THE PERSPECTIVES OF TEACHERS IN CATHOLIC SCHOOLS ON HOW TO DEVELOP SUSTAINABLE LEARNING COMMUNITIES

by

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ABSTRACT

The move from an industrial society to a knowledge society has given rise to an increased awareness of the importance of learning, the knowledge and understanding that people gain through the learning process and the learning environment in which that learning occurs. The nature of how people learn, and the context in which learning occurs, have changed significantly in recent years, yet the learning environment of schools has changed very little which suggests that it needs to reflect current knowledge about learning. There is a recognition that learning does not occur in isolation, but that individuals are part of a community of learners, and that learning with any community is based on a set of values that gives meaning to the learning and can lead to the development of sustainable learning communities. All of this, however, is dependent on the understanding of key figures in the learning process which are the teachers; it is teachers who have the ability to change the way in which learning occurs in schools (Sergiovanni, 1996).

The purpose of this study is to gain an understanding of teachers' perspectives on the learning environment and how that learning environment can be organised to enhance the learning process. The context for this study is the Catholic Education System in Western Australia; specifically, two secondary colleges that operate within this system. Catholic schools have been selected because they have a clearly defined set of values, a common culture, and a focus on building community which form the basis on which the learning environment is established.

It was the nature of the study that determined the adoption of a qualitative research methodology, and suggested an interpretive theoretical approach to the research question concerning teachers' perspectives on their learning environment. A grounded theory
approach was used to gather and analyse data, which is consistent with the interpretivist methodology and use of a case study approach (Bromley, 1986; Foreman, 1948). Two case studies were developed through the use of semi-structured, focus group interviews with teachers from each school, and follow-up individual interviews were conducted to support this data where appropriate. In the analysis of data collected, this material was compared and contrasted between cases and with the relevant literature.

The research findings are presented as two separate case studies, and after further analysis, as a set of five propositions concerning what teachers considered to be the most important aspects of the learning environment. These propositions are: a common set of values, uniformly and consistently modelled for students across the total learning environment; rapport, the development of good reciprocal student-teacher relationships based on trust; the development of an environment where students are intrinsically motivated to learn; a need for greater flexibility and diversity in the provision of learning environments so that they more closely reflect the needs of teachers and learners; and the learning environment needs to reflect the broader (parental and societal) values of citizenship and life-long learning, and to promote the development of relationships that build community.

It is recognised that the research findings are based on two case studies and therefore do not have generalisability across schools. However, these findings do have implications for the theoretical literature in the areas of the learning revolution, theories of learning, the learning process, the learning environment, and learning communities. They also have relevance for future research in the area of student-centred learning, and outcomes-based learning, as well as for determining whether values and relationships, key concepts in the findings of this study, are considered important in other contexts, and the
effect this may have on the development of sustainable learning communities. The research findings have significant implications for future practice with regard to the move toward a student-centred and outcomes-based learning environment associated with the implementation of the Curriculum Framework. This is especially significant for Catholic schools, where an increased focus on values and building trusting relationships are seen as important aspects of developing sustainable learning communities.
DECLARATION

I certify that this dissertation does not incorporate without acknowledgement any material previously submitted for a degree of diploma in any university. I also certify that to the best of my knowledge this dissertation does not contain any material previously written or published by another person without due reference being made to this fact in the text.

Susan Rosemary Baker
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CHAPTER ONE

INTRODUCTION

Introduction

The aim of the study reported in this dissertation is to gain an understanding of teachers' perspectives on the learning environment and how the learning environment can be organised to enhance the learning process. The basic assumption underlying this study is that current learning environments are not necessarily the best ones to promote learning. Since it is teachers in schools who are the key figures responsible for creating learning environments (Sergiovanni, 1996), it is necessary, initially, to elicit teachers' perspectives on their current learning environment, and then to consider what teachers believe would be the changes necessary to improve that environment in order to bring about more effective learning. The premise on which this study is founded is that the learner is not isolated, but is part of a community, and that this community has its base in a set of firmly established values. It is these values that give meaning to the learning and give rise to the sustainability of the learning community. This research will make a contribution to knowledge through a qualitative study of teachers' perspectives on the learning environment within the Catholic Education System in Western Australia.

The central concern of education is the pursuit of learning, a key aspect of which is providing the best environment in which that learning can occur. The learning environment of most schools has changed very little for many years and yet the research on how people learn has advanced greatly, which suggests that learning environments should change to reflect our current knowledge of the learning process.
The nature of the educational process and the context in which this process occurs have changed significantly in recent years. A number of factors have impacted on the teaching and learning process in schools and the ways in which the curriculum is delivered: the focus on the learner and learner-centredness with the move to more collaborative and cooperative classroom strategies; the change in the nature of knowledge and the amount of information that is available; the availability of a range of technologies that enable easy access to information; and a greater understanding of how the brain functions with regard to learning, learning styles and the nature of the learning process. All of these factors impinge on the learning environment.

Not only is the educational process changing but the society in which that process occurs is also changing. The current emphasis on life-long learning presupposes that schools are equipping students for an ongoing process of learning throughout life (OECD, Press Release Paris, 17 January 1996). The range of options available to students as they leave school has increased and the means by which they access the workforce or further education has diversified (OECD, Jobs Study, 1994). There has also been an increase in the knowledge, skills and processes that the world demands of its workforce. The changing nature of society is placing different demands on education (The Nordic Council of Ministers, 1995; Chapman and Aspin, 1997). The increase in levels of unemployment together with the increase in non-work time place an onus on education to prepare young people for the use of this discretionary time. This change in the structure of the workforce affects the aims of education. Education in schools, it is argued, should not be singularly directed at preparation for the workforce, education is concerned with the process of learning, not training (Chapman and Aspin, 1997; Mackay, 1992; Smethurst, 1995). Education is now related to a world based on the processing of information, it has moved
beyond the industrial era through the post-industrial society to the knowledge economy and learning society, where people have to deal with increasing complexities of information and communication.

These changes would suggest that the learning environment provided by schools would also have changed, but in many instances this is not the case. Evidence from secondary education suggests that students are becoming increasingly disengaged and alienated by the learning process and this will have disastrous effects on life-long learning and the development of a knowledge society. Whilst educators have embraced change to varying degrees, there has been little evidence to suggest large scale changes to the classroom environment and school organisation. It is the intention of this research to develop an understanding of teachers' perspectives on the learning environment in order to focus on how schools can best be organised to maximise the learning process and to develop a sustainable learning community.

The people who can effect change in schools are teachers. They represent a "small group of thoughtful and committed citizens" (Sergiovanni, 1996. p.173) who have the ability to change the way in which learning occurs in schools. If this change is to occur then we need to understand how teachers view the learning environments currently provided for students, and how they feel these should change.

Caine (1996) states that there is a new dynamism of life that is emerging as the world moves through the 21st century. This is borne of a new view of life given to us by physics and biology, the prolific use of technology and a new understanding of ourselves and our world view. Stability and controlled change is being replaced by disequilibrium and a turbulent world of extraordinary change where outcomes are often unpredictable.
This disequilibrium in the new sciences is called ‘the edge of chaos’. If we are to influence this change it is necessary for us to embrace it and internalise it; “The key to successfully transforming education (and learning) lies in transforming ourselves” (Caine, 1996 p.22). Educators need to be active participants in the learning process and be clear about how people learn so that the best learning environments can be provided to learners.

One problem that education faces is that it continues to go through so many phases with 'strategies that work', to the extent that nothing really changes and this is because the mental models of teaching and learning are not changing. Senge (1990) states that “mental models are deeply engrained assumptions, generalisations, or even pictures or images that influence how we understand the world and how we take action” (p.8). The study reported in this dissertation aims to arrive at an understanding of what teachers believe to be the best model of teaching and learning as they construct learning environments that enable students to engage in the learning.

This research focuses on creating a learning environment for students that provides them with the opportunity of maximising and valuing their learning. It focuses on the recognition of the learner as a person who is sensitive to and cognisant of her/his role in the world, who has an understanding of what it means to be human, and who embodies the values and beliefs that will help in developing a sustainable world. The learner is also a member of a broader community of learners, is a life long learner and has an ability to develop their role as part of a learning community.

This chapter provides an introduction to the dissertation. First, it provides a broad outline of the context that has given rise to the study, that is the beliefs and values that underpin the learning environment of schools in the Catholic Education System of Western
Australia. Second, it provides a theoretical framework to the study by outlining the contextual literature that has suggested the need for this study, sub-dividing the literature under the following headings: learning revolution; theories of learning; learning process; learning environments; and learning communities. Finally, it presents the research question that is central to the study and the essential features of the methodology of the study.

The Context for the Study

The study reported in this dissertation focuses on the understandings that teachers have of the learning environment and the ways in which teachers believe that environment can be configured so that it provides the best environment for the learning to occur. The context for this study is the Catholic Education System in Western Australia, and specifically, two secondary colleges that operate within this system. Schools within this system have been selected because the Catholic Education System has a set of clearly defined values and a clearly stated mission that provide a common basis on which the learning environment is established, and a framework within which the learning can occur. It is also a system that values a sense of community; where family, church and school work closely together to develop the Catholic education of persons.

Catholic education began in Western Australia in 1843 when Fr John Brady established the first Catholic school for 30 students in the Swan River Colony. He returned to the colony in 1846 with 6 Sisters of Mercy who made provision for a second Catholic school in the colony. From these early beginnings the provision of Catholic schools grew from 1 school with 30 students in 1843, to 156 schools with 64,407 students by 2000 (Handbook for Catholic Schools, 2001). Altogether 35 Religious Congregations have
arrived in Western Australia over this time to contribute to Catholic schooling in this state. More recently the prevalence of these Religious Congregations has diminished, due largely to their declining numbers, and responsibility for these schools has passed to the Bishop of each diocese, and their management to the Catholic Education Commission. Of the two schools comprising the case studies reported later in this dissertation, one is a diocesan school responsible to the Bishop, while the other is an order-run school responsible to the Sisters of Mercy.

The increased community responsibility for Catholic schools is reflected in the growing philosophy grounded in the idea of the school as a community, with concern for the care of all its members. The Catholic School is also seen as only one aspect of the Catholic Education community where the Parish and the family are seen as two other significant and contributing aspects (Ryan, Brennan, and Willmett, 1996). The Mandate Letter (2001) states that: "Parishes play a vital role in supporting parents as the first educators of their children ... Catholic schools are established to help parishes with their supportive responsibilities towards parents" (p.23). This has relevance for the two case studies reported later in this dissertation, where there are strong community links between the school and the parish in one case study, and in the other, which has a residential component to its student population, where there is a physical separation between the school and the parents and parish of those residential students.

Flynn (1993) states that schools "are places where people find meaning through relationships" (p.7). The Catholic mission is people centred and Catholic schools are intended to be "meeting places for those who wish to express Christian values in education" (The Catholic School: 1977. Art 49). They draw on the Gospel teachings as the basis for their value system. Flynn (1979) states that faith is at the heart of Catholic schools, and
that they include within their concept of education the vital place of Christian faith in the lives of persons. He states that young persons develop an image of God through the influence of their home and their experience of a Catholic school, where the genuine interest that teachers have in them helps them to think of God as a kind and gracious loving Father to whom they want to commit in faith. Catholic education may be described as education based on the life of Jesus and the Christian faith tradition, through its symbols, sacraments and beliefs, within the heritage and life of the Catholic community (Flynn, 1979).

The term Catholic implies wholeness or universality; and faith is the discovery of wholeness (Flynn, 1979). The Catholic school is focussed on the development of the whole person. Its mission embraces the physical, intellectual, vocational, social, emotional, aesthetic, moral and spiritual dimensions of the young person. The Catholic School (1977) states that:

*The specific mission of the Catholic School is the critical, systematic transmission of culture in the light of faith ... and the integration of culture with faith and of faith with living (Art 49).*

It is this integration of faith and life which is central in the development of the culture of Catholic schools, and it is the learning environment of a Catholic school that can nurture this integration. These two aspects of Catholic education, the transformation of the whole person and the integration of faith and life, reflect the Gospel imperative of Jesus’ teaching:

*Love the Lord your God with all your heart, with all your soul, with all your strength, and with all your mind; and love your neighbour as you love yourself ... do this and you will live (Luke 10:27).*
Flynn (1993) states that this understanding of Catholic education underlies the mission statements of Catholic schools which are based on the assumptions that the Catholic school is founded on the person of Jesus Christ and is enlivened by Gospel values; highlights the relevance of faith to life and contemporary culture; is linked to the community of believers and shares in the evangelising mission of the Church; and is committed to the development of the whole person.

The culture of a school "describes the way things are" (Flynn, 1993). Flynn states that it is the tone, feel or character of a school, the whole way of life of the organisation comprising the shared values and behaviours, which bond the community together in its search for meaning. He defines culture in terms of four dimensions: the core beliefs and values of the school; the expressive symbols of the school; the myths and traditions of the school; and the rituals or patterns of relationships in the school. These are often identified through the ways in which the school communicates with its broader community.

In the case of the study reported in this dissertation, the two schools that comprise the case studies have a number of elements common to their mission. They aim to foster the development of the whole person, and to promote the holistic and optimal development of each person. They focus on the need to build community, and specifically to live out the Gospel values through the Catholic faith. They aim to promote the ideals of justice, service, compassion and a concern for others, at the same time as encouraging a critical appreciation and Christian leadership role in society based on a commitment to human dignity and peace. It is these ideals that inform the learning environment of the Catholic school and provide a context for the learning process.
In the case of the study reported in this dissertation the context of the Catholic school provides a specific and common culture and set of values that enable the researcher to arrive at an understanding of teachers' views of learning and the type of learning environment that needs to be provided to enhance the learning process in students. It provides a common understanding of what the best learning environment should be if the learning is to be maximised.

**Theoretical Framework**

The study reported in this dissertation is concerned with learning, the learning process and the environment in which that learning occurs. Therefore, it focuses on teachers and their perspectives on learning and how they might improve this process by providing a learning environment that will enhance students' learning. The contextual literature that informs the theoretical framework of the study is based on five main areas. First, the learning revolution explores the historical background that has led to a change in thinking about the type of environment needed for learning as society moves from the industrial to the information age. The aim of the study is to arrive at an understanding of the extent to which teachers perceive that the learning environment meets the needs of students entering the information age. Second, theories of learning indicate that there has been a paradigm shift that has occurred to take learning from an inputs to an outcomes focus, that is from a teacher-directed to a learner-centred environment. The study aims to investigate the extent to which teachers see this as a significant move in improving the learning for students. Third, the learning process reviews the current theories about how people learn. The question that underpins this research is to find out the significance that
teachers place on these theories in their provision of an improved learning environment. Fourth, the learning environment views the elements associated with the context in which learning takes place and how this might change if the needs of the learner are considered to be of paramount importance. Finally, the learning community considers the ways in which society has changed and the need to develop relationships based on shared moral values. Regarding the case studies conducted in the two Catholic schools reported here, it is interesting to note the significance placed on values and relationships in the provision of the best learning environment. The study is interested in understanding the views of teachers with regard to shifting the focus onto the needs of the learner in order to enhance the learning process.

The study reported in this dissertation suggests that if the best learning environment is to be provided for learners each of these five domains of learning need to be considered, and teachers' perspectives on these need to be understood in order to construct appropriate learning communities. The literature informing each of these five aspects of learning will be considered in more detail in the remainder of this chapter.

**The Learning Revolution**

The move from the industrial to the information age. As society moves from the industrial age to the information age it requires education to change from a 'factory' system of delivery to a 'knowledge' system. There has been a shift in world view from a clockwork, mechanistic concept of the universe to a living organic system perspective. This new world view has been accompanied by a shift in our understanding about the brain and human learning. These two paradigm shifts necessitate that the current structures of schooling be replaced with a vision of a learning community that stimulates our capacity to
learn. New learning structures need to reflect the changes that are occurring in both our institutions and ourselves so that they can accommodate the move from reductionist, linear thinking about schools and learning, and the ways in which we interact with one another (Pace Marshall, 1997). The study will consider how teachers understand this change and what it means for them in the learning environment at the beginning of a new century.

We have moved from an industrial society to a knowledge society, where we use information to enable us to learn, and where that learning is both an essential and ongoing part of our existence. The educational process can be viewed as a chain where individuals are trained to learn how to learn and to be motivated always to learn more so that they become well-rounded individuals with a wide knowledge and skills base founded on a firm set of values and beliefs (European Round Table (ERT), 1996). Schools have a part to play in the early stages of this learning process, since they are learning centres, but it is a part that has to be shared with other learning agencies in the community such as colleges, universities, workplaces, recreational centres, cultural centres, and most importantly, the home and the family. If learning is to occur to the optimum benefit of individuals then it will require collaboration and interaction between each and all of these agencies, a task made increasingly easier by the information and communication technologies that currently exist and enable networking to occur between elements of the learning community, so that learning becomes an ongoing and shared experience. In the study reported in this dissertation it will be interesting to see how teachers perceive their place in the learning environment and the significance they place on the use of information and communication technologies in improving the learning environment.

Cotgrove (1997) describes industrial age schools as concentrating masses of children into heavily routinised, regulated, and controlled classes where they were taught
by teachers held in high regard by a largely uneducated society. They were the product of a masculine society, which valued dominance and exploitation, and where institutions were hierarchical, homogeneous and conformist. He also states that today, however, schools need to become more flexible and modular in their function so that they reflect the societal attitudes of stewardship and conservation where sustainability and quality of life are important, and where institutions are more consensual and heterogeneous.

Beare (1997) criticises the current system for perpetuating industrial concepts such as: 'egg-crate' classrooms; set class groups based on age-grade structures; division of the school day into standardised slabs of time devoted to particular subjects; the linear curriculum which sequences knowledge; the parcelling of knowledge into predetermined subjects and the division of staff by subject specialisation; the allocation of school tasks to teachers; the limitation of learning to a space called school; the division between school, home and community; the isolation of school from other aspects of the community; and the limitation of schooling to a set age group. Spady (2001) states that the “mechanical, standardised, command and control, Industrial Age model of instruction is profoundly flawed because it’s contrary to human potential (and) human learning” (p.55). Education operates on an Agrarian calendar and an Industrial age delivery system that is counter to ensuring learning. Beare and Slaughter (1993) comment that educators need a credible vision of a future that reconnects each individual to the wider world, and develops a sustainable human vision. The study reported in this dissertation explores what prompts teachers to have such a vision.

Toffler (1980) sees the problem as being one of conflict between schools, which are the product of second-wave industrialism, and third wave change. Schools are sites at which an industrial social practice confronts post-industrial technologies. These
technologies are at the heart of activity outside of school but on the periphery inside school. This is causing tension for schools and education. An attitude of dissension and resistance in students is manifesting itself in apathy and boredom, violence and truancy; these implicit and explicit criticisms may be a legitimate response to the text and context of school and society at a time of great change and complexity.

Schools of the information age are somewhat different. Hancock (1997) describes six attributes of an information age school: interactivity; encouraging a high level of self-initiated learning; teacher's role is that of coach and guide; the critical nature of library-media specialists; the need for continuous evaluation; the presence and easy accessibility of information technologies. It is relevant to determine whether teachers perceive these attributes to be important in building a learning environment for the information age. The study reported in this dissertation seeks to discover this reality in the case of these schools.

Teachers are facilitators rather than purveyors of contentious knowledge. They are coaches who provide an environment conducive to learning, and they are also models as they themselves engage in the ongoing process of acquiring knowledge and skills. The traditional image of the powerful teacher and the powerless learner, indicative of an industrial system of worker-employer organisations, must be reversed so that the learner becomes empowered and the hierarchical structures flattened so that sustainable learning communities are created (Pace-Marshall, 1997).

When the industrialised era replaced the agricultural era the power base changed from land to capital. Pace-Marshall (1997) states that in the 21st century the knowledge society will discover that learning is the basis for power, and that learning is a life-long process that will enable the individual to access a better quality of life. Wealth, health and
personal development will be related to the learning process. Drucker (1995) states that an educated person is one who has learned how to learn and who will continue to learn throughout her lifetime, and in a formal context. Whether this view of lifelong learning is seen as important to developing the best learning environment will be one aspect of the study reported in this dissertation.

**Learning organisations.** The development of learning organisations will not only be desirable, but essential if the demands of a 21st century society are to be met. Ball (1995) warns that our traditional and inherited system of education has failed to create 'learning societies' in which everyone is motivated and enabled to practise life-long learning. He calls for a restructuring of the provision for education to enable every person to develop their human potential as fully as possible; and for the key principle in the future to be the primacy of personal responsibility for learning, encouraged and enabled by the support of the whole community. For this to occur there needs to be a transfer of resources for learning from those who provide teaching to those who undertake learning. Motivation is the key to successful learning, and whilst it is not possible to do someone else's learning for them, they must decide to learn for themselves, it is important to help one another develop the desire to learn by offering examples, encouragement and rewards.

Ball (1996) states that 'learning pays', organisations that do not become learning organisations will not survive, and schools which do not put their students first will not recruit. Learning provides economic, social and personal benefits that are available to all. In the learning communities of the 21st century the focus, according to Fink (2000), needs to be on bringing about change in the key areas of teaching, learning and caring. Davies and Ellison (1997) describe the main change as being in the core task of teachers' expertise
in learning strategies. It is in the complex area of understanding learning processes that the educational endeavour needs to focus. Beare (1989) states that:

Good schools target learning outcomes. They believe that every student can learn and is willing to learn. An attitude of success permeates the whole school. Good schools are constantly on the search for a better way of doing things. They do not just talk about good ideas; they go out and practise them.

He sees schools as being focussed on the learner and the success of all learners. The study reported in this dissertation seeks to examine teachers' understandings of the importance of the notion of successful learners and how this can be achieved.

Dimmock (2000) states it more bluntly than this when he says that well-designed schools place learners at the centre of their operations because learning is the central purpose of schools. The key question is “how do students best learn?” (p.109), and the answer to this question informs the creation of favourable conditions for learning. These conditions of the learning environment include the physical and emotional condition of the student, the physical classroom environment, the characteristics of the teacher and teaching and the students’ own motivation.

The sustainability of learning environments. The title of this area of research is derived from a number of sources. The concept of sustainability (Beare and Slaughter, 1993; Pace-Marshall, 1997) describes a ‘futures' view of learning based on the moral value of selfless love leading to caring for self, for others, and for the resources of our earth. A learning community (Sergiovanni, 1996; Spady, 2001; Starratt, 1995) is a moral community. Sergiovanni (1996) defines communities as collections of individuals who are bonded together by natural will and are bound by shared ideas and ideals. The members
become part of a tightly knit web of meaningful relationships based on trust and openness, and over time they share common sentiments and traditions that are sustaining. Spady (2001) defines learning as “a change in understanding and behavior (sic) that results from encountering new experiences” (p.18). Learning is brain-based as we use our minds to constantly make connections between what we already understand and the new experiences we encounter. Learning is not only about a change in understanding and meaning, it is also about being able to do something with that enlarged understanding; it is about competence and performance, being able to ‘do’. New experience provides the catalyst for developing understanding and performance; “how one learns determines how one lives” (Spady, 2001: p.31). This means that there is an unbroken circle of cause and effect connecting the two: learning and living.

Beare and Slaughter (1993) comment that the work of schools is vested in the future because education is concerned with purposes, goals and intentions. Popper (1988) states that “it is not the kicks from the back, from the past, that impels us, but the attraction, the lure of the future and its attractive possibilities that entice us: this is what keeps life – and, indeed, the world – unfolding”. The question is to determine whether schools and teachers are driven by this forward thrust, or whether they believe learning to be vested in tradition; a question that underpins the study reported in this dissertation.

Beare and Slaughter (1993) maintain that education relies upon a view of human growth and human potential that is based on the human capacity for peacefulness, caring and stewardship. It is based on the spiritual notion of humanity and the role it has to play in developing a more just, peaceful and sustainable world. They discuss the notion of a futures education where humans work in harmony with their environment to bring about the moral reality of a sustainable world. Human beings are continuous with nature, a
concept which causes us to reconsider our values, beliefs and practices. Moreover, learning is forward thinking, it is based on the concept of what will be, not what is or what has been.

To move toward a sustainable learning community Beare and Slaughter (1993) believe that:

*We need teaching and learning which are in the strictest sense of the word moral. We need to be aware that in a thousand small but cumulative ways, teachers, schools, classrooms and curricula impinge on a student's mores, and they are cumulative, built up step by step over time with consistent purpose ... It is a style of mind rather than another curriculum model* (p.129).

They suggest that there are ten ways in which teachers and parents can affect a child’s outlook on the environment. 1. Choose metaphors that represent the universe as a complex living creature with a mind, rather than as a mechanism. 2. Teach for wholeness creating wonder, awe and reverence for our universe through ownership and responsibility, rather than creating a disconnected materialistic approach to knowledge. 3. Create a right relation with the world through empathy and compassion by teaching identification, connectedness and integration. 4. Teach the constructive powers of building one’s own beliefs rather than blindly accepting the value-sets foisted on one by others. 5. Teach visualisation, the ability to focus on positive imagery that leads to success rather than dwelling on negative thoughts. 6. Pay attention to visions of the future. 7. Distinguish between faith and hope so as to act with confidence and conviction. 8. Tell apocryphal stories as these are a means of conveying shared belief systems, a way of seeing the possibilities of the future. 9. Teach and learn how to celebrate as a way of seeing what is significant. 10. Select and use the available tools as a means of creating new opportunities.
This is the essence of the moral code of Catholic schools and should, therefore, form the basis of the learning environment that teachers in Catholic schools aim to develop. These ten points underwrite the learning by establishing the foundations on which community can be developed and sustained. The study reported in this dissertation seeks to understand the moral code on which teachers base their development of a learning environment in two Catholic schools in Western Australia.

Theories of Learning

Definition of learning. Senge in O'Neil (1995) states that in the Chinese culture the word *learning* is made up of two symbols, one translates to the word 'study', meaning to assimilate new ideas and ways of doing things, the other is 'practise constantly'. This implies a process whereby people's beliefs, skills and capabilities, and ways of seeing the world change over time. It is an ongoing process which takes time and effort and requires an integration into our lives. Caine (1996) states that "learning is change in thinking and behaviour due to new understanding" (p.23). All forms of animal life learn and modify their behaviour on the basis of experience, but schooling is involved with more complex learning (Brandt, 1998). Scholars have used various terms for this: productive learning (Sarason, 1997); understanding (Perkins and Blythe, 1994); dynamical knowledge (Caine and Caine, 1997); and powerful learning (Brandt, 1998).

Brandt (1998) identifies ten conditions that lead to powerful learning: 1. People learn what is personally meaningful to them. 2. People learn more when they accept challenging but achievable goals. 3. Learning is developmental. 4. Individuals learn differently. 5. People construct new knowledge by building on their current knowledge. 6. Much learning occurs through social interaction. 7. People need feedback to learn. 8.
Successful learning involves use of strategies – which themselves are learned. 9. A positive emotional climate strengthens learning. 10. Learning is influenced by the total environment. These conditions encompass the knowledge and skills students are expected to learn (numbers 1 to 3), how they go about the process of learning (numbers 4 to 8), and the setting in which the learning occurs (numbers 9 and 10).

Learning is essentially a social activity, relying on knowledge construction rather than on knowledge transfer. It gives rise to understanding which relies upon using knowledge and reflecting on experience rather than on the abstract knowledge on which so much of our current educational practice is based. Whilst there are many definitions of the term, more important than this is an understanding of how people learn which relates directly to how the brain functions. The study reported in this dissertation is concerned with the extent to which these understandings are built into the development of current learning environments in schools.

Brain-Based Learning. The traditional view of the brain is that of an empty vessel waiting to be filled with information imparted by knowledgeable people such as teachers. This 'clean slate' or Tabula Rasa model is that of the passive learner waiting for knowledge to be conveyed to them, and typifies the 'chalk and talk', 'drill and practice' style of classroom practice where teachers control what information children get. This understanding of learning views the brain as a computer. The study reported in this dissertation seeks to determine whether teachers' current understanding of the learning process and learning environment is different from this traditional view of how people learn.
Caine (1996) states that learning is both a complex and a 'messy' process reflecting the very complex nature of the brain. Research from the neurosciences and other fields is changing what we know about how people learn. In a time of such instability and turbulence when many systems are in a state of disequilibrium and traditional methods of solving problems do not work the first step is to learn how people learn. It is an understanding of how learning occurs that is a focal point of the study reported in this dissertation.

Outcomes-Based Education. The basis of learning is success, achievement and learning outcomes. Outcomes-based learning is founded on three premises; first, that all students can learn and succeed, but that they learn in different ways and at different rates; second, that if students experience success they are more likely to be motivated to seek further success; third, schools can control the conditions for success, they can establish a context which is conducive for successful learning (Spady, 1994). Whilst outcomes-based learning focusses on success it does not, however, address the means by which student are assured of that success. The focus of outcomes-based learning has shifted from a teacher-inputs model to one where the curriculum focus is on what students are expected to learn and achieve. It empowers students in their learning and focuses on success. It is this understanding of the learning process that has led to the development of the Curriculum Framework document that is in the process of being implemented in Western Australia, and that will consequently influence the understanding that teachers have of the nature of the learning environment.

An outcomes-focussed system is based on developing a clear set of outcomes around which the school is focused, and establishing the conditions and opportunities that enable all students to achieve these outcomes. "Outcomes are clear learning results that we
want children to demonstrate at the end of significant learning experiences” (Spady, 1994: p.2). Outcomes are performances that embody and reflect learner competence, they are a tangible application of what a learner knows and has learned. They focus on ‘what’ and ‘whether’ a learner has been successful, rather than the old paradigm that deemed ‘when’ and ‘how’ a learner had been successful to be more important.

Outcomes-based learning provides schools and teachers with a great deal more freedom to create a curriculum and learning environment suited to the needs of the learner. It provides a curriculum framework that defines the skills and understandings to be developed and the performance criteria to be achieved, it does not define the learning experiences and opportunities to be provided, this is the domain of the teacher (Darling-Hammond, 1997). Whilst outcomes-based learning has been mandated for implementation in schools in Western Australia, this in itself does not assure teachers of the provision of an enhanced learning environment for students.

One of the principles of outcomes-based learning is constructivism. This has “its focus on ‘how’ individual students (within social settings) construct personal meaning and understanding” (Phye, 1997: p.594). Its defining characteristic is the emphasis on a student-centred approach to learning. The process of learning is concerned with the construction of knowledge on the part of the learner. Knowledge construction is the result of learning and remembering: the acquisition, storage and retrieval of information. This poses two concerns: first, the provision of the learning situation most appropriate for the construction of knowledge; and second, the provision of the most critical tools for engaging in the learning process. The two attributes of a learning environment are: the physical setting, providing students with the opportunity to work both collaboratively and cooperatively with fellow students and teacher as well as working independently; and the
learning episode, providing for the use of higher-order thinking skills. Phye (1997) notes that it is the learning process, and not the product of learning that is the focus of constructivism. He states that the teacher must be able to create motivating conditions for students, be responsible for creating problem situations, foster the acquisition and retrieval of prior knowledge, and create a social environment that emphasises the attitude of learning to learn. These principles underpin the approach that the study reported in this dissertation has to understanding teachers' perceptions of the best learning environment.

The Learning Process

There are a large number of theories that have been developed to explain the learning process, but whilst none of them is definitive they do suggest that students learn in different ways, and that it is important for schools and teachers to recognise this diversity of learning styles and to accommodate them in the learning environment if students are to become successful learners.

Learning conditions. Dimmock (2000) suggests that the physical learning environment needs to be conducive to the learning. This includes such factors as adequate fresh air, bright, cheerful presentation of classrooms, display of student work, ambient temperature, exclusion of distractions such as external noise, and adequate space for arranging classroom furniture. Control of these factors can lead to the provision of a safe and comfortable learning environment that can stimulate learning. These are some of the factors that are to be explored in the study reported in this dissertation.

Ornstein (1995) itemises the following conditions which are favourable for learning: a positive self-concept on the part of the student; a motivation or interest to learn; goal focus on what is to be achieved; recognition of the connection between prior knowledge
and new information; a state of developmental 'readiness' to learn; opportunities for appropriate practice or rehearsal; opportunities for the transfer of learning; appropriate reinforcement provided; and positive feedback and encouragement. This list suggests that learning is influenced by a complexity of physical, social and psychological factors.

Slavin (1991) suggests that learning occurs in a series of eight phases which he describes as: motivation, apprehension, acquisition, retention, recall, generalisation, performance and feedback, and which occur sequentially. Dimmock (2000) states that if these phases were consistently incorporated in the learning experiences of students in a school across the curriculum it could lead to an increase in the quality of learning. These principles of learning could be applied irrespective of teaching/learning strategy or style to develop independent learners. These are some of the practical aspects associated with providing an environment conducive to learning that the case studies reported later in this dissertation intend to explore in questioning teachers.

Learning styles. The theory of learning styles suggests that learners operate from one of four main learning styles: active, reflective, pragmatic, and theoretical. There has been a great deal of research conducted in this area aimed at identifying the range of learning styles. Dunn and Dunn (1975) identified four stimuli and eighteen elements to learning styles; McCarthy (1990) developed and applied the 4MAT system to identify learning styles; Mamchur (1996) has developed an instrument for assessing student learning styles based on the Myer-Briggs Type Indicator; Kolb (1984) described learning as a cyclical process; and Mellander (1996) developed this learning process into a Learning Spiral. Gear (1989) notes that there is an emotional side to learning that involves the whole person, not just the whole brain. Learning is not a linear process but rather an interactive
one, and one which involves conscious and unconscious processing of experience and information interactively. It suggests a very 'jungle-like' and messy, but holistic process.

A knowledge of students' learning styles enables teachers to organise learning experiences in response to student needs. Whilst the traditional classroom environment suits the analytic learner (McCarthy 1990), it often cannot provide a stimulating environment for other types of learners which in turn can lead to frustration. The implications for teachers is that they need to be able to identify the learning styles of their students, and to provide experiences to accommodate all learning styles. They also need to expose students to all learning styles, and to encourage them to operate from more than one style and be able to work with people who operate from a learning style different from their own.

It is not only the learning style of students that is important, but also a recognition of the teaching style and how this impacts on the learning. Dimmock (2000) identifies four major approaches associated with teachers' classroom practice: mastery learning; direct instruction; cooperative learning; and problem-based learning. Whilst the first two teaching strategies have formed the basis for classroom practice for many years, it is the latter two that form the move toward a more student-focussed and empowering environment for students.

In the study reported in this dissertation a knowledge of both learning styles and teaching strategies is fundamental to developing an understanding of how people learn and therefore how teachers can create a learning environment that enhances the learning process.
Multiple intelligences. Gardner (1985) states that the brain is designed to process seven distinct forms of intelligence which he lists as: Linguistic; Logical/Mathematical; Visual/Spatial; Musical; Kinaesthetic/Bodily; Interpersonal; and Intrapersonal. More recently, Gardner (1997) introduced an eighth intelligence, ‘Naturalistic’, and then a ninth which he called ‘Esoteric’. Each learner has a preferred way of learning and she/he is likely to learn from one or more of these processes. Classroom learning tends to focus only on the first two of these intelligences, which may disadvantage a learner who operates predominately from another intelligence. This theory offers teachers a number of different approaches to topics, several modes of representing key concepts and various ways by which students can demonstrate their understanding (Gardner, 1997).

Handy (1997) extends Gardner’s range of eight intelligences to eleven, and out of these eleven he states that schools focus on just three - factual intelligence, analytic intelligence, and numerate intelligence, and says that these “will get you through most tests and examinations and entitle you to be called clever” (Handy, 1997: p.212-13). However, he suggests that there are another eight: linguistic intelligence; spatial intelligence; athletic intelligence; intuitive intelligence; emotional intelligence; practical intelligence; interpersonal intelligence; and musical intelligence which are crucial to the learning environments of schools. It is these eight intelligences that schools need to address if they are to make a contribution to the well-being of society in the future (Caldwell and Spinks, 1998). Spady (2001) expands this list of human aptitudes to twenty-five, and then clusters these into five domains or potentials of Total Learning, which he lists as: conscious learning – personal growth and identity; creative learning – creative and critical imagination; collaborative learning – personal and cultural relationships; competent learning – functional and productive competence; and constructive learning – contribution
to human wellbeing. These five domains need to be addressed by schools if the 'best' learning environment is to be provided. The interest in the case studies reported later in this dissertation is to discover whether teachers perceive these domains or intelligences to be significant in the learning environment they provide for learners.

MacGilchrist, Myers and Reed (1997) explore the significance of multiple intelligences in their portrait of an 'intelligent school' which considers school and classroom effectiveness and improvement. They identify the following intelligences as being key components in the school environment: contextual; strategic; academic; reflective; pedagogical; collegial; emotional; spiritual; and ethical. The final three of these intelligences relate to personal well-being, a theme that is taken up by Swann (1998) in his research on compassion in leadership where he found a strong confirmation for a model in schools which is based on compassion.

Mastery learning suggests that our efforts to achieve mastery of knowledge or skills takes us through four stages: unconscious incompetence - we do not recognise that there is a body of knowledge or skill that we need to master; conscious incompetence - we know that we cannot do it but we are motivated to try; conscious competence - competent but having to think about how we are doing; unconscious competence - we can operate well without having to think about the skills we are employing.

Children bring to their learning one of two classes of beliefs: entity theories and incremental theories (Dweck, 1989; Dweck and Elliot, 1983; Dweck and Leggett, 1988), and these beliefs affect how they view their performance. Resnick and Nelson-LeGall (1998) state that children with entity theory believe that their intelligence is fixed. They strive to perform well and achieve their goal, but they avoid challenges that they believe
they cannot meet and do not persist in the light of failure. Conversely, children with incremental theory set goals and believe that their performance can be improved by will and effort. They seek challenges and show high persistence. Children can hold different beliefs in different theories in various areas of learning. These theories may relate to the motivational drives of children, which will no doubt have implications for understanding how people learn, and what enables students to achieve.

Learning Environments

Engagement. Learning is a life-long process but it is one from which individuals can only benefit if they are motivated and engaged to learn. Chapman and Aspin (1997) note that this will only occur if their initial experiences of education are positive; if they derive a sense of self worth, excitement and challenge, as well as success and achievement, in their early learning experiences. Too often, particularly in the secondary years of schooling, students see schools and education as irrelevant and disengaging, and they become alienated. It is this alienation that must be addressed if education is to capture the learner early in this life-long process.

Crequer (1996) makes a very damning, but realistic, indictment of the educational system and its effect on learning when she states: “a child begins his or her life eager and curious to know the world, reaching out and touching what is not yet understood. Sometimes it comes apart in their hands. The light (this light of curiosity) goes out as they make the inexorable march into the formal education system” (p.49). The task of schools is to ensure that this ‘light’ remains lit and brightly burning through a child’s formal years of schooling.
It is the task of education to make the learning process an engaging and rewarding one. This can occur if the learning environment is relevant to the learner. The learning environment is appropriate where the living, working and learning are part of a seamless web, and this relates not so much to school as to schooling which replicates a form of community life, and includes all the agencies that compose that community. Abbott (1996) states that opportunities for learning become richer when schools and communities work toward a common agenda, when the whole environment of the learner is engaged to further the learning. The two Catholic school communities that form the case studies reported later in this dissertation state precisely this in their mission statements which provide a basis for establishing the nature of the learning environment.

**Learning experiences.** Abbott (1996) believes that schooling should provide the individual with a range of learning experiences that enables that person to live and work comfortably among all the change of a highly technological society. That person should know how to learn and manage four skills: the ability to think, to communicate, to collaborate and to make decisions.

The Committee on Developments in the Science of Learning (2000) describes four aspects of learning environments that interrelate and are interconnected. The first is the learner-centred environment in which attention is given to the knowledge, skills, attitudes and beliefs that learners bring to the educational setting, and which focuses on diagnostic teaching, and developing students’ thinking skills and ability to solve problems. The second is the knowledge-centred environment which helps students to become knowledgeable by learning in ways that lead to understanding, and build on prior knowledge. The third is the assessment-centred learning environment which provides feedback and revision that makes assessment congruent with a student’s learning goals.
Both formative and summative assessments are important components of this environment. The fourth is the community-centred environment. The degree to which learning environments are community-centred is an important aspect of student learning. In this sense community relates to the classroom, the school and connections to the broader community. The alignment between each of these four aspects of the learning environment is important for student learning.

Learning is a collaborative, problem-solving, sense-making activity, and when it is fed by a rich, challenging but low-threat environment, enables the individual to perform prodigious feats of learning. Schools often provide a highly didactic, top-down model of learning, ignoring the individual's own learning strategies, and this can be destructive rather than supportive of the learning process. Abbott (1996) states that "what is needed is not a new form of School, not 'more of the same only better', but a new form of schooling - a form of community life in which living, working and learning are re-united" (p.15). This is what a learning community should provide, and what the study reported in this dissertation is concerned to address, from the viewpoint of teachers.

**Bureaucratic environments.** This means that schools need to re-think their organisation and that of the classroom so that they become engaging environments that address the needs of the learner. Shachar and Sharan (1995) draw some comparisons between low participation, bureaucratic organisations and cooperative, high participation systems at both the classroom and school level. They state that classroom teaching as it is practiced in most schools in Western society is based on the traditional presentation-recitation model, and reflects features of the bureaucratic model of organisation. This is a model which is extremely resistant to change as it is based on mental models of teaching and learning that are not changing. It is these mental models of educators that need to
change. In this model administrators and teachers determine the definition and pace of work and inform the workers what they are to do. There is little participation at the student level. Student behaviour is controlled by rules and regulations determined at an administrative level. Students are placed in a passive role regarding the degree of control they exercise over their school and classroom environments. Communication is unilateral during the presentation stage of the lesson, and bi-lateral during the question-and-answer stage. There is little opportunity for discussion amongst students. Students are addressed as an undifferentiated audience, and each student is given the same information and expected to work uniformly to produce a set product. The physical layout of the classroom is relatively permanent and is organised to enable the efficient transmission of information from teachers to all students simultaneously. Students work individually at their desks and rarely meet with peers to discuss work. Class time is scheduled into neat, uniform blocks of time, and the school day is divided by subject and teacher into discrete segments between which there is little liaison.

At the school level this bureaucratic, hierarchical model is also evident. The curriculum is largely determined by school authorities and the emphasis is on content requiring that teachers transmit large quantities of academic subject matter to students within given periods of time. Communication is top-down, consistent with the hierarchical conception of authority. Communication between teachers is invariably limited to those in the same disciplinary department, and so emphasises subject-matter specialisation. The teacher's task is to instruct all students the same thing in a similar way at the same time and for the same amount of time. Teachers only have control over how they teach, and this is largely determined by the school's overall organisation. Teachers' primary focus is on classroom instruction and they have little input to school-wide matters of policy. School
organisation is based on a 'one teacher - one class' axiom which limits teaching to a very isolated activity. The distribution of teachers to classes, and classes to time slots, is an unalterable regime set by school administration.

Learner-centred environments. Shachar and Sharan (1995) believe that learning environments would be very differently structured if the needs of the learner were given primary consideration in classroom practice and school organisation. A setting that facilitated cooperative learning would reflect an open system with an emphasis on members participating in planning and decision-making processes. Importance would be given to the relationship between members of the system, the multi-lateral flow of information, a horizontal rather than hierarchical organisation of setting, and a reliance on feedback to correct current functioning. Teachers become facilitators, guiding students and assisting them in making decisions about what and how they will study. The groups' activities and the demands of the tasks determine the pace of learning. The teacher follows broad guidelines for educational goals rather than content-prescribed curriculum. Communication flows between members of groups, and teachers coordinate this communication. Students have a more active role in determining how they will study. There is greater latitude for different groups to pursue study in a variety of ways to achieve various goals. Not all students will study the same thing at the same time, or in the same way. The classroom structure is flexible and changes with the needs of the activity. Class scheduling is also flexible and teachers confer to determine what the needs are at any point in time.

Such changes in classroom management necessitate change in school organisation. Administrators involve teachers in the ongoing process of setting school policy, working together in instructional teams to implement an integrated curriculum, setting principles for evaluating students, deciding how to adjust class scheduling to differentiated methods of
instruction, coordinating students' learning experiences in different classrooms, and including parents in various aspects of school life. Teachers initiate programs and engage in ongoing critical evaluation of both classroom and whole school activities and policies. This degree of cooperation creates a more complex and dynamic system that reflects that nature of the learning process for the 21st century. Schools become more open systems not only in the way in which they operate and distribute tasks and power, but also in the use of resources (Shachar and Sharan, 1995).

Information and communication technology. One important aspect of the changing learning environment for the 21st century is the significance of information and communication technology. The process of rapid and constant change that society is undergoing is largely being driven by the use of this technology. It has the power to enable people to learn how to learn in a highly participative, constructive and effective manner, and can make high quality learning material accessible to all people independent of time and place. It is vital that this technology be integrated in the new learning society. It has the capacity to change the learning process from a passive process to an active and interactive one, and to make the learner more independent. It also has the potential for networking so that all learning environments are linked, and learning can take place across the network and free of any particular location. The learner can become more independently minded, responsible and self-disciplined, and will be able to set and pursue their own learning goals at their own pace. The technology will enable the learner to be at the core of the learning process and will require close cooperation between all links in the education chain as well as interaction between the formal education system and the outside world.
The danger of the technology lies in its possible misuse. It is becoming increasingly easy to give access to vast amounts of information, but it is important to be able to discern how to use this information. Mellander (1996) states: “We are drowning in information but starving for knowledge” (p.52). There is a danger of spending too much time accessing information so that there is concomitantly less time available for processing that information and deriving meaning from it. The learning process needs to guide learners in the appropriate selection and application of the information so that we become a knowledge society. The literature describes the type of learning environment that will engage and challenge students in their learning and promote successful life long learners.

**Learning Communities**

Community. To be effective places for learning, schools should develop as learning communities. Sergiovanni (1996) defines community as a “collection of individuals who are bonded together by natural will and who are together bound to a set of shared ideas and ideals” (p.48). Communities are social networks based on “shared values, commitments, and ideals” in the context of “sustained relationships” (Sergiovanni, 1993: p.17-18). They are organised around relationships and ideas, and are bound by a set of values, sentiments and beliefs that bond people together in a oneness. They provide the means of creating and sustaining supportive, productive learning environments (Beck, 1999).

Strike (1999) is concerned that there is a disparity between shared values and inclusiveness. He states that shared values, or constitutive values, are based on the idea of working together toward a set of common goals based on the concept of a good education that contributes to human flourishing, and shared common projects. Communities are based on a sense of ownership, loyalty, nurturing and caring, concepts which are
antithetical to the notion of competition. He states that constitutive values unite people into communities that are more like congregations based on moral coherence and the common good. Bryk, Lee and Holland (1993) comment that since Vatican II Catholic schools have been dominated by a humanistic and communitarian vision of education which values both the life of the mind and the pursuit of a just and caring community. Catholic school communities subscribe to the notion of a good life and how learning contributes to it. Schools commit to a pedagogical vision in which all children can learn, know what is worth learning and why it is worth learning. Catholic schools value academic learning, as well as establishing a just and caring community and transmitting a sense of social responsibility (Bryk et al. 1993). Noddings (1992) relates the development of a community with a sense of caring that can develop into caring relationships with a sense of good in others. It is precisely this notion of melding the learning to the creation of a just and caring community based on respect, that forms the mission statements of the two case study schools reported in this dissertation. In both cases it is the development of a learning community based on Gospel values that informs the learning environment.

Palmer (1998) talks about the teacher being in communion with self before finding communion with others; and that community is an outward sign of inward grace, a move from personal integrity and identity into the world of relationships. He discusses the idea of knowing, teaching and learning in community as the essence of good teaching. The community of truth lies not in the teacher-centred classroom nor in the student-centred classroom, but rather in the subject centred classroom. A learning community focuses the attention of the teacher and the student onto the subject of the learning. Palmer (1998) states that it is a teacher’s passion for her/his subject that propels that subject, not the teacher, into the centre of the learning, and that then provides students with direct access to
the energy for learning and for life. It is the teachers’ perception of their position in the learning environment that is the concern of the study reported in this dissertation.

Sergiovanni (1996) differentiates between *gemeinschaft* and *gesellschaft*, relating the first to community and the second to society. Tonnies (1957) describes *Gemeinschaft* as a living organism in which commitments between people are taken for granted rather than chosen intentionally. Sergiovanni (1996) believes that society has progressively moved from *gemeinschaft* toward *gesellschaft* as humans have moved from the idea of a sacred community toward a secular society. In this move the natural will has been replaced by rational will as the motivating force, and the moral ties between people have been replaced by calculated ties. *Gemeinschaft* organisations go beyond calculated to committed involvement and develop relationships among people which are familial in the sense of the unity they create, and the moral overtones they exude. Communities create a sense of identity and belonging by the sharing of place for periods of time, and a sense of allegiance to common goals and values. Sergiovanni (1996, p.51) states that communities create “webs of meaning that connect people together uniquely by creating a special sense of belonging and a strong common identity”. It is this sense of place that informs the learning community of schools, such as those included in the case studies reported later in this dissertation.

Hough (1997) identifies a paradox between the two concepts where, on the one hand, the world is getting more global through the existence of global communications and trade, and at the same time it is getting more local in providing localised service to customers. Organisations are developing as ‘learning organisations’ that accept and focus on a competitive edge while developing work teams instead of the individual as the basic unit of work. Learning communities develop in their students strategies for living in a
global environment at the same time as strategies for living in a ‘tribal’ environment. These two ideas are surely not so antithetical; one has to learn to live in relationship with others based on a firm set of values before one can interact in a global society.

The school as a learning community has a responsibility to create a moral community, with a focus on goals, commitment to shared values, connections among people, and moral authority. This has implications for the organisation of schools. Creating communities of relationships would imply smaller schools where students and teachers were together for longer periods of time, where units represented multi-aged family groups, and where discipline was based on moral principles. Rules would be replaced by social contracts and reward systems would disappear where families took responsibility for solving their own problems. Sergiovanni (1996) talks of the moral voice where leadership is vested in a shared fellowship and where community members are bonded together sharing commitments in a covenantal relationship. It is the development of the school as a learning community and teachers’ understandings of their part in this development in a Catholic context that is of interest to the researcher in the study reported in this dissertation.

Covenant. The word covenant implies that the school changes from a secular to a sacred enterprise where people are committed and accountable for living out the covenant. Starratt (1995) supports this idea when he refers to an empowering covenant which he describes as “something sacred in the common life people share together” (p.38). He describes it as a strong bond among members of a school community that is woven of ideas and ideals they have agreed to pursue together. Sergiovanni (1992) states that “a covenantal community is a group of people who share certain purposes, values and beliefs, who feel a strong sense of place, and who think of the welfare of the group as being more
important than that of the individual. This community inspires deep loyalty and compels members to work together for the common good” (p.102-3). This is the basis for any school community, but more particularly for a school community based on the shared values of mutual trust and a respect for others, which is the focus for Catholic schools, and is pertinent to the study reported in this dissertation.

Starratt (1995) believes that there are three aspects to an empowering covenant. The first is personal and professional fulfilment which implies recognition of each person’s talents, competencies and potentials that can be exercised in creative and responsible ways to benefit students. This empowerment is based on trust. The empowerment of individuals can lead to a collective response to school needs that could not be achieved individually. Individual and communal empowerment can lead to the power of ideas and ideals that lift the community to new levels, or new visions.

It is this sense of community that should be able to commit students to the common good and override the student subculture that so often arises in the absence of a more compelling moral voice. It is this commitment to the common good which is such a vital aspect of community, a clear mission which all members of the community are striving to accomplish. All schools should aim to teach students to be moral beings and this should be the focus of all learning. This mission becomes easier to achieve in denominational schools such as the Catholic school system where the beliefs and values are clearly articulated in the learning community, and become the basis for building moral communities. In fact, the two schools that are the focus of the study reported in this dissertation have clearly defined values and a mission which enable members of the community to work toward the achievement of a common goal.
**Culture.** Community can be achieved through the identification and development of culture. Deal and Peterson (1999) focus their attention on the need for a school to develop a culture based on values and people; “the key is heart ... if you pour your heart into your work, you can achieve dreams others may think impossible” (Schultz and Yang, 1997: p.8). As Deal and Kennedy (1982) state, culture is the shared beliefs and values that closely knit a community together; the complex web of traditions and rituals that are built up over time as teachers, students and parents work together and deal with crises and accomplishments (Deal and Peterson, 1990; Schein, 1985). It is the organisational culture that is critical to the improvement of teaching and learning (Fullan, 1998; Rossman, Corbett and Firestone, 1988). Bryk, Lee and Holland (1993) found that a sense of community, as defined by organisational culture, was a key factor in cultivating a sense of excellence in private schools. This was supported by McLaughlin (1995) when he found that high performing schools had positive, focussed cultures, and were places of cohesion, passion and commitment. Newman and Associates (1996) found that to be successful schools needed a culture based primarily on student learning, but also on an “ethos of caring, sharing, and mutual help among staff, and between staff and students, based on respect, trust and shared power relations among staff” (p.289). It is this communal spirit that is important for the development of successful schools and successful learning environments, and which is the focus of the study reported in this dissertation.

Bascia and Hargreaves (2000) refer to four dimensions of teaching and of educational change: technical; intellectual; sociopolitical; and socio-emotional. In a world of unstable relationships, transformed family structures and shifting work requirements teachers are concerned to do more than equip students to enter the knowledge society as a productive worker. Teachers want to develop the key emotional intelligences of self-
awareness, self-regulation, empathy, motivation and a range of social skills so that students can care for and build relationships with others (Goleman, 1998). It is by attending to students' emotional lives and providing safe, orderly and supportive learning environments that their cognitive and academic learning can occur (Bascia and Hargreaves, 2000).

It is these aspects of building a learning community that underpin the study reported in this dissertation; the need to determine the extent to which teachers value these dimensions of the learning community. The aim of the study is to gain an understanding of how teachers perceive their current learning environment and how they might improve this environment to enhance the learning of students and to develop a sustainable learning community reflective of Catholic values.

**The Research Question**

The argument so far is that the nature of society and the needs of individuals operating within that society have changed as we move from a post industrial to a knowledge society. At the same time our knowledge and understanding of the learning process have increased substantially as we have become more aware of the ways in which people learn. This means that the ways in which we view learning, and the contexts that we provide for the learning need to change so that we establish stimulating and engaging environments for the learning. It seems that if educators are to provide useful learning experiences for students as they progress through secondary schooling they need to be knowledgeable about these changes and be able to use that knowledge to provide students with the best learning environment in which the learning process can occur.
However, the people who are best placed to bring about an improvement to the learning environment provided in Catholic secondary schools in Western Australia are the teachers whose professional responsibility it is to understand and facilitate the learning process. Whilst it is understood that teachers need the support of the school community, school structures and the administrative personnel, as well as the support of the system, inevitably it is the teacher who will determine the amount and direction of change that will occur in the classroom, and this will steer the change that becomes apparent in the wider learning environment. Conversely, no amount of direction given from systems, community and administration will be effective if teachers' understandings are not taken into account.

At a state and systems' level much has been spoken about the need for curriculum change at the classroom level at present. However, if this is to be successfully implemented attention needs to be given to teachers' understandings of the learning environment and how this might be changed to facilitate the learning process. Sergiovanni (1996) states that it is teachers who have the ability to change the way in which learning occurs in schools. If this change is to occur then we need to understand how teachers view learning environments currently provided for students, and how they feel these should change.

There is a great deal of literature on the investigation of learning environments and change to learning environments in individual schools and their effect on the learning process, and of the change to learning environments across schools; there is an absence of literature on the understandings of teachers with regard to learning environments. The research question for the case studies reported later in this dissertation, presented below, focuses on teachers' perspectives on current learning environments and on how these
environments should be structured to maximise the learning process for students in secondary schools in the Catholic Education system in Western Australia.

Research Question:

What are the perspectives that teachers have of the learning environment and how it could be organised to enhance the learning process?

In addition the study will be guided by the following three questions:

1. How do teachers describe the current learning environment of the school, and how would they like to see this changed?

2. How do teachers describe whole school structures and do they think they are conducive to the learning?

3. How do teachers describe the learning environment outside of the school, and the interaction that occurs between school and the outside environment?

Whilst there are a number of studies which investigate learning environments in various ways, there does not seem to have been a great deal of research, undertaken from an interpretivist approach, into teachers' understandings of learning environments and how they believe these environments should be re-configured.

The research methodology has been determined by the nature of the research question. A study of teachers' understandings lies within the realm of qualitative research and suggests that an interpretive theoretical approach provides an appropriate means of investigating this question. The interpretivist approach places primary importance on the social meanings people attach to the world around them. It is human behaviour, what people say and do, that determines how they define and view the world. In the case studies reported later in this dissertation it is important to understand how teachers view the learning environment and to be able to interpret their understandings.
Hill and Kerbert (1967) state that the social world can only be understood from the stand-point of the individuals who are part of the ongoing action being investigated, so that if a researcher is to understand the actions of an individual that researcher must share her frame of reference. The interpretivist paradigm is characterised by a concern for the individual and its central concern is to understand the subjective world of human experience, and to understand this world by viewing it from within the individual (Cohen and Manion, 1989). This approach is based on action and shared experiences. Theory is emergent as the researcher builds theory from experience and understanding; theory develops as a result of the research, and is grounded on data generated by the research act, it follows rather than precedes the research.

**Conclusion**

This dissertation presents a study of teachers in Catholic Secondary Schools in Western Australia and their understandings of their learning environments. First, it attempts to determine teachers' understandings of the ways in which learning environments can be structured to maximise learning. Secondly, it does this in the context of West Australian non-government schools, specifically in the Catholic sector of secondary education in Western Australia. Thirdly, it considers learning environments at the individual classroom, whole school, and community levels. This should provide educators with insights on how to improve the learning environments in schools in a very practical sense.

The significance of this research is that it aims to improve practice by enabling teachers to see what needs to change with respect to learning environments and how these
changes might be effected. Research suggests that the current learning environments do not engage students adequately in the learning process. The study reported later in this dissertation seeks to determine how the teachers engaged in the learning could create better environments for this learning to occur.

The remainder of the dissertation comprises six chapters. Chapter Two reviews the empirical research literature that has previously examined the issues that are pertinent to the research question. Chapter Three describes the research methodology. Chapters Four and Five present the case studies for each of the two schools represented in the study. Chapter Six presents a cross-case analysis and discussion of the findings. Chapter Seven brings the dissertation to a conclusion.
CHAPTER TWO

EMPIRICAL LITERATURE REVIEW

Introduction

The study reported in this dissertation is concerned with the development of sustainable learning communities, and with teachers' understandings of what this means in terms of being able to provide the best learning environment to facilitate the learning process. Chapter One focussed on the contextual literature relevant to this area of study. This literature was grouped around five main concepts: the learning revolution; theories of learning; the learning process; learning environments; and learning communities. This chapter focuses on empirical research that has been undertaken to date in this area and, consistent with the contextual literature review, adopts the same conceptual categories to organise the review. A number of studies are examined to indicate the contribution that the study reported in this dissertation makes to the area of sustainable learning communities.

Much of the research that is relevant to the study reported in this dissertation has arisen from the school improvement, school reform, and leadership literature, and much of it is concerned with students' learning environments and improving teaching and learning within the school context. There is also a focus on the development of school community, and school and community relationships. As previously stated, the empirical research undertaken in the field will be examined under the categories established in Chapter One, which broadly reflects the main bodies of research that have occurred in recent years.

The school restructuring movement of the 1980s and 1990s has produced a large body of research on learning environments, both at the classroom and the whole school level. This research can be divided broadly into two types: an investigation of learning
environments in individual schools and their effect on the learning process (Alger, 1996; Long, 1994; Zachlod, 1996); and the study of particular phenomena related to learning environments across a number of schools (Chittenden, 1993; Elmore, 1995; Majoribanks, 1994; McLaughlin and Talbert, 1990; Rutherford and Billig, 1995; Waxman and Huang, 1996). Most of these studies adopt a qualitative approach to research. In the first instance this is often a case study or even action research approach, and in the second an interpretivist approach is usually adopted. However, some of the research where a larger sample is taken or a broader approach across many schools, a quantitative methodology has been adopted. Much of the research on the learning process and how students' learn has been undertaken from a quantitative theoretical perspective. However, that which focuses on building school community and developing a better learning environment tends to adopt a qualitative approach. The review of the literature for this study is limited mainly to studies that have been undertaken in the last decade, that is since the early 1990s.

Theoretical Framework

The Learning Revolution

The study reported in this dissertation is concerned with understanding how teachers perceive the needs of students' learning and the provision of the learning environment, and how this might be different from the types of learning environment that have been provided by schools to date. There is a body of research arising out of the school restructuring movement, that has investigated reasons for substantially different ways of structuring a school learning environment to accommodate changing student needs.
An example of this is the work of Long (1994) who describes the restructuring of Wilson Campus School in Minnesota, U.S.A. between 1977 and 1986 to form a K-12 laboratory, or open-format school. The approach was the antithesis of dominant schooling patterns in its day, and probably still would be so today. The school concentrated on providing alternatives in teaching methods and content that were designed to meet individual student needs, and offer a student-centred and personalised curriculum. The principal Don Glines chose key concepts around which to frame the curriculum: teacher/advisor systems; teacher/student learning groups; written reports of progress rather than grading; team planning; a curriculum addressing problems of students and the process of learning how to learn; and a reliance on student interests as the basis for course content. Additionally, Wilson sought to integrate curriculum and eliminate age and other categorical barriers.

Implicit in Wilson’s student-centred practices were: a greater trust of students’ ability to define and assess their own development; a recognition that interdependent, nurturing relationships enhance learning; and a recognition of multiple contexts in which teachers, students and the school interact. The following changes were made to the organisation of the school: the rearrangement of structural and temporal patterns; the redesign of patterns of relationships; the reconstruction of knowing and controlling. Long (1994) reported that the strengths of the open education system of Wilson were gained from the fact the schooling system was a reflection of the education system and that schooling and educating were in close relation. It is this relationship that is seen as vitally important in the investigation to be undertaken in the present study.

Changes in learning environment to provide a context that will enhance the learning process will not occur easily unless teachers are provided with the support that they need to
effect these changes. Schools need to be redesigned to become genuine learning organisations for both teachers and students (Darling-Hammond, 1996). Studies by Bryk, Camburn, and Louis (1999); Leonard and Leonard (1999); Leithwood, Leonard and Sharratt (1998); Marks and Louis (1999); and Scribner, Cockrell, Cockrell, and Valentine (1999); are examples of this research on organisational learning and professional community which is part of the school improvement process.

Leithwood, Leonard, and Sharratt (1998) report the results of evidence gained from three independent studies of conditions that foster organisational learning in schools. They compare the results on research undertaken in different conditions with respect to stimuli for learning and organisational context. The framework for this report includes: the nature of organisational learning processes, or collective learning; the causes and consequences of such processes, including stimulus, school conditions, out-of-school conditions, leadership, and outcomes; and forms of school leadership including instructional and transformational leadership. A qualitative multicase study design was adopted for the three individual studies and each study was developed as a case study using grounded techniques, and conducted in multiple sites totalling 14 school sites. The studies occurred in three different states in Canada: British Columbia; Newfoundland; and Ontario. Data collection was by structured teacher and principal interviews. Interviews were tape recorded, transcribed and coded, with links made between coded transcripts for each study.

The results from the three studies suggest that the variables that exercise the greatest influence on organisational learning are ranked as: District (out-of-school condition); Leadership; Culture (school condition); and Structure/Policies and Resources (school condition). The most valued characteristics of the District were described as collaborative and harmonious, and providing a sense of community. School cultures were described as
collegial and collaborative, providing support among teachers and respect for colleagues’ ideas, as well as a willingness to take risks in initiating new ideas. School structures were described as those providing greater participation in decision making by teachers, including: brief weekly planning meetings; problem-solving sessions; flexible and creative timetabling; regular professional development time in school; common preparation times for teachers working together; and integrated curriculum teams. Policies and Resources included the provision of sufficient and current resources to support professional development to aid new school initiatives. The leadership dimensions were related to transformational leadership, specifically the ability to: identify and articulate a vision; foster the acceptance of group goals; convey high performance expectations; provide appropriate models, individualised support, and intellectual stimulation; build a productive school culture; and help structure the school to enhance participation in decisions. It is these dimensions of the learning environment that are precisely the focus of the case studies reported later in this dissertation where teachers are questioned with regard to their understandings of organisational learning.

Marks and Louis (1999) link the capacity for organisational learning with teacher empowerment. They focus their research on an examination of teacher empowerment, not only their part in the democratic decision making process of the school, but more especially their collective focus of that empowerment on the quality of teaching and learning. Effective empowerment, they suggest, both depends on and enhances school capacity for organisational learning, which includes supportive school structure, facilitative leadership, shared commitment and collaborative activity, the inflow of knowledge and skills, and a system for enhancing feedback and accountability. The study identified 24 schools across the United States of America that had been identified as having undertaken extensive
restructuring of students' school experiences, teachers' work lives, school governance, and the coordination of school and community resources. Of these 24 schools, there were eight in each of the grade levels: primary, middle and senior school, and in total 910 teachers were surveyed. Teams of researchers also visited each school site to observe school practice and to interview teachers. The results of each school visit were written up as a case study.

Marks and Louis found that the opportunity for and evidence of organisational learning and teacher empowerment were much greater in primary school than in middle schools, and was even less evident in senior schools. The researchers' final comment was that it is the teachers' involvement in mid-level decisions that affect the core technologies of teaching and learning and that is most associated with increased capacities for learning on the part of the school.

This study provided evidence at a whole school level of the context necessary for developing a learning environment that has the capacity to enhance learning. It was based on the perceptions of teachers and their needs in order to perform their professional role effectively. It did not, however, address their perceptions of the nature of the learning environment, which is the aim of the study reported in this dissertation.

A third study that focuses on organisational learning is that conducted by Scribner, Cockrell, Cockrell, and Valentine (1999) who are concerned to foster professional communities in three rural middle schools through the processes of organisational learning. The study was a two-year qualitative case study. They believe that organisational learning has the potential to create communities characterised by shared norms and values, a focus on student learning, reflective dialogue, deprivatisation of practice, and collaboration;
where learning is continuous and focused on student outcomes. Their study draws from the literature on organisational learning, school as community, and professional community. They address the following research questions: how does the school improvement process foster the development of professional communities; and what organisational factors support or impede their development? Scribner et al (1999) use a constructivist method of inquiry and a collective case study approach to achieve their objectives. Their research focused on three middle schools in a rural context in the United States of America, each of which had similar characteristics. Data were gathered from multiple sources: observations, interviews, documents, and artifacts. The principal, leadership team and teachers were interviewed and observed during the two-year course of the study.

The findings of the study demonstrate the tensions that schools must negotiate between bureaucracy and professional community, and suggest that the organisational factors that influence the establishment of professional community are as follows: principal leadership; organisational history; organisational priorities; and organisation of teacher work. The researchers also found that double-loop learning is invaluable to sustaining professional community. Leadership style and the principles of double-loop learning were fundamental to the establishment of professional community. Professional communities, in themselves, can serve as a foundation for developing school communities that maintain a focus on student learning. This study is significant in relation to the study reported in this dissertation in that it is concerned with the development of a sustainable learning community based on the perceptions of teachers. However, it is dissimilar in respect to its context, in that it is located in a middle school learning environment in a public system in the United States of America.
Bryk, Camburn and Louis (1999) pursue the examination of professional community leading to improvements in teaching and student learning. Their research is premised on the theory of communities as collectives in which behaviour is shaped by shared values and goals, and regular personal contact; schools are organised as communities promoting greater teacher commitment and more student engagement in school work; and enhanced teacher professionalism is necessary for the promotion of more challenging academic work for all students. They define professional community as frequent interaction among teachers where teachers' actions are governed by shared norms focussed on the practice and improvement of teaching and learning; and they itemise its essential features as: reflective dialogue; deprivatisation of practice; peer collaboration; and normative control. The first three of these concepts are consistent with those used by Scribner et al (1999) in the study discussed earlier. They define organisational learning as a school's capacity for continual innovation and improvement and itemise three conditions for this: school size; principal leadership; and trust. The study examines whether a climate of experimentation and innovation is more common in schools organised as professional communities. It uses data from a survey administered to public primary school teachers in Chicago in 1994.

The purpose of the survey was to gather information on teachers' views of the school environment, classroom learning, parental involvement, governance, and the professional work life of teachers. In the Bryk et al (1999) study data were collected from 5690 teachers in 248 primary schools. The findings from the study were that small school size, teachers who committed to out-of-school activities and facilitative principal leadership and supervision were all facilitating factors toward building a professional community. The strongest facilitator, however, was the trust and respect that teachers showed for each
other. Once a supportive professional structure is in place a climate prevails where faculty members are encouraged to seek out and try new ways of teaching, so that professional community fosters instructional change.

Leonard and Leonard (1999) investigated primary motivators for redesigning three selected schools as professional learning communities for teacher collaboration. The study focussed on teachers and asked them to identify leadership sources for implementing new programmes and teaching practices. The restructuring movement asks school to 'reculture' in terms of teacher professionalism, encouraging increased collegial interaction through shared decision making and professional growth. The transformational leadership of the principal is considered to foster professional learning conditions through a culture of innovation and collaboration. The study was conducted using three schools (grades K-6; K-8; and 10-12) in eastern Canada. Teachers at each school were asked to complete a questionnaire indicating those persons they thought to be most influential in implementing new programmes or teaching practices. In all schools the principal was seen to be the most important for motivation, although not always for innovation. Teachers considered informal collaboration to be more effective in terms of leadership provision for change than more formal structures.

The studies discussed so far are concerned with the ways in which schools might change, or re-structure their learning environments to better facilitate student learning, and the need to provide support to teachers to enable this to occur. This is precisely the area on which the present study will focus. However, the focus for the present study will be more specific than that undertaken in these studies which is part of the school improvement literature. The study aims to examine teachers' understanding of how they might re-structure the learning environment of their school to serve the needs of their students, a
study which is case specific. This relates to the empirical studies examining theories of learning and learning processes.

**Theories of Learning**

The study reported in this dissertation is concerned with developing a better understanding of learning so that a learning environment can be provided to enhance the learning process. There has been a great deal of research undertaken in many countries aimed at enabling researchers and teachers to come to a better understanding of how people learn. Whilst it is impossible to cite all of this research, the following review focuses on some key studies undertaken in both Western and Asian countries in recent years.

There is a body of research literature that has investigated student motivation, both extrinsic and intrinsic, and shown relationships between student achievement goals, and their approaches to learning and learning outcomes. The following studies have been selected from this body of research as being relevant to the study reported in this dissertation. The studies discussed in this, and the following section of this chapter, are closely related and belong largely to the same body of research literature.

A study by Kong and Hau (1996) investigated students' achievement goals and approaches to learning to show a relationship between an emphasis on self-improvement and thorough understanding. They defined two learning orientations as 'learning goals' and 'performance goals' and identified three approaches to learning as surface, deep and achieving approaches. The study drew on research evidence that showed that learning oriented students tended to be more intrinsically motivated and used more self regulating learning strategies than performance oriented students who were more extrinsically motivated and responded to a more competitive learning environment. From this Kong
and Hau hypothesised that learning goal was related to deep approach whereas performance goal was associated with surface approach. The quantitative study was conducted using a sample of 274 Chinese students from seven Grade 8 classes in Hong Kong. The results upheld the hypothesis. Whilst both goals provide a high achievement motive it was argued that the learning goal and deep approach emphasised self improvement and thorough understanding in the learning, whereas the performance goal stressed out-performing others and a reliance on rote memorisation and extrinsic motivation. These findings have been supported in other studies (see, for example Ames and Archer, 1988; Hau and Salili, 1990; Nicholls, Patashnick and Nolen, 1985; Nolen and Haladyna, 1990).

A study conducted by Somuncuoglu and Yildirim (1999) identified the relationship between students' achievement goal orientation and learning strategies. Similar to the other studies discussed here, they defined motivation as a driving force for students' learning goals, and identified different sets of achievement goal orientations as surface, deep and achieving. They defined learning strategies as mental processes that learners can deliberately recruit to help them learn and understand new ideas. A three-part questionnaire was completed by a sample of students taking the Educational Psychology course at Middle East Technical University in Turkey. They found that when mastery orientation is prominent students have a more realistic attitude to learning. Specifically, their awareness of effective learning behaviours and their own performance, along with their critical thinking skills, are more alert and they are likely to engage in more autonomous and meaningful learning. These findings support those of previous studies (See, for example Ainley, 1993; Meece, Blumenfeld and Hoyle, 1988; Nolen and Haladyna, 1990; Pintrich and Garcia, 1991).
Wong and Watkins (1998) argued that environmental factors and approaches to learning have a direct effect on student learning outcomes. They built their argument on previous research that had shown a direct link between a student's preferred classroom environment and her/his chosen approach to learning, and that different approaches to learning (surface, deep and achieving) can determine the quality of learning outcomes. In their longitudinal study they investigated the relationships among classroom environment, approach to learning, and cognitive and affective variables through structural equation modelling. The study was conducted in the mathematics classroom, using 356 Grade 9 students in nine secondary schools in Hong Kong. The study found that a positive attitude towards, and previous achievement in mathematics led to cognitive and affective outcomes, but also to enjoyable classroom environments. Prior success in mathematics also influenced students to move from a surface approach to a deep approach to learning, which in turn enhanced achievement. Results indicated that classroom environments influence learning outcomes.

A similar study was conducted in Australia by Dart, Burnett, Purdie, Boulton-Lewis, Campbell and Smith (2000) who postulated that students' conceptions of learning influence how they perceive their classroom learning environment and how they engage in learning. They used Biggs' (1993) 3P model (presage, process, product) for understanding student learning, where the presage factors are qualitative or quantitative conceptions of learning, and process factors are surface and deep approaches. They equated a deep approach with constructivist teaching and a surface approach with a traditional transmission model, or inputs approach to learning. The participants for the study included 457 students from 22 classes in two metropolitan secondary schools in Australia. The results showed that students who report qualitative conceptions are likely to use deep approaches to
learning, whereas students espousing quantitative conceptions of learning will most probably use surface approaches. Dart et al. translated these results into implications for the classroom learning environment. They stated that teachers need to help students develop qualitative conceptions of learning, where learning is about developing meaning and understanding, by using teaching strategies in their classrooms that are congruent with these teaching and learning techniques. Teachers also needed to promote deep approaches to learning by providing safe, supportive classroom environments that offer helpful relationships.

These three studies are concerned with the relationship between learning strategies or classroom learning environments and their possible effect on learning outcomes. They are relevant to the case studies reported later in this dissertation which examines this relationship from the perspective of teachers and the nature of the learning experiences and teaching strategies that they employ to enhance learning.

The Learning Process

The following studies are closely related to the previous three, but extend this research into student motivation, the adoption of specific learning strategies and teaching styles, and link these to student outcomes in the classroom learning environment.

A Canadian study by Seifert and Wheeler (1994) stated that enhanced student motivation is related to the adoption of self-instruction strategies. They believed that students must be strategic; they must possess and use metacognitive knowledge to control their thinking; and they must be responsible for their learning. A means of training students to become good strategy users is self-instruction. The purpose of their study was to examine the impact on student motivation of incorporating a self-instruction training
programme into classroom activities. Siefert and Wheeler used a sample of 61 grade 6 students split into three classes; two classes acting as control groups and the third class of 21 students as the training group. Students completed a pre-test and post-test consisting of a questionnaire, and the training group underwent a two-phase training programme consisting of teacher and peer modelling of problem-solving strategies. All three classes were engaged in mathematics' instruction. The results showed that the training led to improvement in the motivation of students indicated by the preference for working on challenging problems, increased self-efficacy, and a reduction in experiencing negative feelings. The researchers suggest that this has implications for teachers in that they need to model self-regulatory and problem-solving strategies, explicitly teaching metacognitive knowledge, and also teaching students how to cope with failure.

Similar to the last study, the study conducted by Whicker, Nunnery and Bol (1997) examined the effect of cooperative learning on student achievement and attitudes in a mathematics classroom. This study used a quasi-experimental design comparing two classes. However, contrary to much of the research in this field which has been undertaken with primary or middle school students, these were secondary school students engaged in a precalculus course. In this study the participants were 31 students from a rural high school in the United States of America who were split into a treatment and a control group, and the achievement of students in one section of the course who studied the material in cooperative groups was compared to the other group of students who studied the material individually. Student achievement was measured by three teacher-developed tests, and a questionnaire was completed to determine students' attitudes towards cooperative learning. Significant group differences on the achievement measure supported the hypothesis that cooperative learning promotes mathematics' achievement in secondary grades, which also
supported the results from previous studies in both primary and middle grades. The second prediction that students would favourably evaluate cooperative learning techniques was also confirmed, students commenting that they liked working with other students and receiving help from them.

The research cited thus far, both in this section and the previous section of this chapter, aims to relate student motivation to learning outcomes and is part of a substantial body of research that has examined the process of learning at the individual classroom level, often specifying mathematics classroom environments and focussing on student perceptions. The findings can then be used to influence teaching strategies. This research is relevant to the case studies reported later in this dissertation insofar as it provides insights into the learning process, and evidence that the learning environment of the classroom needs to change to enhance the learning process for students. However, the case studies reported later in this dissertation aim to provide a broader perspective on the learning process than that of the classroom and examined the learning process from the professional viewpoint of the teacher in order to gain their perspectives on student needs. The following studies, while still examining the learning process, do so from the point of view of influencing teaching style, and whole classroom environment.

Wong May Oi and Stimpson (1994) examined the appropriateness of teaching style in relation to developments in environmental education, using data from Hong Kong. In this context, where the curriculum is prescriptive, it is the teaching style and classroom environment that become crucial in determining what is actually learned. The researchers comment that for the purposes of this study, teaching style is defined as teacher behaviour in terms of degree of openness, non-directiveness, and pupil-centredness, within sections of a lesson in the medium of a geography classroom. Data were gathered on teaching style
and classroom management from a self administered questionnaire sent to geography teachers in 388 schools, out of which 381 teachers responded from 281 schools in Hong Kong. As a result of the survey a typology of teaching styles was developed clustering them into three style types: guided learning, which represented 62% of teachers surveyed; exposition, which represented 26% of teachers surveyed; and inquiry, which represented 12% of teachers surveyed. Wong May Oi and Stimpson comment that similar results have been recorded in many other studies across the world, and indicates that teachers are not supportive of the type of learning which is student-centred, and seeks to develop pupil attitude and influence behaviour.

They suggest that this reluctance on the part of teachers to adopt more student-centred approaches to classroom practice is due to a lack of confidence, in that they may be fearful of placing themselves in a classroom situation with which they would find it difficult to cope. They conclude that the findings do reflect that teachers understand the need for a more open, participatory and questioning approach, but they are faced with a complex, interacting and often conflicting set of demands, so that the vision needs to be balanced with the more pragmatic realities of the present which mitigates against a change of classroom practice. The findings of this study are very pertinent to the nature of the case studies reported later in this dissertation in which teachers are asked to comment on their own current learning environment and consider how it might be improved to enhance learning. However, the scope of the proposed research topic and its context is rather different from this study in Hong Kong.

A study in the United States of America that investigated the impact of a particular approach to curriculum on student learning was that conducted by Mettetal, Harper and Jordan (1997) who investigated the impact of multiple intelligences curriculum on teachers,
students and parents in one primary school. The focus of the study was to identify the attitudes of parents, students and teachers to this particular curriculum as it was implemented in the school. The planning and implementation of the curriculum occurred between 1993 and 1995, and the collection of data through observation, interview and survey occurred in 1995 and 1996. The study used qualitative research methods and the researchers were participant observers in the process. Focus group interviews were conducted with 26 teachers, 6 parents and 129 students; class observations occurred for each grade level and surveys were sent home to parents to elicit their opinions. A grounded theory method of data collection and analysis was used and three themes emerged from the data: 1. acceptance by everyone of the concept of multiple intelligences; 2. generally positive reactions to the schoolwide implementation of the multiple intelligences curriculum; and 3. uneven implementation of the multiple intelligences curriculum across classrooms. Generally teachers and students embraced the concept of multiple intelligences, believing it had changed their thinking about learning. However, the process of changing classroom practice was harder for some teachers, and others needed to become role models for them. There was recognition that more communication and information between administration, parents and teachers needed to occur during such periods of change. When curriculum implementation had been completed a standardised test was administered at the end of each year and the scores showed significant improvement over previous results for the school.

Both of these studies highlight the difficulty that teachers face in implementing change in the classroom learning environment. Teachers often recognise the need for change and accept that the learning process can be enhanced by adopting a more student-centred approach to classroom practice, but without additional training and support teachers
are often hesitant to take the initiative to change their practice. This is relevant to the case studies reported later in this dissertation where teachers are asked to discuss their learning environment and how it might be improved, but they are not asked to implement their perceptions or views.

The research discussed so far relates student achievement to classroom environment, but there is a body of research that broadens this scope to include whole school environment, or climate. Plucker (1998) examines the relationship between school climate conditions and student aspirations. He defines student aspirations as the educational and life goals that students set for themselves, and discusses two components of this: inspiration, the involvement in an activity due to its intrinsic value and enjoyment; and ambition, a sense of goal orientation. He identifies eight school climate conditions as: achievement; belonging; curiosity; empowerment; excitement; mentoring; risk taking; and self-confidence. The purpose of Plucker’s study was to examine whether students’ perceptions of school climate conditions discriminate between high- and low-aspiring students and, if significant discrimination is found, to suggest a possible ordering of condition importance. The sample of participants consisted of 1170 students in two high schools in New England, United States of America, each of which was located in a different socioeconomic context. Classroom teachers administered a Secondary School Aspirations Survey with items covering both student aspirations and perceptions of school climate conditions. The results were discriminant and showed that a school climate that fosters self-confidence, mentoring, excitement, belonging, and achievement increases student aspirations. This is important information if teachers are to provide learning environments that motivate students to learn. In this study students were asked to rank the conditions in their learning environment that caused them to be motivated to achieve.
Whilst this study is relevant, in the case studies reported later in this dissertation it is teachers who are being asked about the conditions that are most likely to motivate students to learn.

Most studies focus on an examination of the positive factors that affect student learning, but in the research undertaken by Al-Methen and Wilkinson (1992) the focus was on the causes of failure among secondary students, and particularly on the environmental or contextual problems that lead to unsuccessful learning. The researchers gave the students themselves the opportunity to specify the aspects of their personal characteristics or environmental conditions that led to unsuccessful learning so that a perception instrument could be derived to enable teachers to explore these factors. Thus the extent of the environment was broader than the classroom or school, and the aim was to provide information to teachers. The sample consisted of science major students, aged 16 years plus from 14 Kuwaiti High Schools. The participants were divided into three separate samples of 67 students, 80 students, and 107 students and each sample was used in different parts of the study. This enabled the inventory items to be tested and developed. The results from the inventory were clustered under four areas: student personal behaviour characteristics; teachers' behaviour characteristics; content of academic subjects; and family and environmental characteristics. Each of these areas has significance for failure in student learning. The study revealed that the whole learning environment is important to their learning and students do not attribute their lack of success to any one aspect of the environment.

These studies examine the classroom learning environment specifically, and various elements and strategies that can contribute to, or limit student learning within that environment. This research relates to the study reported in this dissertation in that it is
concerned with the factors that can contribute to student learning and how these factors combine in the total learning environment of the learner. However, the case studies reported later in this dissertation examine this from the perspective of teachers, and how they perceive factors contributing to student learning.

**Learning Environments**

Whilst the research discussed so far examines factors relating to student learning in the classroom environment, there is a body of research literature stemming from the school reform or re-structuring agenda that views the learning environment in broader terms and considers the whole school environment and its contribution to student learning. The case studies reported later in this dissertation are concerned with examining those aspects of the learning environment that are important in ensuring that the learning process is maximised, and this extends beyond the immediate classroom environment. The following studies have been selected from this literature.

Research investigating the effect of fundamental changes to the learning environments on learning has been carried out in schools such as River Oaks Public School, Oakville, Ontario (Alger, 1996), and Robert Ulrich Elementary School, California City (Zachlod, 1996). Much research has been conducted with respect to learning environments across several schools. Waxman and Huang (1996) investigate how classroom learning environments are perceived and interpreted by students in an inner city middle school in the southern central region of the United States of America. Elmore (1995) studied the relationship between structural change and teaching practice in three elementary schools to find that there was no significant relationship between structure and practice.
Waxman and Huang (1996) examined resilient and non-resilient students’ perceptions of their classroom learning environment to determine whether resiliency was a factor in students’ perceptions of teacher’s classroom instruction, classroom learning environment, and motivation. This study drew upon research in the field of educationally resilient students and classroom learning environments. The researchers were concerned about the lack of research undertaken to investigate the link between classroom learning environment and measures of students’ motivation and aspirations. The participants for the study were 150 middle school students from a large comprehensive middle school in an inner-city neighbourhood in the United States of America. These students were all from a low socioeconomic background and the school had a high rate of discipline problems and academic failure. The participants were classified into one group of 75 resilient students and one group of 75 non-resilient students on the basis of academic performance in mathematics. Three student self-report instruments were used to test for motivation, classroom environment, and instructional learning environment. The study found that the classroom and instructional learning environment, as well as the level of motivation differed significantly between resilient and non-resilient students. However, there was no significant difference between these groups of students on variables such as homework, affiliation, parent involvement, and teacher support. These findings suggest that schools need to examine ways in which classroom and instructional learning environments can be changed to serve at-risk students and to improve student resiliency. Waxman & Huang concluded that improvements in student motivation and learning environment can significantly improve academic achievement. These are factors that have been addressed by the research reported in this dissertation, although this research did not directly link learning environment to student achievement other than by teacher perceptions of its effect.
Multiple research methods were used to explore the nature of classroom learning environments in a cross-national study conducted in Western Australia and Taiwan by Aldridge, Fraser and Huang (1999). The research involved a comparison of learning environments in both countries, as well as an investigation of factors that influence the learning environments in different cultures. The researchers aimed to extend previous research in this field by exploring causal factors associated with students' perception of their learning environment. The interpretive study used multiple research methods to examine science classroom environments in Taiwan and Western Australia. A large scale quantitative questionnaire and attitude scale to measure students' perceptions of their classroom learning environment was administered to 1081 students across 25 schools in Australia and 1879 students across 25 schools in Taiwan. The data were used to collect further information through interviews with participants, observations and narrative stories. Interviews were conducted with 24 students and 8 teachers, and observations were carried out in the classes of four teachers in each country. The results from the quantitative data indicated that students in Australia held more favourable perceptions of their learning environment, whilst students in Taiwan had more positive attitudes towards their science class.

The analysis of qualitative data allowed the researchers to present the following findings. The learning environment in each country was influenced by the nature of the curriculum; the more examination-driven curriculum led to more teacher-directed learning, whereas the emphasis on involvement in Australia lead to a more student-centred curriculum. The pressures on teachers in Taiwan were to enable students to perform well in examinations, whereas in Australia teachers were pressured to implement innovative practice and tailor a less prescriptive curriculum to the needs of students. In Taiwan the
greater social distance between student and teacher lead to a higher degree of respect and a more orderly classroom environment with less student disruption to the lesson, whereas in Australia the students felt more able to ask questions and gain help from the teacher but endure greater levels of disruption to the lesson. The comparative nature of the study allowed for a greater understanding of the factors influencing the learning environment in each country. Whilst the breadth of issues explored here is relevant, the study reported in this dissertation is limited to a local learning environment and to the perceptions of teachers alone.

In addition to examining the classroom learning environment there is a body of research literature that investigates a broader range of factors that can be described as quality of school life variables, or school satisfaction. A study by Huebner and McCullough (2000) cited two bodies of research that informed their study. The first demonstrated the variability of students’ levels of school satisfaction, but whilst most students reported positive levels of satisfaction, little account was taken of those students who recorded some level of dissatisfaction. The second focussed on the presumed consequences of students’ dissatisfaction. As a result of this previous research, their study focussed on exploring the correlates between school satisfaction among adolescents, with two specific aims: the consideration of a wider range of life experiences incorporating school and non-school events; and the use of self-efficacy as a moderator of the relationship between life events and school satisfaction. The participants in the study were 92 students from a private secondary school in a middle- to high-socioeconomic environment in the United States of America. An instrument was administered to measure school satisfaction, life events, and academic self-efficacy. The results demonstrated the importance of contextual experiences and self perceptions in attempting to understand students’
satisfaction with their school experiences. It indicated the contribution of non-school experiences to school satisfaction, experiences related to family, friends, recreation, and physical and mental health. This study provided useful information to school personnel in designing prevention and intervention programmes for negative school outcomes, and alerted teachers to the need to look for variables beyond a student's school experiences when trying to enhance their learning experiences. As in the case studies reported later in this dissertation, this study considers that the wider environment and life experiences of a student all contribute to, and have influence on the school learning environment. The study reported in this dissertation defines the learning environment as the total life experiences and events that compose a student's environment.

Brutsaert (1995) explored differences in affective outcomes in state and Catholic primary schools in Belgium. He stated that the value orientation of a school creates a distinctive normative climate and learning environment. Quality of schooling is judged not only by intellectual achievement, but also by affective outcomes such as children's concepts about self, school, and learning. The study is concerned with the quality of school life in terms of the wellbeing of students. Well being is defined as adjustment to school life as reflected by self-esteem, sense of mastery, fear of failure, sense of belonging in school, and school and study environment. Brutsaert states that private schools should display a higher quality of school life since they have a longer tradition of acting as agents of socialisation, place more emphasis on personal formation and moral values, and stimulate a sense of belonging through the organisation of extra-curricular activities. The sample for the study consisted of 3116 sixth-form students from 50 primary schools (15 state schools and 25 Catholic schools) in Flanders, Belgium. A written questionnaire was administered
consisting of items measuring the variables of: parental socio-economic status; school size; gender composition of teaching staff; and wellbeing.

The results of the study were twofold: overall, Catholic schools did not seem to be more effective in fostering the wellbeing of students than State schools; and the pattern of results was different for girls than for boys. The analysis for boys revealed that for self-esteem, sense of control, and fear of failure, private schools scored more favourably than State schools. However, Brutsaert attributes this to selective enrolment, and the gender composition of teaching staff in private schools. The study did find that girls seem to gain in terms of self-esteem and sense of control from attending a Catholic rather than a State school. Whilst these results are not particularly convincing or relevant in terms of the study reported in this dissertation they do indicate a difference in the focus of learning environments between State and Catholic schools, although this study has examined primary schools and the case studies reported later in this dissertation will focus on secondary schooling.

An examination of an alternative learning programme and its effect on student motivation and self-esteem in a large urban school district in the United States of America was conducted by Nichols and Utesch (1998). The goal of the project was to determine whether this specific alternative learning programme could have a positive effect on the motivation, goal orientation, efficacy, and self-esteem of the participants. Such alternative programmes have been established in an attempt to provide environments and curriculum to meet the needs of at-risk students. In this case the effectiveness of the programme was defined in terms of improved attendance, decreased discipline problems, academic progress, and eventual employability. The study employed a self-report questionnaire to assess changes in motivation as students entered and exited the programme; changes in
self-esteem were assessed in the areas of home, school, and peer relationships. The programme served an average of 571 students a year across the middle and high school grades. The study found that the alternative programme was successful for those students who completed the programme insofar as they experienced increases in extrinsic motivation; peer, home and school self-esteem; and persistence toward learning task. It also found that those students who did not complete the programme were initially higher in extrinsic motivation and peer self-esteem, which has implications for teachers in schools in general.

The research literature on school leadership and its effect on the organisation, and hence on the learning environment, is extensive. A study conducted by Leithwood and Jantzi (1999) investigated the relative effects of principal and teacher leadership on student engagement with school. They argued that these influences are mediated by school and classroom conditions and moderated by family educational culture. In this study teacher leadership was measured by asking respondents to indicate the extent of influence on the school by teachers acting individually and in groups; and that of principal leadership was based on a set of practices intended to have effects on teaching and learning in the school. School conditions were defined by five variables: purposes and goals; planning; organisational culture; structure and organisation; and information collection and decision making. Student engagement with school was defined by: a behavioural component, the extent of students' participation in school activities; and an affective component, the extent to which students identify with school and feel they belong. Family educational culture was defined by: family work habits; academic guidance and support; stimulation to think about broad issues; academic and occupational aspirations and expectations; adequate health and nutritional conditions; and a physical setting conducive to work in the home.
Data were collected from teachers and students in one large school district in Eastern Canada. Two survey instruments were used to collect data; one to collect data on school conditions and leadership from 2465 teachers; and another to collect data on engagement with school and family educational culture from 9941 students.

The results from the study indicated that principal leadership effects are significant whereas teacher leadership results are insignificant. Leithwood & Jantzi offer some justification for this, suggesting that the role of teacher is distinct from a leadership role and may be devalued by being accorded leadership status in the terms of this study. Other findings were that the effects of principal and teacher leadership were mediated by all five school conditions, although principal leadership explained more variation in conditions than teacher leadership. The role of family educational culture in the variation of student engagement was significant. This finding has significance for schools by suggesting that closer links need to be forged between families and schools if levels of student engagement are to be raised. One aim of the present study was to investigate the need for greater parental involvement in school if the learning environment is to become more effective.

These studies have broadened the discussion about learning environment to a consideration of classroom, school, and family as factors affecting students’ learning. The study reported in this dissertation similarly utilises a broad definition of learning environment to include those community factors that extend beyond the school, but it develops an understanding of that environment specifically from the perspective of teachers. One final aspect of learning environments that deserves consideration, and which has primary importance in the study reported in this dissertation, is that of learning communities.
Learning Communities

There is an extensive body of research that has investigated the dimensions of community and built an understanding of learning communities, and the development of sustainable learning communities. Some of the studies already cited have contributed to this research literature. The studies considered here are those that have specific relevance to the study reported in this dissertation in some respect. These studies are related to school communities, and the broader interpretation of community as well as focussing on specific areas of community such as values and culture.

Rutherford and Billig (1995) studied 9 sites to investigate the effect of family and community involvement on student learning. McLaughlin and Talbert (1990) studied three schools to investigate the effect of personalised learning environments on student learning. Chittenden (1993) used a naturalistic case study approach designed around interviews, observations and documents to investigate the existence of a shared culture between staff and students at a grammar school. Majoribanks (1994) researched the use of the interpretivist research approach for the analysis of learning environments and found that this approach enriched our understanding of the association between learning contexts and children’s learning.

A study that focussed on teachers' sense of community was conducted by Royal and Rossi (1999). They examined the in-school differences in teachers' sense of community in relation to the following variables: length of employment in a school; time spent interacting with others; the nature of work arrangements; and perceptions of the school organisation. Data for the study were collected from a survey of teachers in three public high schools in San Francisco, United States of America. Whilst the results were rather complex, school
organisation variables and time-related variables emerged as the strongest predictors of teachers' sense of community.

McLaughlin and Talbert (1990) investigated three schools that have adopted a personalised learning environment as a means of promoting students' commitment to school and their engagement in learning. They believe that a personalised learning environment facilitates the development of close personal bonds between adults and students which provides teachers with a greater capacity to motivate and engage students than the traditional forms of social control. Teachers are able to gain more information about students' learning style and knowledge which enables them to develop instructional 'scaffolding' and make the learning relevant to the learner. This also increases the teacher's professional efficacy and makes for a more rewarding teaching environment. This study describes a personalised school environment and the organisational practices that support it, in three independent secondary schools for at-risk students in the United States of America.

The results of the research found that these schools, although they are each different from the other two, experienced great success in terms of student retention rates and post secondary destinations. Students and teachers described their school as providing a caring, respectful and secure environment which is like a "family". Students are enthusiastic about their school, and teachers feel a sense of satisfaction and professional pride. McLaughlin and Talbert describe a number of factors about the organisational design of these schools that help to foster and sustain personalisation. Choice and scale is significant in that students and teachers select to attend these schools which provide a sense of commitment, and the school size is small which makes it easier to establish and maintain personal contacts. School level structures for communication and collaborative problem solving; broader teacher roles; personalised instructional strategies; and strategies for teacher
support and revitalisation are other important strategies for enabling the development of a personalised environment. Each of these schools has developed an environment where teachers and students are actively engaged in education, according to the researchers.

As McLaughlin and Talbert have already noted, it is important to create a respectful and caring environment if a community of learners is to be formed. The next three studies (Horsch, Chen and Nelson, 1999; Schaps and Lewis, 1999; and Westheimer and Kahne, 1993) all describe the creation of such environments. It is the creation of learning communities that is the central concern of the study reported in this dissertation.

Horsch, Chen and Nelson (1999) describe the positive changes that they observed at a primary school in Chicago initiated through the implementation of the responsive classroom approach to learning. This approach to learning acknowledges that children need to feel both pleasure and significance as members of a classroom community; and they increase their desire to engage in learning when they feel safe, valued and respected. The approach at this school used six components: morning meetings; rules and logical consequences; guided discovery; classroom organisation; academic choice; and assessment and reporting to parents. These components work to develop social skills, and help teachers to create a caring, respectful learning community that promotes both academic and social competencies. To date teachers' attempts to create a more student centred environment had been jeopardised by misbehaviour. The result of the implementation of the responsive classroom approach had overcome this problem. Students' behaviour improved and greater stability was achieved so that the creation of a more caring and respectful environment was possible. Reasons for its success were stated as: the approach being consistent with the school's mission; it received strong administrative support; most teachers participated in training; the training was both theoretical and practical; and all
teachers were expected to implement the same approach. This study has been conducted with primary students which is different from the intended environment for the case studies reported later in this dissertation which will be conducted in a secondary school environment.

Schaps and Lewis (1999) also worked with primary school students to create a learning community. They defined sense of community as the student's experiences of being a valued, influential member of a group committed to everyone's growth and welfare. It is likened to a good 'family' where the school forges affective bonds essential to students' motivation, character, and citizenship. They outlined a number of practices that help to create a caring community: activities that build a sense of unity; class meetings to help shape norms and practices; collaborative learning based on respect and challenge; disciplinary approaches based on what is right; and thoughtful discussion of ethical issues. Like the previous study, the emphasis is on small units for intimacy and 'family' associations. Conditions necessary for successful implementation were seen as: environments must be caring and challenging; teachers must be central to the student-centred classroom; schoolwide change is essential; school values must be examined; and assessment must be aligned philosophically with instruction. As with the previous study, this one was conducted in primary schools which is different from the secondary environment in which this study was conducted.

Westheimer and Kahne (1993) argue that learning communities are built on a sense of membership engendered by engagement in the social mode of learning, where students and teachers work collaboratively and derive support, motivation and direction from one another. They believe that there are two components currently missing in the attempt to build community. First, teachers are not provided with experiences that will familiarise
them with the nature and benefits of strong community. Second, teachers are not equipped with pedagogical techniques necessary to foster and sustain communities. Both of these points are relevant to the study reported in this dissertation. They developed an Experiential Curricula Project in 1990 at Stanford University School of Education for prospective teachers. The project revealed five principles that seemed effective for fostering and sustaining community: move from student experience to theory; engage students in common projects; break norms to create opportunities for new relationships; motivate students within the context of community; and encourage reflection and respect dissent.

Whilst it was possible to develop a successful programme working with a discrete group of teachers and students, they recognised that schools might find this more difficult. The following challenges were identified: school are subject to frequent turnover in student and teacher population so that the culture needs to be capable of regenerating the community; tensions created by division and lack of consensus about common goals and means of achieving them can undermine community-building efforts; the pursuit of community may be seen at cross-purposes to current policy reforms. This last point is less relevant to the Western Australian context where the Curriculum Framework provides both flexibility and a values orientation that would encourage the development of community. In a Catholic context this is particularly the case, where the school mission talks specifically about the building of communities of faith. Westheimer and Kahne conclude that if teachers are to be able to foster communities in schools, it is the teacher educators who need to train teachers in this experience to equip them with the necessary tools.

This sense of sustained community built on a set of clearly defined values, and focussed on caring and respectful relationships with others is the focus of the study.
reported in this dissertation. As the researchers cited here suggest, it is the teachers who need to use this and have the confidence and skills to develop this style of learning environment in schools. The present study aimed to investigate this.

Another aspect of building community involves the development of significant home-school relationships. Of the body of literature that has emanated from research in this area three studies are particularly pertinent to the proposed research (Roberts, 1989; Rutherford and Billig, 1995; Marjoribanks, 1994).

A case study examining how schools involve parents in the education of their children in middle school, and the way this involvement is seen by teachers and parents was the purpose of a study conducted by Roberts (1989). Three middle schools in Britain were included in the case study and the researcher interviewed 42 teachers and 39 parents in the course of the study. Interviews were conducted to gain the subjective perspectives of both teachers and parents about the nature and extent of parent activity in the school. They found that teachers commented on the adequacy, frequency, and value of parental involvement. Teachers expected collaboration from parents, and felt that this collaboration should take the form of: attendance at consultation evenings and a range of school events; engagement in a variety of home-based exercises including assistance with homework; and school-based involvement in the provision of ancillary help. Teachers were concerned about the issue of control. They were wary of parental involvement encroaching on the structures, policies and curriculum of the school, and whilst parent involvement was encouraged, teachers were hesitant about the idea of 'parents as partners'. Parents were concerned about the issues of communication and acknowledgement of the status of parents. They were critical of the communication networks in operation, with most criticism coming from parents who made little use of current communication channels.
Some parents expressed a preference for increased frequency of reports and consultation evenings, particularly if their child's progress was deteriorating. Parents also commented that they did not feel that the school accorded them the status of parent, and they were often made to feel inferior when dealing with teachers or the school. Teachers reinforced this feeling through their need to control or manipulate situations where parents were involved. Both teachers and parents felt that it was important to have the 'right parents' on governing bodies of the school. Whilst it was recognised that there is a need to involve parents in schooling, finding appropriate ways of achieving this was thought to be more difficult. This study is significant to the study reported in this dissertation insofar as it raises the issue of parent involvement in learning, but unlike this study, the case studies reported later in this dissertation sought to determine only the views of teachers in this regard.

Similar to the last study, Rutherford and Billig (1995) investigate school/family partnerships in the middle school. They selected nine sites across the United States of America, and used three sites to investigate each of the following areas: districtwide programmes; school restructuring; and adult/child learning programmes. They posed two questions: how do schools and districts involve families and the community as partners in educational reform; and how do schools and districts create partnerships that acknowledge the roles of family, school, and community in the growth of the child, and how do these systems interact?

From their findings the researchers developed a set of eight lessons of relevance to schools. Lesson 1: the stakes are high and immediate for everyone in the middle grades. Schools can create programmes that respond to the needs of families and students. Lesson 2: challenges can become opportunities for parent/family involvement. Schools can create structures that decrease the fragmentation caused by the way schools are organised.
Lesson 3: relationships are the essence of family and community involvement. Schools can encourage direct contact between families and teachers and can create staffing patterns that support these relationships. Lesson 4: responsibility and decision making are shared by a broad array of players, including the child. Schools could include families, teachers and students in decisions about curriculum, conferences about coursework and individual progress, and coordinate information from school to ensure smooth communication. Lesson 5: sustained parent/family and community involvement depends on active advocacy by leaders. Schools could look at a whole array of community connections, use creative approaches to define leadership, design programmes, and solve problems to provide a climate for success. Lesson 6: a system of support for front-line workers is critical to parent/family involvement. Schools can provide professional development for school personnel that deals with promising practices and programmes for family involvement. Lesson 7: families need connections to the curriculum. Schools should engage families in meaningful home learning tasks, demonstrate ways for families to work with middle-grade students and use school learning experiences as starting points for family connections. Lesson 8: schools need connections to the community. They must recognise and acknowledge the unique characteristics of the community; design programmes to build on the strengths and needs of the community; and seek opportunities to engage and invite the community to participate in school activities (Rutherford and Billig, 1995).

This is a very comprehensive list of possible ways to strengthen school and family interaction, and is pertinent to the case studies reported later in this dissertation where teachers are asked to consider the need for greater involvement between the school and home learning environments, and how this must occur. However, these case studies have a different context from this study.
Majoribanks (1994) presents a number of studies that have adopted an interpretive approach to the study of family and school learning environments. Lareau (1987) investigated social class differences in family-school relationships, using interviews and observations of the home-school relationships of American children in Grade 1 and 2 in both a working-class, and upper-middle-class school. The research questions were: What do schools expect of parents in the educational experience of young children? Are there variations in teachers' expectations of parental involvement? How do parents respond to schools' requests, and how does social class influence the process through which parents participate in schooling? The evidence gained from the study demonstrated that the level of parental involvement was linked to the class position of the parents, and school and cultural resources that social class produces in American society. Whilst parents from all social classes have an equal desire for their child's educational success, they respond differently toward the school's request for involvement. Working class parents depend on the teachers to educate the child, whereas middle-class parents are more prepared to become directly involved in the educational process. This provides an advantage to middle class children in comparison to working class children. This is of interest in the study reported in this dissertation where the two cases studies have different socio-economic contexts.

Connell, Ashenden, Kessler, and Dowsett (1982) examined the relationship between families, schools and educational opportunity. They interviewed 100 Australian Grade 10 and 11 students, their parents, school principals, and many of their teachers. Half of the student sample came from working class family backgrounds whilst the other half came from middle class family backgrounds. They aimed to discover why home and school worked better for one group as opposed to the other. Connell et al. thought that the
educational careers of young people are shaped by such factors as: the extent to which parents care about schooling; the manner in which family members relate to each other; material provision; and their internal structure. They noted that deficit theory states that certain family variables correlate with school success, and school failure grows from families that are deficient in these desired qualities. Their study refutes this theory.

The findings suggest that whilst the families provide powerful influences on children which penetrate every part of their lives, including schooling, schools are also active, influential agents in producing educational outcomes. Just as there are differences between families, there are also differences between schools that provide a range of powerful mechanisms impacting on student learning outcomes. This research concluded that educational inequality can be caused by families or by schools.

The following two studies (Chittenden, 1993; Johnson, 1999) are particularly relevant to the proposed research. The studies reviewed so far in this chapter are relevant in terms of their content and hence applicability to the research field, but these two studies apply also to context, a vitally important aspect of the interpretivist, case study approach adopted in the study reported in this dissertation. Both studies were conducted in Australia, and both adopted a case study approach in an independent school environment.

Chittenden (1993) investigated the existence of a shared culture between staff and students at the Anglican Church Grammar School, in Melbourne. He adopted a naturalistic case study approach using qualitative field study methods, similar to that used in the study reported in this dissertation. He comments that all schools have a culture which is developed by the contribution of staff, students and administration. Sometimes there is a divergence of teachers and students to create two 'subcultures' which are opposing rather
than providing a unifying environment. Chittenden states that if a school can create a
shared organisational culture between staff and students, the result is likely to be an
effective school facing issues with a collegiality and collaboration. The sample for the
study consisted of two members of the school's Senior Administration and 20 members of
the school's 98 teaching staff. The sample also included 20 students who spanned the age
range at the school. The research used three methods, interviews, observation and
documents. Evidence was gathered over a three month period, and a three-phase plan of
orientation and overview, focussed exploration, and member check was used. Theory was
developed during these three phases using a grounded theory approach.

The findings from the study stated that the shared culture centred on the importance
of the academic curriculum and achievement within a subject centred approach. The
pastoral care structure, service activities, and the caring nature of the school were also
considered to be important aspects of the school culture. The notion of caring was
accompanied by a commitment by staff and students to the extra-curricular programme of
the school. The findings suggested that the organisational culture between the staff and
students at the school existed and that is was grounded in the value and significance of the
personal growth and academic aims of the school. The implications of the research are as
follows: the development of decision making which seeks to include the student body as
well as teaching staff; the further development of existing school cultural elements and the
heightening of the spiritual aspects of the school; the greater participation of all members of
the school community; the extension of the aims of the school to all sub-cultural groups;
and the employment of a range of external sources in the development of the educational
aims of the school. Chittenden concluded that in order to achieve excellence, students and
teachers must strive to develop the aims of the school and strengthen the existing school
culture. Whilst the nature of the study relates to the case studies reported later in this dissertation, the context is different.

The study conducted by Johnson (1999), like the study reported in this dissertation, takes as its focus a belief that schools are learning communities and that their prime function is student learning. It is the professional, the teacher, who is most critically involved in this learning process and is able to determine the best learning environment that will maximise the learning. It is changing classroom practice that will have the most impact on the learning process. This study stems from a belief in teachers-as-researchers who should be instrumental players in the research community given their belief in the reflective practitioner and experience in researching learning communities.

Johnson describes the ways in which a group of teachers working in a school-based network at Methodist Ladies College, Melbourne sought to straddle theory and practice by a discussion of how they engaged in research and linked it to teaching innovation. The College set up a Learning Network which became the vehicle for the action research engaged in by teachers. The model used a participant case study approach based on participant action research which provided a method of examining social phenomena via the analysis of a specific case. As researchers they seek to build conceptual understandings from the micro viewpoint of the case which maybe applicable elsewhere. Engaging teachers as researchers, Johnson reports, provided a powerful means of professional development. It created self-critical and self-reflective communities of professionals who were interested in developing their own professional skills, as well as their profession.

The case study focussed on the period from 1998 to 2000, although the reflective practice had been occurring over a longer period of time. This model of action research is
seen as embodying the notion of the reflective practitioner and developing the idea of staff development into professional development, and hence job-embedded learning. Johnson comments that a learning organisation grows out of teaching staff engaging in action research and self-directed learning, such that the combination of teacher knowledge and risk-taking culture results in emerging teaching innovations. The principles of such a Learning Network are: to improve learning in the school and put this as the prime focus for the whole school; to create opportunities for the teacher's voice to be heard and valued; to create opportunities for the learner's voice to be heard; and the commitment to look outward as well as inward. The key aspects of the Learning Network are: for classroom teachers to take charge of their own knowledge; to communicate research findings to the broader research community; to develop reflective teaching practice; to validate the classroom as a site for educational research; to help staff achieve principles of best practice proposed by learning theories; to help staff appreciate how students learn; and to help teachers articulate their own practice. The aim of the Learning Network was to shift research to the classroom, and to ensure that teacher learning translates into changes in teaching and classroom practice so that the classroom learning environment is continually changing in the light of their research. It is this approach which is relevant to the case studies reported later in this dissertation which question teachers about their learning environment and how they might improve it in order to provide better learning opportunities for students.

Action research has been seen as a powerful tool in effecting a change in the classroom practice of teachers, and an improvement in the learning environment for students. One example of such a study is the Middle Years Research and Development project (MYRAD) undertaken by the Victorian Department of Education, Employment and
Training, in association with the Centre for Applied Educational Research at The University of Melbourne (State of Victoria, Department of Education, Employment, and Training, 2001). The Initial Research Project was conducted from August 1998 to March 1999. It was predicated on the need for a concerted, systematic effort to develop an agenda for whole school reform in the middle years based on a set of strategic intentions, and a set of general design elements to be used by schools. Twelve schools made use of the conceptual framework and model. Each school involved in the project developed a systematic approach to observing and analysing the cognitive and affective dimensions of student learning; developed strategies for implementation of the design for school improvement; and developed trailed assessment and monitoring processes to enable evaluation of the design.

The findings of the study were very positive, and led schools to develop their own plans for action based on some of the following elements of the model: beliefs and understandings; standards and targets; monitoring and assessment; classroom teaching strategies; professional learning teams; school and class organisation; intervention and special assistance; home/school/community links; and leadership and coordination.

The success of the initial project has led to other initiatives focusing on Years 5 to 9 and the transition from primary to secondary school in four areas: literacy; numeracy; wellbeing/engagement; and thinking skills (Middle Years Matters, 2000). These aim to create people who are successful members of society through the creation of curriculum environments that are more responsive to the aptitudes and concerns of students. Schools are investigating the team/small group approach to classroom organisation; realising the advantages of involving students in negotiating the curriculum; and recognising that many students are under-stimulated in the average classroom environment. This action research
was aimed at teachers examining their current practice in order to improve the learning environment for students is precisely the domain of the case studies reported later in this dissertation. However, this research is specifically targeted at the middle years of schooling and its agenda, and does not take account of the aims of Catholic Schools which is the intention of the study reported in this dissertation.

The Quality Teacher Programme (QTP) currently being undertaken across systems and sectors of education in Western Australia is another example of an action research project, or School Site-Based Action Learning Initiative, aimed at improving classroom practice and learning environment. Action Learning is a professional development strategy which enables groups of teachers to solve real work-based problems, issues or concerns using the PADRE model: Plan, Act, Describe, Reflect, and Evaluate. This strategy has been applied to a cluster of Catholic primary and secondary schools in Perth, Western Australia in 2001 (Catholic Education Commission of Western Australia, 2001). Project 5: Learning and Teaching in Year 6-9 focussed on integrated curriculum and student learning. The following question guided the research for students in Year 6: how is your integrated/negotiated approach to curriculum affecting student motivation and learning? The research team of teachers undertook to implement an integrated approach to teaching taking learning styles of students into account. The following data were collected from students: a survey of how they learn best and their learning styles; and a benchmark test was administered to determine the results of this approach. The predicted indicators were: an increase in student involvement in their learning; an increase in their desire to learn; and increased work output. In Year 9 the research question in this project was: are the pedagogical practices, school structures and learning environment at secondary high school meeting the needs of Year 9 students?
The results of this research initiative are not available to date, but nevertheless the nature of the research design is pertinent to the study reported in this dissertation insofar as it is concerned with teachers examining their learning environment in order to improve student learning. However, the study reported in this dissertation defines learning environment much more broadly than that of the classroom, and examines the learning environment across the secondary school, not just in the middle years of schooling. It also adopts a case study approach rather than action learning.

One final study relevant to the proposed research is that conducted by Dillon (1989) in his research on schools and the characteristics of effective teachers. There is a large body of literature on the effective teacher, but the comment made by Dillon, as a result of a one year participant observation study of a teacher's classroom in a rural secondary school in the United States of America, is worthy of inclusion here. He identifies two driving forces at the heart of the effective teacher's teaching:

*His sensitivity to his students and what they explicitly and implicitly need as they attempt to learn in a variety of contexts, and his love of the excitement, the unpredictableness, and the challenge of unsolved problems associated with teaching. These rewards and challenges are what motivate teachers ... to strive toward mastering the art of effective teaching.* (p.228).

He comments on the research about school learning environments that effective teaching and learning defy identification and quantification, but rather it requires specific and long term observation of the learning environment itself. He does specify certain conditions that must exist before effective teaching can occur:

*These conditions include giving teachers the freedom to be risk takers, encouraging them to try new ideas, allowing them not to be bound to
cover particular content, encouraging experimentation with various
teaching styles, providing them with time to reflect on their teaching,
and acknowledging that they need to work toward constructing a
model of teaching that works for each of them in their specific setting
and with various groups of students. At the heart of these models are
the goals of developing relationships with students, believing in
students' abilities to learn, listening to students to gain a better
understanding of what they know and how they learn, and providing
students with meaningful experiences during classroom lessons
(p.256).

This study is relevant to the proposed research where teachers' perceptions are sought
regarding the best learning environment to promote student learning. It also highlights the
need for a case study approach to an examination of learning environments, where context
is an important consideration.

The Aim of the Study

As this chapter attempts to demonstrate, there is a great deal of research available
that has investigated the nature of learning environments and the ways in which students
can be motivated to learn, the learning process, and the creation of effective learning
communities. Some of these studies have focussed on gaining data from students, from
teachers, from parents, and from a combination of these stakeholders. More recent studies
have tended to focus on a case study or action research approach in recognition of the need
to involve practitioners in the research if change is to occur, and effective learning
environments are to be created. Much of the evidence from comparing a range of studies
across the research literature suggests that learning is contextual; that is, the learning
environment best able to maximise students’ learning is related to the social and cultural context of the learning.

It is in this area of contextual learning that the research is limited. An extensive examination of the literature in the field has not revealed any studies that investigate teachers' understanding of the learning environment and how it can be organised to enhance learning, from teachers' perspectives within the secondary school sector of the Catholic Education System in Western Australia. If the learning is context specific, then it is necessary to research within that context. This suggests that a case study approach is appropriate and that the context might be different for each case studied. The study reported in this dissertation aims to examine the development of sustainable learning communities in two schools in the Catholic Education System of Western Australia. Specifically it aims to develop an understanding of teachers’ perceptions of the learning environment and how it can be organised to enhance the learning process. It does this in the values laden environment of Catholic schools where the learning community is focussed on Catholic values, the teachings of the Gospel. It is in this context that there has been a lack of research to date, and hence the need for this study. This study aims to contribute to that body of knowledge, and to develop a clearer understanding of what a sustainable learning environment might be for two secondary schools in the Catholic Education System in Western Australia.
Conclusion

This chapter has reviewed the empirical research that has been conducted recently in the areas relevant to the study reported in this dissertation. This research spans the areas of school reform and re-structuring, school improvement, leadership, and professional community. It has reviewed this research using the five concepts adopted for the contextual literature review in Chapter One: learning revolution; theories of learning; learning process; learning environments; and learning communities. Whilst the literature is abundant there is little evidence of research having been undertaken in the precise area of the study reported in this dissertation; that is teachers' perspectives on learning environments in Catholic Secondary Schools in Western Australia.

The following chapter of this dissertation will describe the research methodology used for the case studies reported in later chapters.
CHAPTER THREE

METHODOLOGY

Introduction

In order to examine teachers' perspectives of the learning environment and how it might be improved to enhance the learning process, it is necessary to understand the perspectives of teachers in relation to the learning environment that they currently provide and how they consider this could be improved. This chapter describes the methodology used to undertake the research. The study is undertaken from an interpretivist theoretical position applying grounded theory to a case study approach where participants from two schools are interviewed to arrive at an understanding of their perspectives of the learning environment. Following a description of the theoretical framework of the study, this chapter goes on to detail the selection of the schools and participants that provide the case studies for the research. Finally, the chapter outlines the processes of data collection and analysis used to explore the research question, and from which the propositions that summarise the findings of this study were developed.

The Interpretivist Method of Inquiry

In this study it is important to understand how teachers view the learning environment and to be able to interpret their understandings. Therefore, this research will be undertaken from an interpretivist theoretical position, where primary importance is placed on the social meanings people attach to the world around them. The assumption
underlying this position is that it is human behaviour, what people say and do, that determines how they define and view the world (Lincoln and Guba, 1985).

The purpose of interpretivist social science is to understand social reality as different people see it and to demonstrate how their views shape the actions they take (Hill and Kerbert, 1967). Interpretivists argue that the social world can only be understood from the standpoint of the individuals who are part of the ongoing action being investigated, so that if a researcher is to understand the actions of an individual that researcher must share her frame of reference. This defines a subjective view in that an understanding of an individual's interpretations of the world around her must come from the inside.

This research adopts a qualitative approach as it is concerned with developing an understanding of the perspectives of teachers on the learning environment, which suggests that human action is best observed and explored in context. The understandings teachers have of learning are informed by the natural setting of the school, and so it is important in coming to an understanding of how teachers view the learning process that the researcher studies this in the local setting.

**Interpretivism**

In the interpretivist paradigm, theory is emergent as the researcher builds theory from experience and understanding. Theory develops as a result of the research, and is grounded in data generated by the research act; it follows rather than precedes the research. The theory becomes a set of meanings that yield understanding and insight into people's behaviour. It provides multifaceted images of human behaviour as varied as the situations and contexts supporting them. In this study the researcher is concerned to develop an understanding of teachers' perspectives on the best learning environment to enhance the
learning process. The development of this understanding means that the theory emerges as the data is gathered and interpreted rather than being established from a preconceived notion.

What constitutes reality is in contestation in much the same way as is the nature of knowledge. Constructed reality is the notion that reality is a construction in the minds of individuals. We can never know reality, but "there are an infinite number of constructions that might be made, and hence there are multiple realities" (Lincoln and Guba, 1985: p.84).

The researcher is an interpreter providing images or perspectives, which are coloured by tacit knowledge, personally and culturally constructed. Researchers select the variables, indicators and instruments they will use to represent education, so that representation is different from reality just as perception is different from reality. This distinction is revealed in constructivism, which Stake and Kerr (1995) describe as a flowing reality formed of interpretations worked and reworked, insisting on dynamic relationships among evolving interpretations. Constructivism is not aimed at confirmation, it is not concerned with 'what is' but with 'what is worth pondering'. Interpretation gives rise to an awareness of the multiplicities of realities, and calls for new interpretations of interpretation. In relation to this study, a constructivist approach is adopted when the researcher develops an interpretation, or understanding of the perspectives teachers have of how they can provide the best learning environment for the learning process.

Barton and Walker (1978) view persons as active participants:

In the creation and construction of social reality ....The nature of school knowledge, the organization of the school, the ideologies of teachers ... all become relative - and the central task of the sociology of education becomes to reveal what constitutes reality for the participants in a given
situation, to explain how those participants came to view reality in this way (p.274).

It is this task that is the central focus of this research. The aim is to develop a better understanding of the perspectives that teachers have of how the learning environment should be structured to facilitate the learning process.

The Qualitative Process

Bogdan and Biklen (1992), Lincoln and Guba (1985), and Taylor and Bogdan (1984), and state that qualitative research takes place in the natural setting or context of the entity, because realities are wholes that cannot be isolated from their contexts, or fragmented. The setting in which it occurs significantly influences human behaviour. The belief in complex mutual shaping suggests that the phenomena must be studied in their full-scale force field, as they take their meaning as much from their context as they do from themselves. No phenomena can be understood out of relationship to their time and context. The context is crucial also in deciding whether or not a finding may have meaning in some other context as well. The context of time and place has an influence on what is being studied so that the researcher goes to the setting in order to interview or observe. In the case of this study the researcher will interview the participants in their school. Since the business of this research is concerned with setting, with the learning environment, this is an important aspect of the investigation.

The primary data-gathering instrument is the human instrument because only a human instrument is sufficiently adaptable and responsive to cope with the indeterminate situation of the study. Humans can respond to all personal and environmental cues: they are adaptable and can collect data about multiple factors simultaneously; they have an
holistic emphasis that enables them to grasp information about a phenomenon and its context in all its complexity. Humans can operate simultaneously in the domains of tacit and propositional knowledge; they can process information immediately it becomes available and generate and test hypotheses as soon as they are created. Human instruments are capable of clarifying and summarizing data and giving instant feedback as well as responding to idiosyncratic responses. It is this personal relationship between the participant and the instrument that is important in understanding the human and social side to life. In this study, if the researcher is to understand learning environments and how they can influence the learning process it is important to gain data from those people most intimately involved in their creation, that is the teachers.

This type of inquiry values tacit knowledge in addition to propositional knowledge. Tacit knowledge is a set of understandings gained from experience, it is intuition based on understanding, or the sum total of one's professional experience; whereas propositional knowledge is the interpersonally shared statements based on observations of objects or events. Propositional knowledge is more tangible and objective than tacit knowledge. Tacit knowledge is an influential part of the research which provides the basis on which the human instrument builds many of the insights and hypotheses that will develop. The indeterminate nature of the inquiry requires that the human instrument be able to use tacit knowledge and convert it to propositional knowledge so that the inquirer can think about it and communicate it to others. Qualitative methods of inquiry are those methods that are extensions of normal human activities such as listening, looking, speaking and reading. This means that interviewing is the main mode of collecting data.
Case Study Approach

Whilst a case study approach can accommodate a variety of disciplinary perspectives both quantitative and qualitative, Merriam (1988) states that a case study approach to research in education is qualitative and hypothesis testing, focussing on discovery, insight and understanding from the perspectives of those being studied, in this case teachers. She lists four characteristics essential for a qualitative case study which are: particularistic, focussing on a particular situation; descriptive, providing a 'thick' description and interpretation of the phenomena under study; heuristic, illuminating the researcher's understanding of the phenomena and bringing about the discovery of new meaning; and inductive, generalisations, concepts and hypotheses emerging from an examination of the data.

The research problem in this case is a concern about the current nature and provision of learning environments and the need to understand teachers' understandings of what constitutes a good learning environment and how this can be provided in order to enhance the learning process. This study adopts a case study approach because, as Bromley (1986) states, it is necessary to "get as close to the subject of interest as they (the researcher) possibly can, partly by means of direct observation in natural settings, partly by their access to subjective factors (thoughts, feelings and desires)" (p.23). Bromley goes on to say that a case study may also be appropriate when the information gleaned from participants is not subject to truth or falsity, but rather the aim of the study is "to eliminate erroneous conclusion so that one is left with the best possible, and most compelling, interpretation" (p.38). Foreman (1948) states that a case study is useful when the problem involves developing a new line of inquiry, needs further conceptualisation of functions or
factors, "demands emphasis on the pattern of interpretation given by subjects" (p.419). In this study it is the understandings provided by teachers that are important.

**Grounded theory**

The grounded theory methodology has developed in response to the need for a framework that would provide new understandings of social processes and natural settings, the focus of this study. Grounded theory is based on the discovery and conceptualisation of specific interactional processes. It is founded on the notion of discovering the world as seen through the eyes of the participants and the basic social processes or structures that organise that world (Hutchinson, 1940).

The grounded theory methodology determined the processes used for collecting, coding and analysing data for this study. The use of focus group and individual interviews allowed the researcher to develop an understanding of teachers' understanding of the learning environments best suited to the learning needs of their students. As these understandings emerged the researcher used this data to form propositions that led to the development of an hypothesis. The theory developed from the data as it was gathered and analysed. Whilst the researcher began with a research question that informed the approach to the study, the propositions emerged from the data.

**The Research Setting**

The study reported in this dissertation adopted a case study approach. The problem underlying this study was the need to develop an understanding of teachers' perspectives on the way in which the learning environment is structured to facilitate the learning process.
The study aimed to accumulate knowledge and information in a social context in order to construct meaning in relation to this problem (Erlander, Harris, Skipper and Allen, 1993). This problem was researched by conducting a study based on information obtained from teachers employed at two secondary colleges, both of which are in the Catholic Education sector of the Western Australian education system, and will be referred to as College X and College Y.

One of the case study colleges, College X is a K-12 co-educational college for day students, although only the secondary component of the College is relevant to this study. The College was established in 1992, with a cohort of 58 Year 8 students and has grown to a total population of 920 students, of which 630 are in the secondary component of the college. The other college, College Y, is a girls' secondary college which was established in 1937 and currently has 660 students, 160 of whom are boarders. College X is outside of the metropolitan area, situated in a large country town, whilst College Y is within the metropolitan area. The two colleges differ with regard to the clientele they serve. College X is located in a lower socio economic area with a high unemployment rate, and the main sources of employment are the mining industry and small business. College Y is located in a higher socio economic area and the families are generally more affluent and have a business or professional background. Both colleges serve a rural community, College X has a rural hinterland, whilst College Y serves the whole of Western Australia via its boarding facility.

The selection of schools within the Catholic Education sector was determined by the fact that schools within this sector have a common and clearly defined set of values that informs the learning environment, such that a specific natural setting is available for study (Erlander et al., 1993) and a common context provided in which the learning can occur.
Learning is effective when it is reinforced throughout the community within which the learner operates and interacts. When learning is supported by a set of values articulated throughout the community this provides for continuity in the learning. Marshall and Rossman (1989) note that it is important that the researcher has entry to the site; in this case the researcher is familiar with the Catholic Education sector in Western Australia and has access to sites within this system.

In sampling schools within the system there were a number of criteria to consider. These criteria covered differences in location, nature of student population, nature of facilities, age of school, and socio-economic status of clientele. Each of the two colleges has a very different contributing population with regard to socio-economic status and educational expectations, as mentioned previously. Length of service and teaching experience of the staff is different in each of the two colleges. Whilst other colleges could have been selected within the Catholic Education sector of Western Australia displaying the same diversity of criteria, these were the colleges that made themselves available to the researcher.

Participants from these two colleges were selected by purposive sampling, (Chein, 1981; Patton, 1980), also referred to as criterion-based sampling, (Goetz and LeCompte, 1984) where standards or criteria are established necessary for units to be included in the investigation. The aim was to maximise the variation in the information and to maximise the range of data exposed and increase the researcher’s ability to identify emerging themes that take account of contextual conditions.

The initial sample consisted of staff members representing a wide range of viewpoints in respect to the research question. Lincoln and Guba (1985) suggest that the
sample should be selected in ways that will provide the broadest range of information; what Patton (1980) calls maximum variation sampling where extreme cases, typical cases, critical cases, maximum variation cases, sensitive cases and convenient cases are all included. Lincoln and Guba (1985) state that initial interviews should recognise gatekeepers, experts, and informants. In this study no pre-selection of the participants was made, but staff were invited to become participants in the research. This enabled the maximum number of participants to be engaged in the interview process ensuring a breadth of cases.

Participants were categorised according to their professional experience, length of service at the college, and status within the college, as these were criteria that might be relevant to their understanding of the learning environment and its effect on the learning process of students. On this basis four categories were devised: teachers who were new to the College; more experienced teachers; less experienced teachers; and the senior management team. These categories were very broadly defined to take account of the very different staffing circumstances of the two colleges pertinent to the study, and the availability of the participants for interview. In fact these categories, particularly those of ‘less’ and ‘more’ experienced teachers, became blurred due to staff availability for interview.

At College X the four teachers interviewed who were categorised as ‘new to the College’ had been teaching at the College for only 6 weeks prior to the interview. The first interview took place in Term One of the school year. At College Y, however, the four teachers interviewed in this category had been teaching at the College for 2 to 3 years as these were the most recent appointments to the staff, and the interview took place toward the end of Term Two. The categories of ‘more’ and ‘less’ experienced teachers were
loosely defined as those teachers who had been teaching for more or less than about 10 years. The senior management of the College was defined as those with senior management status.

Criteria such as age, gender and subject specialisation were not taken into consideration in determining the initial sample, however there was a broad spread of participants across each of these criteria. These criteria were not used to determine the interview categories and so these criteria were distributed across the selection categories. An example of this would be the participants 'new to the College' at College X who included graduate teachers and teachers with more than 20 years of experience, ranging in age from 21 years to over 40 years, and composing two male and two female participants, and including specialist teachers of Mathematics, English and Society and Environment.

In total 27 participants were interviewed; 15 participants from College X, and 12 participants from College Y. The difference in sample size between the two case studies is due to the availability of participants to fit the interview schedule.

Data Collection

The Research Question

The focus question for this study was:

What are the perspectives that teachers have of the learning environment and how it could be organised to enhance the learning process?

This question informed the focus group and individual interviews that formed the data collection process used in this study.
Focus Group Interviews

The main form of data collection was by focus group interviews. The focus group interview is an organised, informal, in-depth discussion among selected individuals about specific topics focussed around a single theme (Beck, Trombetta, & Share, 1986; Krueger, 1986; Vaughn, Schumm & Sinagub, 1996; Byers and Wilcox, 1988). It is a research tool that allows the researcher to understand more about what key stakeholders think and feel.

There are a number of advantages to the focus group interview over the individual interview which made it a useful instrument for the collection of data in this study. It provides a flexible tool for encouraging interaction among participants as well as interaction between moderator and participants. This interaction between participants has the potential to add depth and dimension to the knowledge gained, as well as an understanding of perceptions, beliefs, attitudes and experiences from multiple points of view. The anonymity of the group discussion can lead to greater honesty and openness by participants, and the relaxed setting of the group has a ‘loosening effect’ on the participants. An important advantage for the researcher in this instance is its efficiency in that it allows the collection of a range of specific information in a very short period of time. From a interpretive approach, the focus group interview allows the researcher with an initial knowledge of the topic to develop a more in-depth understanding from the perceptions of various participants (Vaughn et al., 1996). In the case of this study these were important considerations, particularly the ability to interview a larger sample of participants than would otherwise have been possible, and the promotion of interaction between participants that this form of interviewing facilitates.
A disadvantage to this interviewing technique is the practical limitation imposed by scheduling participants. There is less flexibility when a schedule needs to be organised in consultation with 4 or more participants. This inflexibility was experienced in this study and it influenced the number and combination of participants in each focus group interview. As stated previously, the categories of 'less' and 'more' experienced participants became blurred by the availability of the participants for interview.

There were two stages in the data collection for this study. The first stage was by focus group interview. Four such interviews were held for each case study, eight interviews in total, where between 2 and 5 participants were interviewed for a period of between 60 and 90 minutes. Following these interviews, and after the data from these interviews had been analysed, the second stage of data collection occurred. In this stage individual interviews were conducted with participants selected from the initial focus group interviews. Participants were invited to participate in a second, individual interview where they had the opportunity to provide more detailed responses to the issues they raised in the initial interview. These participants were selected according to their responses in the initial interview. These participants were selected so that greater depth could be gained from the knowledge gathered in the focus group interviews. Four individual interviews were conducted at this second stage, two for each of the case studies.

Focus group interviews for the two case studies were organised in the following way. In all cases participants were assigned pseudonyms to ensure their anonymity. The four interviews at College X were conducted involving 15 participants. The first interview was conducted with participants who has joined the college staff at the beginning of the year. This interview was conducted with 4 participants: Andrew; Brenda; Craig; and Debbie. Both Andrew and Debbie were graduate teachers, in their early 20s, and both
teaching in the English faculty. Craig and Brenda were both experienced teachers who taught in the Year 8 Learning Team and Mathematics faculty respectively. The second interview was conducted with 4 less experienced staff. The participants were Ellie, Felicity, Gaby, and Helen. Whilst these participants were described as less experienced, in fact their experience was quite considerable. The least experienced was Helen with 6 years' teaching experience and the most experienced was Ellie who had been teaching in excess of 20 years. Their learning area experience spanned Mathematics, Science and English, and included a Teacher Librarian and a Coordinator of Year 9 Learning Teams. The third interview was conducted with more experienced staff who included 5 teachers: Keith; Les; Melanie; Neil; and Olivia. Whilst these teachers were classed as more experienced their experience ranged greatly, from Neil who was Head of Applied Sciences and had been teaching for more than 20 years, to Keith and Les who had been teaching for 3 and 5 years respectively. Neil and Olivia both taught in the Mathematics' faculty, Melanie and Keith were scientists, and Les taught in Society and Environment. Melanie, Keith and Les all taught in the Middle School Learning Teams. The fourth interview was conducted with the senior management team consisting of the Head of Senior School, Ian, and the Head of Middle School, John. Whilst these two staff members had taught at the school for several years this was their first year in these senior management roles.

A total of 12 participants were interviewed at College Y and they were organised as follows. The first interview involved 4 participants who were very experienced: Andrea; Belinda; Cathy; and Donna. Each of these participants had served at the College for more than 10 years, and in Belinda's case, more than 20 years. In three of the four cases they were members of the middle management of the College. Their subject areas included Society and Environment, Art, LOTE, and Business Education. In the second interview
three staff were interviewed who were less experienced: Evelyn; Francine; and Gwenneth. Their teaching experience ranged from 2 to 10 years, and their subject areas included English and Science. Three staff who had served for a maximum of 2 years at the college, Jeff, Hannah, and Ilma, formed the third interview. Catherine had 2 years’ teaching experience, whereas both Jeff and Hannah had much more lengthy teaching experience. Jodie had taught at the College for several years, but she had taken leave and only recently returned to the College. Jodie taught in the Business and Computing faculty, Jeff taught mathematics, and Ilma taught Society and Environment. The senior management team, consisting of Rebecca, Deputy Principal (Curriculum) and Sally, Deputy Principal (Pastoral Care), both of whom had occupied these positions at the College for more than 10 years, were interviewed last.

Interviews were conducted at each participant's school at pre-scheduled times convenient to the participant. This posed a problem with regard to the participants involved in the 'less' and 'more' experienced categories. Teachers selected an interview time convenient to them which caused these categories to be fairly loosely interpreted for College X participants. The researcher conducted interviews at College Y, and the first (newly appointed staff) and fourth (management team) interviews at College X. Focus Group interviews for 'less' experienced and 'more' experienced staff at College X were conducted by a third party, a person familiar with the research territory, but not known to the participants. This was necessitated by ethical considerations due to the fact that the researcher was known to the participants and worked with them, a fact which could potentially contaminate the data collected in these interviews.

**Interview structure.** The first stage of the focus group interviews was aimed at exploring issues related to the focus research question. Participants were provided with a
list of questions prior to the interview along with the comment that these questions were merely an indication of the researcher’s area of interest and a specific request that they do not prepare answers to them as the interview conversation needed to be spontaneous. The researcher also prepared an aide memoire for her own reference during the interview. Both of these documents are provided in Appendices 1 and 2 respectively. These questions formed the basis for the ensuing interview, but were not specifically addressed at interview.

Each interview was semi-structured so that the participant was able to talk freely. The format for the interviews was divided in this way: a) introduction, b) purpose statement, followed by c) easy, warm up questions, proceeded by d) more complex questions, and concluding with e) a closing statement. The purpose statement used in these focus group interviews was:

*I am looking at learning environments in terms of what’s in class, what’s in school and what’s out of school. What our current learning environment is and what it should be like in the future, and what we need to do to get there. That is my focus in coming to an understanding of what teachers think the learning environment should be.*

*I would like to focus on those areas and look at current learning environments and what you see in your current learning environment because that’s what we know and that’s what we deal with day to day.....*

**Guiding questions.** The following questions indicate the areas covered by each interview. These questions were asked under the following headings: physical environment of the classroom; provision of information technologies; values; student motivation and engagement; grouping of students; teaching environment; learning strategies; school structures; parent involvement; and community.
A. The classroom environment:

1. What are teachers' understandings of how the classroom environment should be structured to ensure that students are successful learners? What sorts of spaces and facilities should be made available?

2. What is the place of technology and how should it be made available to learners?

3. How should learners be grouped?

4. What do you think motivates students to learn and engages them in the learning process?

5. What values do we present to our students and do students understand the values that we are presenting to them?

6. How would you describe your current classroom practice? What learning strategies do you currently use with students?

B. The whole school structures:

1. What are teachers' understandings of the current organisation of the school and the school day and how should this be organised to facilitate learning.

C. The learning environment outside of the classroom:

1. Do adults, other than teachers, have a part to play in the learning environment and if so, who are they, and how can they become involved in the learning?

2. How can the learning community and agencies outside of the classroom be used to enrich learning?

These questions were sufficiently broad to encourage discussion so that data could be accumulated. Specific questions and prompts were developed from within these broad topic areas. These areas were redefined as the interviews progressed, and in light of the information that emanated from each interview. The researcher became a reflective listener during the interview, interjecting where appropriate and responding to the comments made by the participants.
Each interview began with informal talk to establish confidence, to develop accord and to make the participant feel relaxed. This occupied a very brief space of time so that the main agenda of the interview could be broached. In the body of the interview questions were structured so that the participant was given adequate direction but also sufficient room to express detailed opinions. As the interview progressed, the questions became more specific. Probes were useful for the researcher to invite the participant to extend their answer and provide a more detailed response.

The study progressed through several phases that caused the nature of the interview to change. The initial phase required a broad range of open-ended questions so that the researcher could gain a feel for the field. Lincoln and Guba (1985) describe this as the "grand tour" phase where questions are aimed at allowing the participant to tell the researcher what she might want to know. This provides the researcher with information so that she can determine what is important enough to follow up in detail. The second phase is one of "focussed exploration" where the researcher is able to obtain information in depth about those areas that are determined to be salient. The focus and depth of questioning increased as the study progressed and the researcher gained a greater understanding of teachers' perceptions of the learning environment. Between each interview, time was allowed for data analysis to occur so that the next interview could be enlightened by information already received and checked.

Each focus group interview was tape recorded, and the tape transcribed verbatim ready for analysis. This occurred at the end of each interview and before the next interview so that the as the data emerged it could be used to inform the following interview. All participants received a hard copy of the transcript of their interview and were invited to make any changes they felt appropriate. No changes were submitted to the researcher.
It was the emergent data from the analysis of the focus group interviews that determined the participants who would be selected to a second, individual interview. Four participants were selected for individual interview on the basis of the comments that they contributed to the focus group interview. These participants were Craig and Helen from College X, and Andrea and Evelyn from College Y. These participants were chosen so that they could provide greater depth to some of the comments they had offered previously. These comments had in some cases been reinforced across participants and become salient, and in other cases were at variance to the opinions of others, in either case they needed further exploration. This selection process, and the second round of interviews, took place only after all the data from the focus group interviews in both school had been completed and the data analysed.

Individual interviews were conducted under the same conditions as those for focus group interviews. The participants were informed that the purpose of the interview would be to explore some of the comments that they raised in the previous interview more fully. Questions were therefore based on the transcript from the tape. These interviews were taped and the tapes transcribed, but only comments that proved useful in extending the knowledge already gained from the previous interviews were transcribed. Whilst the researcher had envisaged conducting a greater number of individual interviews than four, it was found that the point of redundancy had been reached. The information obtained from the third and fourth individual interviews did not contribute substantially to the knowledge already obtained from previous interviews.
Data Analysis

The data were analysed inductively to uncover embedded meanings and make it explicit. In this method, researchers develop concepts, insights and understandings from patterns in the data. This requires a flexible research design where the researcher begins the study with only vaguely formulated research questions and refines these in the light of the research findings. It is a 'bottom up model' where one constructs a picture that takes shape as the data is collected and examined. Lincoln and Guba (1985) outline two subprocesses associated with this type of analysis: 'unitizing' and 'categorizing'. Unitizing is a process of coding the data by aggregating it into units; categorizing is a process whereby unitized data are organised into categories that provide description or information about the context from which the units were derived. It is this system of coding data for analysis that was used in this study.

The theoretical approach used in this study was a method for discovering theories, concepts and hypotheses directly from the data. It involved collecting data, looking for key issues and recurrent ideas that become the basis for establishing categories or themes (Glaser and Strauss, 1967). Two of the three stages of data analysis were used: open coding involving collecting data that provide many incidents of the categories so that the diversity of the dimensions under the categories can be seen; and axial coding seeking to build the categories around the model. This provides a design whereby the theory emerges from the data, and there is a continuous process of data analysis as the study progresses.

Coding the Data

The first task is to read and re-read the data. It is important to read through field notes carefully so that the researcher knows the data intimately. As these ideas come to
light it is necessary to look for emerging themes implicit in these ideas. It is through concepts and propositions that the researcher moves from description to interpretation and theory. Developing concepts is an intuitive process gleaned by poring over the data looking for words and phrases used by the participant to capture some particular meaning.

In this study much of this reading and preliminary data analysis was done during the process of data collection. It was necessary to transcribe and code the data from an interview before commencing the next interview. This enabled the researcher to think deeply about the data being collected, reflect on the ideas of participants and build an understanding of the topic as the data collection progressed. In this sense data collection and analysis are simultaneous and not sequential, and theories and hypotheses emerge from the data.

Open coding. The first stage of coding is to unitise the data. The aim is to establish units of information that will serve as the basis for defining categories at a later stage. These units must be heuristic, that is based on some understanding or action that the researcher needs to have or to take; and they must also be based on the smallest piece of information, that is they must be stand alone and be interpretable in the absence of other information. They are the smallest unit of code such as a sentence, a phrase, or a word encapsulating an idea.

In this study the data were coded according to the concepts and ideas that emerged as a result of reading the transcripts of the interviews. The codes used in this study were based on phrases and sentences used by the participants and were identified by key words. The coding system developed as more interviews were read and coded, so that categories of codes became evident from the data. As the interviews progressed these categories became
more evident. Whilst the initial coding was trial and error, as suggested by Bogdan and Biklen (1992), an appropriate coding system soon became apparent. This coding system was refined by expanding and collapsing the categories as more data became available, so that the codes developed to fit the data (Taylor and Bogdan, 1984). This was a process of unitising, as each phrase and sentence, or unit, was given a code so that as more units were coded a pattern became evident and the coding began to suggest categories emerging from the data. A sample of this process is provided in Appendix 3.

**Axial coding.** The second phase of coding is to bring codes together into categories. Once all the data has been coded relationships between codes needs to be established. A system of codes and sub-codes are established so that data can be sorted.

In this study the codes established in the initial coding stage of data analysis were brought together under headings. These headings suggested themselves from the patterns, or categories identified in the earlier stage of analysis, but they also reflected the aspects of the learning environment addressed by the questions asked at interview. However, it became apparent that some aspects of the learning environment were viewed as more important or relevant than others. The significance of some data in contrast to other data were revealed not just by what was stated but by how long the participants spent on a particular aspect, or the intensity of participants' feelings about an issue. Whilst the researcher introduced the topics for discussion she did not guide or probe the extent of discussion. The degree to which there was consensus or disagreement about a topic was important in drawing categories together. The most important aspects of the learning environment were seen to be those relating to values, the intrinsic and extrinsic motivation of students, and the relationships or rapport that developed between student and teacher. In contrast to this, categories that assumed less significance were related to classroom
facilities, teaching environment and learning strategies. New categories had also emerged that had not been anticipated such as the significance attached to gender as a basis for grouping, so that concepts and theories began to emerge from the data that were not directly related to the questions asked at interview.

In order to obtain a clearer picture of these categories they were aggregated between schools, and between groups. An example of this process can be seen in Appendices 4a and 4b respectively. The between groups data were not significant, that is to say that there was very little relationship between the same group across the two schools, whereas there was considerable significance in the data between schools. This provided justification for the case study approach. It may also reinforce the fact that the groups were not distinctly defined at the point of data collection.

Once coding had been completed the next stage was to review all the data that has been left out of the analysis. Whilst no study uses all the data that is collected it is necessary to ensure that no data has been discarded that could fit into the coded categories and provide useful additional evidence.

Discounting data. Deutscher (1973) calls this final stage in analysis of data the discounting data stage where the data is interpreted in the context in which they were collected. The researcher solicits data by the methodology she uses and the questions she asks: would the response have been different if the participant had talked spontaneously? It is also important for the researcher to understand the effect she had on the setting in which she entered. By comparing data received at different stages in the research it is possible to ascertain a measure of the effect of the researcher on the setting.
In this study the final stage of data analysis was to refine the constructs that had been developed for each case study into a set of propositions (see Appendix 5). Miles and Huberman (1984) state that "by comparing sites or cases, one can establish the range of generality of a finding or explanation, and at the same time, pin down the conditions under which that finding will occur" (p.151). Yin (1984) comments that to build a multi-case study one needs to "build a general explanation that fits each of the individual cases, even though the cases will vary in their details" (p.108). In this case five propositions emerged from the data which were relevant across the two case studies. These propositions were the result of the comparison of data cross the cases and as a result of the coding processes described earlier. These propositions, together with a detailed cross case analysis of the data, are to be found in Chapter Six, and form the basis for the findings of the study.

Trustworthiness

Lincoln and Guba (1985) suggest that for qualitative research measures of 'credibility', 'transferability', 'dependability', and 'confirmability' are measures of trustworthiness. In the case of the study reported in this dissertation creditability, dependability and confirmability were used to establish trustworthiness.

Credibility can be established in this study by prolonged engagement, triangulation, and member checking. Prolonged engagement suggests that the researcher needs to be in the setting long enough to learn the culture, test for misinformation and build trust. In the case of this study prolonged engagement was achieved by the interviews being conducted over a span of six months for the focus group interviews, and the individual interviews were conducted about four months later than this. This spanned the data collection over the extent of the school year and allowed time to pass between the two stages of the interview
process. This helped to reduce the impact of any particular event occurring at the school at a particular point in time and to build trust and rapport between the participants and the researcher.

It can be argued that triangulation is achieved by using both focus group interviews and individual interviews to verify the data gathered. The individual interviews confirm the data gathered in the focus group interview. For the first case study, College X, where the researcher was known to the participants, the focus group interviews were conducted by a third party who was unknown to the participants. This reduced the opportunity for contamination of the data by the intervention of the researcher. During interviews the researcher was careful not to intervene other than to ask questions and to prompt where necessary, so that the participants were able to interact spontaneously with each other. Member checks were conducted once the data had been transcribed which gave opportunity for the participants to confirm the validity of the data.

The spontaneous conversation of the interviews, together with the verbatim transcription of the interviews, from which analysis proceeded provides thick description of the context of the interviews. Participants were able to describe situations in detail and to recount incidents that provided the context for their opinions and responses. Examples of this are to be found in Chapters Four and Five. The participants were able to speak freely and offered a range of typical and divergent data on the topic under discussion.

The Audit Trail

An audit trail is developed in order to satisfy the demands of dependability and confirmability. It is a residue of records stemming from the inquiry, which are coded in such a way as to become a useful tool to the researcher when writing up the report. For the
purposes of this research the main forms of audit trail were the raw data, the field notes from interviews conducted and transcribed; the analysis of those field notes and summaries emanating from them; various types of data reconstruction and synthesis; and process notes including methodological and trustworthiness notes. These techniques can help to establish a degree of trustworthiness in the inquiry, but as Lincoln and Guba (1985) state “naturalistic inquiry operates as an open system; no amount of member checking, triangulation, persistent observation, auditing, or whatever can ever compel; it can at best persuade” (p.329).

Together, these methods can help to convince the audience that the findings of the research are worthy of attention and are credible, but essentially the collection and analysis of data need to stand alone in their credibility.

Conclusion

In order to ascertain the understanding that teachers have of the learning environment it is necessary to ask questions, and interview the people involved in the learning process. From these interviews it is possible to develop propositions and hypotheses that might help to develop an understanding of how teachers perceive the learning environment, and how they believe that the learning environment can be structured to facilitate the learning process. This chapter has described the approach taken in this study based on interpretivism as the research methodology and using a grounded theory approach to the collection and analysis of data which resulted in the emergence of five propositions used to compare the findings in the two case studies researched. Chapters
Four and Five to follow examine each of the two case studies, and Chapter Six provides a cross-case analysis of the findings from these two cases.
CHAPTER FOUR

FIRST CASE STUDY: COLLEGE X

Introduction

The aim of this study is to determine teachers' perspectives on how schools can best be organised to enhance the learning process. This chapter presents the first of two case studies that sought teachers' responses to questions about the current learning environment and how they would like to see it changed to facilitate the learning process. In the case described here, a total of 15 teachers were interviewed, in a series of four focus interviews, with follow-up individual interviews with two of the participants. Length of time at the College, length of teaching experience, and position within the organisation of the College were criteria used for grouping participants for focus groups. Focus interviews were conducted with four staff who had joined the staff of the school at the beginning of the year: Andrew, Brenda, Craig and Debbie; four staff were who were less experienced: Ellie, Felicity, Gaby and Helen; five more experienced staff: Keith, Les, Melanie, Neil and Olivia; and a fifth focus interview was conducted with the management team: Ian and John. When these interviews had been completed, individual interviews were conducted with Craig and Helen.

The chapter has been organised under a series of topics that reveal the themes that emerged from the data. Whilst these themes do not equate with those that emerged from a review of the literature, they do have a consistency with, and resemblance to those themes, and it is possible to make links between them. The topics that emerged from the data were: values; rapport; motivation; student grouping; teaching environment; learning strategies; physical environment and facilities of the classroom; technology; school structures;
parents; and community. These were the aspects of the learning environment on which participants chose to focus their comments during interview. These topics will remain constant in the two case studies, Chapter Four and Five.

Aspects of the Learning Environment

Values

There was general agreement across participants that the most important influence in learning is the establishment of a set of values that is common across the learning environment for students. These values need to be recognised and agreed to by all parties to the learning, and reinforced in the home, the school and the broader community. Participants felt that these agreed values need to be modelled for students throughout their learning environment so that they are reinforced for students by whomsoever they meet. They need to be clearly articulated and constantly demonstrated for them. There was general consensus that Gospel values are the prime values that students need to have consistently modelled so that they develop a respect for others and an understanding of one's relationship with other people. It was felt that teachers find difficulty in assessing how effectively this set of values is modelled across the learning environment because the result can often only be evaluated in the long term, and cannot necessarily be directly attributed to schooling.

Key values in the learning. Participants agreed that values are not hereditary or inbred. Students do not automatically inherit a set of values, they learn them from those with whom they come into contact. It was felt that this places a responsibility on teachers,
parents and the wider community to ensure that the role modelling of values is appropriate. Some participants stated that in a Catholic School the values that are presented to students need to be consistent and they felt that this is not always the case. There was a consensus among participants about the values that it is important to present to students, but a lack of agreement about how these values should be modelled to students.

An emerging theme among participants was the belief that a key value for students in secondary schooling is respect; respect that is reciprocal between students, and between adults and students. Felicity expressed this view when she commented that it is important that students recognise the need for respect, and are prepared to act in a respectful manner to others:

*I hope that they are picking up the respect that I am giving them, and that I expect in return. I expect them to give to each other, and I get quite upset when they give each other a hard time that is not helping us work. That's not appropriate - everyone is a human being.*

It was agreed that this ownership of respect for others is important in establishing good classroom relationships. Felicity believed that a teacher's willingness to accept human fallibility is an expression of the Christian value of humility. “I value that they point out when I make a mistake, I tell them that's a good thing, that's what you are supposed to do.”

Participants commented that the values of honesty, truthfulness, responsibility, and care for others are values held by teachers and practised in the learning environment of the classroom as a community in partnership. It was felt that it is these values that are reinforced in the classroom as desirable traits that need to be encouraged.
Most participants believed that learning is about values and not about knowledge or matter, and that this is recognised in the Curriculum Framework where the values are placed in higher regard than the content. They commented that the most important values are those that are going to allow students to develop into good, decent people. Craig illustrated how these values are evident in the classroom when students have the resilience and confidence to try their hardest no matter what the result, to be honest, and ask for help when they need it. He stated:

*If you always try no one is ever going to get cross with you; if you are honest, no matter what you've done, you will always get a different reaction from when someone has spent a whole week trying to find out who did it, or how it happened, or whatever; and that it's okay to ask for help. If they can learn those three things they will be able to go on and do wondrous things with their life, because they will have the secret ingredients that will allow them to evolve into good, decent people, who knows for what, for whatever they choose to do.*

He believed that this resilience, confidence, and respect and concern for others would grow out of the provision of a safe and comfortable learning environment where students feel that it is acceptable behaviour to be risk takers. He continued: “If that value part isn't there, they won't take those risks, or develop that concern for the person sitting next to me....I don't know that the learning can happen without that value thing being there first of all.” Participants supported Craig’s view when they stated that the values that are important to the learning process are those values that enable the individual to cope in society. There was general support for the notion that resilient people are those who have the confidence to ask for help, to trust people and to build relationships. These were felt to be the life-long skills that we need to teach in school if we are to espouse a Christian value system.
The participants from the management team of the school stated that the plausibility and credibility of the values that we espouse in school are related to our honesty as Christians, to our humility and to our willingness to admit our failings and mistakes. As John stated, “Once you admit to people that you are not perfect but you’re on about the right sort of stuff, then you actually earn their respect.” He believed that it is this humility that will set the Catholic ethos for schools.

A consistent set of values. Ian supported the view that the values that a Catholic School promulgates are more than a set of religious doctrine, when he said they are about “producing people out there with Christian values.” He stated that these values need to be consistently addressed in all aspects of the school environment. Whilst participants wholeheartedly supported this view, they also felt that it posed a number of difficulties. First, these values are often at odds with the point of view, or perceived needs of the adolescent, which in turn reduces their receptiveness to the values being taught; second, the values that are being presented by society are often antithetical to those presented by the school; and third, there is often competition between teachers within the school about the values that each supports.

A view expressed by a number of participants was that the values students encounter in school are often contrary to those to which they are exposed in the wider society. It was felt that the Catholic values presented by the school are often challenged by societal values that place materialism, commercialism, consumerism, hedonism and individualism above the Gospel values. This dissonance between the two sets of values was seen as being potentially confusing for students who need to be given a clear and consistent message.
There was general support from participants for the view that there is not a great deal of respect in the local community for educational values. However, the expectations that parents have of the school is that they want happy, well adjusted people - a child who can cope with the world into which she/he is going, as Craig commented. However, participants believed that the communities that schools serve have changed their expectations of schools greatly. They no longer place a high regard on children performing well in the narrow field of academia, more recently it is values have taken a much higher precedent over academic performance. Several participants commented that parents realise that academic excellence can be obtained in a range of ways, but they felt it is more important for children at school to learn how to survive in society, and this is particularly the case for boys. The focus is on life-long learning and the ability to build relationships.

There was consensus among participants that schools are becoming market-driven. It seemed that parents are looking for schools that will work in partnership with them to provide the support that they cannot necessarily provide themselves for a variety of reasons. Craig articulated this view when he stated that marriage breakdown, single parent families or both partners working cause parents to seek a school which will provide a strong values' orientation, but at the same time the school may not endorse some of the values that those families bring to the school, nor indeed may the family be prepared to endorse the school's values. The participants from management stated that this was evident in the local community where the religious dimension of the school challenges the materialistic values of the community. It was felt that this created a dichotomy where on the one hand parents were looking for moral direction from the school to compensate for their own perceived inadequacy in this respect, yet on the other hand they were reluctant to give support to the value system espoused by the school. Some participants argued that
where the school is trying to maintain values that are not endorsed at home there seems to be a case for changing the school’s values to be more consistent with society's expectations. The alternative, which gained greater support from participants, is for the school to maintain its values but to change the teaching strategies by which these values are conveyed.

Another view supported by participants is that other external demands that compromise the values of the school are economic demands and those of external agencies such as tertiary institutions, industry and educational agencies that dictate the requirements for secondary education. It seemed to several participants that teachers are placed in a difficult position where they are under pressure to meet the demands of these agencies and also to uphold the school’s values. They felt that the result is often that the values become diminished in importance under the pressure.

There was support for the view that the school is constantly competing against more powerful and seductive value systems such as those provided by the family, the media and society in the wider sense. Participants noted that this does not mean that the values provided by the school do not tender, it is rather that their overall effect is diminished. Ian commented that viewed alongside this is the fact that our own value system is often steered away from Gospel values to those that are more materialistic so that some teachers consequently subscribe to the societal values of results, success, and achievement to the detriment of Christian values. He stated:

So it is no longer the person with the correct values or the right values or they (sic) live their life in a good way and treat people well; it is people who do well in the TEE, win a few football premierships, or the like.
John made the comment that the record of the Catholic church with regard to the right treatment of fellow men also provides an hypocritical view of Christian values which serves to undermine the value systems that Catholic schools seek to instil in students.

**Modelling values.** There was a divergence of views among participants regarding the extent to which teachers provide a positive and consistent model of values within the school. Participants new to the school noted that teachers coming into the school, and into the Middle School learning team environment specifically, are very supportive of the modelling that is occurring, and its effect on students. Craig supported this view: “I think you model your values very well - you don't have many weak links. People don't go counter-culture; everyone gets in there and does it ... the kids are getting a consistent view. That they then see as the norm.” He cited two poignant examples where he saw this having a positive effect on the Year 8 students:

*A little girl, she has got a lot of problems, had to do an oral performance to 84 kids. I think she had the shortest part, but she forgot a bit. The boy next to her put his hand up (to his face) and told her the next word, and we said that's what "College X" kids should do, that's what's normal here, that you help the person through - not "you stuffed it up for the rest of the group".*

*Bus duty - bus duty can be a nightmare but they have a great respect for those little primary kids. They don't cross that line in the car park until every one of those little kids has got on the bus... they have a respect for those little kids.*

Craig saw these as the important values that students are learning: “the values are being lived and I think it shows in the kids.” Andrew, also a new teacher and a member of the learning team, commented that he sees that students are “passionate about their learning and they want to be here (school)”, and that this attitude is engendered by the teachers.
Participants commented that the learning team teachers are consistent in their modelling of values and they are able to reinforce each other in this respect. However, it seems that these teachers distrust the degree of unity among the broader spectrum of teaching staff, and certainly feel a greater level of distrust when it comes to the values being presented to students outside of school. Participants reported a level of discontent among some staff with what they perceive as a lack of unified collegial support for the consistent modelling and reinforcement of value systems within the school. They felt that there was a sense of frustration with the lack of unity shown by teachers toward the enforcement of school rules and disciplinary procedures. This comment also extended to a criticism of management for their lack of support and praise for staff in the enforcement of values. Some participants commented that the provision of more line supervision and management is seen as a move that would improve this situation.

The participants from management believed that the number of non-Catholic teachers in Catholic schools raised the question of the ability and willingness of those teachers to support the Catholic ethos of the school. John commented that it is this non-Catholic element of the teaching staff who are questioning the values both among their peers as well as in the classroom. Other participants stated that the opportunity that learning team teachers have to see students for longer periods of time during the school week, and to work together with their colleagues as a team of teachers, enables them to reinforce values. This situation is seen as a definite advantage in providing a learning environment that enhances the promotion of values.

A consensus among participants was that the modelling of values is seen as a process of mutual respect whether it be between staff and student, or student and student. The modelling of values is a matter of modelling behaviours to each other as one person for
another. It was seen as transcending age and relationship, each person modelling respect for the other. It is this expectation of reciprocity that gives rise to consistency in the enforcement of values, a view that was stated by a number of participants.

A general belief among participants was that there is a need for greater staff unity and support for the maintenance of standards and for a more collaborative approach by staff to achieve this. The teaming of staff is helping to counter the level of disunity that some participants believed has been apparent in the past. This was seen to be particularly evident in the learning environment of the Middle School.

Participants were of the opinion that professional accountability for the modelling of values in the learning team environment is much higher than in the traditional classroom environment. In a learning team there is not the comfort of knowing that whatever goes on in the classroom is the teacher’s business because there are always three or four colleagues present. Participants believed that this gives rise to greater levels of accountability and uniformity as well as providing support for teachers. It also creates a consistency of approach and solidarity among staff, as Craig commented: “It creates solidarity between your staff, and I think that the kids see that the teachers are actually working together.” He believed that teachers with similar sets of values, working in a learning team environment, can reinforce their values across the curriculum and that this helps to create an integration of faith and life for students: “I think - certainly the group of people I’ve got - I think model to the kids in a very professional, but a very loving way, the sorts of values that I think should be in a Catholic school.” In comparison, some participants commented that traditional structures promote teacher isolation and duplicity of values where a student moves between teachers and can receive different value systems in the process.
It was a commonly expressed view that the advantage of learning teams in the promotion of values is that a team of students and teachers working together for large blocks of time are able to develop a common set of values, which cannot so easily happen in a more fragmented allocation of time. This process is very important in developing an ethos, as Craig illustrated:

_You see I think the teams of people play a very important role, and the blocks of time, time to develop that ethos. I guess the ethos we've got at the moment - here everyone talks about Bullysmart; with the Year 8s this year we are introducing them to Worksmart. I thought - yes that's a word game, you're playing on that word, but Worksmart is. A Worksmart person: when the teacher says 'you have got 35 minutes' says to themselves 'great I have got 35 minutes and I've got this task, and I am going to put my heart and soul into getting as much of it done now as possible'. A Sillysmart person says 'I've got 35 minutes to gossip, or look at the roof, or look out the window', and at 'take home' time I have got 35 more minutes homework, and they whinge to their parents and they whinge to their friends "this school gives too much homework." First of all the kids say "oh yeah." But then we set them 30-35 minutes, which is about as much as you can get 80 kids to do... And then we stop them and say: 'Now have a look at how much you have done?' 'How do you feel about that?' 'Oh I'm really glad I got all this done'.

'Now, look at the way you've written it, or look at the way you've drawn the pictures. Are these because you were concentrating, or are they messy like yesterday?'

'Oh no, they re a lot better'.

'What have you now learnt?'

'I've learnt that I am working much better when I am concentrating...'_

He explained that the traditional structure, where time is fractured and disjointed, does not allow the building and selling of an ethos in the same way, but rather it causes a fragmentation of values and goal achievement. In learning teams the reinforcement of values can occur because of the time available, but also because the team of teachers can build on each other’s focus which in itself helps to reinforce the value.
Craig confirmed: “You have got staff going in the same direction, with a love of children and a common goal – you can do a lot with that.” He believed that it is this solidarity that has an impact on the student’s learning.

Rapport

Rapport was defined by participants, particularly those working in the learning teams, as the ability of two parties to respect each other and to try to understand both sides of a situation, so that they become partners in the learning. They believed that this is vitally important in the development of a collaborative learning environment in the classroom, but it is also important in the broader community where rapport needs to be developed between teacher and parent.

The consensus of opinion among participants was that the development of rapport, or good reciprocal student–teacher relationships, is closely related to the promotion of values and to student motivation. They stated that it is a vitally important aspect of any learning environment because without these relationships it is difficult for the learning process to be productive. Craig summed up the significance of relationships in this way: “In terms of the learning environment, the most important thing is the kids and the teachers, everything else is superficial, because you can find ways around it.” He was referring predominantly to the Middle School learning team environment.

Craig commented that it is when students are relaxed in the classroom environment in the sense that they will approach teachers to ask for help when they need it, and they are confident to do this, to ask for help at year 8 level, that a rapport has been established between teacher and student. This is an indication of positive teacher-student relations. He believed that the teaming process in Middle School, both with teachers and students,
provides a collaborative environment where people work well together creating an environment which is conducive to learning.

Participants working in the learning teams identified time as a factor in developing relationships. It was felt that if a teacher has long periods of time with a student, or has the same student for two years, it provides the opportunity for a relationship to develop, for a teacher to get to know a student. Several participants noted that it is most important to establish a relationship with those students who are not easily motivated; it is this rapport that will enable a trigger for motivation to be established. Helen reiterated this point when she said that it is the students who are not motivated who will not respond to questioning, it is these students with whom the teacher needs to establish a rapport in order for them to become motivated through involvement.

Another point noted by participants was that all relationships need to be built on trust. They felt that rapport could only be achieved if both parties trust each other. In the community, parents need to be able to trust what a school is doing for their children; they need to understand the teachers’ point of view and both parties need to work together to find a learning environment they trust. This requires involvement by both parties to reach this position.

Participants involved in the Middle School made the comment that in the classroom it is this mutual trust that forms the basis for building rapport. Good relationships will give students the confidence to seek the truth, to ask for help, or to take risks. It provides them with the security to do this. It seems that this is particularly important to the learning process in the early adolescent years of schooling. Similarly, participants stated that where students are constantly testing the limits of adults they are able to form their own
boundaries and refine their values in the light of the reactions they receive to inappropriate behaviours.

There was consensus among Middle School participants that rapport provides the means for establishing a learning environment that caters for the needs of individual students. Ian extended this idea: “The teacher as professional needs to understand every individual in that class to understand what motivates him or her.” Where relationships are built and student’s needs are understood there is a chance of allowing them to work in different ways and this can be accommodated. Craig confirmed this: “Schools have to look for either structural things or human things that create that rapport or that environment for their kids that allows their differences to be catered for.”

Several participants commented that rapport is also the key to student motivation. It is not until positive and trusting relationships have been established that students will believe in a teacher sufficiently to enable that person to provide an environment where they can move on in their learning.

Many of these views, regarding the significance of rapport in building a positive learning environment, were expressed by participants teaching in the Middle School where the structures were more conducive to allowing these relationships to develop.

**Motivation**

Participants identified two types of motivation: intrinsic and extrinsic. They defined extrinsic motivation as the desire to learn which is triggered by some force external to the learner, usually a significant adult such as a teacher. Intrinsic motivation was defined as the desire to learn which is engendered by the learner. Each of these was seen as
important in the school learning environment. In this school intrinsic motivation was related primarily to the Middle School learning teams environment; whereas extrinsic motivation was more closely associated with the inputs model of learning which is operating in the Senior School learning environment. This view was expressed across participants irrespective of their involvement in the Middle School.

**Extrinsic motivation.** Participants believed that extrinsic motivation is a powerful influence in causing students to move forward in their learning whether it be by providing competition, positive reinforcement or reward systems. Ian argued: "I think we underestimate that there is still a place for extrinsic motivation whether it be stamps or comments on test papers, and giving kids back their work as soon as possible with lots of feedback ... kids are motivated by success."

John stated that motivation is the key to getting kids engaged, and it is only when they are fully engaged that they are likely to reach their potential, but they need some form of stimulation to get them started. This stimulation or influence is the role of the teacher, or another significant adult, in the school learning environment. Several participants commented that teachers need to own some professional responsibility for motivating students to learn – humans all require an external motivator to stimulate them to achieve. Ian used this example: "It's a cynical view ... but why are we (teachers) here? Ultimately we love our jobs, and we love kids and we want to promote learning, but I guess the question is, would I be here if I didn't get paid? So I think the same applies to kids." He stated that we as teachers can provide a learning environment that acknowledges students' interests, but it is also the teacher's responsibility to broaden their educational experience beyond that, to extend them to achieve their potential.
It was widely felt by participants that a teacher’s role is to motivate students and, if necessary, to set goals for them. John supported this view: “A good teacher is someone who looks at an individual student and knows what motivates them to work and ... is someone who can actually push a student to their full potential.” Ian confirmed this statement, but also stated that it is someone who cares about students to the extent that they ensure that a student reaches her/his potential and they take action if this is not occurring.

Extrinsic motivation is largely teacher driven, competitive in nature and content oriented, as several participants commented. The traditional classroom environment and the current TEE focus in Senior School are reliant predominantly on extrinsic influences to motivate students. It was felt that in subjects like Mathematics, which is heavily content driven, motivation is related to student need or desire to learn the content, there is very little attempt to engage the student in the learning. Felicity explained that there is a lot of content to accomplish in Mathematics, and whilst it needs to be made interesting and relevant for students there simply is not the time to do this and to complete the content as well. She said that it is a matter of “shoving it down their throats.” The motivation is to get students to do the work that is required without taking time to provide the context for them. According to Felicity, the motivation is limited to: “I am getting ticks on my page, and hey, that feels good because I know I can do this.” This was not a view expressed by other participants.

Work ethic. Craig believed that in the context of the local community this motivation to work hard is difficult to achieve because a good work ethic is not part of the culture of the local area. Students are isolated from the metropolitan area and do not have a concept of what hard work at Year 12 level means. Neil was concerned that students in top academic classes “might have to do as much as an hour of homework a night, or a week,
compared to others, and that's it, and they have no real concept of what's going on outside (in other schools)." Participants believed that this is part of the 'laid back' attitude of a country town that makes the motivation for achievement difficult. Craig described this as part of the laissez-faire environment of the community "no one hurries in the town - kids don't hurry, staff don't hurry, even in the supermarket there is a particular pace" and he believed that it is this pace that visits itself on the students' work ethic. They want to go to university, but they do not see this goal being related to working hard. This poor work ethic places the onus on the teacher to goad the student into working which indicates a minimal level of competitive drive by the student. It makes for dependent learners who are reliant on the teacher to drive the student. This view was supported by many of the participants.

Most of these comments have been made by teachers in reference to Senior School students who have experienced very much a teacher directed learning environment. This is essentially very different from the type of learning environment being provided in the Middle School where participants believed students are being given more ownership of, and responsibility for their learning environment.

Intrinsic motivation. Several participants felt that motivation can be triggered by something as simple as a teacher spending time, often at the beginning of a lesson, getting to know students, talking about what interests them, not necessarily related to the curriculum but building rapport by creating a sense that school and learning is not detached from the real world. It seemed that time spent building relationships with students can substantially increase their level of motivation to learn.

Gaby described three 'layers' of motivation in a class. The first consists of those students who are intrinsically or self motivated and will be motivated whatever is
happening in the classroom; the second consists of those students who decide whether or not they are motivated depending on their level of interest in class activity; the third consists of those students who are not motivated. She believed that it is this third category with whom the teacher needs to build rapport in order to find out what will interest them and engage them in the learning.

The consensus among participants was that the aim of extrinsic motivation is to engender intrinsic motivation in students; the one should lead to the other. This belief was expressed by a range of participants, who also stated that intrinsic motivation derives from motivational influences such as ownership of the learning and being able to make choices, being responsible for the learning, a curriculum that is relevant to the learner, and the experiencing of success. These are all aspects of a more student centred learning environment. Participants believed a distinction needs to be made between a student being motivated to learn, and being engaged with the learning.

There was strong support among participants for students being given greater responsibility for their learning. This example, from Craig's Year 8 Learning Team, indicated this:

_We said to the kids today:_
'We are thinking about giving you set seats, we think we might have to give you set seats - what do you think about that?' And of course, 79 out of 81 said 'we wouldn't like that'.
'Okay, well let's see whether we are getting the right message here. Yesterday the message was 'you want to talk a lot but you don't want to actually use that talking to make you work better'. So we have reached a conclusion that we will get you to work better if we put you in set seats. 'Is that right?'
No, you didn't want to give that message. 'Okay, what message did you want to give?'
We want to be able to have the choice of where we sit. 'Okay, we are prepared to give you that in return for what?'
As long as we make sure that we do our work real well.
So what's coming out here? We will just wait and see. Now, they worked for 60 minutes really well. Now it won't last, and eventually we will put them in set seats, but the kids like the fact here that they have some choice. And one of the ways they measure their choice is the opportunity to choose a seat. That to a 12 or 13 year old is like making a big, life decision. If we took it away from them we would be penalising...if you went in and did it to all the kids, there are certain kids who would see that as devastating because they are making good choices, and it would be the handful that would ruin it. So we are going to try and see if we can't just throw it back on them a little bit. If they start to get a bit ragged, you had a choice - you can either keep it, or you lose that choice because a responsible adult makes a choice for a child. And just to help them to refine those choices.

Participants commented that students are being provided with opportunities to make decisions, and to be responsible for the choices they make about their own learning. Students who are being given these learning opportunities will not be satisfied with a teacher directed curriculum in Senior School.

Several participants involved in the Senior School referred to students being responsible for their learning, insofar as being given a choice about what they learn, having an influence on their level of motivation. In the learning area of English this might be achieved by providing students with the opportunity to select a text in which they are interested rather than selecting one for them. As Andrew commented, “being constrained by literature … it is a gender thing because the books we read tend to be girly books - thoughts and emotions and that sort of thing - whereas guys want the adventure, the action.” The argument was that literacy skills can be taught using a range of texts, therefore using content that is more relevant to students makes the process more effective.

Another strategy, promoted by Gaby, with senior students is to share the task of analysing a text in groups, so that each group has responsibility for one element of the task. She believed this gives each group ownership of the learning, and a responsibility to the
class for achieving the task. It also involves peer tutoring which is a useful tool for engaging students, according to Gaby, because they learn more readily from their colleagues.

There was debate among participants about whether students being given the freedom to select their own content was motivating or demotivating, depending on the student's decision making ability. It was felt by participants who were involved in the learning teams, that students who are diligent and well organised are likely to make good decisions. They enjoy the opportunity afforded them because it allows them to work at their own pace and have ownership of the task. As a result of their organisational skills they are likely to be successful researchers and reap the rewards of this success. The less organised students have the potential to make poor choices, and become frustrated at their lack of success in researching for reasons such as Ellie suggests: “they have chosen a topic that perhaps is a poor choice ... or you can't resource it properly ... or the child has been let down by the use of outside agencies.” This is part of the decision making process and students learn the ability to make good decisions. As Helen said “the real motivation for them is having a choice of what they are doing.” Melanie supported this idea: “If they feel that they own what they are learning, there is no end to it but if they feel that they are doing it because they have to that's a demotivating factor ... I try to let kids have as much say in what they do ... give them some freedom.” There was general agreement that where the choice of content is not crucial to the learning it is advantageous to let the students have ownership of the content by choosing. Ellie, Helen and Melanie were all participants who had experience in the learning teams.

Some participants saw another important influence in the motivation of students as the relevance of the curriculum to them. One way of achieving this relevance is to draw
links from the curriculum to an area of student interest. Les commented that he liked to link areas of law to the various law programmes being presented on television as a means of initiating discussion with his students. In his opinion this approach made the curriculum more relevant to the student’s social world.

Relevance also relates to the tools of learning, as noted by a number of participants. They viewed technology as a motivational tool enabling students to access information more easily, and they considered it as a tool for developing independent learning, providing that students have the research skills to use it effectively. To use it in this way they need to have reliable access, and guidance in how to locate relevant and appropriate information. The problem described by participants lay in the limitations of time where the constraints of the school day imposed restrictions for ongoing research. Ellie noted that students in Mathematics are keen to use interactive programs to further their understanding of Mathematical concepts. She saw that computers allow students access to interactive programmes that provide them with information in a personal and non-threatening manner which boosts their confidence. The problem with using this technology in the school, according to some participants, is that teaching the skills of searching for information using the internet is time-consuming, and this can lead to frustration and disillusionment.

Participants were convinced that ultimately intrinsic motivation is where a student values education for its own sake and has clearly set his/her own achievement against a set of educational goals. As Debbie stated: “it (valuing education) is just a conscious decision on the part of the student, you can only tell them about the value of education but you can’t really impart it, in their mind they have to take that on themselves.” Goal setting is also very important as a motivational influence. So many students, in Debbie’s opinion, have
no goal and “so they have no drive and they have no ultimate direction.” A student is motivated to learn if he/she values education and has a goal to achieve.

Participants believed that it is a professional responsibility of a teacher to know a student well enough to be able to determine the learning needs of that student and to be able to provide the right stimulus or drive to engage that student in the next phase of their learning so that they progress to further achievements. Craig summarised this when he said: “I think that rapport is the key thing … The key to motivation is the key to finding out that the child is at this level and wants to move to that level.” This is the basis for intrinsic motivation, a view expressed by Craig, but reiterated across participants. Participants teaching in the learning teams believed that the flexibility provided in the Middle Schooling learning environment increases the opportunities for teachers to be able to accomplish this.

**Grouping of Students**

Participants were in agreement that the way in which students are grouped for learning is vitally important if each student is to reach her/his potential. However, they were not unified about the way in which they believe this can be achieved. The groupings in the school are mainly determined by factors such as pastoral care, gender, student need, and class size. Participants commented that the Middle School learning teams offer the most flexible grouping of students so that they can provide for individual student need.

**Vertical grouping.** Participants were generally in support of the House system which provides vertical homeroom groupings so that students mix across years 8 to 12. As Debbie commented about this system: “there is no hierarchy in the school and there is no sense of a really strict structure because they intermingle.” However, participants who have experience in the learning teams believed there are some adverse affects of vertical
groupings. The fact that Year 8 students are not in the same pastoral care groupings as they are for Learning Teams which means there is a separation between curriculum staff and pastoral care staff, and the Year 8 students do not have the same chance of socialising. Brenda, who is not in the learning teams, also commented adversely about the vertical integration: “I have tried to get the big ones to go with the little ones, but they are not really interested.” There was some debate about the value of grouping students vertically for pastoral care, particularly with regard to Year 8 students.

**Group size.** Participants who taught in the learning teams believed that the learning team groupings cause students to be adaptable. They considered that students are used to operating in a range of sized groupings, as Helen stated, “from 20 or 32 to 900 and everything in between,” and they are able to act appropriately in whatever combination they find themselves. Craig commented on this:

I look at the kids in the 80 situation and to me they are far better behaved in an 80 than I would have ever thought was possible. Technically to me you put 80 12 year olds together they should have a field day, and yet in a lot of ways they are probably as good as a good class of 32 working in a traditional school. So there is something happens to those kids when more are joined to them. Now, I can see good in that because I don’t believe the kids here get phased, now that could be (the) socio-economic environmental ... whatever influence, or it could be (the local environment’s) structure saying to the kids ‘you’ll be supported but you’ll get used to different sized groupings’. And it doesn’t matter whether they go to their Houses, the whole House, the whole school, the whole college of 900 kids or a small group of 20 – they don’t ever seem to get phased by that.

Learning is not just taking place in the classroom but also in the wider community and this allows students to operate comfortably in bigger groupings. Craig commented that “kids can cope with whatever level they are put at, for a given reason.”
It was felt that teachers need to be equally adaptable to the range of sized groupings, as Craig commented:

*I think as long as your teachers are all aiming for the same dream and not ... we don’t want 82 we want 32 locked in four walls ... we are all saying ... yes 82 there are good and bad, but we’re heading that way. I think you should get a lot of good from that. Because I think the kids here seem more adaptable. And that can only I think be because of the school structure, they are taught to be adaptable.*

Meanwhile, participants from the Year 9 learning teams indicated that the teams need to be subdivided into smaller groupings for the learning to be effective. Helen stated:

*For last year we worked in 83s and I just found that was horrendous. I did not like it - I hated the fact that I had 80 kids in the classroom. It wasn’t very good for their learning at all. I couldn’t see them all learning. So I broke them down into smaller groups in the team, and they really liked that. The kids liked it, except for the social butterflies who liked to have everyone in the classroom with them, but the kids who were there to learn really loved it. So this year I went back so we had a couple of lessons where we have 82 kids in the class, I had a new team of teachers and they said - we don’t like it. If the kids aren’t working, we are doing crowd control, that sort of thing, so it’s not a learning environment. It’s great when you’ve got 40 kids in there, but having 82 kids in two classrooms is more than you would have in a normal classroom size. So, no, it’s not working.*

Participants believed that the benefit of the learning teams is that the grouping of students is very flexible. Students can be re-grouped as their learning needs require.

**Gender grouping.** Participants felt that another benefit of this flexible grouping was the ability to group by gender. Boys have very different needs from girls and so for some of the learning it is appropriate to group them separately. Girls are much more attuned to the passive environment of the classroom whereas boys need a more active environment. As both Keith and Melanie agreed, girls come into the room, sit down and are happy to commence the task, whereas the boys take more time to get motivated. Keith commented
that the boys “come in champing at the bit, wriggling in their seats. They want to be doing
something, they don’t want to be sitting there with their heads in ....” Given a writing task
when they are in single sex groupings, Craig observed:

_The girls don't talk when they are on their own, and they don't say it
to you, but basically their body language would be "shut up, I know
what I have to do, just give me some peace and quiet and we'll do it."
And they wrote for an hour off their own backs, they didn't want any
interruptions, they just wrote, and before the first kid spoke it was an
hour - the boys go for about 6 seconds!_

Participants with learning teams’ experience believed that separating students on the basis
of gender improves the learning for Physical Education, Religious Education and
Language. Statistically, boys’ language development can deteriorate during early
adolescence, particularly in co-educational learning environments. Several participants
commented on the research showing that this is the crucial time at which to harness boys’
language skills. Without the girls present, and with texts that are relevant to them, they are
able to develop these skills and maintain interest. Craig found that they are quite capable of
writing for sustained periods of time given an appropriate learning environment in which to
do this. In this school he believed that boys have the best of both learning environments,
they can learn in single sex classrooms for some subjects but also have contact with the
girls for other aspects of their learning, and in some cases this is negotiated.

Participants commented that in the traditional co-educational classroom teachers
tend to skew their teaching to the girls’ preferred style of learning to the neglect of boys,
whereas research seems to suggest that boys are reacting to this approach. They
commented that in the learning teams tasks are being designed to accommodate the
learning style of each gender, and this was considered to be beneficial to their learning.
Craig commented that traditionally tasks would be language based, but if tasks take account of different learning styles it is likely that both genders will be able to complete the task successfully. It is an experiment to see whether this approach will enable boys to keep pace with the girls in the longer term.

Participants working in Middle School noted the fact that in physical education summer sports, such as swimming, have been conducted in gender groupings. With the onset of winter sports the students were asked whether they wanted to be grouped by gender, or cross-gender for netball. Their response was that they wanted mixed gender classes. Craig explained: "Netball is non-contact. You see the girls, because it is biased towards them, come in as the stronger players in a lot of cases, so the boys have to grapple, but because the boys are determined to beat the girls they rise to the occasion anyway." Craig commented that this is a case of competition which teachers see as very healthy. Outcomes education is largely non-competitive and young adolescents are often inspired by competition; it gives them a reason for engagement.

Gender based groupings, participants agreed, are not only advantageous for some aspects of academic learning but also for the social curriculum. Craig noted that "12 or 13 year old girls can be highly embarrassed because of the way a boy expresses himself," similarly gender based grouping provides the opportunity for boys to discuss issues in their own language. He stated: "I also think the girls get tired of the boys being noisy and ... boisterous ... I think they truly like the chance to have some peace and quiet without the boys." Craig also commented on the ability of boys and girls to sit together in the learning teams without misbehaviour: "to sit in tables normally they would be kicking each other under the desks. I have been looking – they don’t do it ... for kids going into adolescence they seem to handle it very well." He believed that it is important that the work output does
not take second place to an environment that allows interaction to occur. It is a matter of keeping the balance between gender based and co-educational groupings so that the relevant agenda for the students is met.

Participants endorsed the fact that the learning teams allow a flexibility of groupings so that students can be grouped according to their needs, both academic and social. This ability to move between gender based and co-educational groupings is seen as a strength of the Middle School learning environment in meeting the learning needs of students and keeping them engaged in the learning.

Teaching Environment

Participants believed that teachers need to be facilitators of learning rather than having control of the learning process, particularly for Senior School students. This places the onus on students to be responsible for their learning and to engage with their teacher to ensure that their needs are met. It is a collaborative relationship rather than an adversarial one. It is a change in the role of the teacher, and this places responsibility on both the teacher and the student to understand this.

Team teaching. In the Middle School, participants believed that team teaching provides a very different classroom learning environment for the teacher than the traditional 'one teacher with a group of students' system. Some participants commented that the dilemma of team teaching is that the team of teachers needs to have a uniform approach to the student group and a routine that is recognised and understood by the students. Students need to know what is expected of them in the learning team which implies that each teacher in the team needs to implement the same routine. It seems that this approach defies the autonomy of the teacher and the teacher's style in the classroom, which was of concern to
some participants who taught in the learning teams. Les commented: “One of the things I find hard is that we have been given a set plan of how we should teach our classes ... I find I struggle with that ... they have to come in, sit down and start work. I like to interact with the kids at the start of each lesson.” He believed that there is always going to be a difficulty with establishing a common methodology when there are a number of teachers involved, each of whom has a different teaching style. As Neil commented: “whatever you did might suit you but might not suit the other person.” Teachers who have taught in single-teacher classrooms find the change to a team approach difficult to accommodate. Melanie explained it this way: “I feel less in touch with what I'm doing now than the way I felt last year, that's only because I have had ten years of doing what I did last year.” It was generally felt by participants that adapting to a common group methodology is not easy, especially for teachers who have had considerable experience of a different learning environment.

Whilst team teaching and grouping students into learning teams provide the flexibility to be able to focus on the learning needs of individual students, Neil pointed out that it seems that the learning environment is in fact moving toward greater rigidity and inflexibility as a means of ensuring uniformity across groups and student security. Melanie commented that: “I think the problem we have is that we've not done enough with the kids on different styles of learning ... all the kids seems to be doing is sitting and reading and writing.” It seems there is a feeling among the staff that a greater emphasis could be placed on providing for the needs of each student, and providing a greater range of learning experiences in the learning teams.

Professional accountability. Professional accountability, according to some participants, is a lot higher in the team teaching situation than it is in the single-teacher
classroom. They stated that in the learning team a teacher usually has several other
colleagues in the room with her/him, and so their professional skill is on display. The
situation is one of continual informal appraisal, the teacher is constantly role modelling for
her/his peers, as Craig commented: "I think you prepare better when you know you have
got your peers there watching you." It also increases the level of collegiality in that staff
are prepared to give support to each other and students see that staff are working together,
which implies a solidarity and unity among team members. Another benefit, explained by
members of the learning teams, is the ability of one teacher to reinforce a point made by a
colleague so that students have that point consistently reiterated across the curriculum.
Craig saw this as a particularly useful strategy for coaching graduate teachers, to
demonstrate the strategies that you would like them to use with students, and then observe
how many of those strategies they build into their own practice.

The participants from management commented that teacher support and appraisal is
an important aspect of the ongoing professional development of staff. Both Ian and John
expressed concern about the lack of positive feedback and support that is offered to staff,
particuarily inexperienced teachers. They believed that as a profession we are anxious to
provide this type of reinforcement for students, but we often forget the need to provide
adequate support to the teachers. He commented that there is a sense of frustration in many
teachers, and the industry seems to be losing good teachers because they are not being
nurtured. Coupled with this, some participants expressed the need for professional
development that is practical, frequent and ongoing if we expect teachers to provide the
best learning environment for students. They believed that industry, outside of education,
provides a lot more mentoring of new staff than is experienced in the teaching profession,
and it is this type of support and resourcing of staff that is necessary. A system of appraisal
that provides positive feedback and affirmation to teachers who are engaging in good practice would be a means of recognition. Teachers in the learning teams environment commented that that environment provides a good opportunity for this affirmation, but it is not so easily accommodated in the more isolated learning environments in which most teachers operate.

Learning Strategies

There was an opinion expressed across the range of participants that learning strategies employed in the classroom need to cater for the individual differences of each student. This implies that there needs to be a move away from a content focus to a skills and processes focus. It seems that moving in this direction is difficult however, because it means creating a more collaborative environment and one that is less competitive. Craig commented that whilst parents know that each child has different needs they still “want to check that their kid is as good as the next person’s kid”, which makes gaining parental support for the removal of a competitive spirit difficult.

Catering for the individual needs of learners. Many participants believed that in reality, catering for the individual needs of students when there are 30 in a class or 84 in a learning team, is incredibly demanding on the teacher. It requires working with each student when each one is potentially engaged in a different task, or developing a skill using a different content or context. Craig commented: “I don’t know that I have enough skills to be able to do so many different things for so many different kids ... You have to take manageable steps so that the kids will get quality in the skills that they are learning and the teacher too can stay sane.” This describes the magnitude of the task that teachers feel they are facing in changing pedagogy to a student centred learning environment. For the
moment, as Andrew stated, "we are going to teach the subject via the skills rather than concentrate on the content. I suppose it is just more gradual reform." There was a general feeling among participants that the focus needs to shift from the narrow view that many students have of education as being a set of skills that will enable them to access university, to that of life-long learning.

Participants supported the school in its aim to develop independent learners who are problem solvers. As Craig stated: "How I see the school going? It wants the children to go out, and no matter what the world throws at them, they will be able to find solutions ..." Participants commented that this philosophy, and the pedagogy that supports it, is not supported by all teachers at the school. There is a balance between those who are reactive to the change and still believe in a content-based curriculum, and those who are more proactive and believe that process is more important. Craig saw this balance as a healthy situation with one group counterbalancing the other. He stated:

*I think now we have found a way to wave the olive branch at each other .... We are not going against each other, we are going in the same direction, two different approaches ... I think they are watching us, and we are watching them, we are actually educating each other. So I think the sense of direction is there, but you need a few doubting Thomas's to actually make it work anyway.*

He saw this same philosophical issue occurring at a state level too where some secondary schools have retained a curriculum that is strongly content based, whereas others, such as this school, have decided that the learning of skills, through whatever content they deem appropriate, is more important. Participants stated an awareness that just as the two groups of staff within the school are evaluating each other's progress, so too are the schools within the state. There is a wariness of being too progressive when the reality
of the TEE is still present; students need to be flexible enough to be able to cope with a range of learning environments. Nevertheless, participants commented that other schools are observing the value of learning teams and a skills driven learning environment in tackling some of the issues other than curriculum that are related to secondary schooling.

The participants felt that the focus of the Middle School learning teams on developing process skills in students is certainly producing students who are independent learners. Teachers outside of the learning teams, such as Melanie and Olivia, commented very favourably on the students’ ability to research independently.

Olivia: I think they (Learning Teams) are trying to develop the kids' skills ... teachers have commented on how well they can go and access information on their own resources, and given that there is that sort of independence, that's the feedback that I have had. I don't teach in the learning team, but that's the trend that's coming through.

Melanie: Last year when I got a group of Year 9s who weren't in learning teams - Year 9 Science - and they had done learning teams in Year 8, I put them together in group work and they were absolutely brilliant. They were self-directed, they weren't relying on the teacher to be directed, and that. Organising themselves to get done what they needed to get done. Fantastic!

...Work within a group, but also getting things done ... this is what it is about, planning - "this is what we need to do. Let's do this first, let's do this next. This didn't work, let's see what would happen. This didn't work, let's ask the teacher what her suggestion is" ... and that's absolutely fantastic!

They commented that these skills have been taught over a period of time. Helen stated that students are taught how to work collaboratively in a group, how to work independently and, in Year 9, interdependently. The process is dependent on being able to group students in a range of group sizes depending on the learning strategy being used.

In Senior School, some participants commented, the classes become more standardised and larger which may not facilitate the process being taught in Middle School.
Felicity stated that currently the students in Senior School do not have the independent learning skills nor the responsibility shown by students in the Middle School. They are the product of the traditional approach to learning which makes them very reliant on the teacher.

Participants felt that the school needs to recognise and be able to provide for a much wider range of learning styles if it is to develop a learning environment that suits the needs of all students. In Craig's view, if we want students to value education "what's seen as the measure of education has to be broadened like it has never been done before" because currently the parameters are too narrow for some students to demonstrate what they have learnt and that they are responsible for their learning. There is more to education than our school is currently recognising which means that we need to value all learning styles and provide for them. Debbie pointed out that while it is important to recognise each student's learning style we must also be able to extend that student into other learning styles and not allow her/him to be limited to her/his preferred style. We should identify the preferred style that motivates them to learn, and then encourage them to be adaptable in the use of different learning styles.

**Constraints on learning strategies.** Participants expressed concern regarding a number of constraints on the implementation of particular learning strategies. First, team teaching presents some difficulty for individual teachers to change their learning strategy with a group of students because teachers have to work together and so they have less control over their learning environment. Second, there are physical constraints such as the length of period. An 80 minute period is standard for all groups within the school and this may not suit a particular situation, as Neil commented: "whether you have Year 8 remedial kids who have an attention span of a minute, or a Chem. Prac. that is going to take 2
hours,” the length of period is the same. Third, the location of the class might pre-empt certain strategies being used because of their effect on other groups of students operating quite differently, but in close proximity.

Certainly the effect of block scheduling, as some participants noted, is to cause teachers to have to break down the 80 minute period by using a series of learning strategies within that time frame. As Neil pointed out, learning strategies need to change constantly: “not only does it change with year level, but it changes with the kid and it changes with the day.” There was a general feeling among participants that learning environments need to be very flexible, and teachers need to be flexible too, if they are going to serve the needs of the students.

The consensus of opinion was that good teachers are teachers who view teaching as a vocation and have a caring attitude to students and to their profession which means that they will seek the most appropriate learning strategies to ensure that their students reach their potential. In response the school needs to nurture its good teachers so that they feel valued in their endeavours. It was felt by some participants that praise for the good work of teachers should be a focus of management.

The management team believed that the school should be prepared to support innovative teachers so that they are encouraged to provide interesting learning opportunities for students. This includes teachers who want to provide off campus learning experiences despite the fact that this might disadvantage or disrupt the normal on-site learning environment. Ian believed that “good management is about not treating everyone equally,” that the talented teachers need to be supported and rewarded even at inconvenience to the less motivated staff. He firmly believed that effort needs to be rewarded and encouraged.
Physical Environment and Facilities of the Classroom

There was general support for the notion that the flexibility and diversity that typifies the good teaching and learning environment is also true of the facilities that are provided in order for the learning to occur. Teachers generally believed that the space available and the layout of the classroom are important to the activities that occur therein. However, it is difficult to determine precisely what these should be as they differ from one teacher to another.

Participants agreed that the most important criterion for the classroom is the amount of space provided and the way this is utilised. The strategies being used by teachers to develop independent learners require large amounts of space that are able to be used flexibly. Teachers require room for students to move around, whereas most of the space in a classroom is being consumed by the location of furniture. An additional problem, noted by participants, is caused by the fact that teachers share rooms which causes conflict over the most desirable configuration of the desks or tables. It was felt that classroom furniture needs to be more portable so that it can be reconfigured to suit the learning strategies being used by each teacher accessing the room.

It was argued by participants that ideally teachers need to be in charge of their own classroom or learning space so that they can manage it to suit the types of learning opportunities they are providing for their students. Having ownership of a room also enables the teacher to spend time on classroom presentation. In the Middle School learning environment, participants noted that time is spent developing the classroom presentation in a similar way to primary school classrooms. Teachers like to be able to create a certain
atmosphere in the room in which they teach, and this might be dictated by the nature of the furniture or the aspect of the room.

Another view expressed by participants and an alternative to providing larger classrooms to accommodate independent learners is to limit class size, so that fewer students are accommodated in the current classroom space. In either case, as the management team argued, this requires an increase in resourcing of capital development or human resources. Teachers argue that reducing class size increases their ability to identify and provide for the needs of individual students. They argue that it is difficult to work individually with students when the teacher to student ratio is high. This was a view expressed across participants.

Several participants commented that the atmosphere of their classroom is relaxed and informal, and it is in this environment that students feel at ease to relate to teachers and engage in their learning. It is creating that atmosphere where students feel they can approach a teacher, and where the classroom environment is conducive to learning, that is important according to several participants. This is only partly concerned with the physical environment; it is also a product of relationships that occur within the classroom, as Craig reinforced.

Most participants did not express a concern with the provision of facilities for learning, beyond that of having adequate physical space and resources such as textbooks.

Technology

Participants reported that teachers were concerned about the availability of technology as a learning tool, and there was much debate and little agreement about how
this could be adequately provided. This was an argument about the extent of access to computers and associated technologies in classrooms, and the reliability of the network service to enable teachers to use these tools effectively with students. The competence of staff to use these technologies as part of their learning strategies is a separate, but important debate.

There was general agreement among participants that teachers are expressing a degree of frustration caused on the one hand by an expectation on the part of the school that computers should be used as a learning tool, and on the other by the perceived lack of assistance to implement this expectation. Whilst teachers are very willing to embrace the first part of this proposition, they are requiring more help with the second part of it. Participants reported that those teachers who consider themselves to be computer literate are finding that they do not have adequate access to the technology to incorporate it into their classroom practice. This was variously described as a lack of hardware, software, access to the network, speed of internet access, or unavailability of peripherals such as cameras, fax machines and telephones. There was also concern about the unreliability and the speed of the network, which interrupts student learning and frustrates teachers, a view which was largely expressed by teachers in the learning teams.

Participants also reported that concern was expressed by teachers about the variation in the number of computers available in any given classroom, and that where they are provided they are not adequate in number to serve the needs that teachers have for them. The availability of peripherals was seen to be both inadequate, but also unknown. The location or distribution of computers and peripherals was also an issue. Neil summarised the problem as follows:
What I might want to do would be to put all the computers in one classroom, and then I might find that with the number of rooms you have got the majority of people might prefer to have one in every room rather than four in that one, four in that one. And with limited resources - it could be one in every general teaching area, or it could be a couple of banks, or it could be 5 rooms of 8.

I would hate to think that I was actually making that decision for the staff, and the unfortunate thing is that even then you could set it up tremendously but two years later most of the staff who made that decision won't be here any more, and the other ones are saying what the hell have we got this set up like this for, and we do have a fair degree of rotation of staff.

He itemised the additional problem of the changing needs of technology, in that the school can only provide for the present.

As well as a concern about the availability and location of the technology, teachers also expressed a concern about their confidence to use it with students in the classroom. Participants noted that teachers have a need for professional development in both the skills associated with the use of the technology, and their confidence in its use in the classroom. Participants felt that the school needs to provide the technology in classrooms and then skill the teachers in its use with students. Ian stated that it is an ongoing process whereby access to computers and the professional development go hand in hand, and need to occur together.

School Structures

Participants commented that the opportunity in Middle School to programme teachers with a group of students all day, in a similar manner to primary schools, would make for a more flexible use of time in the learning environment. The learning teams' approach is a move in this direction. Some participants felt that a similar system operating...
in Senior School would be beneficial to students. Ian commented that it should certainly be possible to integrate some subjects across the curriculum for Senior School students and team teach in that way. He felt that currently the curriculum is too fragmented and subjects become isolated so that the learning is fractured for students rather than providing an holistic experience for them.

Participants felt that teachers are generally very happy with the learning environment that has been structured for Middle School, but this success is causing criticism to be directed toward the Senior School which is more traditionally structured. Participants believed that the lower staff to student ratios provided in Middle School need to be extended to senior students where their colleagues believe that the class sizes are too large for a teacher to provide adequate attention to students.

Whilst the participants were generally supportive of the school's division of the administration into Middle and Senior School, there was concern that the physical layout of the school does not reflect this subdivision. The fact that the nature of the learning environment for each sub-school is different was seen to cause problems when they are located together. An example of this was something as simple as a learning team operating in a room adjacent to a Senior School class which has a test on that same period. Some participants felt that the nature of the different learning strategies being employed is disruptive.

The length of period and the location of recess are two issues of concern, noted by participants, in the structure of the school day. As long as teachers employ different learning strategies with classes, it was felt that it is unlikely that agreement will be reached regarding an acceptable length of period. This was seen as another example where greater
flexibility needs to be accommodated in the structuring of the school day. Melanie noted that recess occurs at 11.25am after two 80 minute periods. She felt that for many students, and particularly for younger students, this is very late in the morning. However, she also noted that attempts to move recess to the break between periods 1 and 2 had met with disapproval by teachers.

The change of administrative structure to facilitate a Middle and Senior School was seen by teachers as a positive move that enhances the learning environment for students. Felicity commented that it was seen by teachers to provide for a clearer definition of roles and an improved level of support for classroom teachers.

Participants also commented that the vertical House system receives the support of teachers. As Olivia stated: "vertical homerooms can cater for everybody and everybody is happy - no one complains." The opportunity for students to mix across Years 8 to 12 is more realistic for social interaction than a system that divides students artificially into chronological year groups. Craig commented that vertical homeroom groups work well for students in this particular community where there is a lack of family networks. Students often do not have extended families living locally so there is a need to develop community within the school. It seems that the vertical House system creates a support mechanism for students who need to make relationships because they do not have a support system outside of school; it provides a substitute for the extended family.

Participants also noted that parents appreciate the community focus of the school, where it is providing a learning environment that compensates for the lack of community found in the local area.
Parents

There was general support from participants for the idea that a school cannot work in isolation. It draws its clientele from an existing community and it was felt that the learning environment developed by the school needs to reflect the needs and aspirations of that community. Craig gave support to this: “I think the working relationship between a school and parents is the second most important relationship that exists in the school community. Teachers and kids being the first, and school and the parents second.” John reinforced this view when he said that if the school is going to educate children it needs to understand the parent group and what that group’s expectations are for schooling. He believed that parents are the primary educators of children, and children’s values are learned from their parents.

Parental expectations and attitudes to learning. Craig commented that the parents of the school are not highly motivated toward academic achievement or competitive spirit. Many parents are employees in the mining industry, or proprietors of small businesses and they have not had to achieve high academic standards to be successful in these areas of employment. It seems that their expectations for schooling are that their children will be happy and able to cope with society. Craig believed that they are not concerned about sporting prowess, or academic excellence, but they are concerned that their children will be able to avoid the social ills of youth suicide, substance abuse, fractured relationships and violence. This is their reality.

Craig summarised the views of several participants when he commented that this philosophy can lead to an indulgence in children by parents, in an attempt to ensure their happiness. He said the result can be having “children who have everything they want, or
only have to do what they want,” and he believed that this needs to be tempered with challenges. Children need to feel challenged and to be responsible for their learning. It can be counter-productive, in terms of students becoming independent learners, when parents indulge their children. Craig used the following example:

> If a kid hasn't done their assignment - the parent actually believes it is their fault, not the kid's. And they are quite happy to take the blame: 'it is my fault, I should have sat down with them'.
> I had a great lady on Friday, I was talking to her and the child had said: 'oh, I've done it, and Mum's going to bring it in today.'
> Mum rang and she said: 'I've got it here, I can bring it in?'
> I said: 'Why? Why would you want to bring it in - it's not yours?'
> She works a lot of jobs, she sounded a bit of a battler, and it was her day off.
> I said Why don't you go down town and have a cup of coffee, and put your feet up. It's not your assignment, it's not even your problem, it is hers'.
> She said 'oh well, I won't come.'
> I said: 'No. When your daughter arrives home and says, 'oh Mum did you run down to College X and hand it in?' just say 'No - and I'm never going to.'
> And that's what she did. And the girl brought it in herself on Monday.
> And that Mum, in talking to her, for 12 years she has been indulging that kid, and she's softened the blows and taken things into school that the kid didn't do, and she's starting to see that she's getting a little bitch of a daughter, and she is trying to cut the strings, and it's not too late. But she's trying to do it, and that kid is going to have a hard time to start with, but at least her mother's realised she must cut the strings. It is the child's problem, not mum's. So I think there are people there who want a little bit of 'don't bring it in - it's not your problem'. So, that's as I've seen it.

Craig also commented that the other aspect of over-indulgence of children occurs as a result of the dysfunctional family and the disruption to routine that this can cause. Fathers who work in the mining industry often work on a fly-in/fly-out basis which means that they are with the family for a week and then away for two to three weeks. He believed that this causes children to have a routine when they are at home with one parent, but when father returns the routine changes, usually to a more indulgent routine where the father
indulges the child to compensate for his absence. It seems that this can have a deleterious effect on the child’s work routine for the period when the father is at home. Craig also believed that the effect of the mother living dually as a single parent and married parent can also affect the child’s stability and hence his/her ability to engage at school, and understand how to build relationships.

Another aspect of parental expectations that has been alluded to earlier, and which was supported by several participants, is the need to build community in view of the fact that the local community lacks a cultural heritage. They believed the fact that the population has been fairly itinerant has led to a lack of extended family and a lack of a sense of place. This means that a student’s experience of cultural identity has been recent, and might also have been temporary. Participants believed that the school needs to consider this in its attempt to help students to build relationships, in its understanding of the lack of community support and commitment, and in the learning experiences that it provides for students.

Parental involvement. It was the view of several participants that the school needs to involve parents more directly in the learning. It seems that parents are often fearful of engaging in discourse with the school, and of entering the campus unless by invitation, such as for canteen duty or a parent information evening. It was felt that it is the role of the school to engage with the parents. The traditional view of this engagement is stated by John: “... and parents ... well they are the people we contact when there is a problem.” To help remedy this understanding, his idea initially is to provide a helpline for parents, and then to invite parents in for a variety of reasons, ranging from morning tea to providing expertise and skills in the classroom. He believed that there are many parents or family members from whose life experiences the students could benefit. It seems that the school
has an advantage in that there are lots of parents who have flexible working hours and who are available during school time.

Participants generally felt that the nature of the learning environment in the school is changing and the school has an obligation to keep the parents informed of this change. Parents' experience of education is often limited to their own experience of schooling, and their understanding has not progressed beyond that. The participants believed that the school needs to find a range of ways in which it can educate parents about lifelong learning and current educational practice, so that they understand what the school is trying to achieve in its learning environment. Participants commented that there needs to be an engagement of parents so that they can work in partnership with the school. There was concern that teachers need to hear what parents value and both parties need to be able to work together to achieve the best learning environment for students. Craig commented that this is the importance of building a learning community where students are receiving the same message from school and home. He said parents need to "hear from schools in a non-academic, non-threatening way, in language that anyone can understand, and to walk together down that path."

A general theme expressed by participants was that building good relationships with parents is a very important aspect of creating a good learning environment for students. They commented that where the home and the school are articulating different values not only will the student be confused but she/he is likely to develop an antagonism towards the value systems espoused by the school. They felt that this is particularly evident in the area of religious education where parents give support to the student's notion that work in this curriculum area is less important than that for other subjects. Unfortunately, participants
felt that the parents are not very supportive of the faith dimension of the school which suggests that their value system is more secular and materialistic than Christian.

The management team believed that the school needs to involve parents more directly in the school learning programme. It was felt that the involvement that parents have during the primary years of schooling deteriorates once students reach secondary schooling. John stated that there needs to be a greater level of openness by the school towards parents so that they are invited to be involved in the learning, particularly at Year 8. He commented that it is the students themselves who resist this involvement by parents once they reach the early adolescent phase of development, and the school needs to counter this resistance.

Community

Craig stated that in country towns the relationship between parents and the broader community is usually very close. It seems that in the community of this school there is a lack of local identity, as most of the population was not born in the town but elsewhere, interstate or internationally. Craig noted that the structure of the population is only now just emerging, as the size of the population grows. He believed that this lack of identity creates a need in the community for stability and for a sense of identity and ownership, and it is this need which impacts on the learning as the learning environment attempts to respond to community needs. This view was supported by his colleagues.

The participants who are part of the management team believed that working in close contact with the local community is a two way process which involves inviting community members into the school learning environment, and allowing students to access the community and its facilities. They stated that inviting members of the local community
into school makes the learning relevant to students in the context of their broader learning goals. It also allows students to experience the lives of other people and it is through this experience that they become engaged in their learning.

There was some concern among participants that the local community has many facilities that provide scope for excursions, which would be very useful for students to access. However, the structures of the school day often limit access to outside facilities by student groups, and make planning and organisation difficult to the extent that it seems teachers are reluctant to use these facilities as much as they would like. Participants believed that the flexibility provided by the middle schooling approach allows students to access the community much more readily, and they welcomed this. It was generally felt by participants that the school needs to make greater use of the local community in the learning process, as students find it relevant and are motivated by engagement with the broader community outside the confines of the school.

Conclusion

This chapter presented the case study findings of College X. The findings are presented as key themes that emerged from the analysis of the data. The main theme was that the most important influences on the learning environment are those that focus on relationships and values. In particular, the modelling of a set of values that are consistent across the total learning environment was seen as vital to effective student learning. The prevailing view was that values need to be in accord in this respect, and this is not always the case in this community. However, if students are to respond to these values then it is important that good reciprocal relationships are built between students and teachers. This is
an aspect of learning that is gaining attention, at least in the Middle School learning environment.

A further theme was that the Middle School learning environment provides opportunities that lead to the intrinsic motivation of students by focusing on learning strategies that develop independent learners, empowering students in their learning. There is flexibility in the grouping of students that allows for single gender and cross gender groupings to occur.

There is a clear distinction in this school between the nature and effect of the learning environment provided in Middle School and Senior School. The flexibility of the Middle School learning environment provides much better opportunities for enhancing the learning process, and this casts doubt on the quality and appropriateness of the Senior School learning environment.

The following chapter presents the case study findings of College Y, the second case study related to this research. This chapter will follow the same key themes as presented in this case study.
CHAPTER FIVE
SECOND CASE STUDY: COLLEGE Y

Introduction

The intention of this research is to develop an understanding of how teachers perceive schools can best be organised to maximise the learning process. In this chapter the findings from the second of the two case studies that were undertaken are examined. This chapter focuses on the responses received from a total of 12 teachers discussing their views about the current learning environment at their school, and how this might be structured to improve the learning process.

A total of 12 teachers were interviewed, in a series of four focus interviews. Two of the management team, Rebecca and Sally were interviewed. There were three staff interviewed who had joined the staff of the school within the last two years; these are Jeff, Hannah and Ilma. Three staff were interviewed who were less experienced; these are Evelyn, Francine and Gwenneth. The four more experienced staff interviewed are Andrea, Belinda, Cathy and Donna. Individual interviews were conducted with Andrea and Evelyn. Whilst participants were grouped according to the criteria described here, the important criterion that evolved in the interviewing process was that of location in a particular subject area which allowed them to have a specific view of and approach to the school learning environment as it related to students’ learning.

The chapter has been organised under a series of topics that reveal the broad themes that emerged from the data, and which are consistent with those topics appearing in Chapter Four. These topics are values, rapport, motivation, grouping of students, teaching
environment, learning strategies, physical environment and facilities of the classroom, technology, school structures, parents, and community. These themes are consistent across both case studies.

Aspects of the Learning Environment

Values

There was general agreement amongst participants that the learning environment of the school needs to be established on an agreed and clearly articulated set of values, that are known to and accepted by all participants in the learning. The senior management of the school were unified in their opinion that whilst some values are explicit, many of them are implicit and not well articulated, and embedded across the curriculum.

Need to articulate a common set of agreed values. They felt that teachers do not have a clear understanding that values are part of their curriculum, and less understanding of what those values might be. Rebecca, a member of the management team, commented: “I mean even just within Biology or Human biology some of the values - I mean the values of the Catholic Church and Catholicism. I don’t think staff are clear on some of those values.”

The senior management participants believed that in some instances there can be a lack of congruence between the values held by the Catholic school and the values espoused by the teacher. They stated that the school, and indeed the Catholic Church, needs to make clear to teachers the values that it is expecting them to encourage in their classrooms. Rebecca also believed that teachers have been trained to teach values-free, whereas now the
Curriculum Framework has made it a more explicit part of the curriculum. In Catholic education values are a very important component of the mission of the school and teachers are required to own Catholic values and to teach from a values perspective.

Most participants agreed that the establishment of values significant to the school are particularly important for new staff so that they become imbued with the ethos of the school. Sally and Rebecca, as senior managers, both commented on the fact that insufficient time and resources are committed to the orientation of new staff into the school. Rebecca stated that commercial organisations spend time inducting their staff in the values and ethos of the organisation, whereas schools do not. As she said, “just an evening or having a meal with people talking about the ethos of your school and what we value, what makes this school such a good place to be” would give new staff an understanding of the values that the school expected teachers to transmit to students. The quality of teaching staff is fundamental to the operation of the organisation. Rebecca firmly believed that time spent in the appointment and induction of staff entering the school would reduce the time spent by the executive in staff remediation. She believed that it is difficult to improve staff once they have been appointed, whereas explaining the expectations of the school on appointment would ultimately enable the teachers to perform better in the learning environment. These views were those expressed by management and they were not necessarily resonated by other participants, nor in their opinion, were they necessarily reflected by teachers generally.

Support of Gospel values. There was general agreement amongst participants that the values of the school need to be based on Christian and Catholic values, but also that they need to reflect the value system of the Religious order who established the school. The participants articulated a range of values which they described as charity, mercy, social
justice, compassion, respect, honesty, self-worth and integrity, truthfulness and self discipline.

The management of the school acknowledged this set of values and believed that they should be embedded in the mission statement of the school as a code of responsibility for staff and co-responsibility of parents. They believed that if values are important they need to be explicitly stated and uniformly reinforced, which is to some extent, not the current practice. For this to become practice the school needs to re-visit the values on which it was founded. Rebecca commented that many order-established schools of various denominations are doing that currently, in order to focus more clearly on their values.

There was a general feeling among the more experienced participants that the school needs to give greater support to the tradition of the Religious order that it represents, and Andrea reflected that opinion when she spoke about “a hole in the soul” when it comes to promoting the value system of the Religious order, and noted that the school needs to “work hard at a publicity of value” in order to develop pride in the school.

The general theme among participants was that students model certain values very well. In classroom practice students show respect for the rights of others and demonstrate shared responsibility. They are generally honest and truthful in their relationships with others, and their experience of group work taught them self-discipline and respect as they learnt to listen to others and to value the opinion of their peers. These views were presented across the participants as a reflection of the views of teaching staff.

Some participants, particularly those relatively inexperienced teachers, believed that learning needs to be seen as a lifelong process that has an intrinsic value, that value being
the enjoyment of knowledge as a source of enrichment for the person. Evelyn summarised this view:

*I would like to think that they are promoting education for the sake of education, but I don’t think that we do. I think we promote it for the sake of getting a mark to go to Uni. I think the whole way it is set up tells the kids that it is a means to an end, and the end is not enrichment, personal enrichment. It is money through enrichment, but it’s not that ‘hey, go out and be a student of life’, and take in everything because it is exciting, and there’s knowledge out there that’s just waiting...*

Contrary to this view, Evelyn believed that students saw education as a commodity, as a means to an end that would enable them to gain money rather than personal enrichment. Francine supported this view when she commented:

*I am forever sharing the value of knowledge, the enjoyment that you can gain from it, and the fact that it can make you a better person I suppose. But also I would like to think too that we are trying to promote the ideal, get them to value social justice, to create a sense of social justice.*

She saw the importance of an awareness of others and the value of world resources as crucial to values education. Gwenneth reinforced this when she commented that values are really about “learning to think critically and not to accept everything that comes their (the students’) way, to be really questioning and to value knowledge.” Gwenneth went on to say that the values promulgated by the school, such as charity, mercy and a belief in God, are transmitted to students through the daily practices and structures of the school.

Evelyn furthered this point by stating: “the point is not for you (the student) to go out believing something, it is for you to go out knowing the choices you have about what to believe.” She believed that it is a matter of freeing students from a focus on academic
achievement to allow them to re-focus on ways of thinking that would enable them to
approach the world. She believed that this was also a rather fraudulent approach to learning
when students know that ultimately they are still entering a competitive world where their
academic results are really what counts in the short term. Evelyn still believed that despite
the short term academic goals, students are enriched by the values of the school. "I do
agree that I think they pick up a lot of the ideas and values along the way. And I think that
later on they will come to realise what for them is the most important."

**Work ethic.** There was a strong feeling among participants that there was a poor
work ethic among students, and that whilst parents and students value education this is
different and detached from a perceived need to work hard in order to achieve. Hannah
summed this up when she said: "Valuing education and having a work ethic don't go
together. There are some very bright students out there who value their education but they
are not prepared to work hard to get where they think they should be getting." This is a
reflection of society's values, explained Ilma:

> People seek the easy way out. Rather than paint your house, you pay
someone else to paint the house. ...drive-through bottle shops, and
drive-through food places and there's drive-through soon-to-be banks.
People don't need to do anything, you can ring up and people can do
anything from bring you food to fix the tap. There is no motivation to
do anything.

She believed that it is parents who value education and want their children to benefit from
the opportunities that they did not receive, but in the process they are providing students
with opportunities without also providing the expectation that they need to work hard in
order to gain these opportunities. There was some division among participants regarding
the possible relationship between work ethic and socio-economic status. There was support
however, for the idea that work ethic is related to goal setting, that students who know what they need to achieve to gain a university place will work hard to get there.

**Modelling values.** There was a feeling among participants that staff need to role model for students the values that the school espouses, and that they are not necessarily doing this well currently. Belinda believed that there is a contradiction between staff behaviour and their loyalty to school values: "we ourselves behave just like they do, so there's this contradiction almost in the values." Donna commented that it is common practice for students to take time off to study for examinations, and Belinda stated: "but we have the same problem with staff. I am really amazed that during pressure times how many staff actually take time off and are suddenly ill, and catch up on their work." There was agreement amongst the more experienced participants that it is the impact of teachers modelling the wrong values to students which is damaging to the learning. Not only does their frequent absence from class adversely affect the learning environment, it devalues learning and acts as a demotivating factor for students.

Participants who were new to the school viewed the pastoral care system as a vehicle for the transmission of values to students because the house tutor had the potential to role model values for students over a period of five Years. Jeff expressed concern over the possible conflict of roles that can occur when the classroom teacher is expected to assume a pastoral relationship with students. He also believed that this provides an unrealistic preparation for the world they will experience outside of school. The role of the classroom teacher is to challenge and extend students' perceptions of their abilities. Jeff expressed it this way: "they think 'okay, I am a C student, and I am happy getting Cs'. But give them a kick up the backside and they might get a bit more." Hannah believed that
school provides an environment that is too sheltered and supportive in comparison to the real world. Jeff supported this view when he commented:

If they don't meet the deadline when they get a job, they're going to get sacked. We are catering to their needs by giving them these outcomes, where you can hand it in but we will negotiate if you give it to us a week later. I mean how's that preparing them for the future?

He believed that we need to provide students with values that will prepare students for the workplace. Jeff's views were not particularly reflected by the other participants.

Rapport

This aspect of the learning environment was not seen by the majority of the participants to be as important as values and student motivation. Rapport was discussed as an indication of values. Sally commented on this when she said:

That is why such values as kindness - that is how students judge teachers, is usually by them being kind, being kind and considerate, and listening to them. And they are things they often say about teachers when they judge teachers, so that to them is what they value. They don't judge them by the overt curriculum which is what a teacher would expect them to, they judge them by the sort of person they are.

Participants believed that the basis for rapport is the way in which teachers interact with students, the value they place on establishing that relationship. Sally observed that teachers forget that students learn so much from often unintentional aspects of their interaction, such as looks, or the way they might respond to a question or a request. She believed that teachers are very powerful in the influence they have over students in their care.

Most participants agreed that the development of student teacher rapport was an essential aspect of building a positive learning environment. One experienced participant
believed that rapport is built by the way in which a teacher engages with students. Andrea stated: “I think myself that motivation comes from the engagement that you have with a student, talking to them to make them realise that what they want to say is sayable.” She drew the link between relationship, rapport, and motivation, and went on to say that by this rapport one can monitor a student’s level of interest or expertise. Rapport is a reciprocal process so that the motivation works for both parties, student and teacher. Evelyn supported this concept when she applied it to the House system where she believed it is easy to develop simply because of the pastoral nature of the relationship. Gwenneth commented that the activities engaged in by Homeroom teachers enables them to build rapport with their students. Similarly Francine cited an example of the way in which she recognised the contribution that students make to her lesson:

I tend to say ‘thank you’ at the end of every one of my lessons. One of the Year 11s said:
‘why do you do that?’
‘I like to enjoy myself as well, so if you put the effort in, I like you to think that I noticed it’.

She saw that rapport was based on the establishment of a relationship of trust.

Jeff had a different perspective on the issue of rapport. He believed that the development of rapport did not enhance learning “I don’t want my students to like me and get 60%. I would rather them not like me and get 75%.” Jeff made a clear distinction between classroom practice and out of class pastoral concerns.

Motivation

There was a general consensus from participants that motivation is the key factor concerned in the provision of the best learning environment for students. There was some
debate about the significance of intrinsic and extrinsic motivation, but generally participants supported the importance of intrinsic motivation. There was general support for the development of independent and interdependent learners and the concept of life long learning.

Extrinsic motivation. Most participants agreed that extrinsic motivation, or teacher directed learning, acts as a demotivating factor for learners. It alienates the learners who are not in the middle range of learning ability to whom the teacher is directing his or her instruction. It creates a sense of competition and comparison with other students, particularly with regard to the assessment of work, and this can build a sense of failure for some students. Whilst competition can be a motivating factor for some students it is more often a demotivating factor. Students cease to be risk takers when they know that their performance is related to others by way of marks or grades. As Evelyn stated: “take away the fear that what they are doing is wrong, and tell them ‘go for It’. If it is not marks oriented they are much more willing to take the risk.”

It was felt that students need to be successful as competitors, and that this is not the nature of competition in learning. As Gwenneth stated: “there is nothing more demotivating than failing, and not even being able to understand the work.” This can be related to the promotion of students by age, rather than by a student’s needs or ability. It was also felt that this fear of failure is often generated by parental expectation of students.

Parents were seen as a significant influence in regard to students’ senior school expectations. Francine stated that the student perception is: “my parents expect me to get an A or a B, or you know my parents are paying this much money and they expect…” When students should be heeding advice regarding subject selection they may be swayed
by parental desires for them to access the more demanding subjects. There was also a feeling expressed by participants that students in Year 11 and 12 are promoted to subjects for which they do not have the academic qualifications, which suggests that they are being programmed for failure. They are also unable to change subjects once they have committed to them, which demonstrates a very inflexible system.

There was general agreement amongst participants that the role of the teacher is to provide an environment which is motivating for students, and to encourage students in their learning. They felt that one way of achieving this is by praising the efforts of students to provide them with confidence in the face of competition. As Andrea stated: “accepting that children have to understand that if you put in your best, that is all you can expect of them (and) praising them for that effort.” Evelyn expressed the difference between intrinsic motivation and extrinsic motivation in this way:

_ I think differently, because I am thinking of one student who was motivated completely on success for herself. She set incredibly high standards for herself and that’s it, you don’t need – there was no outside motivation needed, she’s got all the external praise and encouragement that she can have. It means nothing if she thinks that she is not doing what she wants, that she set herself to achieve. And then there are those who need that constant affirmation, and even just a drop of praise. I had one student last term in Year 10 who, I mean I knew her from Year 8, an incredibly weak English student, not very focussed at all more interested in socialising and so on, but I think she might have had a bit of a shock with her end of year report last year and she was really trying to concentrate. I mentioned it to her, I said ‘look, I have noticed that you are really trying very hard to stay focussed. I just wanted to tell you that I had noticed it’, and she was so chuffed and so puffed up with it she was even more industriously trying to take notes, trying to think of something intelligent to write down and I think that praise does a lot. To know that what they are doing is recognised, even if they realise that I’ve still got 4 out of 10, that the teacher knows I tried to do my best._

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She did agree with Andrea about the need for affirmation to provide some students with confidence so that they can be successful, a point of view that was reinforced by most participants.

There was general support for the notion that teachers need to give recognition to the individual talents of students, which may not be academic in nature. This is a different approach, according to Belinda, who said that we have spent so long grading students into different categories rather like “grading oranges into different categories for export” and now we are telling students just to do their best. It is a shift from competition to individual achievement, to identifying particular strengths and expertise and using this to build confidence in learning and respect from others. As Cathy stated:

*In the school environment where students are working in groups, you might have one with a low ability, but who’s good at technology—talk about boosting their morale.*

‘Look, you’re great at that (technology) — you should be showing your group how to do it’.

*And all of a sudden that person has become an equal.*

It is a matter of identifying a student’s strength and providing opportunities for that student to succeed. Participants saw this as the concept of multiple intelligences; and of recognising the various preferred learning styles of students and accommodating them.

Participants were of the opinion that it is necessary to vary the learning strategies used in the classroom in order to motivate students. Francine drew the distinction between one class where the students were very vocal: “the last three lessons we haven’t put pen to paper but we’ve been playing with words, making noises, making up poems, sharing favourite poems and miming poems”, and another class “where a discussion is like pulling teeth not because they are not interested, they just prefer to write”, whereas Gwenneth
commented that her students were motivated by the practical, and said that “learning with the different modes is good in Science, lots of visual and hands-on.” Again Francine found that the motivation of students was achieved by providing them with freedom to adopt a preferred learning style:

*I have found something that I just did recently with the Year 12s. I gave them an oral, mainly to try and get through a text, you know I broke it up into chapters – time is of the essence – broke it up into chapters; ‘just do a presentation’ ‘but can we do a video?’ ‘Do what you like, I don’t care’. I said ‘you know it’s worth 2% just keep that in mind’, meaning don’t put 200 hours into it. And the things they came up with – there were dramatisations, videos, there was mime, there was the most magnificent handouts. I said you did not have to go to that much trouble, in the sense that you weren’t going to be marked on the presentation, more the content. “Oh, no, no, we loved it, loved it”, because it was a chance to be expressive, be loud, be not putting pen to paper all the time.*

She commented that this approach elicited a much more proactive response from students than when she was adopting a more traditional inputs focus in class.

Whilst most participants were in favour of student centred learning and outcomes based education, one participant voiced a different opinion. Jeff commented that Mathematics does not fit the Curriculum Framework outcomes based strategy of learning. He believed that his subject, “is the old school and it would be hard to change their (teachers’) minds. If there is a subject where you wouldn’t do it (implement the Curriculum Framework) it would be Mathematics.” This suggested that extrinsic motivation, or teacher directed learning, is the preferred model of learning. He went on to say that the Curriculum Framework did not allow students to reach their potential and its implementation would be to the detriment of higher ability students.
Intrinsic motivation. Participants believed that students need to be successful learners. The most important motivational factor considered by the majority of participants was the empowerment of students, which they believed in turn leads to intrinsic motivation. Donna commented that success is the secret to motivation. The teacher’s role is to recognise their achievement so that their success provides energy for further motivation. Andrea believed that one can motivate or engage students by being “reasonable in the way you deal with them, you ask them to do it to the best of their ability.” She continued to say that “to develop their own personal motivation is easy if you allow them the opportunity to do it at their pace or their level to be engaged with them, to make sure you are monitoring their level of interest or expertise.” This opinion was in accord with that of other participants.

The participants were in agreement that empowerment was the most important influence in providing for the ongoing engagement of students in the process of life long learning. Empowerment was defined by participants as giving power to students so that they are in control of their own learning. Andrea described it as “taking control – that is the real fundamental in our classroom. You are in control – you’ve got power; you’re out of control – you’ve got no power. You know when you lessen your control you lessen your ability to achieve.” Control and ownership are important as Cathy stated when she said “once you get them to own the task, they can work at their own pace, they can move on and they excel.” It is in this situation that the teacher becomes the facilitator of the learning, the student is working independently and at her/his own pace, and the work she/he is undertaking is relevant. As Belinda stated, choice and responsibility are important to the ownership of learning. This individualising of the learning is based on the concept of immersion by the teacher to initiate the learning, so that students have a knowledge base
from which to begin. Belinda stated: “I’ll show them different things – photographs, videos, documents – so that they can go further from there, and they have got a base from which to start.”

The general theme expressed by participants was that the curriculum needs to be relevant to the learner. Hannah said that if you give students a real life situation they have to solve they are more motivated because they see it as worthwhile. They begin to think creatively and divergently to solve the problem. They own the learning and are more responsible for their achievements. This ownership of the learning is more apparent in Year 8 than higher up the school simply because of the prior learning to which they have been exposed. Participants commented that students in Year 11 and 12 lack research skills and the ability to access knowledge from books. These views were supported by a number of participants.

There was concern that often students have been promoted through the school without mastering the learning as they proceed. There were varying points of view expressed by participants with regard to mastery learning and the promotion of students by age. Evelyn expressed an opinion that it was inappropriate to promote students through schooling regardless of achievement and without any remediation, whereas Gwenneth felt that the student had social developmental needs that suggested that a person should progress with their chronological year group. She felt that schools needed to cater for the needs of individual students within their year group.

Participants from the management team felt that the school needed to adopt a more proactive approach to students’ learning. Their view was that students need to have goals that motivate them toward an intrinsic desire to learn, and these goals have to be
internalised. The learning environment provided for students needs to be more student-centred and more flexible. They felt that this is particularly the case for senior students who need to feel more empowered, trusted and responsible in their learning. Students in early adolescence are often alienated from the very controlled environment of secondary school. The learning environment works counter to their egocentric world where they focus on peers, social life and immediate gratification. Rebecca stated that “they are too old to be locked up in schools in uniform and regulated.” She believed that it is a culture that has to be developed in schools starting with lower school students and progressing to senior students because currently senior students are not able to handle this level of freedom.

Empowerment based on providing students with choice, making their learning relevant, and their achievement attainable are desirable attributes of the learning environment of school, according to most of the participants. However, there was also a feeling among some participants of a resistance to this empowerment.

Grouping of Students

There was general agreement amongst participants that the practical ability to group students is different from the educational desirability of grouping students in particular ways. Participants agreed that whilst students are grouped in school by age and in large clusters called ‘classes’, this is not necessarily the best method for engaging them in the learning process, and catering for their individual needs. However, participants varied in their opinions about the most effective means of grouping students for learning, influences such as size of group, configuration of students and criteria for groupings were some of the concerns expressed.
Grouping by age. An emerging theme among participants was that whilst students progressed through their schooling grouped by age this was a practical and convenient means of grouping students rather than one which recognised the individual learning needs of students. There was considerable support for the view that age grouping of students is artificial, and sometimes counter-productive to learning. Belinda represented this view when she said that age grouping is restrictive of developmental processes, and it denies individual needs: “you can see they are struggling. The structures do make it difficult for them. We are so inflexible really. We just move them on, shove them through.” Andrea contributed to this theme when she commented that catering for individual needs requires more flexibility in grouping students, and that it would be beneficial for students to be able to move across year groups so that Year 8 and 9 students might be grouped together, or Year 10 and Year 11 students, according to their individual needs.

Evelyn furthered this argument by stating that students should be grouped by ability rather than by age, a position in accord with the views of most participants.

*I mean in an ideal situation I would like a school where students advanced according to their ability, not according to their age. The student who is in a Year 9 level English is in a Year 10 level Science, and a Year 8 level Social Studies. You know just to actually list the needs of the students, of where they are, just to make it more evident to them. They don’t always have a strength in every single subject necessarily, so why not meet you where you are, rather than say you should be at this point because you are 13 years old. I mean we see that in Year 8 when students come in, when some of them are unable to write a sentence and others are writing essays already.*

Whilst participants agreed with the concept of multi-aged grouping of students, some participants noted two problems associated with it: the social development of students, and the administrative implications.
The view expressed by Cathy that “young people like to be with their own age group. I think it is a social thing” was reinforced by Gwenneth, who said, “but generally kids seem so reluctant to be out of their year group.” Jeff agreed both with the opinions expressed by Cathy and Gwenneth, and the statement made earlier by Andrea, that whilst it is possible to mix students in adjacent years, from a social context it is not possible to combine students with greater age differences into a single class or group. Whilst outcomes based education suggests that students should not progress until they have achieved a particular outcome, there was general agreement from participants that this would cause social problems if it implied that multi-aged grouping was a corollary of this requirement.

There was some reservation expressed by participants that the administrative implications of multi-aged grouping of students could be prohibitive to its practice. Andrea commented on the problems associated with the tracking of students, and Rebecca felt that a more flexible system could be achieved, but at some cost to the existing structures. Sally supported this in her statement: “It would be great if you could group them according to their needs, but how do you run a school like that?” Both Sally and Rebecca conceded that this flexible grouping is quite possible with students at both extremes of the ability spectrum. These reservations were seen by most participants as less restrictive than the social implications of multi-aged grouping of students.

One aspect of multi-aged grouping that was well supported by participants was with regard to a vertical system of pastoral care. The vertical interaction between students in the House system was seen to overcome the barriers to social interaction between year groups apparent in the academic arena of schooling. Francine commented that not only did it foster House spirit but it “is a way of giving kids who might not be on the Council or
Sports' Captain a modicum of responsibility, or a chance to provide some sort of role model for the younger ones." Participants agreed that students have a strong sense of identity with their House, and House activities provide a forum for vertical interaction. Gwenneth reinforced this perception when she stated that student confidence and bonding between students is enhanced through the opportunities provided by the House system.

**Grouping students by ability.** There was a range of viewpoints with regard to the grouping of students by ability, and little agreement amongst participants about the most appropriate way of achieving this to enhance the learning process. One group of participants, the less experienced teachers, were unified in the fact that mixed ability groupings were more appropriate in Year 8 and 9 and that this practice needed to change to ability grouping in Year 10 and above. There was also agreement that this did not work to the benefit of lower ability students who needed to be grouped together from Year 8 onwards. Evelyn explained her support for this:

*I like the mixed ability in lower school, especially after term one you have a fairly good idea of the range you have, and if you can arrange the groupings for group work, they work beautifully together. I think they really enjoy, especially the brighter ones enjoy, the push they can get, they are not just doing easy work. They are being asked by their not-so-able peers to explain what they don't understand and they get quite a buzz from being able to say 'well this is what's happening', and it clarifies it for them as well. So I like the mixed ability.*

Gwenneth reinforced this opinion. "There is no grouping (ability) in Year 8 which I find is very positive for everyone, the weaker ones get pulled along by the stronger ones, and they tend to be really happy classes."

Francine explained that mixed ability classes also enable students of different abilities to help each other which promotes the values of respect for each other and tolerance of others, important values for a Catholic school: "it is good for them, particularly
the brighter ones, to have that awareness of other people. You are a Catholic school and this is a particular attitude you are trying to foster, and this is one way of doing it.” There was a divergence of views amongst participants about the desirability of ability grouping.

There was general agreement among participants however, that the lower ability students needed to be separated from the mainstream classes. Evelyn commented “they (the special needs students) are so far behind the rest of the class it doesn’t serve them any purpose to be with them. They just can’t keep up with it.” This opinion was supported by other participants who believed that not only is being in a mixed ability class detrimental to the self-esteem of lower ability students, but those students are also denied adequate attention in these classes. Ilma supported this point of view when she stated:

_They already know that they are going to get a ‘D’ or an ‘E’. Wouldn’t it be better if they got an ‘A’ in a different class. In a mixed ability class if you’re the lowest student you tend to get more ignored than the higher students who keep answering all the questions and they do all the work because they’re congratulated and they’re respected by the teacher._

A counter view was offered by some participants who recognised the possible effect of exclusivity on the low achiever. They felt that students can become isolated from the mainstream and that this can be compounded as they move through the school, often resulting in behavioural problems. However, in a school where such problems were minimal, participants felt that ability grouping across the curriculum could only be of benefit to the students.

While some participants believed that ability grouping was only desirable for the less able students, Ilma and Jeff were of the opinion that ability grouping should extend to all levels of ability. Jeff believed that for content driven subjects, such as mathematics, it is
necessary to ability group because of the range of content material that is covered between the different levels of ability: “I have been in the situation of teaching accelerated, medium and low level and you teach totally different things. You’ve got the same year level but it is just not the same content.” Ilma supported this idea in the subject area of social science where she admitted the difficulty of coping with a range of abilities in the one class.

Working in different sized groups. Participants agreed that the opportunity for students to work in different sized groups is facilitated by having mixed ability classes. Hannah typified this sentiment when she explained that having students of different abilities enables her to organise groups so that students work to best effect. She engineers groups so that each contains a range of ability so that those with different skills and abilities can teach each other. Participants felt that a range of learning experiences was provided for students that ranged from a need for them to work individually, to working in pairs and small groups, to working in larger group situations. It was this diversity that the participants felt was beneficial to students.

Cathy, an experienced teacher, explained that for her the ability to organise students into different sized groups enabled her to prepare students for work in the business world, and to develop their interpersonal skills for the workforce. She achieved this through role playing: “they are all role playing but that is the real life skills.” It also gave her the opportunity to evaluate their performance in a range of ways including self and peer evaluation, as well as group evaluation. Belinda, another experienced teacher, noted that the ability to work effectively in a group was a learned skill, which needed to be taught:

*What I think is the real importance of group work is actually teaching our kids to do it. They just don't know, you can't assume that they can work as a group because they really cannot, they are not used to it enough. They are very much used to working as individuals.*
Andrea described group work as an opportunity to work as a cooperative team where each group member can appreciate the effect of the individual on others. “There is a tendency to cooperative responsibility reflecting the values of the group.” Andrea also felt that for her subject the experience of working independently and individually is important: “I think sometimes they (the students) need to come to their own space and their own time. I also think that they need to be able to explore their own world in their own way.” The agreement among participants was that it is these varying ways of working that makes a rich learning environment for students.

**Class size.** There was general agreement among participants that the ability to cater for the needs of individual students is closely related to class size. The number of students in a class determines the degree to which a teacher can get to know each one and offer them assistance with their learning. Andrea stated that large class size impedes the development of rapport with individual students: “everything compounds with increased size and the increased anonymity of a child in a classroom.” Gwenneth expressed the same sentiment of not having time to attend to students: “if you really wanted to help students with literacy and with problems then you need smaller groups. So you just have time for them, it’s not just the disruptive ones, there are the quiet ones that you never have time to go near and find out what’s happening.”

Several participants commented on the difficulty that large class size presented for their ability to access students. Another concern expressed by participants was the relationship between class size, and classroom practice and learning strategies. There was a general feeling that the ability to use collaborative classroom practices was impeded by the large number of students in a class. Andrea expressed concern that the size of classes affected the availability of limited resources and in turn the learning experiences that she
could provide for students. She used this example: “in our area you can’t do two metres of fabric if you have only got half a metre per kid of work space.” It is a resource allocation issue whether the resources be human or physical, and this is a cost factor, as some participants identified. Some participants drew the relationship between ability grouping and class size. They indicated that if class sizes remained large it provided a stronger argument for grouping students by ability to enable easier management of their needs.

There was a strong feeling among participants that the grouping of students in the learning environment should be different for students in Years 8 to 10, from students in Years 11 and 12. Participants agreed that senior school students need to be provided with a more flexible timetable that allows them to use time according to their needs, and thus place more decision making on them to enable them to become more responsible for their learning. Part of the rationale for this system would be to emulate tertiary learning practices by establishing lecture and tutorial style learning experiences. The management of the school agreed with other participants that senior students need a more empowering learning environment and freer structures, such as a lecture and tutorial system would provide. They felt that such a system would marry content delivery with a level of student care. According to the participants from the management of the school the constraints of this system lie in the need to provide different learning environments for students from Year 8 to 12 on the same campus. Rebecca stated: “I still think that in lower school it would need to be a lot more guided, giving freedom but within much more fixed parameters. Whereas I think the upper school, 11s and 12s, could be given greater freedom.” Sally commented that it would be difficult to provide for the two distinctly different needs of students in the one school.
Teaching Environment

Most participants did not consider this aspect of the learning environment to be of concern and therefore did not comment on it. It was the participants who were new to the school who raised the following points. The main concern with the teaching environment was the ability to achieve a balance between a collaborative and a competitive classroom environment. Jeff stated “I like the cooperative learning environment, I reckon that is the ultimate way to learn, but there's got to be a competitive edge as well” because that is the reality of the world outside the school. He expressed concern that the outcomes approach does not allow students to extend themselves:

Outcomes isn't competitive at all. You could have a whole class of 'B's or 'S's, it's the criterion approach, so therefore you are setting a set standard, you're not releasing the roof where they can go beyond that standard.

This raises the question of the achievement of outcomes at different levels, which is a point noted by Hannah. She commented that a progress map, to plot the levels of achievement of outcomes by students, is important if teachers are to be able to extend students and provide rigour in the learning tasks.

Jeff extended this discussion to include the human resourcing of outcomes based education. He commented on the need to increase the provision of human resources so that students could be isolated into their various levels and thus reduce the class size so that a teacher could access each student to the level of that student's need. Hannah supported this by saying that “the most important resource is the teacher, and the ratio to kids.”
This was the extent of the participants' discussion of their concern with regard to the provision of an improved teaching environment.

**Learning Strategies**

The participants who commented on learning strategies were mainly experienced staff and management at the school. The participants from the management team stated that there needs to be a more creative curriculum designed to cater for the different learning needs of students and pitched at a range of levels. Rebecca felt that the learning strategies adopted by teachers need to be more varied to suit the needs of individual students:

*Staff need to take on change which does require different learning and teaching strategies, and requires knowledge of those. It requires much more individual attention to the students I think, although you say 'off you go and you've got freedom' that really isn't the case. The teacher to me would still be very much in contact with each student and be a tutor to them.*

Rebecca commented that this is a different approach from the current inputs focus where the teacher tends to lecture students from the front of the classroom. She felt that the TEE is the driving force of a content-driven lecture style of delivery. She continued to comment that it is this content driven mode of delivery in upper school that creates the need for a similar style of curriculum in lower school. The debate about content versus skills based curriculum is a crucial one, although Sally argued that content does not preclude independent learning strategies: “(content) can either be taught directly by the teacher if you like in class, or why can't that be part of what you're doing independently? You are still learning the content in a context framework.” Learning strategies are the means by which the content is delivered and that can be by student-centred means as well as teacher directed means.
Rebecca believed that students need to be empowered in their learning, and that teachers need to vary their learning strategies in order to maintain student engagement in the classroom. She stated that teacher directed learning is boring for students:

*It must get very frustrating sitting in a classroom all day just listening. Think what the average student goes through. We can't even do it — staff can't even be quiet at staff meetings. So you are expecting students to sit through six lessons a day, and listen to some of the most boring staff — teachers don't even know when to stop talking.*

Sally stated that the regimentation of the school day disempowers students, and provides unrealistic expectations of students: “every time someone walks into your lesson you expect them to know exactly what you did yesterday, and to pick up on that.”

These participants saw that more flexible learning strategies would be possible if students had greater access to information technology in the form of computers. For example, Sally believed that the availability of computers in the learning environment of the classroom, not in laboratories, as a tool for independent learning and the investigative process, would be beneficial in developing an integral learning style. She also stated that an independent learning style not only requires the availability of computers as tools in the learning, but it also requires an more creative and innovative approach to assessment and reporting.

Most participants did not comment on learning strategies as an influence on the learning environment. Similarly, few participants sought to make comment on the teaching environment as being a significant influence on the learning environment. This was in comparison to the influences of values, rapport and motivation, each of which was viewed as significant by most participants.
Physical Environment and Facilities of the Classroom

There was general agreement amongst participants that the physical environment of the classroom is more significant to the learning than the facilities provided. Influences such as the amount of classroom space, natural lighting, temperature, location and room ownership were seen as important in creating an atmosphere that is conducive to the learning.

Classroom size was a contentious issue for most participants. The size of the classroom is one variable that interacts with others such as the number of students to be accommodated, amount and size of furniture, layout of desks, the shape of the room, the need to accommodate equipment such as computers, the teaching style of the teacher, and the subject and the teaching methodology associated with that subject. All of these variables were seen to interrelate with each other.

Classroom size. The size of rooms in the school vary greatly which in itself prompted a range of comments from participants. Cathy, Head of Business Education, commented on this range of size: “I have actually got three rooms. The first one is a large room., in comparison to another room, which is also very big, but is set out quite differently. The third room is a very small room.” Cathy stated about her own room “I am happy enough to have the large room and it works brilliantly.” Francine, who also has a large room responded differently to its size: “I call mine an old nun’s classroom – I hate it. If you mean literally the space that I am teaching in and how that affects me – mine is big, cavernous, it’s got a stage, it’s cold.” Jeff commented about his large room: “the classroom itself is very big and I think I am teaching to a class and they are way over there.” In contrast, participants also expressed a range of opinions about small rooms. Ilma stated:
"My room's tiny and there are 32 (students) and we can't move in there at all and it makes it very difficult." Whereas Francine implied that smaller rooms are cosier environments: "I mean your classroom seems a little bit smaller, and it just seems cosier, and easier." There was no consensus about the optimum size or shape of room, but rather a conclusion that it is peculiar to the individual teacher.

Most participants agreed that the size of the room needs to relate to the type of activity that occurs within it, but it is also important that it facilitates student teacher rapport and communication. The conversation between two participants who are relatively new to the school illustrated this:

Hannah: I feel spoilt because I am used to very big classrooms. I think it is a subject specific thing as well, and in technology subjects you need more space because of computers. I find a longer room, even the shape of the room makes a difference to me, a longer room where kids are more in front of my critical vision is easier to work with than a wider room where my peripheral vision has to be like this (visual), and it's much shorter so I am really only looking at kids here and I am really having to move either side to be able to see what they are doing, especially when you've got computers that they can hide behind. So I think it is subject specific.

Jeff: Just like maths, because I'm a maths teacher that likes students sitting in pairs or sitting in rows, I find that real hard as well. Like the rows are against the wall and I like to get on either side of them, and not leaning over people. I prefer them all bunched in together, more of a group, so that I can circulate the outside. I think because I was a phys ed teacher originally, I like to circulate around the outside, that could be the reason. That might be why I like the smaller room. I mean I don't like cramped rooms, but I don't like projecting my voice when it is not necessary.

Other influences that participants were generally concerned about were the availability of natural light and the regulation of temperature. Several participants commented on the desirability of having a classroom that was exposed to natural light. The
significance of ambient temperatures was also emphasised as an important aspect of creating a classroom environment that was conducive to learning. The main concern was the absence of air conditioning, and the heat in the top storey rooms in the summer months. Evelyn summarised these views when she commented on the need for regulated temperatures, particularly in summer, to provide students with a comfortable enough environment to keep them alert for learning.

Other distracting influences in the classroom environment that were mentioned by several participants related to the classroom location. They included the captivating views from the classroom windows, the noise being created by student access to drink fountains on the verandah outside the classroom window, the proximity to passing traffic outside the classroom, and vibrations felt in the classroom. Participants felt that these could all affect the concentration levels of students in the classroom.

A major concern for most participants was the issue of room ownership. They believed that providing teachers with ownership of a classroom gives them the power to organise and decorate it so that it becomes an environment that is conducive to their students’ learning. Belinda talked about the need for teachers to make their room a welcoming place for students.

As participants commented, room ownership allows teachers to organise furniture to suit the needs of their students and themselves. Evelyn commented that “the only restriction there is that if you're sharing with another teacher and you prefer the table clusters together and they prefer a circle or rows.” Decorating the classroom is another consideration in making the environment welcoming to students. Donna commented that she takes time during the holidays to decorate her room with photographs and posters so
that students, when they come into the room, feel the flavour of the subject. Cathy reinforced this idea of subject association in classrooms and decorating rooms:

*I also think we are all different subject areas here and we have all made a point that it is good to own it - I think that has come out very loud and clearly. And it is nice to go into the Art department and feel as though you are in the Art Room, and to go to Social Studies and to feel as though you are in it. And a lot of the other rooms across the top - you could go into any of them and they could be any subject, because there is nothing in there, and they could almost be "no subject" - a "no-subject" room - and that's sad.*

Belinda commented that students notice and appreciate the attempt to make rooms inviting environments:

*The kids notice actually, they pick up on it. I heard a couple of them talking last week. I came across a few of them discussing the fact that I had just changed the pictures on the back wall again because we are leading into a new section of the topic. They said 'oh, the pictures have changed' and they said 'it's really nice to come in here, you know, not to just go into a room where there is nothing'.

Andrea conceded that it is probably not necessary for students to have “pictures in every room” as they have a very comfortable and privileged environment anyway.

The participants who expressed greatest satisfaction about their classroom environment were those who had room ownership. The following comments were made by the participants who are experienced teachers, and who hold promotional positions in the school which allows them to have room ownership. Cathy stated: “so far as a working environment is concerned I am very privileged and I wish more classrooms were able to be that way.” Donna commented similarly on her classroom environment:

*Well, I guess I would have the most traditional classroom of the four of us here. Of course it has the best view in the school and that is a*
great advantage, but as you might remember I do share it with Robin who teaches Japanese, and we have some RE classes in there too. But we have quite a bit of room in the back that I can use for role plays, and we've got the TV, video, I've got an overhead projector I can bring in. It's all there. I am a very strong believer in what you people said about owning the room and you are very lucky that you do own your room.

This point about privilege is reinforced in Belinda's statement:

I suppose I am very fortunate too, but I've probably pushed to get what I want as far as learning environments are concerned. I think I've moved around the school from one environment to the other, one room to the other and it's been less than amenable to creating a good learning environment, but where I am presently is fantastic. The room was large enough to be able to organise the desks into groups that would stay there permanently and also now I have got a large, not quite octagonal but strange shaped thing towards the centre of the room where there is a computer for each group so we've got 6 groups and each group has a computer, so they take responsibility for that, and I have got everything I need in the way of audio-visual. Unfortunately the other teachers in my area haven't been quite as lucky, although they have been pushing to get the computers into the rooms.

The participants who were dissatisfied with their classroom environment were those who are disempowered with regard to room ownership. Andrea commented with regard to the development of the new Art facilities that "there were outside restrictions that were placed on us that were possibly a little impractical, and so the working situation is not ideal for the teacher and the student." In this case it was external influences that impinged on the educational design of the classroom.

The participants from the management of the school expressed a different view from other participants. They were concerned about the current disbursement of subject areas in terms of location in the school, and the need for the centralising of subject teachers and classes to facilitate communication and to enable subject coordinators to manage their
resources efficiently. In the same way they felt that the Library and Information Centre should be centrally located to increase flexibility and access to these resources. Rebecca was the only person who commented that resources should be at the centre of the learning environment.

**Technology**

There was division amongst the participants with regard to the value of technology for learning and the need for increased computer access in classrooms. However, there was general agreement that the school provides adequate availability of computers and a recognition that computers are really only one tool for accessing information.

Participants related their need for the use of technology to the demands of their subject. They felt that those subjects where computer use is paramount to the learning have the necessary technology available in the classroom, whereas subjects that require computers as a tool to access information have that facility available to them via the Library or computer rooms that are bookable. Some participants expressed a hesitancy with regard to the overuse of computers as a learning tool in comparison to other tools.

Whilst computers were seen by one participant, Donna, as a motivational tool for the reluctant or weaker students, other participants were concerned that school finances might be diverted to the provision of computer resources at the expense of other more useful resources. The general area of concern, expressed by Francine but supported by other participants, was that information technology resources were seen to be more important than human resources, when in fact it should be the opposite. The specific areas of concern were special needs students and the teaching of critical literacy. Francine
commented that whilst computers in the classroom are important she would rather have resources diverted to special needs:

*I am not in a great hurry for computers in my classroom if I’ve got kids who aren’t being pulled out for special needs. I would any day forego that to get three kids pulled out of the room, and getting one-on-one stuff to be able to speak in full sentences even.*

Evelyn commented on the misconception that working with computers would aid critical literacy skills. She explained that the plagiarism that used to occur in hard copy now occurs in electronic form with the added burden that what is available on the internet has not been censored. She stated that “to teach them critical thinking, it is not necessary for them to have computers. It is necessary to have the human being there to help them through the process.” She extended this to include all visual forms of communication.

Some participants expressed concern about the lack of access to computers, as Donna mentioned when she said that planning curriculum is difficult when the availability of computers is uncertain. They are a good motivational tool for independent learning but they are not always available for classes. Other participants compared access to other forms of technology in comparison to computers. Ilma commented on this when she said: “I have a television and video which is fantastic, and a stereo, but no I have to leave my classroom to use computers or go to the Library for anything that is outside the textbook.” Jeff commented that computers would only be useful for high ability students in the light of the current curriculum, and even then there would need to be a one to three ratio of computers to students.

The general theme expressed by participants is that the availability of technology is not an issue in providing an improved learning environment for students.
School Structures

There was general agreement among participants that school structures need to provide for greater flexibility in the allocation and use of learning time. The timetable and length of period seem to be the mechanisms in schools that are most restrictive of the learning process. Most participants were concerned about these issues, but not necessarily in the same way. There was a diversity of opinion about how these issues should be addressed.

**Issues of timetabling.** The more experienced participants believed that timetabling compartmentalises learning into specific subjects and that this is contradictory to the holistic nature of learning. Belinda commented on the inhibiting effect of timetabling on the learning experience of students:

*Timetabling, you know, how much time you are actually given in a certain thing. It's almost like we are on a treadmill. You go from one thing to another, but I don't know how better to do it, how to make it more flexible but you feel that it needs to be that. Possibly last year and this year you realised how important that is particularly in the lower school, and how difficult structures are and how inhibiting they are. You know with lower school students, extending them and nurturing them. You just get them interested and the bell goes off they go to something else, and you shut your mind to that. It doesn't seem to be right educationally.*

This view was supported by Andrea who commented on the need to block schedule periods of time to allow for longer time spans for practical subjects: "so some things would much better be served by having half a day or a whole day." Andrea went on to say that timetabling dominates the learning environment to the detriment of the learning.

Belinda was concerned that the traditional subject focus of the timetable impedes student learning. She believed that a more flexible use of time and a shift in focus away
from subjects and content, toward a focus on student learning and the holistic development of students, are desirable:

_It's not about students, it's about subjects. You each get equal time, and that's the real problem, I see there...what the students get as a consideration. I mean in secondary schools we don't have the flexibility that primary people have. So okay we step into something, so what's wrong with staying with that for a while and just getting kids immersed in that, and thinking 'well okay, making that the maths time later on? It's our fault I suppose, it's the way we have been brought up along discipline lines to protect our disciplines and we are not here in secondary schools for the benefits of the students as much. We don't think of their holistic development, we only see our little subject and we are still set in that mindset. Content and not anything else._

Cathy supported this idea when she considered the implications of outcomes based education on the time needed for students to achieve the outcomes. She stated that because students have taken ownership of their learning they need more time to work through the process to achieve a product at their desired level. Empowerment of students necessitates a more flexible working schedule to allow them to achieve the outcomes. Cathy believed that this method of working with students defied the rigid system of timetabling that is in place in schools. This is a matter of investing trust in students to be able to move around the school and access the learning they need at any point in time. As Cathy stated: "they have worked on an exercise in class in maths or something, and they have finished that - why can't they be excused and go back to art and finish what they were doing there. Why can't they move around a little bit?" Andrea summarised this point of view:

_We have to look at another way of learning. We have got to look at different structures, and what sort of immersion or depth kids need to have in their interest areas in order to get them to exit school to have some sort of vitality in life, you know some sort of direction._
Other participants expressed concern about the length of period and the importance of preserving academic class time. This was a concern expressed by the less experienced participants. Whilst it was agreed that there was no ideal length of period, and that there were problems with both short and long periods, about 50 minutes was considered to be the optimum time. Classroom management and learning strategies were seen as potential problems with long periods such as 80 minutes, and it was sometimes necessary to take time out from learning in order to break the period for students because they were unable to concentrate for such lengthy periods of time. The short periods of 35 minutes were seen to be inefficient in terms of time management.

**Gender issues.** Participants who were new to the school believed that the single gender classroom was beneficial to the learning. Their view was that girls learn better when they are isolated from males, and that that aspect of socialisation should be reserved for environments outside of school. Jeff stated: “the classroom is the business area to learn, and do your social stuff outside.”

Ilma believed that the philosophy articulated by Jeff, that a clear distinction exists between learning and social interaction, reflected an inputs model classroom where: “we put them in rows, give them rote learning, quiet work to do, chalk and talk” and that this conflicts with the current agenda of student centred learning. She believed that this agenda blurs the distinction between work and social interaction which is a product of the knowledge society. Both Ilma and Hannah stated that students need to have more flexible learning environments and a range of opportunities for interacting with each other, in contrast to the Asian Schools’ model where students are required to work individually. For Ilma this flexibility extended to taking students outside the classroom to access wider
learning environments for their learning, which in her opinion, contravened the school rules. These opinions were reinforced by other participants.

Parents

There was general agreement amongst participants that there is a lack of parent involvement in the learning process at school. There was divided opinion about whether the responsibility for this resided with parents for their lack of interest, or with the school for its lack of invitation. There was also a variety of opinion among participants about what the nature of parental involvement should be, and whose responsibility it is to engender that involvement.

Parental support for the learning. Participants agreed that parents were not very much involved in the school or in their child's learning, but there was a range of opinion about the desirability or otherwise of this level of involvement. Whilst it was felt that parents should be concerned about, and involved in, the learning process of their children, they did not necessarily need to be involved in the school learning environment. Similarly, there was a general feeling expressed by participants that parents themselves did not see the need to be involved in the school learning environment. It was felt that many parents work and are simply not available, and they have an attitude, as Andrea stated, that says that professionally they pay fees for their children to be educated by the school, and the responsibility for that learning lies with the school. In this regard their expectations of the school are very high. Sally supported this view when she commented: "They (parents) probably expect too much from their daughters. More than what some of these schools are capable of achieving. And some of them have got this expectation that they are paying for it so they should be able to achieve it."
Most participants expressed the opinion that parents need to be concerned about their child’s learning and to be monitoring this from the home environment. There was some agreement amongst participants that this was not happening to the extent that they would like it to be. Sally commented that parents want to become involved in the learning environment at home but that students often resist their involvement. Parents are also unsure how to provide appropriate support and supervision of the learning at home, a view that was supported by other participants. Sally was critical of this supervision:

*I think a lot more on supervising because some students spend hours and hours and hours on the chat line. A student who I have now got on detention, she spends three hours a day on the chat line. At least 70% of our students spend an hour and a half to two hours a day on the chat line. But they (parents) think they need a computer. They give them a computer. They are in their bedroom every night - there is no monitoring what is going on. This is quite disturbing the amount of time that is being spent on chat lines. (Girls) have this thing about their bedroom doors should be closed, and parents don’t feel that they have the right to go into their daughter’s bedroom, so they knock which gives you plenty of time to get off the channel. Things have changed and even if they are not on the computer, girls - a lot of girls - are very bad at procrastinating. They will be filing their nails or in love with boys, and they will just dream. They doodle just so much on their work, they just dream. And the telephone, you will hear of parents say that they just spend hours and hours on the telephone. So in a supervisory role - they certainly need to be more supervisory.*

Evelyn saw this supervisory role rather differently, as was evident when she commented on the need to promote the learning at home as a family of learners and saw the family as a learning resource, where parents could be involved in the learning by helping to develop a community of learners within the home. This involvement, according to Evelyn, can range from: “checking that their students are doing homework, reading the same book as your daughter’s reading, talk about it with her – they love that, be interested in what
they’re (your child) thinking about their world, promote learning in its broader sense, talking to them.” Evelyn also promoted this communication with students when she noted:

*I just wonder from what the students’ say, how often they just sit down for a meal to talk with their parents. They are abysmally ignorant of current affairs and I say ‘your parents are a lot of the effective resources if you just talk to them’. And you see the flip side of it with the students who do say, ‘ah I was talking to my Dad about this, and he was saying how in the war his father was’, and they bring so much more enrichment to their learning. And so it is probably a bit sad to hear about the children who go home and are studious and lock themselves in their room, but don’t have that interaction.*

Several participants commented on their belief that the school could do more to inform and educate parents about their role in supervising their child’s learning environment. Rebecca stated that the nature of learning has changed and the school needs to keep parents informed about the philosophy of self-directed learners and what teachers are trying to achieve at school, and how this might impinge on the parents’ role and what they need to encourage in their children. Both Sally and Evelyn stated that parents are critical of the lack of information being fed from the school to parents regarding the progress of their child. Rebecca and Evelyn commented on the need to communicate with parents early in the year to explain the school’s expectations of parents and to educate them about the ways in which they could become involved in their child’s learning.

The management believed that parents are very supportive of the school and this support made the teacher’s role easier. Parents value education, as Sally stated:

*You have the parental back-up, they were interested and I think they are involved, even although they may not come into the school, I think they (are) concerned about their daughters’ learning because they feel that it is an important value for way ahead. I think that is a basic thing that they are there and they are concerned that interest in their daughter’s learning helps discipline.*
Sally commented that parents are very supportive of the learning and ensure that their children complete work, although they are less supportive of school rules and grooming standards. This support is dependent on the establishment of open communications between home and school.

**Parental involvement in the school.** Several participants commented on the lack of parental involvement in the school, and the fact that this had deteriorated over recent years. There was general agreement amongst participants that parental involvement in the school is very low and that it is not encouraged by the school. Sally commented: “no involvement at all, and I don’t know why. They say that we are not very friendly here, not very welcoming, we don’t encourage them to be here. Women (teachers) here are fairly confident and they run the socials, the dances, or the balls.” Andrea supported this view when she stated: “the problems I suppose are that at the school the parent body itself hasn’t been encouraged to be a big participant, they are not given the opportunity.”

Participants indicated that there had been a history of extensive parent support in the College, as Cathy related:

*When we had the school balls here it was amazing how much we got from the parents, how much they did. Because we are now doing all of that outside of the school. So that the parent body are not involved in anything any more and they were really the backbone that got things going. Years ago, they were hard workers, they would come in and they would do the ball, they would do the decorations, they would know someone who could do this. They would go on camp.*

There was an indication from several participants that this philosophy of parent involvement had now been discouraged by the school and superseded by a different philosophy, a disassociation of the school from the community, as Andrea stated:
But the point is they (camps) are no longer a part of our school, and also because we have moved on in other ways they would be an integral part of our development as a community, whereas now they're not there we are still trying to move on and develop new strategies and philosophies, whereas that sort of values philosophy, which is a value philosophy, a values system really isn't that strong a part, or isn't encouraged – it is almost buried.

Andrea believed that the school needs to encourage more parental involvement and because this is not occurring it is limiting the building of community.

A few years ago we got to that point of having the school open after hours and teaching parents computer skills. I mean using the school as a resource in the community and I think really until you do that you don't engage your community very much, you don't have your parents feeling comfortable with that – coming in. You don't have them initiating very much for the school, because why is there any reason to? You only hear from the school when there is something wrong or when you need some more money.

The feeling amongst participants who had a long association with the school was divided between those who were keen to increase parental involvement, and those who were reluctant. Participants were supportive of the benefits that an active parent community could bring to the school, and volunteered many suggestions of how this could be achieved ranging from socials, to inviting parents in to be part of class activities.

Some participants expressed an inherent reluctance on the part of teachers to become involved, as Cathy expressed: “I like the idea, but ask me if I really want to be here dancing with the parents?” Whereas other participants indicated that teachers were providing opportunities for parents to be involved in classroom activities with varying degrees of success. Hannah commented that the social links and interactions between
students, teachers and parents are very good, better than she has experienced in other schools. Ilma supported this when she stated:

I did invite my Year 8 mums to our first class mass of the year. Father nearly had a heart attack when they rocked up. He said parents don’t come to class masses. I said well these ones did. I mean those mothers that don’t have the luxury of not having to work they want to be involved and once your kids hit high school that involvement is taken away from you, and I don’t think that is very fair. For those that want it they are very useful.

Conversely, participants such as Gwenneth and Evelyn were sceptical of inviting parents into the school to be part of the learning environment. Gwenneth commented: “I don’t really fancy the parents around here all the time.” There was a feeling that parents are customers concerned with product not process, and that the teachers are the professionals in the school environment. Andrea expressed a concern that neither parents nor students felt comfortable with parents being involved in the school learning environment. The parents need to be supportive of the out of school learning, and to support the school in that way. Several participants expressed a tension between teachers and parents which is contrary to the need to build a learning community. It is not an unwillingness, but a sense of frustration.

Community

This theme generated limited comment from participants, and where it did there was a feeling that it was an area of little importance or significance to the learning environment of the school. The consensus among participants was that there was little attempt made to build a relationship between the school and the broader community. There was more attempt made for the students to access the wider community and to utilise the learning
environment outside of the school than there was to invite expertise into the school from outside, or for them to utilise the school facilities.

Participants expressed a view that there was limited interaction between the school and the outside community. They commented that the outside community has limited access to the school and school facilities. Andrea stated that: “it is almost like it (the outside community) doesn’t exist.” Belinda supported this by saying: “there are experts out there and we can use them, but we really don’t…” Sally confirmed this view when she stated that: “I don’t think community here is such a huge thing because we have students that come from everywhere.” Participants commented that there was also little attempt to access the local community, but that individual groups of students utilised the local environment where it was appropriate.

Participants commented that the facility for students to access the broader community for their learning was more utilised than the school availing itself of local community facilities. Cathy stated that her students access the local business community in order to engage in inquiry learning activities. She believes that this makes the learning authentic for them. Camps were seen as an essential part of the learning experience of students by several participants. Ilma viewed camps as part of the holistic learning environment:

Since the last six months of last year I went on 5 camps. I had a ball. I got the kids that are ratbags in class and they were fantastic. And I think that’s important because the teachers then see them as different. See the one that is so confident in class really teeter on the edge of the abseiling tower, because all of a sudden their confidence is gone. Whereas the one that is a ratbag in class is up there and coaching them down. I mean I just think that we as staff need to see that, and here the school is not structured for that at all.
This was seen as an important aspect of community engagement in learning.

Sally indicated that the school liaised with the local Rotary club and that they conducted the Young Achievers venture in the school. Students visited the local old aged homes as a service venture, and there were various other service activities that enabled students to gain recognition through the reward system in school. There was no attempt to invite local community groups to use the school facilities and so the liaison between school and local community was rather ad hoc, as the management participants noted.

Despite these isolated and individual examples, it was felt by participants that there was little intent or need for increased liaison between the school and the local community.

Conclusion

The teachers felt that the most important influences on the learning environment are those that focus on motivation and values. Motivation was seen to be the key influence in engaging students in learning. The role of teachers is to recognise, celebrate and provide support for the talents of all students. They need to ensure that the curriculum is relevant and that students are empowered and successful in their learning.

There is a firm belief that the school needs to commit to the values of the religious order on which it was founded, and that the values of the school need to be clearly understood by all members of the learning community and modelled consistently for students.

The way in which students are grouped for learning is a contentious issue. Whilst there is concern that the individual needs of students are not being met by the current
learning environment there is uncertainty about how this problem might best be addressed to improve the learning process of all students.

There was a distinction between the various learning areas in the school and the way in which they understood and responded to the learning environment and learning process. There was agreement among participants from most learning areas that the learning environment needs to become more student centred, collaborative and empowering for students, but there were different opinions about how this might be achieved. The one participant who believed in a teacher directed learning environment was from the mathematics learning area.

In general, there was little support for the idea that the school should build a learning community in association with parents and the wider community.
CHAPTER SIX
CROSS CASE ANALYSIS AND DISCUSSION

Introduction

The study reported in this dissertation is concerned with developing an understanding of teachers' perspectives on their learning environment. The previous two chapters presented case studies of the perspectives of teachers from two secondary schools in the Catholic Education System in Western Australia. The case study findings resulted in the emergence of five key propositions. It is these five propositions, emergent from the discussions with teachers from both schools, that will provide the structure for the discussion in this chapter.

These five propositions encapsulate what the teachers considered to be the most important aspects of the learning environment:

Proposition 1: A common set of values, uniformly and consistently modelled for students across the total learning environment, was perceived by participants to be essential for learning.

Proposition 2: Rapport, the development of good reciprocal student-teacher relationships based on trust, was perceived by participants to be fundamental to learning.

Proposition 3: Participants perceived that the most significant influence on learning is the development of an environment where students are intrinsically motivated to learn.
Proposition 4: Participants perceived that there is a need for greater flexibility and diversity in the provision of learning environments so that they more closely reflect the needs of teachers and learners.

Proposition 5: Participants perceived that the learning environment needs to reflect the broader (parental and societal) values of citizenship and life-long learning, and to promote the development of relationships that build community.

In summary, these five propositions focus on the key concepts of values, rapport (or student-teacher relationships), motivation, flexibility and diversity, and community. According to the teachers involved in the study reported in this dissertation, these are the key concepts relevant to developing sustainable learning communities. This chapter will discuss each of these propositions in the light both of the findings outlined in Chapters Four and Five, and of the contextual and empirical research discussed in Chapters One and Two. It will provide a comparison of participants' perspectives on the learning environment in each of the two schools that comprised the case studies used for the study reported in this dissertation.

Proposition 1

A common set of values, uniformly and consistently modelled for students across the total learning environment, was perceived by participants to be essential for learning.

A Common Set of Values

This proposition was the most significant one of the five in terms of the high level of agreement expressed by teachers across both schools. There was general agreement by
teachers regarding the importance of values, and the specific values that should form the basis of the learning environment. Teachers believed that values are of crucial importance to learning and that values based on Gospel teachings are the basis for learning. Flynn (1993), when speaking of the culture of the Catholic School, says that schools rely on the Gospel teachings as the basis for their value systems. However, the ability to model a consistent set of values to students across all learning environments, including the broader community, is problematic. In the study reported in this dissertation it became evident that whilst teachers recognise the importance of establishing and upholding Gospel values across the learning environment, they also concur with Flynn's view that it is difficult to achieve since the impact of school on a student's value system is far less than that of the home, or society.

Teachers in both schools agreed that the best learning environment is provided when the values presented to students are consistent across all aspects of their environment whether it be school, family or society, and when these same values are modelled by all adults that the student encounters so that there is no confusion among the school, family and societal expectations. These values are Gospel values, particularly the value of respect both for self and for others.

Teachers perceived that a dilemma arises from a conflict of values, where school and societal values can be very different, even to the extent that they are in opposition. This conflict can arise when students are faced with a set of Christian values presented, often not very uniformly, within the school, and another set of conflicting values, often materialistic or secular, presented very persuasively by elements within the broader community. This conflict of values is discussed by Sergiovanni (1996) when he states that society is moving from a sacred (gemeinshaft) community to a secular (gesellschaft)
society, and that we should attempt to reclaim the sacred for our learning community. Teachers in the study reported in this dissertation were in agreement with this sentiment.

Starratt (1995) believes that Catholic schools are based on an empowering covenant that focuses on the communal bond built between people, and based on values, and that it is this bond which underpins the development of a sustainable learning community. In the study reported in this dissertation teachers from both schools agreed that it is the values on which the learning is based which are important for the learning process, and the development of a Christian moral community. This consistency in the presentation of a uniform set of values is simplified by the fact that both case studies are Catholic schools subscribing to common values.

While there was agreement among teachers about the values that should form the basis of the learning, there was less consensus about how well these values are presently being articulated and embedded in the curriculum in their school. They believed that values that have currency with teachers and parents are those values that enable students to lead successful lives and become valuable members of society, to be life-long learners, to build relationships with others, and to have a sense of self-worth and integrity. Bryk, Lee and Holland (1993) support this view when they state that Catholic schools subscribe to a vision of education that values the life of the mind, the pursuit of a just and caring community, and a sense of social responsibility. These values, as described by teachers, range from respect, honesty, truthfulness and responsibility to charity, mercy, social justice and compassion. Teachers in College X spoke of developing resilient, confident students who could cope in society and who have a Christian sense of humility and trust; a view supported by Waxman and Huang (1996) in their research on the significance of resiliency to student achievement. Teachers in College Y spoke more of the values promulgated by
the religious order that established the school, those of mercy, justice, charity and compassion. In both case studies, however, teachers expressed a need for Gospel values to be evident across the learning and consistent with the Catholic culture of the school.

Modelling Values

Teachers articulated a uniform and consistent set of values, however they felt that these values are not necessarily modelled well across the school learning environment; and that they often conflict with those values modelled outside of the school learning environment, by families and the wider community. Whilst there was consistency about the values that should be modelled there was an infidelity between those ‘espoused’ values and ‘modelled’ values; a discrepancy between the overt and covert value systems being transmitted to students. It is this infidelity or discrepancy that concerned teachers; the fracture between espoused values and modelled or transmitted values that causes confusion in students. They believed that the more secular and seductive value system touted by the global community can lure students from the Gospel values subscribed to by the school, particularly if these Gospel values are not well modelled by all members of the school community, or by the family. This was the view expressed by teachers in both colleges.

Teachers felt that whilst the school supports Gospel values this is in contrast to the values of a more materialistic, secular society that focuses on students achieving academic success in order to secure a position in the workforce that will reap them monetary rewards and prestige. They believed that the wider community values a very competitive world where success is based primarily on achievement and wealth, and education is seen as a commodity, whilst the school environment focuses on moral development, self-worth and
personal enrichment. In this sense they believed that the Catholic school is often seen by students to work counter to the value system espoused by the wider community.

Teachers believed that not only is there a difference in the value system presented to students, but that the modelling of these values is also inconsistent. The study reported in this dissertation revealed that teachers feel frustrated by the lack of consistency that is apparent both within and outside the school learning environment with regard to the values being modelled for students. Whilst they acknowledged that there is little that the school can do to influence the societal values, they can effect greater uniformity within their own environment.

Within school there is concern that teachers are inconsistent in their presentation of values to students; whilst they know what values should be presented to students they are less sure about how these values should be modelled, and often vary in their own commitment to these values. Teachers in both colleges noted that this is particularly the case where some teachers are not Catholic in their own practice and may even have difficulty subscribing to Christian values, which leads to an incongruence between the ethos of the school and that of individual teachers. The Catholic School (1977) and Flynn (1993) both speak of the integration of culture with faith, and faith with living as central to the mission of the Catholic school. It is this uniformity of belief that provides the foundation and strength of the learning environment of the Catholic School (Deal and Kennedy, 1982; McLaughlin, 1995; Newman and Associates, 1996). Teachers perceived that that the diversity of faith experience and commitment of teachers to a prescribed value system has the potential to weaken the mission or ethos that the Catholic School aims to present to students through its learning environment.
The impact of a school's value system on learners is difficult to assess. Despite this, teachers from both colleges commented on how well students model values such as shared responsibility, respect for the rights of others, honesty, truthfulness, and self-discipline to their peers. They felt that the values presented to students are vitally important in the development of a learning environment that maximises learning. However, in these two schools there is concern by teachers over a lack of consistency in the values presented to students by teachers, and the affect this might have on their learning. Teachers in College Y were particularly critical of the lack of consistency in the modelling of values and this could be due to the fact that this College was established by a religious order, and not only are staff expected to support the Catholic ethos of the College, but also the specific ethos, or tradition, of that religious order, which is a more specific requirement than that expected of staff at College X.

Teachers agreed that a better learning environment could be created for students if greater staff unity in the modelling of values could be achieved across the learning environment. Teachers in College Y, particularly those in the management team, felt that greater commitment to inducting staff new to the College's expectations with regard to the support and perpetuation of its values would be beneficial. Teachers in College X believed that a more uniform reinforcement of Catholic values could be achieved by teaming teachers so that they work closely together modelling values for each other, as well as for students. This was already happening and the Learning Teams environment established in the College's Middle School provided evidence of this. This finding is in line with studies undertaken by Bryk, Camburn and Louis (1999), McLaughlin and Talbert (1990), and Scribner, Cockrell, Cockrell and Valentine (1999), that indicate the need to establish a
shared set of norms and values in order to develop a successful and professional learning community that leads to improved student learning.

Teachers from both colleges perceived that parents expect the school to provide a value system that represents the holistic development of the student and prepares that person to cope in society, even when these values are not present in the home environment. They felt that the extent to which parents value education varies, but that parents reflect their desire to develop students who are life-long learners and who have the capacity to build relationships and reflect Gospel values. This expectation is also vested in the establishment of a strong work ethic which is instrumental to developing good citizenship, but counter-cultural to modern society. Teachers at both colleges believed that a strong work ethic would enable students to become resilient people confident to develop trusting relationships with others, able to achieve goals and maximise the opportunities placed before them. Teachers at College Y were critical, however, not only of the wider community, but also of their own colleagues, for the poor modelling of a work ethic, and felt that this was diminishing the learning and the Catholic value system espoused by the school.

Sustainable learning communities are based on a clearly articulated and uniformly modelled set of values. In Catholic schools these values are Gospel values which should be clearly articulated (The Catholic School, 1977; Mandate Letter, 2001) and need to be uniformly modelled if the learning environment is to be effective. Whilst it is difficult for teachers, and therefore schools, to have an impact on the values promulgated by society, Catholic schools have some influence over the value systems of its parent body, and have command of the values that underpin the learning environment within the school itself. Hough (1997), Sergiovanni (1992) and Starratt (1995) comment that to create a moral
community the focus needs to be on the shared values of mutual trust and respect for others, and that the focus of all learning should be to teach students to be moral beings. As Beare and Slaughter (1993) suggest there needs to be a strong moral code that underwrites the learning in Catholic schools if a sustainable learning community is to be created. The power of such a strong moral code is that it provides students with a firm value system from which they might assess the values of the wider community. The study found that there was clear recognition by teachers of the need for a shared value system and a strong moral code, and agreement among them that the Gospel values provide this moral voice. However, teachers perceived that the modelling of these values is not always as consistent or uniform as it should be in a Catholic school, and to this extent the learning environment is deficient in providing for the learning process.

**Proposition 2**

**Rapport, the development of good reciprocal student-teacher relationships based on trust, was perceived by participants to be fundamental to learning.**

The development of a clearly defined and implemented set of values across the learning environment was perceived by participants in the study reported in this dissertation to be vitally important to students’ learning. The second proposition, the development of good, reciprocal student-teacher relationships based on trust, flowed from the first proposition, and was viewed by teachers to be important to the implementation of values, and fundamental to the motivation of students to learn. Teachers believed that learning does not occur in isolation; effective learning is values-laden and context-bound which
implies that the development of good relationships, or rapport, is both a pre-requisite for learning and a fundamental value on which the learning environment is based.

In both colleges teachers saw themselves as a powerful element in the student’s learning environment having considerable influence on the extent to which that student learns. They defined rapport as a reciprocal relationship developed between teacher and student, and also between teacher and parent, based on mutual respect and understanding. The relationships develop through interaction and engagement on a day to day basis and often by unintentional aspects of that engagement. This perception is supported by a number of studies. Darling-Hammond (1996) refers to schools becoming genuine learning environments for both teachers and students; Long (1994) talks of the development of a student-centred personalised curriculum based around teacher-student learning groups; Whicker, Nunnery and Bol (1997) and Wong May Oi and Stimpson (1994) discuss the effect on student learning of adopting a more collaborative and student centred classroom which implies closer teacher-student relationships. The study reported in this dissertation found that whilst all of the participant teachers believed in the importance of developing rapport with students as a means of enhancing the learning environment and improving a student’s engagement with learning, the strongest advocates of the need to develop closer student-teacher relationships were those teachers engaged in student-centred learning practices associated with the learning teams environment in the Middle School at College X. Teachers expressed a strong belief both in the significance of building rapport with students in the early adolescent years of schooling, and in the middle schooling structures that provide the necessary time to allow these relationships to develop.

Teachers at both colleges believed that the development of rapport is predicated on values such as mutual trust and respect which form the basis for developing good
relationships whether it be between teachers and students, or between teachers and parents. Moreover, it is this rapport that facilitates the establishment of a positive learning environment that can cater for the needs of individual students, and where students feel safe and relaxed and have confidence to seek the truth, ask for help or take risks.

A strong link was noted by the teachers interviewed between good rapport between teacher and student, and student motivation. They felt that a strong and trusting relationship enables a teacher to engage with students and to motivate them in their learning which in turn increases a teacher's level of interest, and the motivation becomes symbiotic and reciprocal.

This reciprocal relationship changes the dynamics of the classroom or the school learning environment as the focus becomes learner-centred, the system becomes less bureaucratic and more cooperative and participatory, and the learning becomes a collaborative, problem-solving activity (Abbott, 1996; Dimmock, 2000; Shachar and Sharan, 1993). Teachers become coaches and guides in the learning process, and learners become empowered (Hancock, 1997; Pace-Marshall, 1997). Sergiovanni (1996) comments that trust and openness give rise to the development of meaningful, sustained relationships that form the basis of a learning community. Teachers from both Colleges supported Sergiovanni’s comment on the need for trust and openness as a basis for building relationships, but it was teachers from College X who supported the need for a collaborative, cooperative and learner-centred environment in which to promote and sustain the development of reciprocal relationships. This support may have arisen from their experience of learning teams which fosters ideas of rapport and collaboration, whereas the support given to a learner-centred environment by teachers from College Y is less uniform, no doubt arising from their lack of experience of a team approach to learning.
Two studies in particular that are relevant to this concept of developing rapport between teachers and students are those conducted by McLaughlin and Talbert (1990) and Westheimer and Kahne (1993). McLaughlin and Talbert found that the development of a personalised learning environment promotes close personal bonds between adults and students which enable teachers to motivate and engage students to a greater extent than is possible in the traditional classroom environment. Teachers gain knowledge that enables them to make the learning more relevant to students, and which provides the teacher with a more rewarding environment. Westheimer and Kahne found that learning communities are based on students and teachers working collaboratively and gaining support and motivation from each other. These findings are supported by the evidence provided in the current study where the process of students and teachers working collaboratively together is seen by teachers to enhance the learning process for students. Whilst teachers across both colleges stated that the development of good reciprocal student-teacher relationships is fundamental to learning, it was at College X that teachers felt they had the opportunity to develop this relationship.

Both propositions discussed so far have found wide support across teachers from the two case study schools. An agreed set of values uniformly modelled for students and the development of trusting relationships between members of the learning community were seen as inter-related factors, both vital to the development of a learning environment that promotes learning. There was little, if any, disagreement among teachers about the importance of these two propositions for creating a sustainable learning community.
Proposition 3

Participants perceived that the most significant influence on learning is the development of an environment where students are intrinsically motivated to learn.

Teachers stated that the development of strong student-teacher relationships is a key influence in motivating students to engage in learning. Whilst this is an important factor, they also believed that motivation is influenced by many other aspects of the learning environment, including the teaching environment, learning strategies, how students are grouped for learning, the content of the learning, and most significantly, the role that the teacher plays in the learning process. There was general agreement among teachers about the importance of both extrinsic and intrinsic motivational factors in engaging students to learn, but a lack of agreement about the relative importance of these factors.

This concept of motivation underpins the Curriculum Framework document (Curriculum Council, 1998) and the outcomes focussed approach to schooling. The whole notion of outcomes-based learning is focussed on the constructivist paradigm of students constructing their own meaning, and hence the process of learning being more important than its product. This focuses attention on the teacher creating motivating conditions in which students can learn (Phye, 1997). It also provides teachers with greater freedom to construct a learning environment that is challenging and motivating for students, and suits their particular needs (Darling-Hammond, 1997). Most significantly, outcomes-based learning focuses on student success and achievement, and the learning shifts from a teacher directed model to a student centred model. It is premised on the idea of all students being successful learners and the needs of each student being accommodated (Spady, 1994). It is a model based on the empowerment of students in their learning. The adoption of an
outcomes focussed learning environment for all students in Western Australian schools has prompted teachers to consider the motivation and engagement of students in the learning process. Teachers across both case study schools commented on the significance of motivation as a key factor in engaging students to learn.

Motivation

Extrinsic motivation, or the provision of a set of conditions in the learning environment that makes it conducive to learning by a significant adult such as the teacher, creates the desire to learn, or intrinsic motivation in the learner. The implication is that the two terms are related: the aim of extrinsic motivation is to engender intrinsic, or self-motivation in learners. The extent to which extrinsic motivation can be viewed as a positive influence on the learning environment will be judged, therefore, by the degree to which students are intrinsically motivated to learn. This must not deny, however, that some learners are intrinsically motivated to learn without the prompt of an external agent. Teachers agreed that their role is to provide a learning environment, or context, that enables all students to be intrinsically motivated to learn and to reach their potential as life-long learners.

Extrinsic motivation was described by teachers as teacher-directed, or inputs-focussed, relating to a highly competitive and content-oriented learning environment; whereas intrinsic motivation was described as relating to student-centred learning leading to the development of independent or interdependent learners. Whichever approach to learning is adopted the onus is on the teacher to provide appropriate stimuli for individual students to be successful in their learning. What is common to the views of teachers from both schools is the fact that they believe that it is the teacher's role to provide a context that
motivates students, and to understand each student to the extent that they know what motivates them, and how to engage them in learning. A number of studies have investigated the relationship between school learning environment and student achievement, with the result that teachers who provide learning environments that foster self-confidence, excitement and achievement, and are more student-centred, give rise to higher levels of student motivation to learn (see for example, Aldridge, Fraser and Huang, 1999; Plucker, 1998).

The literature that has examined the relationship between levels of student motivation and achievement outcomes has found that students who are extrinsically motivated respond to a competitive learning environment and have performance goals, whereas students who are intrinsically motivated respond to self-regulating learning strategies and have learning goals. Intrinsic motivation equates with a constructivist teaching model, whereas extrinsic motivation relates to a traditional teacher-directed, inputs model of teaching (Biggs, 1993; Dart et al., 2002; Kong and Hau, 1996; Somuncuoğlu and Yıldırım, 1999; Wong and Watkins, 1998). Students who are intrinsically motivated learn for meaning and understanding and develop a love of learning, whereas students who are extrinsically motivated are highly competitive and out-perform others but lack a deeper motive for learning. Dart et al (2002) recommend that teachers promote intrinsic motivation through an emphasis on developing relationships and safe environments. At College X teachers associated the Middle School learning environment with the intrinsic motivation of students, whereas extrinsic motivation was more dominant in the Senior School. Teachers did not note this type of differentiation at College Y where there was no division between Middle and Senior School.
Most teachers in the study reported in this dissertation were concerned to provide learning environments where students are intrinsically motivated toward a love of learning. However, they felt that they are often hampered in this endeavour by external influences such as parental pressure for students to outperform their peers, or the existence of external examinations that place the onus on performance goals and the out-ranking of other students as a measure of success. The teachers interviewed in the study reported in this dissertation are trying to satisfy both demands by providing learning environments that intrinsically motivate students.

There was agreement among teachers regarding the motivational influences that promote students' engagement in learning. These influences are empowerment, success, choice, relevance, ownership, responsibility and control, all of which lead to greater flexibility and freedom in the learning environment and a more collaborative and student-centred approach to learning. Whilst teachers at College Y considered empowerment to be the most significant factor, teachers at College X focussed on the need to provide students with choice. Across the two case studies, however, teachers emphasised the importance of involving students as decision makers and problem solvers, as active participants in the learning process. Teachers agreed that it is relevance that is the key motivator for engagement in learning.

A view contrary to this was expressed by mathematics teachers at both colleges who believe that learning mathematics is not context bound but content driven, and that students are motivated by an interest in the content, or a goal orientation to the need to succeed at mathematics which is engendered by a fear of failure, and the implications of that. They favoured a teacher-directed, rather than a student-centred approach to learning and believed that the Curriculum Framework and an outcomes based strategy for learning prevent
students from achieving their potential. This position is at variance with the research conducted by Whicher, Nunnery, and Bol (1997) whose study, involving upper secondary students, suggests that a cooperative classroom approach to learning mathematics is more appropriate and conducive to student learning than a teacher-directed approach. This is supported by findings from other studies conducted with primary and secondary students (Seifert and Wheeler, 1994; Wong and Watkins, 1998). The four mathematics teachers interviewed in the present study all supported a teacher-directed, content-focussed approach to learning, and suggested that students are motivated by mastery of content, a view which is not supported by other teachers in the study, or by the research literature. This suggests that there is a reluctance, expressed by mathematics teachers from both colleges, to move from the traditional teacher-directed classroom practice toward a more student-centred approach. There is no evidence to suggest that the way in which students learn mathematics is different from the way in which they learn other subjects. This reluctance may be vested in their belief about the subject of mathematics, but this belief does not seem to be substantiated by the research.

Students vary in their level of intrinsic motivation. It is when a student lacks direction or motivation that a teacher needs to be able to build rapport in order to determine the needs of the student and be able to provide the appropriate stimulus to motivate her/him in the learning. The teachers believed that this a key role in engaging students to learn. A study by Waxman and Huang (1996) indicates the relationship between student classroom motivation and resiliency, and suggests the need for improvements in classroom learning environments and the motivation of at-risk students to raise their academic achievement. The findings of the study reported in this dissertation support that research in respect of the
fact that a teacher’s attention needs to be directed toward the less resilient or at-risk student to increase her/his motivation to learn.

There was a general feeling expressed by teachers that there needs to be greater flexibility in the learning environment to allow students to master learning before being promoted to a higher year level, as opposed to the automatic promotion by age system that operates in secondary schools currently. This grouping of students based on age-grade structures is reminiscent of industrial age schools (Beare, 1997) rather than the more flexible and modular structures that encourage self-initiated learning and reflect current societal attitudes and the information age school (Cotgrove, 1997; Hancock, 1997). This flexibility would also allow greater freedom in the selection of course content, a wider range of learning strategies to be adopted in the classroom, and students to adopt their preferred learning style. It would shift the locus of control from the school to the student.

Dimmock (2000) comments that a more cooperative and problem-based learning environment shifts the focus to the student and provides a more empowering environment for the learner. The image of a powerful teacher and a powerless learner is indicative of an industrial organisation, whereas in today's world the roles need to be reversed if a sustainable learning community is to be created (Pace-Marshall, 1997). The study reported in this dissertation found that teachers are in accord with this view, believing that students learn best when they have some control over their learning environment and are provided with the tools for learning. Conditions that lead to powerful learning are those that provide the knowledge and skills that students need to learn, the process of learning and the context for the learning (Brandt, 1998). Shachar and Sharan (1993) draw comparisons between the traditional hierarchical, bureaucratic models of schools and the cooperative, high participation learner-centred environments that provide an open system model more
appropriate for the learning process of the 21st century. The study reported in this dissertation found, with the exception of mathematics' teachers as discussed previously, that teachers support the provision of a more flexible learning environment where the focus is on the needs of students. This was particularly evident at College X where teachers supported the provision of a middle schooling learning environment for students in Years 8 and 9.

Ball (1995; 1996) criticises the traditional system of education for failing to create motivated, life-long learners, and challenges schools to 'put their students first' if they want to survive, a view which is supported by teachers in the case studies reported in this dissertation. He believes that motivation provides the key to successful learning, and that we must help to develop the desire to learn by offering encouragement and rewards, and transferring resources for learning from those who teach to those who learn. Ball’s statement reflects the sentiments of the teachers interviewed in the study reported in this dissertation who believed that it is a teacher’s responsibility to motivate students to learn. The felt that the whole community shares in the responsibility for learning and that good schools focus on the learner and the success of all learners, so that all students can and will learn. It is this focus on success that underpins the notion of intrinsic motivation, and which teachers believe is vitally important to the development of life-long learners (Beare, 1989). Not only can all students learn, but they are discerning and know what is worth learning and why it is (Bryk, Lee and Holland, 1993). This will only occur at secondary level, however, if the student's earlier experiences of learning have been positive, if the learning process has been an engaging and rewarding one, if their environment has been relevant, and if they have experienced self-worth and challenge, which has led to success
and achievement (Chapman and Aspin, 1997; Chequer, 1996). The findings of the study reported in this dissertation echo the research literature in this respect.

**Grouping of Students**

There was agreement among teachers that the grouping of students is a vital consideration in providing the most stimulating school learning environment. However, practical and educational considerations were felt to be in conflict, and while grouping by age is convenient it is not necessarily the best means of engaging students in learning, or catering for their individual needs. Participants perceived that there is a need for a more flexible means of grouping students that allows for developmental processes and the individual needs of students.

There was a range of opinion among teachers about how students should be grouped which took into account factors such as age, ability, gender and size. The nature of the school and its organisational structures had a significant affect on the ways in which students could be grouped, and influenced teachers' opinions in this respect. Hence, teachers at College X were able to comment favourably on the effect of gender based groupings, vertical house groupings for pastoral care, and the opportunity to use different sized groupings of students associated with the learning teams environment of the Middle School. Teachers at College Y, which operates a more traditional organisational structure, were more focussed on the argument of ability or mixed ability groupings for learning. Whilst neither school provided opportunities for multi-aged grouping of students other than for pastoral care, teachers viewed this favourably as providing a means of meeting the needs of students, and the demands of outcomes focussed learning. Teachers also supported the idea of student interaction across year groups to develop a community of learners.
There was agreement across teachers from both case studies that the opportunity to work in different sized groups is beneficial to students as it offers a range of learning opportunities and experiences. Students learn to work individually and in a range of sized groupings which prepares them for work in the wider community. Teachers at College X, where there is a Middle School learning environment, believed that the adaptability and flexibility provided by working in learning teams enables students to work comfortably in whatever size group they are placed in. A rich learning environment is provided by working independently, cooperatively and collaboratively in a range of group settings. Whilst the ability to work in different sized groupings is seen as beneficial to the learning, teachers are concerned to maintain low teacher-student ratios so that the needs of individual learners can be met. This flexibility of grouping found at College X was not apparent at College Y.

The study found that while teachers from both cases study schools had somewhat different needs with regard to the grouping of students to enhance their learning experiences, it was the flexibility of grouping students that was the most important consideration, and the ability to group students according to their needs, although there was recognition that this would vary with context.

**Teaching Environment**

There was very little uniformity in the views of teachers between case studies about the issue of teaching environment and its impact on the learning environment. However, there was a common view that the move toward outcomes based learning requires a shift from a teacher directed to a student centred environment where teachers focus on
identifying and responding to the needs of individual students and creating a collaborative learning environment.

Teachers from both colleges commented on the need to change from the autonomous style of the teacher in the traditional classroom environment to the teacher as a facilitator of learning in the learner-centred classroom. A diversification is required in the range of teaching strategies and classroom practices adopted and the provision of learning experiences to satisfy the different learning needs and styles of students.

Participants from the management team of College X commented on the need to provide ongoing support and positive professional feedback to staff. They noted that there is a need to nurture staff, to provide practical and frequent professional development, to mentor new staff and to appraise, recognise and affirm teachers who are engaged in good practice. This view is supported by studies that have investigated teachers’ learning environments. Bryk, Camburn and Louis (1999) and Leonard and Leonard (1999) support the notion that a collegial, supportive professional environment, where teachers show respect and trust for each other and work in collaboration, provides a climate in which teachers are likely to be innovative and trial new teaching strategies aimed at improving student learning. This was found to be the case in the Middle School learning environment at College X where teachers described innovative practice deriving from a collaborative professional environment. The findings of two studies conducted to investigate organisational learning found that teacher empowerment and the establishment of professional communities had the capacity to enhance student learning (Scribner, Cockrell, Cockrell, and Valentine, 1999; Marks and Louis, 1999). The results of the study reported in this dissertation support the research findings that professional recognition and empowerment is important if student learning is to be enhanced.
Apart from those participants who are new to the College, teachers at College Y made little comment on the teaching environment. The two new teachers warned of the need to maintain a balance between competitive and collaborative learning environments, to extend students in their learning, and to provide adequate resourcing to enable teachers to meet the needs of individual students. The reluctance by other teachers at College Y, and a hesitancy expressed by some teachers interviewed at College X, to comment on the teaching environment, or to initiate change to the teaching environment, support the findings of a study into teaching style conducted by Wong, May Oi and Stimpson (1994). Wong et al found that teachers are reluctant to adopt a student-centred approach to classroom practice despite their acceptance that this approach provides a better learning environment for students. They explained that this seemingly resulted from a combination of fear and lack of confidence in teachers as they face a complex set of conflicting demands that mitigate against initiating change. These findings are in line with those of Mettetal, Jordan and Harper (1997) who conducted a similar study and concluded that whilst teachers recognise the need for change to a more student-centred approach to classroom practice they find this difficult to effect without being given additional training and support. It is this need for training and support that the management team at College X is recognising when they comment on providing professional recognition and empowerment to teachers engaged in trialing teaching practices that improve student learning.

Learning Strategies

There was a common feeling among teachers that a much broader range of learning strategies needs to be employed in the classroom in order to cater for the individual differences of each learner. This requires the recognition and accommodation of a wide range of learning styles so that each student has the opportunity to demonstrate her/his
talents and learning achievements, as well as being exposed to other learning styles that will encourage them to become adaptive in their learning. The findings from the proliferation of research and theory on learning styles in recent years (see for example, Dunn and Dunn, 1975; Gear, 1989; Kolb, 1984; Mamchur, 1996; McCarthy, 1990; Mellander, 1996) suggest that teachers can identify students’ learning styles and provide learning experiences to accommodate them. This move to the provision of more flexible learning opportunities implies a move from a predominantly content focus to a process focus; and from a competitive to a collaborative learning environment. The aim, as participants perceived, is to employ learning strategies that lead to the empowerment of students, and the development of independent and interdependent learners. This recognition of each student’s talents, competencies and potentials is a means of empowering not only the individual, but also the whole learning community (Starratt, 1995). The main task for schools in developing as learning communities appropriate for 21st century learners is to improve teachers’ expertise in learning strategies (Davies and Ellison, 1997; Dimmock, 2000). Findings from the study reported in this dissertation indicate that teachers recognise the need to provide a more flexible and student centred learning environment by employing a wider range of learning strategies, but as the research suggests, they need to improve their expertise and confidence in this regard.

Teachers commented that the change in pedagogy associated with the move from a teacher-directed, competitive, content-driven learning environment to a student-centred, collaborative, outcomes-focussed learning environment, and the change in the role of the teacher implied by that move, has a significant and positive impact on the levels of motivation and engagement of students in their learning. Recent research on brain-based learning, a knowledge of how the brain works and now people learn, has shifted the focus
from knowledge transfer to knowledge construction, which in turn suggests that a student-
centred learning environment is more effective than the traditional teacher-directed
environment where the learner is passive (Brandt, 1998; Caine, 1996; Caine and Caine,
1997; Phye, 1997; Spady, 1994). Despite this perception there were a number of
reservations expressed by teachers in both schools regarding the practicality and efficacy of
changing pedagogy.

Teachers in College X drew a clear distinction between the learning strategies being
used in Middle School and in Senior School. They were supportive of the student-centred
and collaborative learning strategies being used in the Middle School environment and their
effect in producing independent and interdependent learners. Teachers in both schools
advocated a move toward a different approach in Senior School, but warned that it is
healthy to maintain a balance between a content- and process-based curriculum.

A number of constraints on the use of a range of learning strategies that caters for
the individual needs of students were discussed by teachers, particularly the demand that
teachers believe this places on them, the tension created between teachers who subscribe to
the new pedagogy as opposed to those who are resistant to change, and the physical
constraints imposed by limited resourcing. These constraints were seen as limitations on
the learning strategies that could be employed to motivate students in the learning process.

These comments made about constraints are not representative of the total number
of teachers interviewed. Teachers at College X, where a middle schooling philosophy has
been introduced, were keen to comment on the effect of broadening the range of learning
strategies to meet the needs of student and develop independent learners, as this aspect of
their learning environment is very relevant to them. Apart from teachers new to the
college, there was no comment made about learning strategies by teachers at College Y, where a more traditional learning environment was operating, with which teachers were largely content. However, the management team at College Y were keen to comment on the need to increase the range of learning strategies used by teachers in order to meet the needs of students.

There was agreement across all teachers interviewed in the case studies reported in this dissertation that students are most likely to learn to their potential in an environment where they are intrinsically motivated to learn. There was a diverse range of opinion about the conditions that are necessary for this motivation and engagement to occur. Teachers concurred about the influences that promote both extrinsic and intrinsic motivation in students, but how to construct a learning environment that is conducive to these influences produced a divergence of opinion. The grouping of students for learning was considered an important aspect of the learning environment, but there were mixed views about how they should and could be grouped for various aspects of the learning. It was generally felt that a change of pedagogy and a move toward a more student-centred, and collaborative learning environment is necessary for learners to be successful, and the role of the teacher in that environment needs to change to take account of the needs of individual learners.
Proposition 4

Participants perceived that there is a need for greater flexibility and diversity in the provision of learning environments so that they more closely reflect the needs of teachers and learners.

The crucial aspect of creating a learning environment that allows for the development of a sustainable learning community is its ability to respond to the needs of each learner; this is a measure of its sustainability. In order to achieve this it needs to be very flexible and diverse in the way it is structured. Propositions 1 to 3 examined the human relations and resources of a learning environment, the significance of people and their relationships, and there was a consistency of view among teachers regarding this aspect of learning. This proposition examines the physical resources associated with the provision of a learning environment, about which there was less consistency. These resources are the classroom environment - space and facilities, the provision and use of technology, and school structures. Teachers considered these aspects of the learning environment to be less significant to the learning process than values, rapport and motivation, and they expressed a broader range of views about them indicating the flexibility and diversity required to facilitate and promote learning.

Classroom Environment

There was general agreement among teachers that the physical environment of the classroom is more important to the learning process than the facilities provided within that environment, although there was less agreement about the precise nature of that physical environment. Opinions differed from teacher to teacher, but also from one case study to the other, which reflected not only the difference in perceptions of the teachers, but also the
difference in the nature of the classroom environment provided by each of the two schools in the first instance.

Classroom space was one issue about which teachers felt strongly, particularly those teaching in College Y. College X is a relatively new school and the classrooms are of uniform size and shape. College Y is a much older school and the classrooms differ greatly in terms of size, shape and conditions. This difference between the two schools prompted greater discussion from teachers at College Y. However, most teachers from both schools were concerned about the space available in classrooms. The advent of a more student-centred classroom practice gives rise to a need for more space to enable students to move around during lessons, for furniture to be distributed in a range of configurations, for the accommodation of technology within the classroom as a tool for learning, and for the teacher to engage students in a wider range of learning strategies. Teachers at College X argued that since classroom space is limited, class size should be reduced to increase the relative space available. The key variable in determining optimum classroom space is the teacher, and since the requirements of each teacher varies greatly, it is unlikely that these requirements can always be met.

Classroom conditions were commented on by a number of teachers, and particularly those who teach in College Y. Their concerns about classroom atmosphere related to factors such as light, temperature and external distractions are supported by Dimmock (2000), who states that the control of these factors can improve learning by providing a safe, comfortable and stimulating environment for students.

The issue of most concern to teachers from both colleges was that of room ownership. It was felt that the ability to control and organise one's own classroom learning
environment is of vital importance to engaging students and enhancing the learning process. This ownership enables the teacher to design the room to suit the learning needs of the students. Teachers at College Y who expressed greatest satisfaction with their classroom environment were those who had room ownership, and conversely those who expressed least satisfaction shared rooms with other staff members. The classroom atmosphere was seen as a reflection of the teacher’s teaching style and learning strategy, as well as the nature of the subject that she/he teaches. Teachers at College X commented that it is a combination of the physical classroom environment, together with the student-teacher and student-to-student relationships, that helps to develop a relaxed and informal atmosphere that is conducive to learning. Whilst there was concern about building a positive classroom environment there was little comment on the provision of classroom facilities.

Technology

One aspect of classroom facilities that was considered worthy of teacher comment is the provision of technology. Whilst teachers did not consider that the provision and use of technology is particularly important to the development of the best learning environment for student learning, they did comment that adequate and reliable access, as well as staff proficiency, are important considerations in the use of technology as a tool for learning. Teachers' comments on the issue of technology as a resource were directly related to the extent to which that teacher uses or wants to use it as a resource for student learning, and are subject specific. The place of technology in the learning environment and the extent and nature of its use in classroom practice varied from College X to College Y, and the response that teachers made to the debate about its significance to learning varied accordingly.
Teachers at College X commented that there is a demand for the technology to be made available to teachers which is far greater than the College can service. There is a general acceptance of the technology as a learning tool, but some frustration about its accessibility in the classroom, the reliability of the network to deliver the technology, and the level of teacher computer competence to assure staff confidence in the classroom. This view contrasted with that expressed by teachers at College Y where there is a satisfaction among teachers that those who need computer access for learning have provision of it, and those who do not, have access to other resources which they deem to be of more value for learning. These views reflect those of Hancock (1997) who notes that a key feature of the information age school is the ready accessibility of information technologies to learners, so that the learning becomes interactive, as opposed to those of Mellander (1996) who warns that there is a danger of getting the accessing and processing of information out of balance. The student-centred learning environment of the Middle School at College X creates insatiable demands for technology as a tool for learning, whereas the more traditional structure of the learning environment at College Y does not.

Findings from the study suggest that there is a divergence of opinion among teachers regarding the place of technology in the learning process. In the study reported in this dissertation the teachers from each college expressed a range of views about their need for technology as a tool for learning. This range of opinion in itself suggests that technology does not necessarily play a significant role in improving the learning process for students. However, findings suggest that the more student-centred the learning environment the greater the teacher's demand for use of the available technologies as tools to aid the learning process.
School Structures

There was general agreement across teachers in both schools that school structures need to become more flexible to accommodate the holistic development of the learner. The move from an inputs driven curriculum to an outcomes focussed learning environment necessitates a more flexible allocation and use of time in school. Teachers felt that there is an obsessive focus on the timetable and strict divisions of time for the fragmentation of learning into subjects and classes, rather than a focus on learning experiences. The two most contentious issues were seen to be the timetable and the length of teaching period.

Teachers considered that the compartmentalisation of learning into subject disciplines works counter to the idea of the holistic development of the learner as espoused by the schools’ mission statements, and counter to the notion of brain-based learning. The focus on subjects fractures learning, inhibits the learning experiences of students, and encourages a focus on content. The management team from College X suggested that a move away from a subject-based curriculum in Senior School to allow a more flexible work schedule and more freedom for students, would mean an investment in the trust and empowerment of students. This would be in accord with an outcomes-focussed education where students take greater ownership and responsibility for their achievement.

The length of period was considered by teachers at both colleges to impede the learning process. Whilst it was recognised that there is no ideal period of time into which the school day could be calibrated to suit all teachers and their learning strategies, it was felt that greater flexibility in the structuring of the school day could be desirable if students are to maximise their learning potential.
These comments, made by teachers in both colleges, are supported by Shachar and Sharan (1993) in their criticism of the bureaucratic, hierarchical model of schools where the physical layout of the classroom is permanent and reflects a teacher-directed model of learning, and where the day is divided into subject segments, and class time is neatly divided into uniform blocks. They advocate a much more flexible structure consistent with a model that responds to the needs of the learner. The physical design of schools and the structures that operate within them perpetuate the practices of an industrial society which is inconsistent with the society outside of school, and with the demands of education in the 21st century (Beare, 1997; Spady, 2001; Toffler, 1980). These concerns were reflected by teachers in the study reported in this dissertation, who believed that a more flexible learning environment would assist the learning process for students, but often feel powerless to effect such changes.

Teachers at College Y, a single-sex college, debated the desirability of single gender learning environments. One teacher, a mathematics teacher, felt that this type of environment is beneficial to student learning because it segregates the business of learning from the social agenda, whilst other teachers believed that this reflects an inputs-model of learning, and that the distinction between learning and social interaction has become blurred, so that the current more flexible learning environment provides increased opportunities for social interaction which should be across gender. In a single-gender school this would require taking students outside the confines of the school learning environment.

The design and structure of schools need to reflect the current knowledge about how students best learn, how the needs of the student can be accommodated for that learning to occur, and the cultural context of the learning (Dimmock, 2000). This means that the
learning environment needs to become more flexible and diverse in nature as it responds to the demands of a knowledge society and a living, organic system view of the world, and a vision of a learning community based on human interaction (Marshall, 1996; Pace-Marshall, 1997). This flexibility is also in accord with a society where the views are focussed on conservation and sustainability, and which supports learning that is heterogeneous and collaborative (Cotgrove, 1997). The findings of the study reported in this dissertation support these views. Teachers believe that the learning environment needs to become more flexible and diverse if it is to cater for the needs of individual students in their learning. It is this very diversity, however, that makes it difficult to effect.

Proposition 5

Participants perceived that the learning environment needs to reflect the broader (parental and societal) values of citizenship and life-long learning, and to promote the development of relationships that build community.

It is this broader world view that informs the learning environment as industrial age schools are superseded by sustainable learning communities equipping learners for a knowledge society (Caine, 1996; Pace-Marshall, 1997). The perspectives of teachers is that whilst the learning environment provided within the classroom and the school is enormously important because it has a direct and immediate impact on students’ learning, that learning is more likely to be effective and long term if there is a consistency across the student’s learning environment, and the influence of the broader community has some impact on the learning. They believe that the values of parents and family, as well as the values espoused by the broader community, impact on student learning to a greater extent.
than do those of the school. Proposition 1 stated that powerful learning lies where these sets of values are congruent, and students are exposed to, and have modelled for them, a consistent and uniform set of values and beliefs (see also, *The European Round Table*, 1996). Proposition 2 stated that it is from this set of values that the learner can confidently build relationships with others to establish a life-long community of learners. Teachers commented that the problem for them lies in the fact that whilst they can address the needs of students in the learning environment of the classroom and the school, this becomes more difficult when the broader learning community becomes involved.

**Parents**

Teachers across both colleges believed that the school is part of a larger community and that it is important to address the needs of that community, specifically the expectations of the parents who are so influential in the education of their children, and the values those children adopt. The building of relationships between parents, and other members of that community, and the school is also vitally important in developing a learning community based on shared values.

There was a feeling expressed generally by teachers that in a time of educational change the school has an obligation to inform and educate parents about current educational practice and lifelong learning, the philosophy of student-centred learning, and the school’s expectations of parents in the learning process. Teachers believed that it is important to establish a dialogue with parents, and to build a partnership in learning, particularly in respect of values education where the home and the school need to support and reinforce each other. They felt that it is in the school’s interest to establish and build this relationship if it is to provide a successful learning community both because the values of the home are
always more accessible to the student than those of the school, and because the school cannot serve its mission without the support of its parents. Flynn (1993) states that it is through their experiences of home and the Catholic school that young people develop an image of God; and it is through the beliefs and values, and patterns of relationships that the school can help parents and bond the community. The findings of the study reported in this dissertation suggest that it is a role of the teacher to help create and sustain this bond founded on a set of uniformly agreed values supported by both the home and the school. In Catholic schools, such as the two case study schools selected for this study, this task is made easier by the common agreement that these values are the Gospel values supported by the teachings of the Catholic Church.

The expectations and values of the parents of each of the case study colleges were seen to be different. Teachers believed that the parental expectations of the school in terms of academic achievement were different at each college, and that this related to the social context of the college. The parents of College X were seen by teachers to value education for its ability to instil a set of values in students that will enable them to live fulfilling lives in harmony with society. Whereas the parents of College Y were seen by teachers to value education as an economic enterprise; their investment in learning will reap academic and economic success for their children. Teachers from both colleges believed that parents tend to over-indulge their children which undermines the value system of the college, where students need to feel challenged, and to become independent learners taking responsibility for their own learning. At College X teachers believed that this results from dysfunctional families where each parent competes for their child’s acceptance. Teachers at College X believed that parents have an expectation that the college should help students to build relationships in the absence of local community support in this direction. There was
agreement by teachers at both colleges that parents need to take more responsibility for the home learning environment, and their place within it. Teachers commented that they need to educate parents in the appropriate roles that they could adopt at home to help their children's learning, to use the family as a resource for learning, and create in the home a community, or family of learners.

Teachers believed that it is the school's responsibility to build partnerships in learning with parents, so that learning becomes central to a student's whole environment, not just the school environment. Teachers at College X viewed the development of strong teacher-parent relationships as the second most important aspect of the learning environment; the first being the building of good student-teacher relationships. They believed that it is these relationships that promote the building of community. Studies conducted by McLaughlin and Talbert (1990) and Schaps and Lewis (1999) support this idea. Schools that provide a caring and respectful environment, like that of a family, enable the student to feel valued and create bonds essential to a student's motivation and citizenship which help to define a sense of community. It is the development of key emotional intelligences so that students can develop relationships in the context of safe and supportive learning environments that promote the building of community (Bascia and Hargreaves, 2000; McLaughlin, 1995; Newman and Associates, 1996; Strike, 1999; Hough, 1997). The two schools involved in the study reported in this dissertation owned this responsibility to different degrees. Teachers at College X held themselves more responsible for developing partnerships and building community than did teachers at College Y, who placed responsibility on the parents.

Teachers believe if school-home relationships are strong that the values that underpin these environments will challenge the more secular values of the external society.
(Sergiovanni, 1996). This can form the bond, or tightly knit web of meaningful relationships that help to create the sustainable, or moral community (Sergiovanni, 1996; Spady, 2001; Starratt, 1995). This is precisely the *gemeinschaft* of which Sergiovanni (1996) speaks, where committed, familial relationships develop a sense of unity through allegiance to shared goals and values. It is this sense of community that teachers in the case studies reported in this dissertation believe is crucial to the development of sustainable learning communities for students, and to which both parents and schools need to commit. It is the tribal community where students learn to live in relationship to significant others based on a set of shared values, before being able to live in a global environment (Hough, 1997). Studies conducted by Majoribanks (1994), Roberts (1989), and Rutherford and Billig (1995), together with the findings from the study reported in this dissertation, all support the need to build strong home-school relationships in order to develop learning communities. Whilst there was recognition of the need to build community between home and school, there were different opinions between teachers from the two colleges regarding the desirability of parents becoming involved in the school learning environment, as distinct from their involvement in student learning and the broader learning environment. Teachers at College X felt that there had been insufficient involvement of parents in the school learning environment and ways need to be found to encourage it. They agreed that it is the responsibility of the school to invite parents to be part of the learning, and to engage them.

Teachers at College Y had different opinions from this, and these opinions were diverse. They felt that whilst parents have a part to play in students’ learning, they do not need to be a part of the school learning environment, which is seen as the domain of the professional educator. There was ambivalence among teachers about the need for parent
involvement, as well as the nature and intent of such involvement, which created a division between teachers, and a tension between teachers and parents. A study conducted by Roberts (1989) found a similar wariness expressed by teachers in relation to parental involvement or encroachment in school matters. He found that teachers are reluctant to have parents actively involved in the school learning environment and find it difficult to seek appropriate ways of involving them in schooling. A study by Lareau (1987) investigated the effect of social class differences on family-school relationships to find that whilst there was a relationship between these variables, it was the lower socio-economic class parents who felt less comfortable becoming involved in schooling. The findings of both these studies are supported by those of the study reported in this dissertation.

Perspectives of participants in respect to parent involvement in the learning environment were diverse. Teachers across both colleges agreed that parent support in the development of a caring and supportive learning community based on a set of common values is crucial to student learning, but disagreed about the nature and extent of parental involvement in the school learning environment.

Community

Teachers from the two case study colleges held very different views about the relationship between the school and the wider community. Teachers at College X were keen to develop and strengthen the relationship between the college and the local community, and saw the community as a valuable resource for student learning; whereas teachers at College Y expressed a more insular approach, seeing little relevance in the development of a relationship between the community and the College.
The viewpoint expressed by teachers at College X is that the wider community is vitally important for students' learning because it sets the context in which that learning occurs. This context for students at the College is very specific in its requirements, and the school learning environment needs to reflect and respond to these community needs if students' learning is to be effective, and students are to become valuable members of society. Participants believed that working with the community is a two-way process involving the invitation of community members into the school, and allowing students to access the local community. They felt that inviting local community members into the school not only broadens the students' learning experiences but also increases their relevance to the students, and increases student engagement in the learning process. Teachers felt that the limitations imposed by school structures curtailed access by student groups to outside facilities, although the more flexible structures associated with the middle schooling approach to learning facilitates this access. Teachers supported the idea of increasing the links between community and school as a means of making the learning more relevant and authentic.

Teachers at College Y expressed a different viewpoint from this. The relationship between the college and the outside community was considered tenuous and teachers did not see the need to improve or increase it. There was little felt ownership by the College of the wider local community which contrasted to the view of teachers in College X. This may well be explained by the existence of the boarding school at College Y whose catchment area extended statewide, and which weakened the notion of a local environment relevant to students. Whilst there is little inclination to involve the local community in the school learning environment there is some attempt made to allow students to access the community for their learning. The perspectives of teachers about community involvement
are inconclusive, but seem to point to the felt need for a relationship between college and community which is specific to that environment, rather than uniform across environments.

Evidence from these two case study colleges show that the relationship between school and community is context specific, and develops in response to the perceived needs of the school. Teachers did not seem to be critical of the two very different levels of involvement noted in the two case study colleges, they saw each school's response as appropriate to its needs. This indicates that for each of these colleges the culture of the school reflects the needs it has for involvement in its local community. Nevertheless, the wider community was seen by teachers to be less significant than parents in the development of a learning environment that promotes and enhances student learning. Indeed, while teachers recognised the significance of the role of the wider community in building a sustainable learning environment for students, they were also cognisant of their own limited role in realising this liaison between school and community.

Conclusion

The cross-case analysis and discussion presented in this chapter suggests that Catholic school teachers in the two case study schools believe the three factors of values, rapport and motivation are closely inter-related, and taken together they are the most significant and powerful influences in the development of a learning environment that promotes the learning process. They are the pivotal factors on which student learning is premised. These influences are directly concerned with people and the relationships and interactivity that occur between them. This focus supports the mission of Catholic Schools
which is people-focussed and community-centred, where faith and life are brought together in the shared values of the faith community.

The creation of a more diverse and flexible learning environment, and the building of a community of learners, are less tangible and achievable concepts for teachers to envisage. Whilst these aspects of the learning environment are considered by teachers to be very important to students' learning they are perceived as peripheral to their concerns and understandings which are more focussed on the immediate learning environment of the school, and on changes that they can personally effect. In developing sustainable learning communities teachers are concerned with the building of relationships between teacher and student and the integration of the whole person in faith.

There was a consensus among teachers from both colleges with regard to the first three propositions: values, rapport, and motivation, where teachers' influence and impact on the learning environment can be greatest; but there was very little consensus, and an increasing divergence of teachers' understandings, with regard to propositions 4 and 5, concerned with the physical environment and the wider community, where the impact of teachers diminishes in the face of other influences on the learning. The focus on developing a learning environment where student-teacher rapport and the intrinsic motivation of students were considered to be important aspects of student learning was greatest at College X and was directly linked to the middle schooling concept that has been adopted there. Teachers at the College believed that this environment provided them with the best opportunity to focus on and promote these key aspects of the learning environment.

The evidence gathered from the two case studies undertaken suggests that the teachers agree that the most important aspect of the learning environment is a uniform set
of values based on Gospel teachings and consistently modelled across the learning environment. They believe that it is these values that will form the basis of meaningful student learning. This, together with the establishment of reciprocal relationships between key members of the learning community, and the development of intrinsically motivated students engaged in and valuing the learning process will provide the basis for developing a sustainable learning community, according to participants.

This chapter has discussed the findings from the two case studies in terms of the five propositions that have emerged from the data collected from teachers, and compared them in the light of the contextual and empirical evidence that is described in the first two chapters of this dissertation.
CHAPTER SEVEN

CONCLUSION

Introduction

The move from an industrial society to a knowledge society has given rise to an increase in the importance of learning, the knowledge and understanding that people gain through the learning process, and particularly the way in which they use information to create knowledge and to construct meaning. This learning process is based on a set of beliefs and values which determine how people act and interact in society. There is a recognition that learning does not occur in isolation, but that individuals are part of a community of learners, and that learning within any community is based on a set of values that gives meaning to the learning and can lead to the development of sustainable learning communities.

Two major aspects of learning that have changed in recent years are: the knowledge and understanding of the learning process, how people learn; and the context in which that learning takes place, the demands of the society in which we live. It is these significant changes to our current knowledge of the learning process, together with changes to society's expectations of citizens of the 21st century, that suggest that commensurate changes should have occurred to the learning environments in schools if they are to provide the best learning environment to facilitate student learning.

There is a body of research literature that has grown out of the school re-structuring movement in the 1980s and which is concerned with students' learning environment and the learning process. It specifically focuses on learning theories, the learning process and
the learning environment in the school context, and with the learning revolution and learning community in the broader context. It is this research that has given rise to the need for this study that investigated the learning environment at a practical level.

This dissertation has presented a study, conducted at two Catholic secondary schools in Western Australia, which examined the perspectives of teachers on their learning environment and how they believed this learning environment could best provide for student learning. This study was premised on a belief that one aspect of the learning environment in schools that has a direct impact on students and their learning is the teacher, and that it is the teacher who has the most immediate responsibility for determining the nature of that environment and how it is configured for student learning. A second premise implicit in the study was the belief that learning is a life-long process, and that the Catholic school is one element of a broader community based on a set of clearly defined and shared values where people find meaning through relationships and a culture built on the integration of faith and life (Flynn, 1993; Ryan, Brennan, and Willmett, 1996; The Catholic School, 1977). The study has sought to understand the perspectives of teachers in two Catholic schools as they seek to provide a learning environment that enhances the learning process for students. The findings from this study might be used to consider how these environments could be improved to bring about more effective learning.

The concluding chapter is now presented in five parts. The first part summarises the aims, methodology and theoretical propositions that were developed from the study. The second part considers the generalisability of the findings and the potential value of the findings in respect to this. In the third part the value of the research findings are reviewed in terms of their implication for the body of theory related to the research question. The fourth part focuses on the implications of the findings for future research, and future
research questions that might arise from these findings. The final part of the chapter is concerned with examining the value of the findings and how they might inform future practice.

Aim, Methodology and Theoretical Propositions from the Study

The aim of this study was to gain an understanding of teachers’ perspectives on the learning environment at two secondary colleges within the Catholic Education System of Western Australia. These understandings would enable teachers to determine the improvements necessary to develop the best learning environments to facilitate the learning process. The scope of the study was restricted to schools in the Catholic Education System where a uniformity of mission and a consistency of values provide a common agenda on which to base a learning environment and build a learning community. It is argued that it is the notion of a set of firmly established values together with the concept of life-long learning that leads to the development of a sustainable community of learners.

This study was restricted to two case studies, each case study conducted at a secondary school in the Catholic Education System of Western Australia. The scope of the study was limited to two case studies to enable the researcher to explore the data fully and to process the data within the confines of the resources made available to her. Each case study school was selected due to differences in location, socio-economic status of clientele, nature of student population, length of operation and ownership. Both schools operate as part of the Catholic Education System of Western Australia, which provides them with a common and clearly defined set of values and ethos. The researcher was provided with access to both schools for the purpose of conducting this study.
The study has been conducted using a qualitative approach as the researcher aimed to understand how teachers, as active participants, view the learning environment of their school. The intent of the researcher to explore the perspectives of teachers, and to develop an understanding from their experiences of the learning environment, is context specific and suggests an interpretivist method of inquiry where theory emerges from the data, and becomes grounded in the data as human behaviour is studied and interpreted. Understanding proceeds from interpretation (Lincoln and Guba, 1985; Hill and Kerbert, 1967).

This theoretical framework supported the central research question which was:

What are the perspectives that teachers have of the learning environment and how it could be organised to enhance the learning process?

A grounded theory approach was used to gather and analyse data, which is consistent with the interpretivist methodology and the use of a case study approach (Bromley, 1986; Foreman, 1948).

In each case study data were gathered and analysed through semi-structured, focus group interviews. At each school four focus group interviews were conducted consisting of teachers across new, less experienced, more experienced, and management groups within the staff. These interviews were followed by individual interviews of teachers selected from the focus group in order to pursue further elaboration and clarification of the initial discussion. The findings from these interviews were presented as two case studies. These preliminary findings were examined further to develop a set of 5 propositions which were presented as a cross-case analysis. These propositions are as follows:
Proposition 1:
A common set of values, uniformly and consistently modelled for students across the total learning environment was perceived by participants to be essential for learning.

Proposition 2:
Rapport, the development of good reciprocal student-teacher relationships based on trust, was perceived by participants to be fundamental to learning.

Proposition 3:
Participants perceived that the most significant influence on learning is the development of an environment where students are intrinsically motivated to learn.

Proposition 4:
Participants perceived that there is a need for greater flexibility and diversity in the provision of learning environments so that they more closely reflect the needs of teachers and learners.

Proposition 5:
Participants perceived that the learning environment needs to reflect the broader (parental and societal) values of citizenship and life-long learning, and to promote the development of relationships that build community.

Generalisability of the Findings

The term generalisability, or external validity, refers to the ability to transfer the findings from one set of participants and setting to be relevant in another context (Bogdan and Biklen, 1982), or the “degree to which such descriptions can be accurately compared to other groups” (Kincheloe, 1991: p315). This concept of generalisability whilst relevant to the quantitative researcher, may not be so relevant to the notion of interpretivist research where a deliberate attempt is made by the researcher to investigate and report a set of circumstances that are particular to a specific setting, and may not therefore be generalisable to another, different setting.
It was argued in an earlier chapter that measures of 'credibility', 'transferability', 'dependability', and 'confirmability' are more convincing criteria than generalisability by which to convince the audience of the trustworthiness of the findings of the study. Working hypotheses are relevant to a specific time and context and it cannot be assumed that they are still relevant when they are transferred to another context. Such research provides thick description that can be transferred, but it is not the responsibility of the researcher to provide an index of transferability, but only to provide the database that could enable transfer to occur.

The task of the interpretive researcher is to faithfully and “carefully document a given setting or group of subjects, it is then someone else’s job to see how it fits into the general scheme of things” (Bogdan and Biklen, 1982: p.41). The task of the researcher in reporting the findings of this study is to document the perspective’s that teachers have of their learning environment by providing a thick description, or detailed narrative, of their particular setting as they perceived it. It is from these descriptions that hypotheses, or propositions, can be developed, such as the five propositions that emerged from the analysis of the participants’ perspectives on their learning environment described in this dissertation. However, these propositions emanated from the detailed descriptions provided from teachers’ perspectives of their particular learning environment and may not be relevant or true of a school learning environment in another context or time. These propositions emerged from the case studies of two Catholic secondary schools in Western Australia, and cannot be generalised beyond these two schools for the point in time when the research was conducted.

There are, however, interpretations of the term generalisability other than that of making the findings from a specific set of subjects and setting applicable to a broader range
of subjects and settings, which make it more appropriate for use in this study. The thick descriptions that are derived from the data analysis of a particular case study can be made available to the reader, and that reader may seek relevance in this data to apply to another setting. This places the onus on the reader rather than the researcher to draw the relevance of the data to another setting. The generalisability then lies with the reader to extrapolate from the findings of one study and apply these findings to a new setting.

The findings from the current study reported in this dissertation would be useful in this regard. Teachers reflecting on their own practice could find the propositions arising from teachers’ perspectives on their learning environment in other schools, relevant to their own schools, or could consider the findings in the light of their own experiences and use them to inform their current or future practice. In this way it is the reader who is generalising in the light of their professional expertise. The researcher’s task is to report the findings from her study with respect to teachers’ perspectives in a particular learning environment, and the task of the professional reader is to utilise this information and apply it to their own setting if they see that it is applicable. In this sense the findings of the study are generalisable. Kincheloe (1991) comments that schools and classrooms are not good places to replicate research, and teachers intuitively know this. They will use their professional judgement to determine which research findings are useful for them in their professional practice, “verified generalisations can never tell teachers what to do; but research on teaching can help teachers raise questions and consider possibilities” (Kincheloe, 1991: p.138). It is in this sense that the findings from the study might be transferred from the particular cases that are the subject of the study, to other cases outside of the study.
The present educational climate of secondary schooling in Western Australia suggests that the findings in regard to several of the propositions emanating from this study are applicable to schools across the state. The move toward an inclusive, student centred learning environment based on five clearly stated values and the need for a more flexible and diverse learning environment that focuses on the development of relationships and gives recognition to the individual needs of students and provides an outcomes focussed education (Curriculum Council, 1998), would suggest that these findings could well be generalisable across schools, or at least relevant to other school learning environments.

Implications of the Research Findings for the Theoretical Literature

The introduction to this dissertation established that there are five bodies of theoretical literature that pertain to the area of investigation in this study. These bodies of literature are described as the learning revolution, which describes the global and societal changes that are occurring and suggest that a commensurate change is needed in education and schooling to meet the needs of students entering the information age; the theories of learning, which outlines the changes that have occurred to our knowledge of how students’ learn and the move to an outcomes focussed, learner-centred environment; the learning process, which describes the diversity of students’ learning styles and how the environment might be structured to motivate and engage students in their learning; the learning environment, which describes the life-long learning process and the context appropriate to meet the needs of the learner; and the learning community, which describes the relationships and values that bond learners together into a community of learners. The findings of this study have implications for all five areas of theoretical literature.
The literature associated with the learning revolution identifies the need for schools and education to keep pace with society’s move from an industrial age to an information age, based on knowledge. It identifies the process of life-long learning as being central to an individual’s ability to cope in the 21st century (Pace Marshall, 1997; Spady, 2001), and the need for schools to shift their focus from the teacher to the learner, and to create ‘learner societies’ (Ball, 1995) based on moral communities with shared values and meaningful relationships (Sergiovanni, 1996; Spady, 2001). This is precisely the view that teachers have of their learning environment, and is stated in the five propositions that emerged as findings from this study. They commented on the need to create a community of learners based on a common set of values, the development of good reciprocal relationships, the empowerment of students who are motivated to learn, and the provision of flexible and diverse learning environments focussed on student needs. These perspectives on the learning environment provided by teachers give support to the literature and contribute to the vision of developing sustainable learning environments for the 21st century where learning is central to living (Spady, 2001).

Research from the neurosciences has increased our knowledge about the brain and how people learn and this challenges the traditional theories of learning. It is this research which has prompted the move toward brain-based learning and outcomes-focussed learning environments. Teachers in this study are recognising the need to provide a more student-centred and flexible learning environment where the learning strategies are focussed on motivating and engaging students in their learning and the learning environment is one where human interaction is central, and success and achievement are the goals of learning. The implementation of the Curriculum Framework (Curriculum Council, 1998) in all schools in Western Australia which mandates an outcomes-focussed education system will
likely have significant implications for the literature on theories of learning, and it may well be that teachers’ perspectives on their learning environments at present are influenced by the impending implementation of this document.

The body of literature concerned with the learning process builds on the knowledge of how students learn, to inform educators of the types of learning environment necessary to produce successful learners. The findings from this study show that teachers perceive that students need to experience a diverse, flexible and empowering environment that can cater for and reflect the individual needs of learners. This environment needs to provide stimulation and challenge for their learning so that they are motivated to learn. However, the range of views expressed by teachers in this study concerning their ability to accommodate the range of students’ learning styles, and motivate and engage students in their learning suggests that there is not a clear and consistent direction being expressed across teachers from both case studies. This highlights the difficulty of changing pedagogy in the classroom learning environment, and suggests that the impact of this body of literature may only be fully recognised in the longer term.

The literature pertaining to the development of learning environments is central to this study, and to some extent encapsulates the bodies of literature already discussed. To provide learning environments that are learner-centred and focus on accommodating the needs of students requires moving from a rigid, bureaucratic environment to a more flexible and open system (Shachar and Sharan, 1993). This move is one supported by the findings of this study, where teachers believe in the need to re-structure schools to reflect the needs of life-long learners. This process is a slow one and one where the literature is well ahead of the practice, but where the practical input of teachers is important.
It is the body of literature that is concerned with the development of learning communities that is most significant to this study. A sustainable learning community is a moral community, one where its members are bonded together by a set of shared values focussed on the welfare of the group, on the trust, care, loyalty and respect of its members and compelling them to work together for the common good (Sergiovanni, 1992). This is the central concern of teachers in this study, that a learning community should be based on a set of uniformly and consistently modelled values, supported by reciprocal and trusting relationships, and bonded by an intrinsic motivation to learn as part of a just and caring community. It is a *gemeinschaft* (Sergiovanni, 1996) or sacred community, or covenant (Starratt, 1995) bound by Gospel values that defines the Catholic school. This is the strongest implication that this study has for the theoretical literature in that it gives support to the notion of developing a sustainable learning community.

**Implications of the Research Findings for Future Research**

The central research question of this study aimed to investigate the perspectives that teachers have of their learning environment in order to determine how it could be organised to improve the learning process. This question was posed to teachers in two secondary colleges in the Catholic Education System of Western Australia, which not only gave the study a very limited context in terms of geographical location and size of study, but also limited its parameters in terms of the mission and ethos of the schools involved.

The parameters of this study were suggested by the lack of empirical research undertaken in this practical context to date. Whilst there were many studies undertaken concerning aspects of the learning environment, some of which are mentioned in Chapter
Two of this dissertation, there were few that have sought the perspectives of teachers, and even fewer that have been undertaken in the Catholic Education System in Western Australia. It was this paucity of research despite the current changes that are occurring to learning environments that suggested this as an appropriate area for investigation. However, the limit of this study in itself suggests that there is a need for future research in this area.

The research question invites teachers to comment on their current learning environment and to suggest deficiencies in its provision for the learning process. However, it does not formally discuss these deficiencies, nor does it suggest how they might be addressed. There is a clear need for further research to address strategies that might be adopted to improve the learning environment. The five propositions that form the findings of this study describe the most important aspects of the learning environment as perceived by the teachers from the two case study schools. These propositions suggest a deficit between the current learning environment and characteristics of the improved learning environment. Further research could suggest strategies to bridge this deficit, particularly with regard to student-centred learning and outcomes-based learning.

The limit of the current study to only two case studies suggests the need to extend this sample of schools. Despite the dissimilar characteristics between the two schools selected for the study there was considerable agreement among teachers across the case studies regarding their perspectives on their learning environment. A study using more schools across the Catholic Education System in Western Australia could add support to the findings of this study.
The findings of this study suggest that the establishment of a common set of values uniformly and consistently modelled for students across the learning environment, the development of good reciprocal student-teacher relationships based on trust, as well as an environment where students are intrinsically motivated to learn are key aspects of the learning environments in Catholic secondary schools in this state. These findings are descriptive of teachers in only two Catholic schools, and further research could confirm whether these findings are significant.

This study is concerned with the provision of a learning environment that will enhance student learning. On this occasion the research sought the perspectives of teachers on this topic. Future research may well extend to eliciting the perspectives of students. Whilst studies of students' perspectives have been undertaken in other contexts it has not been possible to locate similar research undertaken in the Catholic Education System in Western Australia.

Further research may extend the findings of this study to a comparative study across government and non-government schools in Western Australia to determine whether these findings relate to other denominations and to non-denominational schools. This would provide a more composite vision of the learning environment for students and provide insight as to whether values and relationships, key concepts in the findings of this study, are considered important in other contexts, and the effect this may have on student learning and the development of sustainable learning communities. The significance of values, and particularly Gospel values in the context of Catholic Education may not hold the same significance in other non-denominational schools and this could have ramifications for the life-long learning of students and the development of a moral community of learners.
The findings of a study focusing on secondary schools could also be extended to include all phases of student development K-12 as the Curriculum Framework suggests. This would provide a profile of students’ learning environments so that there is a consistency of environment provided for students. In the Catholic Education System this would be an important study to determine whether the environment presented to students was uniform throughout their schooling.

Other future research may also consider a different set of questions to ask about learning environments to determine the effectiveness of the environment being provided to students in the 21st century. There is much opportunity to expand the focus of this research and this is likely to be necessary in the light of the changes occurring to the learning environment ahead of the implementation of an outcomes-based curriculum associated with the Curriculum Framework (Curriculum Council, 1998).

Implications of the Research Findings for the Improvement of Future Practice.

This study was concerned with gaining an understanding of teachers’ perspectives on the learning environment and how the learning environment could be organised to enhance the learning process. This suggests that the current learning environment may be in need of improvement. The findings of the study, presented as five propositions, indicate the most significant and desirable aspects of a learning environment according to the teachers from the two case study schools that participated in this study. These findings also indicate that there is a discrepancy between these desirable aspects of a learning environment, and the reality found in the two schools. This suggests that there is a need for
a range of changes that could lead to the provision of an enhanced learning environment. These changes are listed as a series of recommendations:

It is recommended that:

1. The school considers the ability of teachers to model Gospel values to students when teachers are employed into the system.

2. The school inducts teachers into the values to be modelled to students in and beyond the school learning environment.

3. The modelling of values is monitored by the management team of the school to ensure a consistency of values is implemented across the school.

4. Teachers in the school are provided with adequate professional development and mentoring to enable them to adopt student centred learning strategies in their classroom.

5. Funding is provided to ensure adequate human and physical resourcing for the implementation of a student-centred learning environment in the classroom.

6. Funding is provided to ensure adequate technology is made available for the implementation of a student-centred learning environment in the classroom and the school.

7. Strategies are in place to promote the development of student-teacher relationships so that individual student needs are met.

8. Pastoral strategies are in place to cater for the social, emotional and psychological needs of students.
School structures are in place that reflect the need for a flexible learning environment to be provided to students which includes timetabling and length of period considerations.

There are procedures in place that will enable closer school and parent, and school and community interactions to occur.

Opportunities are provided that enable teachers to group students in a variety of ways in order to facilitate a range of learning strategies that promote student-centred learning.

The school management team provides additional and ongoing support to teachers who implement innovative learning strategies.

The school management team provides leadership in promoting a learner-centred learning environment.

The most important aspect of the learning environment, as described by participants in the study, is the establishment and promotion of a common set of values uniformly and consistently modelled for students across the learning environment. According to the findings of this study it is this criterion, together with the need to develop reciprocal relationships based on trust that are the most significant influences in developing a sustainable learning community. This requires that Catholic secondary schools are clear and overt about the specific values they support, and that these values are endorsed by all members of the school community, particularly its teachers and families. It also implies that it is human interaction that is the prime basis for developing an effective learning environment. This has implications for teacher employment, teacher induction, and enrolment policies.
The other aspect of the learning environment that is considered by teachers involved in this study to be significant to student learning is the move toward a learner-centred environment. This implies the move toward greater empowerment for students, the use of more student-centred learning strategies, the provision of a more flexible and diverse learning environment so that it more closely relates to the needs of students, and an ability to motivate and engage students in their learning so that it becomes a life-long process of successful learning. This move implies a change of pedagogy for teachers which requires the support of management teams in schools to ensure the provision of professional development so that teachers are competent and confidence to implement a change in classroom practice and curriculum.

The findings of this study support the requirements for the implementation of the Curriculum Framework which is mandated for all schools in Western Australia by 2004. This means that an outcomes-focussed learning environment will form the basis for practice in all secondary schools. The five propositions that form the findings from this study are consistent with the learning environment described in the Curriculum Framework document, and therefore consistent with the notion of outcomes-based learning.

The improvement of future practice will arise from the development of a sustainable learning community which, in Catholic schools, will require the learning environment to be focussed on a clear set of values, trusting relationships, and a student-centred and outcomes-based environment that is consistent across a student’s process of life-long learning.


Appendix 1: Questions sent to participants prior to interview.

QUESTIONNAIRE:

1. What do you think motivates students to learn, and engages them in the learning process, and are these conditions present in your learning environment?
2. How would you describe the motivational levels and engagement of your students currently. Could you do anything to improve this.
3. What values do we currently present to students? Do students understand the values that we are presenting to them?
4. How would you describe your current classroom practice?
5. What learning strategies do you currently use with students, and are they successful. This there anything you would like to change about the strategies you currently use that would improve the learning for students.
6. Are there any resources that are not currently available to you that you think would substantially improve a student's learning.
7. What facilities are available to you in the classroom with regard to technology? Would these facilities enhance your capacity to improve learning?
8. Does the current curriculum provide adequately for students' learning? In what ways do you think this is deficient?
9. Are there aspects of the current classroom set up and timetable that you think hinders students' learning?
10. Do students need the same learning environment in lower and upper secondary schooling?
11. How do their needs, in terms of learning environment, change as they move through secondary schooling? Do we currently provide for these needs in our secondary schools?
12. How do you see parents and other adults being involved in the learning process?
13. Should there be greater parent and community involvement in the learning process and in schooling? If so, how could this occur?
14. How do you believe we influence, or could influence, the learning environment outside of the school for students?
15. How well do you think we equip students for their ongoing learning once they leave school?
16. How well does the structure of the school day cater for the learning needs of students? What needs to change here?
17. How well do the administrative structures of schools cater for the needs of the learner? Are there changes that could be made to improve these structures?
Appendix 2: AIDE MEMOIRE

A. How would you describe the current learning environment of your school?

1. How would you describe the current classroom environment?

2. Are you happy with the way in which classroom space is currently utilised for learning?

3. Do you see any problem with the type and amount of facilities made available for learning to occur in the classroom?

4. What do you see as the main problems with the type of learning environment that the classroom currently provides?

5. Are you satisfied with the way in which students are grouped for the learning to occur?

6. What do you think motivates students to learn, and engages them in the learning process, and are these conditions present in your learning environment?

7. How would you describe the motivational levels and engagement of your students currently. Could you do anything to improve this.

8. What values do we currently present to students? Do students understand the values that we are presenting to them?

9. How would you describe your current classroom practice?

10. What learning strategies do you currently use with students, and are they successful. This there anything you would like to change about the strategies you currently use that would improve the learning for students.

11. What facilities are available to you in the classroom with regard to ICT?

12. What is the place of technology and how should it be made available to learners?

13. How do their needs, in terms of learning environment, change as they move through secondary schooling? Do we currently provide for these needs in our secondary schools?

14. How well do you think we equip students for their ongoing learning once they leave school?
B. The whole school structures:

1. What are your understandings of the current organisation of the school and the school day and how should this be changed to facilitate learning.

2. How well does the structure of the school day cater for the learning needs of students? What needs to change here?

3. How well do the administrative structures of schools cater for the needs of the learner? Are there changes that could be made to improve these structures?

4. Do you see any problems with the way in which the school day is organised particularly with regard to the length of the day, and the length of periods, that might adversely affect learning?

5. Is the timetable structured in the best way to enable learning to occur?

6. Is the allocation of students to classes undertaken in the best way to cause the most effective learning?

C. The learning environment outside of the school:

1. Do adults, other than teachers, have a part to play in the learning environment and if so who are they, and how can they become involved in the learning?

2. How can the learning community and agencies outside of the classroom be used to enrich learning?

3. How do you see parents and other adults being involved in the learning process?

4. Should there be greater parent and community involvement in the learning process and in schooling? If so, how could this occur?

5. In what ways do you enable students to access the learning environment outside of the school?

6. Do you think the school makes sufficient use of learning environments outside of the school?

7. Do you think these learning environments outside of school have a part to play in students’ learning?

8. How often would you take students into the environment outside of school either during school time or afterwards, and for what reasons?

9. How often would you bring members of the community into the school, and for what purposes?
### Appendix 3: Example of the Open Coding of Data

| Respect is based on rapport. | they'll give you all the respect in the world. At least that's what I try and do, and I have found that it works a treat. They won't ignore you in the corridor; if you see them out in the shopping centre they will come up and say 'hello'. That's a good value, you know ordinarily, I mean I would have, ten or fifteen years ago - oh look that's a teacher....and run away. You wouldn't even wave or anything. I think that's what we do as younger teachers. |
| Rapport with students is important. | J: I agree with that to a certain extent, but I think there's a level of both that needs to be brought in. I think outside the classroom and extra-curricular activities is what that's for. And if you go up to a student in the corridor and say 'good day' and if you know their name, before they say 'Mr Allen' or something, that's enough, and they will respect you a little bit more. And it's good to have a good rapport and everything, but when it comes down to business, it's time to come down to business and that's true I think. In my opinion we are catering too much for their needs, and I've got a thing where I don't want to be liked, I mean I want the teacher to be respected, and I would rather be respected than liked as a teacher. |
| Rapport and respect for professional status. | I: You see, I think it comes hand in hand. If you are liked, you are also respected. If you're disliked they don't respect you. I don't think that.... |
| Student/teacher relationship is a professional one. | J: In about five years, they probably will though, when it counts. |
| 'Like' and 'respect' are synonymous. | I: That's what I try and tell them. "When you leave school, you'll really like me". |
| Respect can be a longer term relationship. | J: Well, that's true. I hated my Maths 2& 3 teacher, or most of my teachers. Whereas now I think they did so much for me....I don't know if that's paralleled it all, but I don't think we should be chummy, chummy, because then they try and get away with stuff with you, like and say 'now come on Mr Allen...' and I don't agree, that doesn't wash with me. Now if you just look at marks, I mean in Kalgoorlie where I taught first-off we had this huge |
Appendix 4a: Axial Coding of Data (Between Schools)

Less Experienced Staff

<table>
<thead>
<tr>
<th>Physical Environment</th>
<th>College X</th>
<th>College Y</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Classroom space - library.</td>
<td>Classroom space affects teaching - size and temperature/atmosphere are important.</td>
</tr>
<tr>
<td></td>
<td>Classroom layout - not conducive to current learning theory.</td>
<td>Noise is a factor.</td>
</tr>
<tr>
<td></td>
<td>Class size - need for smaller classes in Senior School.</td>
<td>Classroom size and amount of space is important.</td>
</tr>
<tr>
<td></td>
<td>Staff allocation division between middle and senior school staffing.</td>
<td>Presence of a stage creates a distancing between students and teacher.</td>
</tr>
<tr>
<td></td>
<td>Classroom tone relaxed and informal.</td>
<td>Stage creates an authoritarian approach.</td>
</tr>
<tr>
<td></td>
<td>Staff/student relationships informal.</td>
<td>Classroom location - outside traffic is disruptive.</td>
</tr>
<tr>
<td></td>
<td>Technology need for staff PD.</td>
<td>Classroom with views can be distracting.</td>
</tr>
<tr>
<td></td>
<td>Technology lack of human resources.</td>
<td>Classroom temperature is important to learning environment.</td>
</tr>
<tr>
<td></td>
<td>Pressure and focus on TEE.</td>
<td>Lack of air conditioning in classrooms in summer.</td>
</tr>
<tr>
<td></td>
<td>Classroom tone relaxed and informal.</td>
<td>Natural light is an important factor in a classroom.</td>
</tr>
<tr>
<td></td>
<td>Independent learning encouraged.</td>
<td>Classroom temperature in summer - needs to be comfortable to keep students alert for learning.</td>
</tr>
<tr>
<td></td>
<td>Human resources:</td>
<td>Furniture needs to be movable so that space can be used for different types of activity.</td>
</tr>
<tr>
<td></td>
<td>Learning teams supportive and interactive.</td>
<td>Room ownership - teacher needs to be able to organise space according to student activity.</td>
</tr>
<tr>
<td></td>
<td>Class size:</td>
<td>Noise level can affect teaching and concentration levels.</td>
</tr>
<tr>
<td></td>
<td>Learning teams too big</td>
<td>Classroom temperature - needs to be cool.</td>
</tr>
<tr>
<td></td>
<td>logistics of size</td>
<td>Classrooms need to be small so that contact with students is maintained.</td>
</tr>
<tr>
<td></td>
<td>Facilities:</td>
<td>Classroom size - rooms are too large.</td>
</tr>
<tr>
<td></td>
<td>Library space - need for quiet place.</td>
<td>Teacher and students are distanced.</td>
</tr>
<tr>
<td></td>
<td>School structures: length of lessons need for longer periods</td>
<td>Large room size creates poor atmosphere.</td>
</tr>
<tr>
<td></td>
<td>Staff/student relationships relaxed.</td>
<td>Lack of pinup boards for size of room.</td>
</tr>
<tr>
<td></td>
<td>Class size too big for classroom space.</td>
<td>Smaller classrooms create a more cosy atmosphere.</td>
</tr>
<tr>
<td></td>
<td>Facilities: space</td>
<td>Need to create cosier environment in big rooms.</td>
</tr>
<tr>
<td></td>
<td>Class size varies.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Facilities space and equipment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Human relationships: teaching teams conducive to learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Class size Learning teams logistics of size.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learning strategies.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Classroom create positive environment for learning.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posters</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relaxed tone for students.</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix 4b: Axial Coding of Data (Between Groups)

<table>
<thead>
<tr>
<th>Influence</th>
<th>Interview 1</th>
<th>Interview 2</th>
<th>Interview 3</th>
<th>Interview 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation/Engagement</td>
<td>Motivation - students empowerment (selecting subjects) has an effect on motivation to achieve. Students are motivated because outcomes are achievable. <strong>Motivational factors:</strong> Choice is a motivational factor: - giving students choice of content. - Giving students ownership of their learning. Need to provide opportunities for students to make subject choice. Students need to be successful. Success comes from: - Subject enjoyment - Achievement. - Fear of failure causes students to want to change subjects. Outcomes assessment places responsibility on students to achieve. Ownership of learning. Outcomes - students given responsibility for: - choosing content and - achievement of outcomes. Focus on teaching of skills, not content - more interesting for student.</td>
<td>Motivation: The treatment of students as a motivational factor - negotiation. Personal best performance. Personal, intrinsic motivation as opposed to competition against others. Working in a motivational environment. Seeing others around you perform. Motivation is caught from others. Intrinsic motivation - students should be self-motivated. Personal achievement. Staff-student rapport leads to self-motivation. Staff-student trust is important. Intrinsic motivation of students. Motivation is engagement in a subject which they find enjoyable. Set realistic goals to achieve. Energy is a motivational tool. Extrinsic motivation leads to intrinsic motivation. Teachers program to motivate and engage students. Engagement with students leads to motivation. Motivation is symbiotic - two way process. Motivation is one-on-one.</td>
<td>Intrinsic motivation: self motivation - setting own standards. No needs for extrinsic motivation Extrinsic motivation: Affirmation as a motivational factor - especially for students who lack confidence. Need for recognition of their efforts. Building rapport - recognition of students' contribution to lessons. Motivation is a reciprocal relationship. Acknowledgement that learning is a reciprocal experience. Maintaining a positive classroom environment. Foster relaxed, open classroom environment. Teacher needs to be approachable. Foster good relationships. Student-directed learning: - student tutorials - learn from each other. - Relevance of learning. Group work.</td>
<td>Motivational influences Reactive approach to students. Goals generate motivation in students. Need to set goals and internalise these. Most learning is goal-driven. Need to empower students in their learning if they are to become intrinsically motivated. Student directed learning strategies. Need for greater flexibility in learning strategies. Empowerment of students: Flexibility in access to resources. Control of learning process. Student directed learning. Adolescent's goals are immediate and social. Not intrinsically motivated to learn. Present-centred culture of adolescent. Primary-aged students are intrinsically motivated to learn. Alienation:</td>
</tr>
</tbody>
</table>
Appendix 5: Main Propositions - in detail

MAIN PROPOSITIONS

1. A common set of values, uniformly and consistently modelled for students across the total learning environment, is essential for learning.

1a. Need for a consistent and unified common set of values to be presented to students both within and outside school to present a model of societal expectations.

1b. The importance of modelling values is a key expectation of the learning environment.

1c. The dissonance between overt and covert values systems that are transmitted to students.

2. Rapport, the development of good reciprocal student-teacher relationships based on trust, is fundamental to learning.

2a. The importance of rapport and the development of relationships as a key value.

2b. Rapport, the development of good reciprocal student teacher relationships, is fundamental to learning, and it is the teacher's role to provide an environment where relationships are based on trust.

3. The most significant influence in learning is the development of an environment where students are intrinsically motivated to learn.

3a. Teacher direct learning generates motivation through extrinsic influences such as competitive, whereas student centred learning generates motivation through intrinsic influences.

3b. The motivational influences are empowerment, ownership, relevance, success, responsibility,

3c. Intrinsic motivation - through relevance, ownership, empowerment, success and achievement - is the most significant influence in the learning.

3d. The grouping of students is a significant factor in the learning environment.

3e. The change in pedagogy from competitive to collaborative learning and the change in the role of the teacher that accompanies that.

3f. The move from content to process skills and from directed to independent learning styles.

4. There is a need for greater flexibility and diversity in the provision of learning environments so that they more closely reflect the needs of teachers and learners.

4a. More flexibility required in the structuring of the school day and the use of time to accommodate a student centred learning environment.

4b. School structures need to focus on student learning and the holistic development of the student rather than on subject disciplines.
4c. Diversity of structures - middle and senior school administration, vertical pastoral care system, gender specific groupings - are advantageous to the learning.
4d. Teachers need to have control and ownership of their classroom space and facilities.
4e. Technology is a valuable learning tool.

5. **The learning environment needs to reflect the broader (parental and societal) values of citizenship and life-long learning, and to develop relationships that build community.**

5a. Life-long learning based on community building and the development of a strong values orientation are the focus of education.

5b. Parents need to become more involved in the school learning environment and parent/teacher relationships need to be established in order to build community.

5c. Parents value education and are seeking the Catholic values orientation that will enable their children to become valuable members of society. They are seeking citizenship and life-long learning rather than academic success.

5d. Parents are valuable contributors to their children's learning and schools need to guide them in this supervisory role to ensure that the home is a learning environment.

5e. The school-community involvement in learning is a two way process, but currently this access is limited.

5f. There is a need to make school resources more available to the community, to make greater use of the local community in students' learning and to encourage student access to the community.