth, S. (1997). *International Action Research. A Casebook for Educational Reform*. London: Falmer Press.

Hollingsworth, S., Dadds, M. and Miller, J. (1997). The Examined Experience of Action Research, pp. 49-59. In S. Hollingsworth (Ed.), *International Action Research. A Casebook for Educational Reform*. London and Bristol: Falmer Press.

Hollingsworth, S. and Sockett, H. (1994). Teacher Research and Educational Reform, pp. 1-20. In S. Hollingsworth and H. Sockett (Eds.), *Teacher Research and Educational Reform*. (Ninety–third Yearbook of the National Society for the Study of Education Part 1). Chicago, Illinois: The University of Chicago Press.

Holly, M. and McLoughlin, C. (Eds) (1989). *Perspectives on Teacher Professional Development*. Philadelphia: Falmer Press.

Hopkins, D. (1989). Teacher Research as a Basis for Staff Development, pp. 111-128. In M. Wideen and I. Andrews (Eds.), *Staff Development for School Improvement: A Focus on the Teachers*. Philadelphia: Falmer Press.

Hopkins, D., Ainscow, M. and West, M. (1994). *School Improvement in an Era of Change*. London: Cassell.

Hoyle, E. and John, P. (1995). *Professional Knowledge and Professional Practice*. London and New York: Cassell.

Huberman, M. (1993). The Model of the Independent Artisan in Teachers' Professional Relations, pp. 11-50. In J. Little and M. McLaughlin (Eds.), *Teachers' Work: Individuals, Colleagues and Contexts*. New York: Teachers' College Press.

Huberman, M. (1996). Moving Mainstream: Taking a Closer Look at Teacher Research. *Language Arts,* Vol. 73. No. 2, pp. 124–140.

Huberman, M., and Guskey, T. (1995). The Diversities of Professional Development,

pp. 269-272. In T. Guskey and M. Huberman (Eds.), *Professional Development in Education. New Paradigms and Practices*. New York: Teachers College Press.

Hursh, D. (1997). It's More than Style: Reflective Teachers as Ethical and Political Practitioners, pp. 101-112. In J. Smyth (Ed.) *Critical Discourses on Teacher Development*. London: Cassell.

Jackson, P. (1968). *Life in Classrooms*. New York: Teachers College Press.

Joyce, B. (1990). *Changing School Culture through Staff Development*. Alexandria, Virginia: Association for Supervision of Curriculum Development.

Joyce, B., Calhoun, E. and Hopkins, D. (1999). *The New Structure of School Improvement. Inquiring Schools and Achieving Students*. Buckingham: Open University Press.

Keesing, R. (1974). Theories of Culture. In B. Siegel, A. Beals and S. Tyler (Eds.) *Annual Review of Anthropology*, pp. 73–97. Palo Alto, California: Annual Reviews.

Kellehear, A. (1993). *The Unobtrusive Researcher: A Guide to methods*. St Leonards, Australia: Allen and Unwin.

Kemmis, S. (1989). Critical Reflection, pp. 73-90. In M. Wideen and I. Andrews (Eds.), *Staff Development for School Improvement: A Focus on the Teacher*. Philadelphia: Falmer Press.

Kemmis, S. and Grundy, S. (1988). Educational Action Research in Australia: The State of the Art (An Overview), pp. 321-335. In S. Kemmis and R. McTaggart (Eds.), *The Action Research Reader*. (3rd ed.). Geelong, Victoria: Deakin University Press.

Kemmis, S. and Grundy, S. (1997). Educational Action Research in Australia: Organization and Practice, pp. 40-48. In S. Hollingsworth (Ed.), *International Action Research. A Casebook for Educational Reform*. London and Bristol: Falmer Press.

Kemmis, S. and McTaggart, R. (1988). *The Action Research Reader* (3rd ed.). Victoria, Australia: Deakin University Press.

Kemmis, S. and Wilkinson, M. (1998). Participatory Action Research and the Study of Practice, pp. 21-36. In B. Atweh, S. Kemmis and P. Weeks (Eds.), *Action Research in Practice. Partnerships for Social Justice in Education*. London and New York: Routledge.

Kerlinger, F. (1973). Foundations of Behavioural Research. (2nd ed.) New York: Holt, Rinehart and Winston.

Kievet, F. and Vandenberghe, R. (Eds.) (1993). *School Culture, School Improvement and Teacher Development.* Leiden University, The Netherlands: DSWO Press.

Kincheloe, J. (1991). *Teachers as Researchers: Qualitative Inquiry as a Path to Empowerment*. London: Falmer Press.

Kincheloe, J. and McLaren, P. (2000). Rethinking Critical Theory and Qualitative Research, pp. 279-313. In N. Denzin and Y. Lincoln (Eds.), *Handbook of Qualitative Research* (2nd ed.) Thousand Oaks, California, London and New Delhi: Sage.

Knapp, M. (1999). Ethnographic Contributions to Evaluation Research: The Experimental Schools Program Evaluation and Some Alternatives, pp. 160-179. In A. Bryman and R. Burgess (Eds.), *Issues in Qualitative Research*. London, Thousand Oaks and New Delhi: Sage.

Krueger, R. (1988). *Focus Groups A Practical Guide for Applied Research*. Thousand Oaks, California: Sage.

Kvale, S. (1996). *InterViews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks, California: Sage.

Ladwig, J., Currie, J. and Chadbourne, R. (1994). *Towards Rethinking Australian Schools. A synthesis of the reported practice of the National Schools Project*. Ryde, NSW: National Schools Network.

Lampert, M. (2000). Knowing Teaching: The Intersection of Research on Teaching and Qualitative Research. *Harvard Educational Review,* Vol. 70 No 1, pp. 86–99.

LeCompte, M. and Preissle, J. (1993). *Ethnography and Qualitative Design in Educational Research* (2nd ed.) San Diego, California: Academic Press.

LeCompte, M. and Schensul, J. (1999). *Analyzing and Interpreting Ethnographic Data*. Walnut Creek, California: Alta Mira Press.

LeCompte, M., Schensul, J., Weeks, M. and Singer, M. (1999). *Researcher Roles and Research Partnerships*. Walnut Creek, California, London, New Delhi: Alta Mira Press.

Leithwood, K., Chapman, J., Corson, D., Hallinger, P. and Hart, A. (Eds.) (1996). *International Handbook of Educational Leadership and Administration.* Dordrecht, Boston, London: Kluwer.

Leithwood, K., Jantzi, D., and Steinbach, R. (1999). *Changing Leadership for Changing Times*. Buckingham: Open University Press.

Lewin, K (1947) Frontiers in group dynamics: II. Channels of group life: social planning and action research. *Human Relations*. Vol. 1 pp. 143-153

Lieberman, A. (1993). The Meaning of Scholarly Activity and the Building of Community. *Equity and Choice,* Vol. 10. No. 1, pp. 4–10.

Lieberman, A. (1995). Practices that Support Teacher Development. Transforming Conceptions of Professional Learning. *Phi Delta Kappan,* Vol. 76, No. 8, pp. 591–596.

Lieberman, A. and McLaughlin, M. (1992). Networks for Educational Change: Powerful and Problematic, pp. 43-55. In L. Darling–Hammond, A. Liebermann, M. McLaughlin and L. Miller (Eds.), *Professional Development and Restructuring*. New York: National, Centre for Restructuring Education, Schools and Teaching, Columbia University.

Lieberman, A. and Miller, L. (1992a). *Teachers their World and their Work. Implications for School Improvement*. Columbia University, New York: Teachers College Press.

Lieberman, A. and Miller, L. (1992b). Teacher Development in Professional Practice Schools. *Teachers College Record,* Vol. 92 No. 1, pp. 105–122.

Lieberman, A. and Miller, L. (1994). Problems and Possibilities of Institutionalizing Teacher Research, pp. 204-220. In S. Hollingsworth and H. Sockett (Eds.), *Teacher Research and Educational Reform* (Ninety–third Yearbook of the National Society for the Study of Education Part 1). Chicago, Illinois: The University of Chicago Press.

Lincoln, Y. and Guba, E. (1985). *Naturalistic Inquiry*. Newbury Park and London: Sage.

Lincoln, Y. and Guba, E. (2000). Paradigmatic Controversies, Contradictions, and Emerging Confluences, pp. 163-188. In N. Denzin and Y. Lincoln (Eds.), *Handbook of Qualitative Research*. Thousand Oaks, California, London and New Delhi: Sage.

Lingard, B. (2001). Some Lessons for Educational Research: Repositioning Research in Education and Education in Research. *The Australian Educational Researcher,* Vol. 28 No. 3, pp. 1–46.

Lingard, B., Ladwig, J. and Luke, A. (1998). School Effects in Postmodern Conditions, pp. 84-100. In R. Slee, G. Weiner and S. Tomlinson (Eds.), *School Effectiveness for Whom? Challenges to the School Effectiveness and School Improvement Movements*. London and Bristol: Falmer Press.

Little, J. and McLaughlin, M. (Eds.) (1993). *Teachers' Work: Individuals, Colleagues and Contexts*. New York: Teachers College Press.

Lofland, J. (1971). *Participant Observation in Analyzing Social Settings*. Belmont, California: Wadsworth Publishing.

Lortie, D. (1975). *Schoolteacher. A Sociological Study*. Chicago and London: The University of Chicago Press.

Louden, W. (1991). *Understanding Teaching. Continuity and Change in Teachers' Knowledge*. New York: Teachers College Press.

Louden, W. (1992). Understanding Reflection through Collaborative Research, pp. 178-215. In A. Hargreaves and M. Fullan (Eds.), *Understanding Teacher Development*. London: Cassell.

Loughran, J. (1999). (Ed.) *Researching Teaching: Methodological Practices for Understanding Pedagogy*. United Kingdom: Falmer Press.

Loughran, J., Mitchell, I. and Mitchell, J. (Eds.) (2002). *Learning from Teacher Research*. Crows Nest, Australia: Allen and Unwin.

Loughran, J. and Northfield, J. (1996). *Opening the Classroom Door. Teacher, Researcher, Learner*. London: Falmer Press.

Lytle, S. (1998). *On Reading Teacher Research*, <http//:hugsel.harvard.edu./ncsall/lytle.htm.

Lytle, S. and Cochran-Smith, M. (1994). Inquiry, Knowledge and Practice, pp. 22-51. In S. Hollingswoth and H. Sockett (Eds.), *Teacher Research and Educational Reform*. Chicago, Illinois: The University of Chicago Press.

Macbeath, J. (1998). *Effective School Leadership Responding to Change*. London, Thousand Oaks, California, New Delhi: Paul Chapman.

Macbeath, J. and Mortimore, P. (Eds.) (2001). *Improving School Effectiveness*. Buckingham and Philadelphia: Open University Press.

Macmillan, R. (2000). Leadership Succession, Cultures of Teaching and Educational Change, pp. 52–71. In N. Bascia and A.Hargreaves (Eds.), *The Sharp Edge of Educational Change*. London: Routledge Falmer.

Maehr, M. and Midgley, C. (1996). *Transforming School Cultures*. Boulder, Colorado: Westview Press.

Marcus, G. (1998). What Comes (Just) After 'Post'? The Case of Ethnography, pp. 383-406. In N. Denzin and Y. Lincoln (Eds.), *The Landscape of Qualitative Research: Theories and Issues*. Thousand Oaks, California, London and New Delhi: Sage.

Marshall, C. and Rossman, G. (1995). *Designing Qualitative Research* (2nd ed.) Thousand Oaks, California: Sage.

McLaren, P. (1986). *Schooling as a Ritual Performance. Towards a Political Economy of Educational Symbols and Gestures*. London, Boston and Henley: Routledge and Kegan Paul.

McLaughlin, M. (1993). What Matters Most in Teachers' Workplace context? pp. 70-103. In J. Little and M. McLaughlin (Eds.) *Teachers' Work: Individuals, Colleagues and Contexts*. New York: Teachers College Press.

McLaughlin, M. (1997). Rebuilding Teacher Professionalism in the United States, pp. 77-93. In A. Hargreaves and R. Evans (Eds.), *Beyond Educational Reform Bringing Teachers Back In*. Buckingham: Open University Press.

McLaughlin, M. and Marsh, D. (1979). Staff Development and School Change, pp. 69-94. In A. Lieberman and L. Miller (Eds.), *Staff Development: New Demands, New Realities, New Perspectives*. New York: Teachers' College Press.

McLaughlin, M. and Talbert, J. (2001). *Professional Communities and the Work of High School Teaching*. Chicago and London: The University of Chicago Press.

McTaggart, R. (1999). *Participatory Action Research International Contexts and Consequences*. Albany: State University of New York.

McTaggart, R. (1999). Guiding Principles for Participatory Action Research, pp. 25-43. In R. McTaggart (Ed.), *Participatory Action Research International Contexts and Consequences*. Albany: State University of New York Press.

McTaggart, R. (Ed.) (1999). *Participatory Action Research*. Albany: State University of New York Press.

Merriam, S. (1998). *Qualitative Research and Case Study Application in Education*. San Francisco: Jossey–Bass.

Merritt, L. and Campbell, A. (1999). School and University Partnerships: The development and consolidation of a process of collaboration. *Change: Transformations in Education,* Vol. 2. No. 1, pp. 42-52.

Merritt, L., Reid, D., Smith, D. and Simons, J. (2001). Using Information Technology to Promote Scholarly Inquiry in Teacher Education Programs, and the Impact of Web Based Discussion on Student Learning, pp. 12-13. *Synergy. A Forum for the Discussion of Teaching and Learning* (16). University of Sydney.

Metz, M. (2000). Sociology and Qualitative Methodologies in Educational Research. *Harvard Educational Review,* Vol. 70 No 1 pp. 37–50.

Middlewood, D., Coleman, M. and Lumby, J. (1999). *Practitioner Research in Education Making a Difference*. London: Paul Chapman Publishing.
.

Miles, M. and Huberman, M. (1994). *An Expanded Sourcebook: Qualitative Data Analysis* (2nd ed.) California: Sage.

Miller, S., Nelson, M., and Moore, M. (1998). Caught in the Paradigm Gap: Qualitative Researchers. Lived Experience and the Politics of Epistemology. *American Educational Research Journal,* Vol. 35. No. 3., pp. 377–416.

Mitchell, I. and Mitchell, J. (Eds.) (1997*). Stories of Reflective Teaching: A Book of PEEL Cases.* Clayton, Victoria: Peel Publishing.

Mitchell, I. (1999) Bridging the Gulf between Research and Practice, pp. 127-147. In J. Loughran (Ed.), *Researching Teaching: Methodologies and Practices for Understanding Pedagogy*. London and Philadelphia: Falmer Press.

Morse, J. (1998). Designing Funded Qualitative Research, pp. 56-85. In N. Denzin and Y. Lincoln (Eds.), *Strategies of Qualitative Inquiry*. Thousand Oaks, California: Sage.

Murgatroyd, S. and Gray, H. (1989). Leadership and the Effective School, pp. 91–99. In C. Riches, C. Morgan (Eds.), *Human Resource Management in Education*. Buckingham and Bristol: Open University Press.

National Board of Employment, Education and Training. (1994). *Workplace Learning in the Professional Development of Teachers*. Canberra: Australian Government Printing Service.

Neuman, W. (1991). *Social Research Methods*. Boston: Allyn and Bacon.

Nias, J. (1989). *Primary Teachers Talking: a Study of Teaching as Work*. London and New York: Routledge.

Nias, J., Southworth, G. and Yeomans, R. (1989). *Staff Relationships in the Primary School: A Study of School Culture*. London: Cassell.

Noffke, S. (1996). Professional, Personal and Political Dimensions in Action Research. *Review of Research in Education,* 22, pp. 305–343.

Noffke, S. (1997). Themes and Tensions in US Action Research: Towards Historical Analysis, pp. 2-16. In S. Hollingsworth (Ed.), *International Action Research. A Casebook for Educational Reform*. London and Bristol: Falmer Press.

NSW, Department of Education and Training (1999). *Changing School Cultures. On School Leaders Enhancing School Cultures*.

NSW, Department of Education and Training (1999). *Community and Culture, School Leaders Enhancing School Cultures.*

Patton, M. (1990). *Qualitative Evaluation and Research Methods* (2nd ed.) California: Sage.

Peters, J., Dobbins, R. and Johnson, B. (1996). *Restructuring and Organizational Culture*. Ryde, NSW: National Schools Network.

Pollard, A. (2002*) Reflective Teaching Effective and Evidence−informed Professional Practice*. London and New York: Continuum.

Reason, P. (1998). Three Approaches to Participative Inquiry, pp. 261-291. In N. Denzin and Y. Lincoln (Eds.), *Strategies of Qualitative Inquiry*. Thousand Oaks, California: Sage.

Reason, P. and Bradbury, H. (2001). *Handbook of Action Research Participative Inquiry and Practice*. London, Thousand Oaks and New Delhi: Sage.

Reynolds, D., Bollen, R., Creemers, B., Hopkins, D., Stoll, L. and Lagerweij, N. (1996). *Making Good Schools Linking School Effectiveness and School Improvement*. London: Routledge.

Rhine, S. (1998). The Role of Research and Teachers' Knowledge Base in Professional Development. *Educational Researcher,* Vol. 27, No.5, pp. 27-31.

Richardson, V. (1994a). Teacher Inquiry as Professional Staff Development, pp. 186-203. In S. Hollingsworth and H. Sockett (Eds.), *Teacher Research and Educational Reform. Ninety−third Yearbook of the National Society for the Study of Education Part 1*. Chicago, Illinois: The University of Chicago Press.

Richardson, V. (1994b). Conducting Research in Practice. *Educational Researcher*, Vol. 23 No. 5, pp. 5−10.

Riley, K. and Seashore Louis, K. (2000). *Leadership for Change and School Reform: International Perspectives*. London and New York: Routledge Falmer.

Robinson, H. (1994). *The Ethnography of Empowerment. The Transformative Power of Classroom Interaction*. Bristol, P.A. and London: Falmer Press.

Robinson, S. and Darling−Hammond, L. (1994). Change for Collaboration and Collaboration for Change: Transforming Teaching through School−University Partnerships, pp. 203-219. In L. Darling−Hammond (Ed.), *Professional Development Schools for a Developing Profession*. Columbia University: Teachers College Press.

Rudduck, J. and McIntyre, D. (1998). *Challenges for Educational Research*. London: Paul Chapman Publishing.

Sachs, J. (1997a). Revisioning Teacher Education. *Unicorn,* Vol. 23. No. 2, pp. 46–56.

Sachs, J. (1997b). *The Challenge of School–University Partnerships. Walking the Tightrope between Theory and Practice.* Paper presented at the Keynote address for ACSA Biennial Conference.

Sachs, J. (1999). Using Teacher Research as a Basis for Professional Renewal. *Journal of Inservice Education,* Vol. 25 No. 1, pp. 39–53.

Sachs, J. (2000). Rethinking the Practice of Teacher Professionalism, pp. 76-89. In C. Day, A. Fernandez, T. Hauge and J. Moller (Eds.), *The Life and Work of Teachers. International Perspectives in Changing Times*. London: Falmer Press.

Sachs, J. (2003). *The Activist Teaching Profession*. Buckingham and Philadelphia: Open University Press.

Sachs, J. and Groundwater–Smith, S. (1996). *Celebrating Teacher Professional Knowledge: School Reform and Teachers' Professional Judgement.* Paper presented at the Re–Engineering Education for Change Conference. UNESCO and Asia Pacific Centre of Educational Innovation and Development, Bangkok.

Sanger, J. (1996). *The Compleat Observer? A field research guide to observation*. London and Bristol: Falmer Press.

Sarason, S. (1990). *The Predictable Failure of Educational Reform: Can we change course before it's too late*. San Franscisco: Jossey Bass Publishers.

Sarason, S. (1995). *School Change: the Personal Development of a Point of View*. New York: Teachers College Press.

Schein, E. (1986). Are you Corporate Cultured? *Personnel Journal*. November 1986, pp. 83-96.

Schein, E. (1993). On Dialogue, Culture and Organisational Learning. *Organisational Dynamics,* Autumn Vol. 22 No. 2, pp. 40–51.

Schein, E. (1996). Culture: The Missing Concept in Organisation Studies. *Administrative Science Quarterly,* Cornell University. 41, pp. 229–240.

Schensul, J., LeCompte, M., Nastasi, B. and Borgatti, S. (1999). *Enhanced Ethnographic Methods*. Walnut Creek, California: Alta Mira Press.

Schensul, S., Schensul, J. and LeCompte, M. (1999). *Essential Ethnographic Methods*. Walnut Creek, California: Alta Mira Press.

Schlechty, P. and Whitford, B. (1988). Shared Problems and Shared Vision: Organic Collaboration, pp. 191-204. In K. Sirotnik and J. Goodlad (Eds.), *School–University Partnerships in Action. Concepts,Cases and Concerns*. New York and London: Teachers College Press.

Schon, D. (1983). *The Reflective practitioner: How Professionals Think in Action*. New York: Basic Books.

Schon, D. (1987). *Educating the Reflective Practitioner*. San Francisco: Jossey Bass.

Schwahn, C. and Spady, W. (1998). *Total Leaders. Applying the Best Future–focused Change Strategies to Education*. Arlington, VA: American Association of School Administrators.

Scott, D. and Usher, R. (1999). *Researching Education. Data Methods and Theory in Educational Enquiry*. London: Cassell.

Seller, W. and Hannay, L. (2000). Inside–Outside Change Facilitation: Structural and Cultural Considerations, pp. 180-201. In N. Bascia and A. Hargreaves (Eds.), *The Sharp Edge of Educational.Change*. London: Routledge Falmer.

Senge, P. (1990). *The Fifth Discipline. The Art and Practice of the Learning Organization*. Milsons Point, Australia: Random House.

Sergiovanni, T. (1994). *Building Community in Schools*. San Francisco: Jossey–Bass.

Sergiovanni, T. (1996). *Leadership for the Schoolhouse. How is it Different? Why is it Important?* San Francisco: Jossey–Bass.

Sergiovanni, T. (1998). Leadership as Pedagogy, Capital Development and School Effectiveness. *International Journal of Leadership in Education,* Vol. 1 No. 1, pp. 37–46.

Sergiovanni, T. (2000). *Rethinking Leadership*. Australia: Hawker Brownlow Education.

Shumsky, A. (1958). *The Action Research Way of learning: An Approach to In–service Education*. New York: Teachers College.

Sirotnik, K. and Goodlad, J. (1988). *School–University Partnerships in Action. Concepts, Cases and Concerns*. New York and London: Teachers College Press.

Slee, R., Weiner, G. and Tomlinson, S. (1998). *School Effectiveness for Whom? Challenges to the School Effectiveness and School Improvement Movements*. London and Bristol: Falmer Press.

Smyth, J. (1989). Administrative Leadership in the Intellectual Transformation of Schooling, pp. 219-235. In M. Holly and C. McLoughlin (Eds.), *Perspectives on Teacher Professional Development*. Philadelphia: Falmer Press.

Smyth, J. (1995). *Critical Discourses on Teacher Development*. London: Cassell.

Smyth, J., Dow, A., Hattam, R., Reid, A. and Shacklock, G. (2000). *Teachers' Work in a Globalizing Economy*. London: Falmer Press.

Sockett, H. (1993). *The Moral Base for Teacher Professionalism*. Columbia University, New York: Teachers College Press.

Soltis, J. (1994). The New Teacher, pp. 245-260. In S. Hollingsworth and H. Sockett (Eds.), *Teacher Research and Educational Reform*. Chicago, Illinois: University of Chicago Press.

Somekh, B. (1994). Inhabiting each other's castles: towards knowledge and mutual growth through collaboration. *Educational Action Research*. Vol. 2 No. 3, pp. 37-82.

Somekh, B. (2000). Changing Conceptions of Action Research, pp. 111-122. In H. Altrichter and J. Elliott (Eds.), *Images of Educational Change*. Buckingham: Open University Press.

Spindler, G. and Hammond, L. (2000). The Use of Anthropological Methods in Educational Research: Two Perspectives. *Harvard Educational Review*, Vol. 10 No. 1, pp. 39–48.

Spradley, J. (1979). *The Ethnographic Interview*. New York: Holt, Rinehart and Winston.

Spradley, J. (1980). *Participant Observation*. New York: Holt, Rinehart and Winston.

Staessens, K. (1993). The Professional Culture at 'The Cornflower', pp. 7-38. In F. Kievet and R. Vandenberghe (Eds.), *School Culture, School Improvement and Teacher Development*. The Netherlands: DSWO Press, Leiden University.

Stake, R. (1987). An Evolutionary View of Programming Staff Development, pp. 55-69. In M. Wideen and I. Andrews (Eds.), *Staff Development for School Improvement. A Focus on the Teacher*. Philadelphia: Falmer Press.

Stake, R. (1998). Case Studies, pp. 86-109. In N. Denzin and Y. Lincoln (Eds.), *Strategies of Qualitative Research*. Thousand Oaks, London and New Delhi: Sage.

Stenhouse, L. (1975). *An Introduction to Curriculum Research and Development*. London: Heinemann.

Stoll, L. and Fink, D. (1996). *Changing our Schools Linking School Effectiveness and School Improvement*. Buckingham and Bristol: Open University Press.

Strauss, A. and Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory and Procedures and Techniques*. Newbury Park: Sage.

Strauss, A. and Corbin, J. (1998). *Basics of Qualitative Research* (2nd ed.) Thousand Oaks, London and New Delhi: Sage.

Strickland, D. (1988). The Teacher as Researcher. Towards the Extended Professional. *Language Arts,* Vol. 65. No. *8,* pp. 754–764.

Stronach, I. and MacLure, M. (1997). *Educational Research Undone. The Postmodern Embrace*. Buckingham and Philadelphia: Open University Press.

Taba, H. (1957). Problem Identification. *Research for Curriculum Improvement*, pp. 42–71.

Tabachnich, R. and Zeichner, K. (1991). *Issues and Practices in Inquiry Oriented Teacher Education*. London and Bristol: Falmer Press.

Tafel, L. and Fischer, J. (1996). Lives of Inquiry, Communities of Learning and Caring, pp. 125-136. In G. Burnaford, J. Fischer and D. Hobson (Eds.), *Teachers Doing Research: Practical Possibilities*. New Jersey: Lawrence Erlbaum.

Taft, R. (1988). *Ethnographic Research Methods*. New York: Pergamon Press.

Tedlock, B. (1991). From Participant Observation to the Observation of Participation: The Emergence of Narrative Ethnography. *Journal of Anthropological Research, 47*, pp. 69–94.

Tedlock, B. (2000). Ethnography and Ethnographic Representation, pp. 455-486. In N. Denzin and Y. Lincoln (Eds.), *Handbook of Qualitative Research* (2nd ed.) Thousand Oaks, California, London and New Delhi: Sage.

Tesch, R. (1990). *Qualitative Research: Analysis and Software Tools*. New York: Falmer Press.

Tolich, M. and Davidson, C. (1999). *Starting Fieldwork. An Introduction to Qualitative Research in New Zealand*. Auckland, New Zealand: Oxford University Press.

Tom, A. (1984). *Teaching as a Moral Craft*. New York: Longman.

Tripp, D. (1996). *The SCOPE program − Self Directed Collegial On−going Personal Professional Effectiveness*. Perth, Western Australia: Education Department of Western Australia.

Ulichny, P. and Schoener, W. (1993). Teacher−Researcher Collaboration from Two Perspectives. *Harvard Educational Review*, Vol. 66 No. 3, pp. 496−524.

Walker, M. (1997). Transgressing Boundaries: Everyday/Academic Discourses, pp. 136-146. In S. Hollingsworth (Ed.), *International Action Research. A Casebook for Educational Reform*. London and Bristol: Falmer Press.

Weiler, K. and Mitchell, C. (1992). *What Schools Can Do. Critical Pedagogy and Practice*. Albany: State University of New York Press.

Wellington, J. (2000). *Educational Research: Contemporary Issues and Practical Approaches*. London: Continuum.

Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.

West, M. ,Jackson, D., Harris, A.,and Hopkins, D. (2000). Learning through leadership, Leadership through Learning: Leadership for Sustained School Improvement, pp. 30-49. In K. Riley and K. Seashore Louis (Eds.), *Leadership for Change and School Reform: International Perspectives*. London: Routledge Falmer.

Whitty, G., Power, S. and Halpin, D. (1998) *Devolution and Choice in Education. The School, the State and the Market*. Melbourne, Victoria: ACER Press.

Wideen, M. (1989). Perspectives on Staff Development, pp. 1-15. In M. Wideen and I. Andrews (Eds.), *Staff Development for School Improvement: A Focus on the Teachers*. Philadelphia: Falmer Press.

Wilkinson, S. (1999). How Useful are Focus Groups in Feminist Research, pp. 64-78. In R. Barbour and J. Kitzinger (Eds.), *Developing Focus Group Research: Politics, Theory and Practice*. London: Sage.

Woods, P. (1986). *Inside Schools. Ethnography in Educational Research*. London and New York: Routledge and Kegan Paul.

Woods, P. (1996). *Researching the Art of Teaching. Ethnography for Educational Use*. London: Routledge.

Woolcott, H. (1990). *Writing up Qualitative Research*. Newbury Park, California: Sage.

Yeatman, A. and Sachs, J. (1995). *Making the Links. A Formative Evaluation of the First Year of the Innovative Links Project between Universities and Schools for Teacher*

Professional Development. Perth, Western Australia: School of Education, Murdoch University.

Yukl, G. (1994). *Leadership in Organizations*. London: Prentice–Hall.

Zeichner, K. and Tabachnick, R. (2001). Reflections on Reflective Teaching, pp. 72-87. In J. Soler, A. Craft and H. Burgess (Eds.), *Teacher Development: Exploring our own Practice*. London, Thousand Oaks and New Delhi: Sage.