

Abstract

The notion of Queensland as a ‘Smart State’ is the Queensland Beattie Government’s response to global conditions that require a new type of worker and citizen for a new knowledge economy. The role of education in the success of the ‘Smart State’ is clearly outlined in the Queensland Government’s vision statements and policies, identifying teachers as a key factor in the production of this new type of worker and citizen. In this study I explore the relationship between Queensland’s Smart State policy and the daily practices of teachers as they are implicated in the building of a ‘Smart State’.

The study takes place during what is unquestionably the largest and most comprehensive reform effort to be imposed on Queensland schools and teachers, under the auspices of a ‘Smart State’. The research includes policy analysis of two key Smart State documents, and fieldwork involving semi-structured interviews, observations and artefact collection of the work of two primary school teachers. Using Fairclough’s theories regarding the relationship between discourse and social change, it is possible to show how changes occurring in contemporary organisations are related to changes in discourse, in particular, those surrounding the discourses of a ‘knowledge economy’ or ‘globalisation’.

The ‘Smart State’ is conceptualised in this study as regimes of discourses that may produce new practices and new ways of acting and being (Fairclough, 2001a). The interdiscursive, linguistic and semiotic strategies used in Smart State policy are analysed to show how this discourse is emerging into a hegemonic position, while identifying the dominant discourses reiterated in the policy as necessary skills for a new type of worker. These discourses are mapped onto those identified through the fieldwork of teachers’ daily work practices to determine if Smart State discourses are becoming apparent in teachers’ work.

This study is significant because it makes visible the current relationship between the discourses of the ‘Smart State’ and teachers’ daily work. In this current climate of rapid change and economic survival it is important that the operationalization of a ‘Smart State’ can be attributed to teachers’ work as new ways of acting and interacting become a part of their daily practices.

**Operationalizing Queensland's Smart
State policy through teachers' work:
An analysis of discourses in a Central
Queensland school.**

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Declaration

I certify that this thesis has not been submitted in any form for any other degrees or in any other publication. The main text of the thesis is an original work and any information derived from the published or unpublished work of others has been acknowledged in the text with a list of references provided.

Lenore Adie
December 2006

Foreword

Since 1983, I have worked as a teacher and administrator in both private and public schools in Queensland. In 1998 I became an acting teaching principal of a small rural school with 130 students and seven full time teaching staff. The following year I accepted a position as an acting deputy principal in a larger school with 700 students and thirty teaching staff. During this time, my work as a teacher has been full and varied, enjoyable and rewarding but also, as many teachers report, it has often been frustrating, tiring and all consuming.

Since the 1990s in particular, I have become increasingly interested in how teachers have responded to, and engaged with, the escalating number of changes imposed on them. I have observed teachers stoically continuing with the same practices believing whole heartedly in what they were doing and the transient nature of new practices in education. I have observed others radically change their practices to align with changes only to become disillusioned with a system when promised improvements did not occur. I have struggled to meet the needs of individual students only to find that no matter how much Information & Communications Technologies (ICTs), Multiple Intelligences (MI) or experiential and creative methods I employed, some students still did not engage.

As a parent of two talented girls, I also saw education through their eyes, as an unengaging, often irrelevant exercise that filled in their day but often left them without enthusiasm or inspiration for the school learning experience. So I was led more and more to the questions of how to engage children with their learning in a school setting. It had been easy at home with my children; learning was fun and relaxed with no pressures. Increasingly, however, as teachers, we were being told we were ineffective. Certainly there were still children succeeding at school but some were failing to learn even the basics of literacy and numeracy, while others were totally disengaged. With an ever increasing avalanche of new policies and syllabuses arriving on our desks there barely seemed time to get one under way before something new arrived. However the new policies and syllabuses were not the only complexifying aspect of our work. There were also new accountability demands and an increasing quantity of social and emotional issues occurring in our students' lives that we also needed to address. The accountability measures, particularly mandated testing, did not provide us with any information that we did not already know about our students, in fact, we had far greater knowledge of our students than these tests accounted for. It appeared that our professional judgement was no longer valued, and the feeling that, as teachers, we were no longer trusted permeated the school causing anger in some teachers and confusion in others. Amid all of these demands, the structure of our classes was changing. More and more we were providing support for students involved in marriage break-ups; we had a greater proportion of our students diagnosed with ADHD, autism, asperger's syndrome, anger management issues, depression...; and we had a greater quantity of students 'known' to our local police. What was happening? The nature of my work as a teacher was becoming so complex and the media only seemed to be able to find fault with our work efforts.

I needed to find answers to understand the processes of change and innovation that had led me to question my role and value as a teacher, and to develop an

appreciation about the nature of teaching as a particular kind of work in the current, new millennial context of globalising education. Through this study, I hope to develop my understanding of the contemporary nature of teachers' work and the forces that are driving its present state.

Chapter 1: Introduction

1.0 Introduction

It is 8:00am as Ms Samantha Stewart walks into her classroom and logs on to her laptop computer workstation. There are emails from her students' parents: Zane will be absent today, Emily has had a disturbed night's sleep and Candice has had difficulty with some of her homework. She downloads the day's programs as she greets each of the children, checking on Emily, and solving Candice's homework problems. As her students arrive they too connect their notebooks and log in ready for the day's work. The day then proceeds in a whirl of activity as the class discusses this day's projects and requirements. The class works in teams, collaborating on how to prepare, find and present their information. Their projects are directly related to solving school and real world problems. Some of the groups work together at the desks; others sit on the carpet; while others work at the computers. Ms Stewart roams around the room assisting and supporting whenever necessary; glean information on how the children are handling the content and how they are developing socially; directing the children to resources; and probing and questioning to assist the children in progressing further with their work and finding their own solutions. As she interacts with each of the groups, Ms Stewart records individual proficiencies and notes areas of weakness. She will plot these developments on the children's profiles later in the day and plan further group lessons to develop areas in need of attention. The task that the class are currently working on requires them to not only research information but to analyse and use this information to create a new product to sell at the school fete. They see themselves as innovator and entrepreneurs. Today they have invited a guest speaker from a local marketing firm to discuss current market sellers and to listen to their ideas. They are eagerly finalising and practising their presentations... And so the day continues with the children engaged and enthusiastic about their work and today's events as they practise and apply their basic Literacies that so effectively underpin the technological and entrepreneurial skills they are developing...

Ms Stewart's classroom may not yet be typical of all classrooms in Queensland, but the past eight years have witnessed profound changes in Queensland schools and teachers' work since the introduction of a raft of initiatives associated with the Queensland Labour Government's 'Smart State' vision. This vision sees teachers as responsible for the production of future citizens and workers who are equipped with a new set of essential skills, necessary in a rapidly changing technologised society.

To meet the goals of a 'Smart State', the Queensland Government is working towards a large scale reform of education with the aim of developing "future

entrepreneurs and wealth creators” who have “high levels of education and literacy” and “skills for the information age” (Queensland. Department of the Premier and Cabinet, 2005, pp. 2, 25). Ms Stewart’s classroom is clearly operating as a Smart State ‘Smart Classroom’ with self-directed learners collaborating on real life projects using lap-top technology as a tool to enhance their learning outcomes. This innovative style of working and teaching is scaffolding the development of future entrepreneurial workers through the promotion of social cohesion and a sense of community working together to find solutions to complex problems and utilising the expertise of others when necessary.

The notion of schools as sites of entrepreneurship and knowledge production is relatively new in Queensland. Schools have historically been providers of knowledge to students whose purpose has been directly related to the social and vocational needs of the prevailing era. In the current information era, or knowledge economy, the new ‘Smart State’ vision for the future of Queensland takes account of rapidly changing practices related to technologies, work, finances, leisure and people-management. Smart State policies for schools, therefore, have meant changes to every aspect of schooling including behaviour management, curriculum, pedagogy, assessment, risk management, school management and leadership.

The Queensland Government’s Smart State policy is one government’s response to the demands of a rapidly changing society within a global economy that focuses on knowledge as its main commodity. Considering the importance placed on teachers’ work to deliver the ‘Smart State’ of Queensland, this study looks at the processes involved in building a ‘Smart State’ through teachers’ daily work. Ms Stewart’s class has all the hallmarks of a Smart Classroom operating in a ‘Smart State’. This

study looks specifically at how Smart State policy may be becoming operationalized through teachers' work.

In this chapter the Queensland Government's Smart State strategy is contextualised within the current national and global arena of educational provision in Australia as an advanced capitalist nation state. The problem for the study and the research questions are then outlined, justifying their significance in a period of rapid social change that sees teachers and schools being charged with responsibility for the continued relevance of schooling and the ultimate success of Queensland's global economic strategy. The next section gives an overview of the theoretical framework and the research design, justifying the methodology as a way to investigate the current changes occurring in teachers' work. Finally, an overview of each of the subsequent chapters is provided.

1.1 Queensland, the 'Smart State'

The 'Smart State' is a vision initiated and conceptualised by the Queensland Beattie Labour Government after taking office in 1998 (Queensland. Department of the Premier and Cabinet, 2005, p. 2). Like other similar mantras in other Australian States¹, the 'Smart State' strategy can be understood as a direct response to worldwide trends fuelled by the belief that knowledgeable, innovative and creative workers are needed within a diversified economy to remain competitive in the global market.

The Queensland Government's 'Smart State' vision is aimed at expanding Queensland's technology based industries, developing skilled and flexible workers

¹ For example, *Tasmania Together*, *Growing Victoria Together* and South Australia's *Creating Opportunity*.

and providing a safe and attractive environment in which to live and work. In response to these challenges the Queensland Government has produced a plethora of policies in every aspect of its operation to progress and promote Queensland as a 'Smart State'. Within these policies, innovation, particularly in the areas of scientific research and information and communication technologies (ICTs), is promoted as essential for future growth and development in Queensland. According to the Queensland Innovation Council (2001, pp. 16, 17) this multidimensional approach to developing a 'Smart State' encourages "a pervasive culture of innovation" and requires "a world-class education and training system". Indeed the four key drivers of 'Smart State' growth are listed as education, skills, research and innovation (Queensland. Department of the Premier and Cabinet, 2006).

The main Smart State document articulating this vision for Queensland is the current *Smart Queensland: Smart State strategy 2005 – 2015* (Queensland. Department of the Premier and Cabinet, 2005) which encompasses all aspects of Queensland life under the jurisdiction of the Queensland Government. The role of education in this vision is established in *Queensland State Education 2010* (Queensland. Department of Education Training and the Arts, 1999) which informs all other education policy.

The place of education in Queensland's quest for prominence in a new economy is firmly established within the policy and other related texts and documents of the 'Smart State'. Furthermore, the influence of a globalising knowledge economy within Queensland's education system is clearly articulated in a report by the Ministerial Advisory Committee for Educational Renewal (MACER)².

Education in Queensland needs to respond to the challenges posed by an external environment characterised by innovation and risk, by the increasing importance of

² The Ministerial Advisory Committee for Educational Renewal (MACER) has been established to provide advice to Queensland's Minister for Education.

knowledge and creativity in the economy, and by the impact of globalisation and new technologies across all areas of work and experience (Ministerial Advisory Committee for Educational Renewal, 2004, p. 2).

The Queensland Government is one of the larger government networks seeking to enlist teachers in the progress toward a knowledge economy, and establish Queensland's prominent position in a globalising society. As a large organisation employing over 35 000 teachers, it is not surprising that the Queensland Government, through its education arm, 'Education Queensland', has begun to focus on the teaching workforce as an important key to developing a skilled, inventive, enterprising and prosperous State (Queensland. Department of the Premier and Cabinet, 2005). In this current climate, teachers have a strategic role to play in producing a highly educated populace who are productive members of their State, who enjoy a quality lifestyle and who can confidently lead Queensland into the knowledge economy.

In conjunction with the apparent confidence in teachers to help the Queensland Government achieve a 'Smart State', the influx of new policy, new curricula and modes of operation has led to an intensification of teachers' work. For Queensland teachers this has posed challenges to their work practices, the way they view themselves as teachers and their relationship with their students. Besides carrying out the usual daily work of teaching and administration, principals and teachers are also expected to help steer schools in particular directions through their performances of the new raft of policies. But how can teachers steer schooling?, what is a 'Smart State'?, and what is the teacher's role in achieving this new vision for Queensland?

In this current climate, there is a need for studies that can contribute to an understanding of how teaching practices may be engaging with Smart State discourses and how practices are changing to meet these challenges.

In the following section, I provide a brief outline of the context of Queensland schooling which is undergoing reform and restructure in response to changing global conditions. As Fairclough (c. 2004) and Olssen, Codd and O'Neill (2004) claim, organizations undergoing change can only be fully understood through recourse to the broader global context since this is where "the relationship between the text and the social structure" in which it is embedded must be established (Olssen et al., 2004, p. 3).

1.2 Positioning Queensland schools and teachers in a globalising economy

Teaching is a paradoxical profession. Of all the jobs that are or aspire to be professions, only teaching is expected to create the human skills and capacities that will enable individuals and organizations to survive and succeed in today's knowledge society... At the same time, teachers are also expected to mitigate and counteract many of the immense problems that knowledge societies create, such as excessive consumerism, loss of community and widening gaps between rich and poor. Somehow, teachers must try to achieve these seemingly contradictory goals simultaneously (Hargreaves, 2003, p. 1).

The role of schools and teachers has undergone dramatic change in this new century. As Hargreaves (2003) conveys, teaching is a complex profession with a multitude of, at times, confusing roles and responsibilities, answerable to a gamut of people and organisations. Indeed the intensity of the focus on schools, teachers and their work is quite evident as issues involving what teachers teach and how they teach are constantly debated and criticised in the media, and as governments worldwide promote radical reforms to their education systems to match global economic and technologic advances with the aim of producing citizens who can become productive members in this new society (Apple, 2000; Calderhead, 2001; Organisation for

Economic Co-operation and Development, 1989). However, amid these moves for reform is debate about the role schools and teachers will play that includes whether they even have the capacity to evolve with the changing socio-economic conditions (Organisation for Economic Co-operation and Development, 2003e). According to the Organisation for Economic Co-operation and Development (OECD) and the MACER, this debate will be answered by how well schools and teachers progress toward future goals and the demands of skilling people for work in a globalised world that relies on skills in ICTs and creative and collaborative problem solving.

In Australia, the need for education, business and research institutions to work with the Government to “realise our national potential” has been strongly emphasised. Having a well-educated society is recognised as a necessary component in achieving innovative excellence and “securing Australia’s economic future” (Commonwealth of Australia, 2001, pp. 3, 7). Indeed the emphasis on innovation in recent educational policy in Australia is a clear message that it is a survival mechanism for educational organisations in the new competitive global economy. The Commonwealth Government report “Teachers for the 21st Century” (Australia. Department of Education Science and Training, 2000) identifies teachers and their capacity to innovate as central to school improvement and sustainability. A teacher’s ability to incorporate new practices and transform current educational practices is not only about making schools viable, it is also about making Australia a more competitive player in the world market.

Each Australian state has responded with its own corporate plan for reforming its education sector to meet the new challenges imposed by globalisation and the

knowledge economy. An excerpt from each of the state's current literature highlights the similarities in the goals of each system.

The education and training system has an increasingly important role in the development of a skilled, knowledgeable and innovative workforce (Victoria. Department of Education and Training, 2003, p. 8).

We want all students in our schools to achieve the highest standards of learning possible so that they are equipped to deal effectively with the opportunities and challenges they encounter in a changing world (Western Australia. Department of Education and Training, 2003, p. 2).

We want young people to have the skills and values they need to contribute as citizens of South Australia. Education is the key. Education offers a better future for our children, and for South Australia (South Australia. Department of Education and Children's Services, 2006, p. 1).

The long-term success of the Smart State is dependent on the development of a highly skilled workforce to support the growth of Queensland's expanding knowledge-intensive industries. The Queensland Government is committed to improving general education standards by adopting international best practice in education delivery and ensuring all children receive strong educational foundations (Queensland. Department of the Premier and Cabinet, 2006, p. 21).

In working towards achieving a world-class education for our students, the Department of Education is committed to providing high-quality educational programs that enable students to develop the necessary knowledge, skills, understandings and values to lead productive and fulfilling lives (Tasmania. Department of Education, 2004, p. 1).

The key priority of public schools is to provide children and young people with the foundations for lifelong learning so that they become literate, numerate, well-educated citizens with the capabilities and confidence to make a positive contribution to our society (New South Wales. Department of Education and Training, 2005, n.p.).

...the challenge ahead for the Department of Employment, Education and Training (DEET) is to support lifelong learning for all Territorians and prepare and skill a workforce capable of keeping pace with the changing labour (Northern Territory. Department of Employment Education and Training, 2005, n.p.).

Curriculum develops students as critical thinkers, problem-solvers and innovators. It supports students to apply their knowledge and skills to their experiences beyond school and to contribute to the local, national and global society (Australian Capital Territory. Department of Education and Training, 2006, p. 6).

Clearly, Queensland's initiatives are not unique in this respect. The extracts above illustrate how present reform measures are occurring concurrently in each State, propelled by similar 'forces' such as 'an emerging global workforce', 'a changing world', or a 'global economy' which require the skills of 'lifelong learning' and a 'world-class' education system.

1.3 The Problem

The Queensland Government's Smart State strategy is a comprehensive response to changing global conditions that aims to change social practices in Queensland.

Education, as one of four key drivers of a new 'Smart State', thrusts Queensland teachers into a prominent role in the restructure of education and the production of a new type of citizen equipped with the necessary skills to meet the challenges of a globalising knowledge economy. Consequently, this study aims to investigate the changes that are being called for through Smart State policy discourses and the extent to which these discourses may be being enacted in teachers' work as new methods of operation, inculcated in new identities and materialized in new 'hardware' (Fairclough, 2005a) in a way that is contributing to the skilling of 'a new type of citizen'. Thus the problem for this study, set in the context of an organisation undergoing radical change, seeks to establish just how and to what extent teachers' current work practices are meeting the requirements to progress Queensland into a 'Smart State', that is prominently positioned in a globalising knowledge economy.

Queensland's Premier Beattie (2004, n.p.) claims to have put in place certain education and training system reforms in the quest to "build a Smart State", for example, "adding an extra year of schooling, cutting class sizes in the crucial middle years of schooling and introducing a policy where 15- to 17-year-olds are earning or learning". However these are systemic changes that have little effect on teachers' work practices that will provide their students with the skills to meet the requirements of a new knowledge economy worker. Reforms may be in place, but that does not provide any evidence of how teachers' work has changed to align with the new requirements of a 'Smart State' or evidence of students emerging from the State's education system with the 'necessary' future life skills. The concern for this

study is with the role of teachers in reforming education, and how teachers' work practices align with the discourses of Smart State policy.

The Queensland Government is relying on teachers to produce workers for a new type of economy (Queensland. Department of the Premier and Cabinet, 2005, p. 11), and it is important to understand the contribution of teachers to the accomplishment of this goal. However, current education policy as it attempts reform is considered oxymoronic with its closer links to economic interests and accountability measures that articulate a distrust of teachers' work, while devolving authority back to schools and thereby placing trust in educators to know what is best for their communities (Ball, 1998; Helsby, 1999; Taylor & Singh, 2003). These contradictory elements along with the recent global economic, political and social changes, impose pressures on schools and teachers to keep up with the trends, to be innovative, to change, and to reform their work practices (Sikes, 1992).

The ways in which teachers' work may have changed in response to Smart State policy have not yet been made apparent. It is as yet unknown the contribution that teachers are making towards the development of a 'new' citizen who can positively contribute to rapidly changing social, economic, technological, political and environmental circumstances. Without this study, however, the work of teachers in the construction of the 'Smart State' may remain invisible and unacknowledged. It is important that the official entity of the 'Smart State' is not simply attributed to an automatic manifestation of policy or to some other 'powerful, rational entity' driving the mechanisms of the State such as a Minister or a new technology. Claims are frequently made of a new technology revolutionising practice with little regard to the humans behind the practice. Teachers' work involves much thought, preparation

and planning, and the skilful transformation of these ideas into practices that engage their students and clearly translate concepts, ideas and behaviours. As teachers translate policy mandates to teaching practices it is vital that their role be understood, acknowledged and valued.

With the intensification of teachers' work and an indication of more standardisation and national steerage yet to come, it is difficult for teachers to understand the important role they are meant to be performing in the complex arena of Queensland schooling. Thus, this study investigates the current discourses that are being translated into, and transforming, teachers' work and their relationship with Smart State policy discourses as new practices and routines are built in schools of a Smart State 'kind' through the work of the State's teachers.

The Questions for the study

As a consequence of incessant change and reform in schools, it is important to understand what is happening to teachers' work; what is driving the changes that are occurring; and how current teaching practices compare with the changes stated in policy that teachers are charged with implementing. From these concerns, two main research questions have been generated:

1. *How are two Smart State policy documents designed to promote change in Queensland schools and classrooms?*
2. *What are the mechanisms by which Smart State policy becomes operationalized in schools and classrooms?*

The purpose of these questions is to add to knowledge of how the work of teachers is contributing to the operationalization of a 'Smart State' within the discourses of Smart State policy that have emerged in response to social changes and tensions.

These questions and their associated sub-questions are discussed more fully in chapter three.

This thesis utilises and contributes to discussions about: teachers' work; the role of discourse in a system undergoing change; current educational reform measures; and policy engagement.

1.4 Significance of Research

Smart State policies and texts claim certain kinds of workers and citizens will be needed for the new knowledge economy, and teachers have been identified as responsible for producing people who can add value to the knowledge economy in the 'Smart State'. At present, there is only limited research analysing the practices of primary school teachers as they respond to changing world conditions, vis-à-vis globalisation and the knowledge economy and in particular, the Queensland Government's response through their Smart State agenda. Much is being made of the role of the teacher in the formation of the 'Smart State' in the new millennium and so with the increasing focus on teachers and their work, it is becoming important to determine just how teachers' current work practices are meeting the demands for producing a new 'type' of citizen.

While there has been some research around specific Smart State initiatives in schools (middle school, preparatory year and New Basics³), there is little research around primary school teachers and how their work practices align with the discourses of Smart State policy in terms of the stated behaviours and skills that new 'knowledge' workers will require. The purpose of this study is to articulate how

³ The New Basics project is an optional curriculum in Queensland schools that involves a futures curriculum aimed at skilling students for a new globalised knowledge economy (Queensland. Department of Education Training and the Arts, 2000, 2001a).

Smart State policy may be becoming operationalized through teachers' work. The problem is that policy does not just enact itself in classrooms and schools. The implementation and subsequent survival of any new initiatives require the 'brokering' efforts of teachers in local learning sites (Harreveld, 2002) and the hegemonic positioning of the policy discourse amid competing discourses. Building the 'Smart State' will conceivably mean that teachers will be doing different kinds of work, paying attention to new things and people and establishing new practices and routines in their learning sites. While the 'Smart State' is relatively new, this study looks at the relationship between Smart State discourses and teachers' daily work practices in order to understand the changing practices of teachers.

The Queensland Government has invested much in their future plan for a 'Smart State' and, as an organization, it would be advantageous to identify how (and if) teachers are engaging work practices that may progress Smart State policy to be operationalized. Research has suggested that policy production and its implementation in education remains a 'palimpsest', that is, claims are made of new practices in education but on closer examination these practices are simply mutations of old practices which are still present and visible in schools and classrooms (Hayes, Mills, Christie, & Lingard, 2006). Clearly, when a State deploys enormous resources as is the case in the production of a 'Smart State', then the aim of producing Smart State policy is to effect change in social practices. Historically, however, this has not always been the case with educational reform (Fullan, 2001). Yet, the building of a 'Smart State', from the Government's perspective is reliant on the development of particular skills in its citizens that are necessary for effective operation in a knowledge economy.

In addition to meeting the needs of the Government, the continued existence of schools may be reliant on meeting Smart State mandates to produce a new type of citizen (Organisation for Economic Co-operation and Development, 2003e) as students and their parents need to be confident that schools can provide the skills necessary for future life. The current trend of movement away from the State education system to the private system is indicative of the growing concern that State schools are not providing their students with a sound educational experience. These public perceptions have been shaped by the media and governments who have problematised schooling as irrelevant and disconnected from the vocational interests and future needs of their students in order to promote their reform measures.

To study the specifics of a teacher's daily practices is significant at this time of rapid change in education with repeated calls that the system is not meeting societal needs and failing many young people (Donnelly, 2004; L. R. Smith & Riley, 2003). The significance of this study is the contribution it makes to understanding how the 'Smart State' is being built through the work of teachers as they take up and engage new discourses and perform these in their daily teaching practices. Clearly, teachers have a great deal of agency when it comes to negotiating individual forms of work, even during a concerted push by Governments to change practices in schools. The current spate of Smart State policies, designed to radically change almost every aspect of schooling and teachers' work is an opportunity to study how the Smart State policies can produce changes in schools. The results of this study illustrate how two Queensland primary school teachers are engaging with discourses that surround the 'Smart State' and so make visible how the 'Smart State' may be being operationalized through their work.

1.5 Theoretical Framework

In this study I discuss a ‘Smart State’ with single inverted commas since I acknowledge that a ‘Smart State’ is actually not a ‘thing’ but a diverse and disparate array of people, ideas, practices and routines as well as agencies, policies, organisations, texts, images, technologies and an inordinate number of inanimate objects. An effective way of exploring the complex array of elements that make up a ‘Smart State’ is to view each as a discourse or in relationship to the discourse that informs it. To conceptualise the ‘Smart State’ as discourses helps me to ‘handle’ it in a way that allows relationships to be established between language and social practices. The ‘Smart State’ then becomes, not an array of unrelated elements, but can be viewed as discourses, or elements in relation to a discourse, which provides a framework to demonstrate the existing network. By conceptualising the ‘Smart State’ as a regime of discourses does not mean that it is all discourse or that it can be reduced to just discourse. In this study discourse is viewed as an element of social practice, where each element exists in a dialectical relationship with each other (Fairclough, 2005b).

The production of a ‘Smart State’ involves the production and circulation of particular discourses that promote a particular view of current social events with the intent of transforming social practices. This view relates changes in social practices to changes in discourse and other non-discoursal elements, to provide an account of the way in which discourse is involved in the construction and reconstruction of social practices. For this study the ‘Smart State’ is not being treated as a conglomerate of systems or institutions, since doing so would not enable me to show how new social relations are formed. Through the analytical lens of discourse,

however, Smart State policy can be seen as an attempt to change social practices in Queensland, including education, through the promotion of particular discourses.

The questions for this study are concerned with the ways in which discourses produce change in social orders. The study is looking for evidence that changing practices in schools and classrooms occur when teachers take up new discourses and perform them as everyday language and actions. Common sense tells us that a 'Smart State' cannot be realised through the efforts of teachers alone. How can teachers steer Ministerial communications or departmental accommodations for example? These elements are part of the Smart State mechanisms but are not in the direct control of teachers. Nor can a 'Smart State' be simply the product of policy rhetoric generated by the Queensland Government. It cannot be assumed that a 'Smart State' will simply materialise because there are policies in place. Policies are no more than words upon a page unless the vision is engaged and transformed into elements of social life, for example, work practices, attitudes, behaviours and material objects.

Theories of discourse, for example, those of Foucault, Gee and Fairclough view discourse as more than just language, and involving other elements of social life. Foucault (1980) views discourse as essential in the production and circulation of power and knowledge in social relations. Gee (1999) views discourse (in this sense as Discourse) as involving the sociocultural aspects that are also an integral part of the language act; and Fairclough (2005b) views discourse in a dialectical relationship with other elements of the social in that they are different but not fully separate elements so that they internalize the other elements without being reducible

to them⁴. All of these theories although originating from different theoretical backgrounds, view discourse as involving more than just language and inclusive of a sociocultural dimension. Looking at changing practices in schools as the work of discourses as they compete and contest with one another for representation, allows a particular handling of practice that resonates with understandings of the ‘Smart State’ as a government’s response to global conditions.

As a discursive study, Norman Fairclough’s theories of critical discourse analysis are being employed as a way of mapping the relationship between changing policy discourses and their uptake in teachers’ work (for example, Fairclough, 2005a, 2005b, 2005c; 2005e, c. 2004, working paper). Fairclough’s (2005b) particular interest focuses on the role of discourse in “contemporary processes of social transformation which are variously identified by such terms as ‘neo-liberalism’, ‘globalisation’, ‘transition’, ‘information society’, ‘knowledge-based economy’ and ‘learning society’”; and the use of transdisciplinarity to address these concerns. Smart State policy as a response to ‘global happenings’ aims to transform Queensland society through teachers’ work. It is envisaged that this form of transdisciplinary approach may be useful in mapping relationships between the social processes of teachers’ daily work and policy discourses.

Fairclough’s (2001a; c. 2004) theory relates change in social practices to change in discourses and maintains that social processes cannot be fully understood without recourse to the linguistic/semiotic systems of which they are a part; nor can linguistic/semiotic systems of an organisation be understood without recourse to the social practices of that organisation. This study’s interest lies in the translation and transformation of policy discourses into teachers’ daily work practices and seeks to

⁴ These theories will be further developed in chapter three.

understand how particular Smart State policy discourses emerge as hegemonic amongst competing discourses and how they may be operationalized through the work of teachers. Operationalization of a discourse involves a shift from an ‘imaginary’ to being “enacted as new ways of (inter)acting, inculcated in new ways of being (identities), [and] materialized in new instruments and techniques of production or ways of organizing space” (Fairclough, 2005b, p. 11). Specifically, the study utilises this aspect of Fairclough’s theory to understand how this vision of the future for the people of Queensland under the slogan of ‘Smart State’ can become manifest in teachers’ work in the guise of ‘Smart classrooms’ producing ‘Smart citizens’.

1.6 Research Design

This study consists of two parts. First, a policy analysis of two key Smart State documents, *Smart Queensland: Smart State Strategy 2005 -2015* and *Queensland State Education 2010*. Second, fieldwork involving two teachers conducted in one State primary school in the Central Queensland district. Since the aim of the study is to establish the current relationship between Smart State policy and the work of two teachers, understandings of both spheres of activity need to be established. In this study, the findings from the analysis of Smart State policy are mapped onto the findings from the analysis of teachers’ work in order to identify any resonances between the teachers’ work and the particular policy discourses that articulate what the work of teachers who are ‘building’ a ‘Smart State’ should look like.

When investigating how discourses become operationalized, Fairclough suggests combining critical discourse analysis with ethnographic methods (Fairclough, 2005a). Ethnography is a form of qualitative research and is used where the

environment is uncontrollable. LeCompte and Schensul (1999, p. 21) define ethnography as “writing about the culture of groups of people”. The fieldwork is designed to identify elements in a teacher’s practice that are enactments of discourses aligned with Smart State policy. It involves the researcher as the primary instrument for data collection and analysis, resulting in a product that is richly descriptive.

Data collected from the teachers involves semi-structured interviews, as well as classroom observation by the researcher as participant-observer, and the collection of a variety of artefacts such as work programs and class letters. This data is supplemented with data collected from within the school to gain a deeper understanding of the support structures that surround each teacher. This includes interviews with the school administration and a panel interview with other significant teachers within the school, for example, the curriculum co-ordinator, the teacher-librarian, other ‘leaders’ within the teaching staff; as well as collection of school newsletters, memos to staff, and general observations.

1.7 Overview of the chapters

Chapter one introduces the Smart State policy as the Queensland Beattie Government’s plan for building an Australian State that provides infrastructure, labour and finance, skills and knowledge resources to ensure its survival in a competitive global market. The ‘Smart State’ positions education at the forefront of this plan and the teachers’ role as crucial in developing future citizens able to compete in the new economic and social environment. The chapter establishes the need to understand the processes of operationalizing Smart State policy to show the ‘Smart State’ as being built through the work of teachers rather than simply the

magical workings of a new regime of policy. The chapter also introduces the design of the study which is qualitative in nature in order to adequately capture and describe the details of the complex relations that are teachers' daily work. The theoretical framework is described as utilising the current work of Norman Fairclough (2005b) that provides a particular lens through which to understand the relationship between changes in social practices and changes in discourse while focussing on change brought about by such "elements of discourse" as 'globalisation' or a 'knowledge economy'.

Chapter two investigates current literature pertinent to this study, framing teachers' work and school reform within a 'Smart State' context. It positions Smart State policy as responding to issues of globalisation and the knowledge economy, and investigates these discourses to aid in understanding the influences shaping Smart State policy in relation to Queensland schooling. It also investigates current understandings of teachers' work in a system undergoing change. This involves literature relating to teachers' work as they engage with policy in a period of reform, and identifies the elements that may support or impede this process to develop understandings of the current work context for teachers.

Chapter three outlines the research questions, the theoretical framework and the research design used in the study acknowledging the complex and dynamic environment in which the study takes place. Fairclough's current work with critical discourse analysis investigates the tensions that exist in organisations when change is occurring, and the role of discourses in changing social practices through a transdisciplinary approach. The research design involves policy analysis and field work to closely examine teachers' work using observations, interviews and artefact

collections. This qualitative study is used to search for evidence of Smart State policy discourses within the discourses of teachers and their work, and thus uses multiple sources of evidence to establish a sound base from which claims may be made. Limitations of the methods and the design are discussed as well as the ethical considerations of my research.

Chapter four discusses the results of the Smart State educational policy analysis. Using the analytical framework of Fairclough, key statements and constructs within Smart State policy are identified, as well as interdiscursive, linguistic and semiotic strategies being employed within the Smart State policy documents to gain hegemony for this discourse.

Chapter five describes the fieldwork. This chapter investigates the classroom practices of each of the teachers through presentation and analysis of the data collected through interviews, observations and artefacts. It provides insight into how the teachers are responding to issues of a globalised knowledge economy within their local context as related to Smart State policy discourses. My interpretations draw upon Fairclough's theory of discourses, genres and styles to demonstrate the translation of Smart State discourses as teachers' daily work practices.

Chapter six concludes the study with a summary of these findings in relation to the research problem. The significance of these findings is discussed in terms of teachers' work, policy engagement and the building of a 'Smart State'. The effectiveness of Fairclough's theoretical framework for articulating teachers' changing work practices as related to Smart State policy discourses is considered. Finally further research emanating from these findings is discussed.

1.8 Summary

It is important for each section of the research to logically connect; for each stage to inform the decisions made for proceeding in a particular direction, for choosing one method or theory over another. For this reason, I provide a concept map to diagrammatically represent my research (Figure 1.), summarising each section while identifying the linkages that lead to the next.

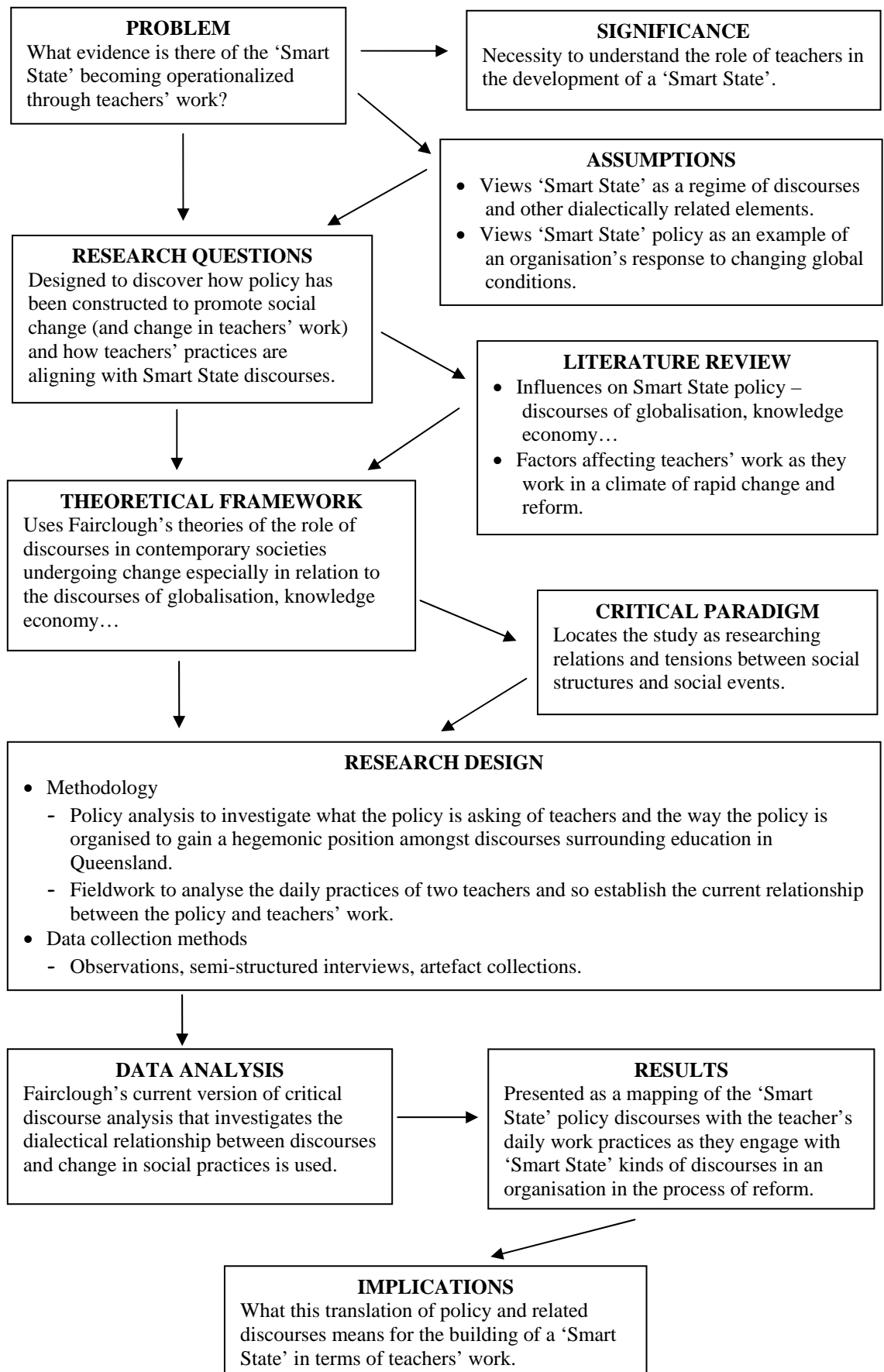


Figure 1: Concept map

Chapter 2: Literature Review

2.0 Introduction

Chapter one outlined the problem for this study of teachers' work in the context of Queensland's Smart State policy which aims to progress Queensland into a prominent position in a globalising knowledge economy. Since the Dawkins initiatives of the 1980s when Australia's economic future became explicitly linked with the formation of human capital through education and training, schools have been undergoing constant reform and restructure. During this time, teachers' work has also undergone radical change as each new reform package has been launched. In 2000, a new raft of policies associated with the 'Smart State' was introduced into Queensland schools with major implications for teachers and their teaching environments. It is this most recent phase of State policy-led innovation for Queensland schools and its significance for teachers' work in the new century that is the focus of this study.

Discussions around the nature and purpose of teachers' work as it relates to policy discourses is an inextricable part of a broader discussion that focuses on the contemporary relationship between schooling and society. Schools do not operate in a vacuum and teachers' work is performed within particular contexts. Schools both *reflect* what is happening in the broader, global spheres of the economy, work, politics and society, and *shape* those spheres of activities as actors in the networks of the State. In order to understand the mutually shaping role of schools and society and the processes by which teachers' work may be shaped by the operation of policy discourses, it requires that Smart State discourses are identified as they become manifest in school policy texts and teachers' work.

In this chapter the broad context of teachers' work in Queensland schools is explored through literature around globalisation, the knowledge economy, supra-national organisations and neo-liberalism, which are clearly argued as driving forces for a particular 'brand' of change and reform in many advanced Western economies. Queensland's particular brand of reform is then discussed as the Queensland Government's efforts to build a 'Smart State', which is part of a new millennial quest for economic survival in an increasingly globalising knowledge economy and involves the work efforts of Queensland teachers.

The next section identifies literature relating to school reform, policy engagement and teachers' work which has undergone radical change and restructure since the 1980s through an unprecedented era of policy-led reform. Through the literature review a number of discourses surrounding the work of teachers will be identified in order that the dominant forces shaping change in Queensland schools become visible.

The review of the literature is organised in a top down fashion, investigating the influence on teachers' work of, firstly, these worldwide trends, followed by national and State government policies regarding education, and concluding with the role of the school and the teacher. It is organised by commencing with a broad vision of the elements influencing teachers' work and concluding with a capillary view of teachers' daily work practices. This is not to imply a sense of importance but rather a way to focus on each factor and the critical literature that will inform and guide the direction of this research.

2.1 Globalisation

In chapter one, Smart State policy was presented as a response to ‘globalisation’ and a ‘knowledge economy’ which, it was argued, is a commonly cited reason for educational reform by Western governments (Beck, 2000). Indeed, references to globalisation are so commonly found in current education and government literature and policies, in the media and in the corporate world that one would assume that there exists a shared realisation and understanding of this term. Despite its dominant, pervasive nature ‘globalisation’ is highly contested with much debate in the literature as to whether it is in fact a concept, a discourse, a phenomenon, an illusion...that is controllable or not, that exists or not... In fact, Harvey (1996 in Ball, 1998) coined the term ‘globaloney’ to highlight the endless usage of ‘globalisation’ to describe and justify almost any conceivable condition especially prevalent in policy documents. For this reason, I outline a number of debates currently circulating around globalisation, comparing the positions taken by a variety of prominent authors within this field, to assist in understanding the ways in which education policy is being shaped and how this may be becoming manifested in teachers’ work.

2.1.1 Contested views of globalisation

Generally, globalisation is conceived as the compression of time and space, in terms of the swiftness of travel and communication worldwide, the current awareness of global events and the presence of the global within the local (for example, the telephone operator in India trying to upgrade telephone systems in Rockhampton). The literature, however, reveals many contrasting interpretations of ‘globalisation’. Burbules and Torres (2000b, pp. 1, 2) have summarised some of these views as they manifest in aspects of education as:

...the emergence of supranational institutions whose decisions shape and constrain the policy options for any particular nation-state;

...the overwhelming impact of global economic processes;

...the rise of neoliberalism as a hegemonic policy discourse;

...the emergence of new global cultural forms, media, and technologies of communication, all of which shape the relations of affiliation, identity, and interaction within and across local cultural settings; and

...a perceived set of changes, a construction used by state policymakers to inspire support for and suppress opposition to changes because “greater forces” leave the nation-state “no choice” but to play by a set of global rules not of its own making.

Within these views it is important to highlight the particular words and phrases which frame current writing on this topic, for example, “supranational institutions”, “global economic processes”, “neoliberalism”, “hegemonic policy discourse”, a global culture, and the global/local culture, as each of these phrases is used in arguments to either give support to or reject current opinions on ‘globalisation’.

Within the literature on globalisation are those who view globalisation as not being a new phenomenon and use examples to show how similar processes have occurred over time, for example Hirst and Held (2002); while others view globalisation as the central characteristic of contemporary societies, for example, Castells (2005), Friedman (2005b), Ohmae (2005) and Beck (2000). Hirst and Held (2002) claim there is nothing new about globalisation but agree that its dimensions are widening from the economics, politics and migration of previous centuries to now include aspects of culture and law. However, Hirst maintains that the effects and ‘newness’ of globalisation have been overemphasised and doubts that “we have passed into a ‘new world order’” (n.p.).

Globalisation, as the defining feature of contemporary society, has a far greater number of proponents. Castells (2005) describes globalisation as the central driving force in modern societies.

Overall, the critical issues conditioning everyday life for people and their governments in every country are largely produced and shaped by globally interdependent processes that go beyond the realm of countries as defined by the territories under the sovereignty of a given state (Castells, 2005, p. 10).

For example, everyday activities such as banking and retail are increasingly being performed over the internet to access computer systems and physical office sites and warehouses in vast localities around the globe. Ohmae (2005), discussing globalisation from a predominantly economic perspective, describes a 'borderless world' where traditional economics are obsolete and communications, capital, corporations and consumers are integrated across all nations. The merging of global and local cultures has led some like Ohmae to believe in the demise of the nation-state and advocate for a new 'global democracy'. Others such as Beck (2000), Sassen (1998), Lingard (2000) and Castells (2005) believe that nation-states will continue to operate but with a new set of rules in a much more complex and interactive system that involves an interdependency with world societies. Indeed, Beck (1992) declares we are now living in a 'risk society' where the effects of modernisation can be felt around the globe as we share common and diverse concerns such as global warming and pollution, and commercial successes and failures. This view is shared by Giddens (2000) who has described the intensified relations brought about by globalisation as local events are shaped by occurrences across the globe.

Thomas Friedman (2000; 2005b) is one author who views globalisation as an historical occurrence but one which has intensified in contemporary times. He describes the world as 'shrinking' and sees globalisation as proceeding in three eras related to the interaction between the continual advancement of technology and nation-states. To Friedman, the first era from 1492 to 1800 was predominated by imperialist motives whose search for new land and resources shrank the world from

a size large to medium. Friedman's second era occurred between 1800 and 2000 and focused on a time when companies searched the globe for markets and labour, shrinking the world even more from a size medium to small. Now, Friedman claims, we are in the third era of globalisation. The world has shrunk from a size small to a tiny and has flattened out 'the global economic playing field' with the inclusion of countries such as China and India.

It is this convergence -- of new players, on a new playing field, developing new processes for horizontal collaboration -- that I believe is the most important force shaping global economics and politics in the early 21st century (Friedman, 2005a, n.p.).

As Friedman shows, globalisation has been developing for centuries but what is now occurring is a fundamental change to processes which are more diverse and complex and occur at a rapidly increasing rate. A number of prominent authors agree with Friedman's basic argument. However, his metaphor of the world as a 'levelled playing field' has been criticised as too simplistic, with many dimensions being left unanswered (Bhagwati, 2005).

Giddens (1999) discusses globalisation as a paradoxical and complex set of processes, simultaneously taking power away from local communities while also reviving a sense of local cultural identity. Some authors (Appadurai, 1990; Beck, 2000; Featherstone, 1995; R. Robertson, 1995) believe that globalisation will lead to the strengthening of cultural bonds within the local or a process of glocalization where global products are adapted to local cultures. 'Glocalisation' is the term coined by Robertson (1995) to describe cultural globalisation, an understanding of the global only through local happenings. Beck (2000) agrees that we are increasingly living in a 'glocal' manner which, he believes, renders world society as multidimensional, polycentric, contingent and political. Beck envisages transnational and translocal cultures emerging. In this sense new relations are being

established between the global and the local where the global is a part of our everyday lives but not viewed as a monolithic, mysterious entity encapsulating (or flattening) the world.

Others claim that globalisation is taking away cultural identity and infiltrating into the cultures of everyday life around the world with brand names such as Nike and Coca Cola. This has led some to argue that we are moving towards a homogenous or single world culture. Ritzer (2000) terms this a 'McDonaldization' of the world. Thus the globalisation debate is not just about the shift of power from nation-states to supranational corporations, it also concerns changes to everyday life.

Giddens (2000; 2003) describes globalisation as a multidimensional (political, technological, economic and cultural) phenomenon driven by technological changes to communications and transport, or the transformation of time and space. Despite the contested interpretations of globalisation, the reality for most people *is* of faster transportation and communication systems with multinational corporations buying and selling resources in markets worldwide resulting in a blurring of the borders between nations in terms of culture, policy and economics.

For this study globalisation is viewed as visible through a condensation of time and space (Giddens, 2000) and evident in the increasingly 'glocal' manner in which we live. In this way, it is possible to understand the multiple forces shaping teachers' work from the broad, global influences on Queensland's economic and political activities to the local sites in schools and classrooms in which their work is played out.

2.1.2 Globalising influences in schools

Developing a general understanding of the contested views of globalisation is important to this study as versions of these views become apparent in Smart State policy and, indeed, in much of the current education policy particularly prevalent in westernised countries. Discussion in chapter one has established that global trends have influenced education policy in Australia and internationally. Driven by the impact of globalisation on industry and the advancements made in ICTs, governments worldwide responded through their education sectors (Burton-Jones, 1999; Calderhead, 2001). As Lingard (2000, p. 79) notes, “the recent restructuring of educational systems can aptly be explained by recourse to an understanding of globalization”. Thus, for education, it could be expected that this global perspective would be manifested within policy documents in many Western nations increasing commonalities between education policies of the nation-states.

There is a body of international literature that illustrates how different governments around the world have translated the global imperatives of competition and market-driven reform into their education policies. The UK, for example, under the New Labour policy, has reformed its education system with new managerial practices that include systems of accountability to ensure transparency of operations. These approaches have focussed on pedagogy and management within schools and are progressing towards the diversification and specialisation of schools within the UK (Shain & Ozga, 2001; Walsh, 2006).

The central characteristic of such a new system will be personalisation - so that the system fits to the individual rather than the individual having to fit to the system (Great Britain. Department for Education and Skills, 2004).

In the U.S., Congress has approved the ‘No Child Left Behind Act’, aiming to reform its education system. This strategy is based on four principles:

“accountability for results, expanded flexibility and local control, expanded options for parents, and an emphasis on teaching methods that have been proven to work” (U.S. Department of Education, 2001). The result is high level accountability that demands minimum standards for all children with the threat of school closure for underperforming schools (E. Smith, 2005; Welner, 2005).

Kagia (2002), Kenway (1998), and Nordgren (2002) stress that education is central (or viewed as central) to life in a technologised global economy. Burbules and Torres (2000a, p. 23) believe that “public education today is at a crossroads” with globalisation presenting new challenges for education. They believe that education has been placed in the complex position of confronting ever changing expectations requiring flexibility, adaptability, resilience and collaboration. The OECD (2003d) makes the claim that the way of the future is ‘demand-driven’ schools that respond to the changing expectations of society, their local community in particular, while focusing on being ‘learner-centred’ with a curriculum that is ‘future-orientated’. Hargreaves (2003) and Bigum (2004) argue the need for focusing on the local community in education. These authors view schools as becoming productive partners with community groups exploring events and issues from the local perspective. While Nordgren (2002) emphasises that being educated for life in a ‘Global Village’ involves learning how to get along together.

Lingard (2000) stresses that the heterogeneous/homogenous issue of globalisation must be purposefully addressed by schools. He explains that “we also need to understand the micro-histories, -cultures, and –politics of local practices of educational restructuring as they are implicated in the multiple flows of globalization” (Lingard, 2000, p. 79). Agreeing with this position, Rowan and

Bartlett (in Rowan, Bartlett, & Evans, 1997, p. 116) argue that globalisation effects “are meaningful only when they are considered at those sites where any process is mediated”. Referring to a diverse range of studies investigating global effects on education, Rowan and Bartlett concluded that the effects of globalisation on education cannot be generalised but must be examined at a particular location at a particular point in time. Indeed, Rowan, Bartlett, and Evans (1997), Featherstone (1995), Castells (2004) and Singh (2004) remind us that in reality, the process of globalisation is unevenly experienced by people in different ways and to different degrees.

This research is significant for this study because it suggests that discourses are taken up by different people in different ways and that any study of the operation of discourses would need to look at specific people acting in specific sites. As this study investigates the operationalization of Smart State policy texts and discourses, it is important that issues such as globalisation are viewed in the different contexts of influence, for example, as an influence on the policy text and, as an influence on the everyday practices of each teacher.

2.2 The knowledge economy

Concomitant to the discussion on the effects of globalisation on education and the wider community is the view of a knowledge economy (or a globalising knowledge economy) that is also shaping social practices. Carlsson and Mudambi (2003, p. 103) state that the resources being sold on the global market “increasingly consist of human capital, intellectual property, and ideas, not only labour and natural resources”. This belief in knowledge as a commodity, as the dominant force in the international market has much support in the literature surrounding new work orders

(for example, Burton-Jones, 1999; Gee, Hull, & Lankshear, 1996). Dahlman (2002) when speaking for the World Bank, defined the knowledge economy as “an economy that creates, acquires, adapts, and uses knowledge effectively for its economic and social development”.

Burton-Jones views knowledge as the one resource which can and will continue to infiltrate all national boundaries to produce one global knowledge economy. Global economic competition reliant on knowledge capital rather than production is described by Burton-Jones (1999) as “sending shock-waves through the economy and society” and as dividing the working world.

The effects of these shocks can be seen in the widening disparity in earning power between the knowledge ‘haves’ and ‘have nots’, in increasing globalized competition, in the disintegration of employment, in the reorganization of the firm, and in falling demand for commodities and low knowledge-intensive products (Burton-Jones, 1999, p. 219).

The ‘lean and mean’ model of the competitive organisation dominates the landscape where products are supplied with speed and cost efficiency by the newly organised firm through the core/periphery⁵ model of work. The peripheral workers producing the goods usually work in poor circumstances for low wages in third world countries where these conditions are allowed (and sometimes militarily enforced) to occur. However, knowledge workers are more likely to be ‘core workers’ employing their talents to create but also to determine the optimum way to “produce, distribute and market their goods and services, as well as to innovatively vary and customize them” which requires the skills of “communication, motivation, and social interaction” (Gee et al., 1996, p. 5).

⁵ In this model “peripheral workers” are the “temporary, part-time, and subcontracted workers” that can claim “few or no fringe benefits” exploited by the core workers of new capitalism (Gee et al., 1996, p. 44)

However not all authors agree that knowledge is the driving force in a globalising world. Richard Florida (2003) believes that creativity is the essential ingredient for economic progress in a global world and that a new dominant 'Creative Class' of people has emerged which, he proclaims, is reshaping the core and fundamental nature of society. Creativity and innovation, in Florida's view, are the crucial elements for competitive advantage and so have become desirable attributes in this globalising world. He proposes that we are positioned in a new era the 'Creative Age' and that this new social class, the 'Creative Class', are transforming the way we work and the way we choose to live. Florida does not explicitly reject the importance of technology or the notion of a knowledge economy. However, in his view, what has become more significant at this stage of post-industrial, advanced capitalism is the Creative Class, which he now deems as "the decisive source of competitive advantage" (Florida, 2003, p. 5).

Florida's view of creativity as a driving force in a global world is agreed with by many authors but only as one component of a range of attributes required by a new knowledge worker. For example, Morrow and Torres (2000, p. 33) believe that "the new global economy requires workers with the capacity to learn quickly and to work in teams in reliable and creative ways". Dahlman (2002) discusses the ability "to create, access and use knowledge" as "becoming a fundamental determinant of global competitiveness". Creativity is one skill amongst others that these authors claim are gaining importance in this new economy.

Despite the all pervasive nature of discourses about the knowledge economy as a new era of knowledge production, Castells (2004) disputes the existence of a new era, as does Fuller (1994), who claims it simply as the breaking down of institutional

barriers. Castells (2004, p. 66) believes that “the notion of the information or knowledge society is simply a technological extrapolation of the industrial society, usually assimilated, to the Western culture of modernization”. He instead proposes that we are part of a “network society”, which is “a globally interdependent social structure” linked through the interaction and sharing of knowledges. Knowledge he contends is “historically relative” and the difference between present and past societies is the type of technology and the resultant networking that is available because of it. The implications of this differentiation are important Castells argues because of the consequences that follow. He believes the claim of an information or knowledge society simply implies the need for more computers but placed within existing structures that do not work. A network society on the other hand, emphasises the need for organisational change and for “a globally interdependent social structure...a network of interacting cultures, unified by the common belief in the use of value sharing” (Castells, 2004, p. 66).

2.2.1 Influences of a knowledge economy on education

In spite of the lack of agreement on whether a knowledge economy actually exists, it remains a principal aspect of the dominant discourse in much education policy and needs to be considered and analysed for its relationship to the classroom practices of teachers as it is textured in policy.

In this environment of ‘knowledge capitalism’ (Burton-Jones, 1999) learning is considered a lifelong task as workers develop and use their knowledge and skills and move between jobs. Where knowledge is treated as a resource or a property it changes the view of education for education’s sake, or as a vehicle for the greater good. Rather, knowledge as that taught in schools, has “become a commodity that is produced, circulated, and consumed on the global circuits of capitalism...the

production, circulation, and acquisition of knowledge have become market forces” (Singh, 2004, p. 111). Clearly, the links between globalisation and the knowledge economy can be seen as a driving force behind major educational reform and policy directives, which has altered the outlook for schools and the work of teachers.

Certainly, the knowledge requirements of the new ‘knowledge economy’ are prominent in current literature which stresses that in order to remain relevant to the sophisticated needs of future citizens and workers, schools must continually change and innovate (Ministerial Advisory Committee for Educational Renewal, 2004)⁶.

Archetypal new millennial organizations such as Microsoft and MIT, have recently joined a chorus of criticisms that claim traditional school subjects and teaching methods as not being able to meet the needs of new post-industrial economies (Carew, 2003; Negroponte, 1995). The advocacy for new workers with new ways of operating is stressed within these documents while positioning the present education system as an obstacle to progress and reform. This system, it is claimed, is presently working within an industrial model of operation and the only solution involves dramatic changes to meet the demands of the knowledge economy (Castells, 2004; L. R. Smith & Riley, 2003). Indeed, since the 1980s, interest in educational innovation, as a necessary factor in the progression to a competitive position in a knowledge economy, has intensified, becoming a priority of Western governments (Keating, 1995).

In Australia, education policy has been linked with government policy driven by a belief that innovation will lead to a ‘Clever Country’ (Keating, 1995). Even though

⁶ The Ministerial Advisory Committee for Educational Renewal (MACER) presented their report to the Queensland Government on ‘A Creative Workforce for a Smart State’ in 2004. This report discussed the effect of changing demographics on the workforce and highlighted the need for changes in pre-service teacher education and teacher professional development to meet the challenge of changing times.

each State in Australia is responsible for its own education system, the Commonwealth Government has increasingly become involved in educational provision over the past two decades (Kenway, 1998). The Commonwealth Government with the State's collaboration produced national goals for the improvement of all schools in the country. The 'Adelaide Declaration on National Goals for Schooling in the Twenty-First Century' (Australia. Ministerial Council on Education Employment Training and Youth Affairs, 1999) states that "Australia's future depends upon each citizen having the necessary knowledge, understanding, skills and values for a productive and rewarding life in an educated, just and open society" with high quality schooling central to achieving this vision. In this document a number of measures are proposed endorsing innovation in education as a key to future development. Other education policy in Australia (for example, Australia. Department of Education Science and Training, 2000, 2001, 2003a, 2003b, 2005a, 2005b) also strongly emphasises educational innovation as central to the survival of educational organisations in a new, competitive globalising knowledge economy and highlights the priority that is being given to innovative practices. However, it is teachers who have been identified as the most important element in the successful implementation of an innovation (Australia. Department of Education Science and Training, 2001; Calderhead, 2001; Geijsel, van den Berg, & Sleegers, 1999; McLaughlin, 1991; Ministerial Advisory Committee for Educational Renewal, 2004; Queensland Innovation Council, 2001; van den Berg, Vandenberghe, & Sleegers, 1999). The Commonwealth Government report 'Teachers for the 21st Century' (Australia. Department of Education, Science and Training, 2000) identifies teachers and their capacity to innovate as central to school improvement and sustainability.

Economic demands are placing new pressures on students, teachers and schools, not

least of which is the need to develop strong foundational skills, critical thinking, innovation, lifelong learning and technological and scientific literacy as the basis of our future productivity as a knowledge based economy. The latter is also impacting on how children develop and learn and requires us to focus on new ways of educational delivery and new teaching methods (p. 3).

These challenges also underpin the rationale for change in all Australian State and Territory policies.

In the new global economy, knowledge is considered a necessary prerequisite for global competitiveness. However, what type of knowledge, what skills future workers will require, and how this should be organised within the curriculum is being debated by many authors and within the media. For example, Wiltshire⁷ (2006) wrote in the *Weekend Australian* of the need to address the loss of academic rigour in current school curriculum. Schools, he insists are for teaching cultural knowledges and developing a high level of basic literacy and numeracy skills. He believes that knowledge has been replaced by information that is gathered by students in the 'weekly assignment' but not learnt in depth to understand its significance in the cultural domain. Education, Wiltshire argues, is failing to provide a rigorous curriculum that is 'knowledge-based'.

The belief that education is not providing students with adequate skills is prevalent in this literature, promoting the increased inclusion (and importance) of a number of skills. Richard Florida's (2003) view of creativity as the driving force behind economic advancement increases the necessity for developing skills of creativity and innovation through education. Florida believes that in reforming education all forms of the Arts (for example, art, music, culture, design and drama) need to be included in the curriculum for it is within these disciplines that inspiration lies and

⁷ Kenneth Wiltshire is a professor of public administration at the University of Queensland business school. He has formally advised to the Australian National Training Authority, chaired the Queensland School Curriculum review, and participated in the review of the National Board of Employment, Education and Training.

transdisciplinarity can be best accomplished. Morrow and Torres (2000) believe that in a 'global informational economy' it is essential to develop skills of creativity alongside team work for this new type of worker. They maintain that,

The implications of the global informational economy model for occupational structures and educational demands is significantly different from those proposed by "postindustrial" models (Morrow & Torres, 2000, p. 33).

Carew (2003, p. 1) discusses similar needs of problem solving, communication skills and critical thinking for the new knowledge worker, maintaining that "the three R's are no longer enough". Burbles and Torres (2000a, p. 23) advocate flexibility, connectivity and adaptability as a requirement for workers entering a changing job market. However, Dahlman (2002) while agreeing with the other authors stressing the need to develop lifelong learning skills using interdisciplinary approaches, also incorporates the necessity to develop core literacy and numeracy skills. Although using different terms all authors agree that there is a need for a new set of skills in a new economy that focuses on the ability to think divergently and communicate with others.

Gibbons and Nowotny (2001) argue that schools are presently teaching a Mode 1 form of knowledge, that is knowledge that focuses on the 'what' and the 'why'. What is required in today's schools, they claim, is more of an emphasis on Mode 2 knowledge that focuses on the 'how'. The transdisciplinary nature of Mode 2 knowledge challenges the traditional discipline segregation and brings in the social dimension of knowledge production that utilises skills and expertises. Smith and Riley (2003) support the inclusion of Mode 2 knowledge in the school curriculum. Like Dahlman (2002) they advocate Mode 2 knowledge as being strongly informed by Mode 1 knowledge and hence both are necessary in the curriculum. Moore and Young (2001) see this conflict between the 'old' forms of knowledge and the

‘newer’ transdisciplinary styles as a difference in the perception of how knowledge is produced and how the curriculum is organised. They argue for a ‘social realist’ approach to knowledge within the curriculum that recognises knowledge as a social construction.

In the environment of a knowledge economy, where the belief of governments is that the purpose of education is to prepare the younger generation for their future roles in society, the changing nature of society places pressure on schools and teachers to respond (Carter & O'Neill, 1995; Gee et al., 1996; Mulderrig, 2003; Sikes, 1992). In education some authors have faith (for example, Burton-Jones, 1999; Nguyen, Hsieh, & Allen, 2006; Vogel, Greenwood-Ericksen, Cannon-Bowers, & Bowers, 2006) in the use of advanced technologies to progress the education system to a new model of self-paced, individualised learning, away from the mass production model of the Industrial age. In recent studies conducted by Nguyen et al (2006) and Vogel et al (2006) the use of technology was positively correlated with improvements in various dimensions of mathematics learning. This is supported by authors such as Burton-Jones (1999, p. 201) who believes that “‘learning technologies’ must move centre stage” to ultimately “provide access to learning for all on a lifetime basis”. However, Burton-Jones also identifies two problems in utilising current technologies. First, there is an economic issue of providing, maintaining and updating enough technology to meet demands. Second, he maintains that there still exists a lack of perceived need within the public for necessary changes to be made to the education system. Castells (2004) agrees with the inhibitive functioning of our present education system and reminds us that teachers can only work within its disciplinary parameters despite the available technology.

These views are important to this study as they are illustrative of the debates surrounding teacher's work and a knowledge economy. The appearance of similar discourses in Smart State policy establishes links with the nodal⁸ discourse of a knowledge economy. However, while it is necessary to understand the influential discourses in policy documents and the debates of how education should be responding, it is also necessary to acknowledge that teachers perform globalisation and knowledge economy discourses based on their personal and professional experiences.

2.2.2 Supranational influences and a neoliberal ideology in educating for a knowledge economy

With the onset of 'modern' globalisation has come the emergence of supranational organisations such as the OECD, UNESCO (United Nations Educational, Scientific, and Cultural Organisation), the World Bank and APEC (Asia-Pacific Economic Co-operation) that function above the constraints of any one nation's systems and have added their voice to how education systems globally should be operating while facilitating the sharing of research and policy worldwide. This explains, to a degree, why education policies between particular countries have so much in common.

Literature emanating from the OECD, and in particular its educational arm CERI (Centre for Educational Research and Innovation), focuses on educational innovations worldwide under the concept of 'Schooling for Tomorrow'. One outcome of these conferences is the development of a 'toolbox' (*The Toolbox for Forward-thinking, Innovation and School System Change*) that will assist schools in the process of forward-thinking and innovation (Organisation for Economic Co-

⁸ Fairclough (c. 2004, p. 5) uses the term 'nodal' discourses to refer to those discourses which "subsume and articulate in a particular way a great many other discourses", for example, the knowledge economy discourse, the neoliberal discourse.

operation and Development, 2003a, 2003b, 2003c, 2003d, 2004b). Australia joined the volunteer 'inner core' systems in 2004 alongside nation-states such as England, the Netherlands, New Zealand and Canada. These countries are developing and reporting on their forward thinking responses to the challenges within their own education systems.

Supranational bodies facilitate the sharing of research and policy worldwide through the homogenising mechanisms of globalisation where advanced technologies of transport and communication make it easier to share experiences. Since nations are vying for a prominent place in a knowledge economy, all are trying to reach the common goals of a technologised workforce comprised of lifelong learners who are creative and critical thinkers. The development of performance indicators by the OECD has encouraged the comparison of schools and systems across and within countries. For this study it is important to identify the discourses inherent in supranational organisations (such as the OECD) that are having a powerful effect on education policies (particularly Queensland's education policy) so that a clearer understanding of policy may be attained.

Several authors claim (Apple, 2000; Lingard, 2000; Olssen et al., 2004; Singh, 2004; Taylor, 2002) that it is the pervasion of a neo-liberal ideology evident in the positions taken by supranational organisations such as the World Bank and the OECD that gives a particular logic to 'globalisation' and the knowledge economy, and in the formation of education policy throughout the western world.

Neoliberalism is evident in educational policy as a discourse that textures together an economic rationality with social welfare, effecting an uneasy alliance between free-market proponents, neo-conservatives, liberal progressives and social

democrats. Lingard (2000) relates the OECD with a neoliberal perspective stating that,

... the OECD has been an institutionalising mechanism for neoliberal economies and the new managerialism... Its educational indicators project...has been one significant catalyst for the performativity now pervading restructured national educational systems... [T]he OECD's role...as an institutionalising mechanism for the new global educational policy consensus...stresses the centrality of an educated and multiskilled labor force to the competitive advantage of nations (Lingard, 2000, p. 98).

According to Spring (2001, in Singh, 2004), in education cultures, globalisation is defined through a neoliberal lens where deregulation of the market, privatisation and individual accumulation of wealth is the goal. This position then has implications for the treatment of students and the skills they should be taught as Apple (2000) claims,

Underpinning this position is a vision of students as human capital. The world is intensely competitive economically, and students – as future workers – must be given the requisite skills and dispositions to compete efficiently and effectively (Apple, 2000, p. 60).

This is the view supported by the World Bank (2002) where education is considered to be the key to increasing wealth and reducing poverty, and by UNESCO (Matsuura, 2003) in its commitment of 'education for all'. Within this position, education is considered to be the key to a nation's ability to maintain conditions necessary for a flourishing democracy operating in a free-market economy, which is designed to increase wealth and reduce poverty. This stance is also evident in writings emanating from the Australian Government where economic prosperity is associated with social wellbeing, and people are considered as capital.

Backing Australia's Ability outlines the next steps in the Government's strategy to encourage and support innovation and enhance Australia's international competitiveness, economic prosperity and social wellbeing (Australia. Commonwealth Government, 2001, p. 7).

Human capital is a key driver of economic growth and prosperity (Australia. Department of Education Science and Training, 2003a, p. 3).

Australia's future depends on a high quality and dynamic school education system to provide students with foundation skills, values, knowledge and understanding necessary for lifelong learning, employment and full participation in society (Australia. Department of Education Science and Training, 2005b, p. 1)

The influence of neoliberalism in education systems has been criticised on a number of levels. Helsby (1999) and Robertson and Dale (2002), for example, believe that the devolution of authority from central offices to schools is characteristic of neoliberal discourses, which emphasise the handing over of control of curriculum and management processes to schools so that they can more adequately meet community requirements. However, they note the paradoxical nature of these moves where, at the same time, other aspects of schooling (some finances, curriculum, teacher registration) are becoming more centralised and standardised across the nation. Codd (2005, p. 193) argues that the elements of a dominant neo-liberal discourse in New Zealand's education system - economic rationalism, managerialism, commercialization and globalization - "have produced an erosion of trust and a degradation of teaching as a profession". This view is supported by other writers (for example, Bates, 2004; Connell, 2001; Davies, 2005; S. Robertson & Dale, 2002) who claim that this culture of distrust is promoted to enhance the appeal of the new discourses surrounding market solutions for a knowledge economy as they are translated into education policies and reform measures.

Davies, Browne, Gannon, Honan and Somerville (2005, p. 344) view the movement of power away from practicing professionals to policy makers as a symptom of a neoliberal ideology where "management, surveillance and control" are a characteristic feature. These authors use the metaphor of a tightrope walker to illustrate the dualistic impact of the neoliberal demands in the workplace where the

...demand for personal control of and responsibility for the self...may seem liberating but is also dangerous in that the self is compelled never to rest. The controlled self must always be flexible, propelling itself into the ever-reinvented demands of the institution... (Davies et al., 2005, p. 351).

Davies (2005, p. 1) warns of uncritically adopting a neoliberal discourse – a managerial language where economic efficiency is the driving force – since by

speaking and acting in a certain way can “make the world into a particular kind of (neoliberal) place”.

Davies’ warning may be timely in a society driven by economic rationalism where constant change compels us “never to rest”. But how are these discourses related to Queensland’s Smart State policy? The relationship between the discourses of neoliberalism, a knowledge economy and globalisation, and Queensland’s Smart State discourses will be explored in the next section.

2.3 The ‘Smart State’

In 1998, the Queensland Labour government under the direction of Premier Peter Beattie, introduced its vision for Queensland. ‘Smart State’ is now the Government’s strategy to position Queensland as a leader in a knowledge economy by focussing on areas of science, research and innovation.

Building on strong economic foundations, investments in infrastructure and sustainability, Queensland is enhancing the education and skills base that will drive new knowledge from research and convert ideas into value (Queensland. Department of the Premier and Cabinet, 2006, p. 6).

In order to ‘value add’, the Smart State strategy emphasises the need to develop collaborative relations between industry and education while identifying knowledge as “the key commodity of the future” (Queensland Innovation Council, 2001, p. 2).

‘Smart Queensland’ encompasses smart strategies, that is, *smart* use of natural resources, *smart* water, *smart* energy, *smart* exploration, *smart* research, *smart* internships and *smart* ICT with smarter learning in *smart* classrooms and *smart* academies, being the key to achieving these goals.

Growing Queensland as a Smart State relies on smart systems and networks to create the linkages between education, skills, research, innovation and business activity. Smart systems foster innovation and encourage entrepreneurship and collaboration (Queensland. Department of the Premier and Cabinet, 2006, p. 6).

In response to this push for innovative excellence, the Queensland State Government has been producing core policy, strategic documents and guidelines focussing on meeting the challenges of life in a knowledge economy. Smart State strategy is encompassed in the Queensland Government's strategic plan – the latest being *Smart Queensland: Smart State Strategy 2005 - 2015* (Queensland. Department of the Premier and Cabinet, 2005). Education, as a vehicle of progress and change, is pivotal in this plan. The document *Queensland State Education – 2010 (QSE 2010)* (Queensland. Department of Education Training and the Arts, 1999) outlines the objectives of the Government to reform its State education sector to meet the new demands imposed by a knowledge economy. A number of policies and documents are then positioned under this framework. They include:

- The *Years 1-10 Curriculum Framework for Education Queensland Schools: Policy and Guidelines* (Queensland. Department of Education Training and the Arts, 2001c) which applies the *QSE 2010* message to “a curriculum for the future”;
- The *Education and Training Reforms for the Future (ETRF)* (Queensland. Department of Education Training and the Arts, 2003a) which identifies four focus areas of reform and sets out timelines for the achievement of these reforms.
- *Preparing for School* (Queensland. Department of Education Training and the Arts, 2003d);
- *Middle Phase of Learning (Years 4 – 9)* (Queensland. Department of Education Training and the Arts, 2003c);
- *Senior Phase of Learning* (Queensland. Department of Education Training and the Arts, 2003e); and
- *Information and Communication Technologies for Learning* (Queensland. Department of Education Training and the Arts, 2003b)

- *Destination 2010: The action plan to implement Queensland State Education – 2010* (Queensland. Department of Education Training and the Arts, 2004). This document contains the outcomes, targets and strategies for achieving the *QSE 2010* vision.

While there is a vast body of theory and research concerning educational innovation of recent years (Australia. Department of Education Science and Training, 2001; Geijsel et al., 1999; G. E. Hall & Carter, 1995; Hord, 1995; Szabo, 2002), there is still only sparse literature focusing on how teachers in Queensland are meeting this challenge in response to their own State's agenda. The New Basics literature has produced reports on how schools are responding to these trials (Queensland. Department of Education Training and the Arts, 2001a). The Queensland School Reform Longitudinal Study⁹ (University of Queensland, 2001) conducted research into student's achievements as a result of teacher's classroom practices. The study made a number of recommendations with regard to teaching practices, assessment and professional development; leadership styles; and system performance. For this study, which investigates the relationship between the Queensland Government's Smart State policy and the current classroom practices of two Queensland teachers, a thorough research into those documents that translate the Government's Smart State vision into education policy is required. Through an analysis of policy discourses a better understanding of the parameters in which Queensland teachers are working can be identified.

⁹ The *Queensland School Reform Longitudinal Study* (QSRLS) was conducted by the University of Queensland on behalf of Education Queensland, to research the impact of school-based management on student outcomes. The findings and recommendations of the QSRLS report are consistent with the objectives of Queensland education policy as put forward in *Queensland State Education 2010* (QSE-2010). For further information refer to: http://education.qld.gov.au/public_media/reports/curriculum-framework/productive-pedagogies/html/about.html

Within the Smart State ethos, all sectors of society are urged to embrace the principles of innovation and thus develop a creative, forward thinking employee (Ministerial Advisory Committee for Educational Renewal, 2004; Queensland Innovation Council, 2001). Education is seen as the foundation to develop these types of creative thinkers. Richard Florida's belief in the 'creative class' is an important idea for this study when viewing the place of the Arts within new curriculum requirements, and its emerging links with notions of value-adding to Science, Maths and Technology in Smart State policy through the development of creative thinking skills. Present policy in Queensland, in response to economic requirements and the call for innovative workers has given priority to the development of creative and critical thinking skills. Indeed, 'innovation' is one of the catch words in current policy text. The system, schools, administrators and teachers must all be 'innovative' in their approach to teaching students to become 'innovative' workers. The Queensland Government defines innovation as "the process of converting knowledge and ideas into better ways of doing business or into new or improved products and services that are valued by the community" (Queensland. Department of the Premier and Cabinet, 2005, p. 41). For example, as part of Queensland's Smart State strategy, the Queensland Government is opening two new 'smart' academies in the year 2007, one focussing on Science, Maths and Technology, with the other focussing on the Arts¹⁰ which are considered a world first innovation developing the skills of students highly talented in these fields.

Queensland's education policy while promoting the development of innovation, critical and creative thinking also demands high levels of literacy and numeracy

¹⁰ While applauding these innovative moves, Gillies (2005) questions the separation of the academies instead of their amalgamation. For more information on the initiative see <http://www.qldacademies.eq.edu.au/>.

skills. However, a call for a return to the basics of reading, writing and mathematical skills with a study of the classics is resonated amongst other messages that we need a ‘new basics’ (Queensland. Department of Education Training and the Arts, 2001b) that empowers citizens for life in a technologised and democratic society. Teachers are trying to meet the needs of both sides of the debate of what subjects should be taught by addressing the traditional, classical studies and basics along with the ‘new basics’ that are responding to sociocultural changes.

In Queensland, a futures perspective underpins all curriculum as outlined in the Government publication *Years 1–10 Curriculum Framework for Education Queensland Schools Policy and Guidelines* which provides a framework for schools to develop their own local responses to “the challenge of preparing students to participate and communicate in new and complex social, cultural and economic futures” (Queensland. Department of Education Training and the Arts, 2001c, p. iii). In Queensland, the Government’s education reform measures are in place to “instill confidence in the community that Queensland schools can prepare young people for futures that will be vastly different from the present” (Queensland. Department of Education Training and the Arts, 2005b, p. 8).

2.3.1 Contextualising a ‘Smart State’

It is clear from the literature already cited that the ‘Smart State’ is a part of a global educational context where nation-states such as Australia, the USA and the UK have increasingly looked to education as central to economic success in a globalising economy (Apple, 2000; Calderhead, 2001; Organisation for Economic Co-operation and Development, 1989). Indeed, globalisation and a knowledge economy are also used as reasons for the changes occurring in Queensland education as they are in other State and nation-state systems.

Education in Queensland needs to respond to the challenges posed by an external environment characterised by innovation and risk, by the increasing importance of knowledge and creativity in the economy, and by the impact of globalisation and new technologies across all areas of work and experience (Ministerial Advisory Committee for Educational Renewal, 2004, p. 5).

The Queensland Government responding through its Smart State agenda aims to establish Queensland as a leader in research, education and innovation. In fact, the universal notion that the new millennium requires a new kind of worker and citizen who, rather than lamenting the demise of traditional practices and values, actually celebrates opportunities brought about by the constantly changing conditions of a globalising knowledge economy, is a common justification for recent innovation in Queensland schools.

In developing the direction of the 'Smart State', global influences are evident. Specifically, the influence of the OECD is apparent with frequent referrals in Smart State documents to the OECD's position on different issues, and the necessity to meet benchmarks set by the OECD. For example,

The OECD says that social cohesion rather than narrow economic gain is the greatest prize for societies in which all citizens, through learning, become more effective participants in democratic, civil and economic processes (Queensland. Department of Education Training and the Arts, 1999, p. 7).

Queensland lags far behind the leading OECD countries and the gap is widening...The leading quartile of OECD countries all achieved 85 per cent or better, and all have positive educational, social and economic policies in place to improve that figure (Queensland. Department of Education Training and the Arts, 1999, p. 7).

The OECD sees innovation as a major driver of economic growth... (Queensland Innovation Council, 2001, p. 5).

Most OECD member countries are implementing programs to encourage innovation and entrepreneurship in their communities (Queensland Innovation Council, 2001, p. 5).

We believe that the proportion of young people in Queensland completing Year 12 or achieving vocational education qualifications should match that projected for leading Organisation for Economic Cooperation and Development (OECD) countries (Queensland. Department of Education Training and the Arts, 2002a, p. 12).

The fundamental objective of these reforms is to increase the number of students completing Year 12 from 68 per cent to 88 per cent by 2010. This will match the figure projected for leading OECD countries (Queensland. Department of Innovation and Information Economy, 2003, p. 58).

Only 1 percent of Australian tertiary graduates are in physical sciences (compare the OECD mean of 2.6 percent). (Ministerial Advisory Committee for Educational Renewal, 2004, p. 7)

As the OECD suggests:...There are substantial challenges in ensuring that all teachers, and not only the most motivated ones, are lifelong learners, and in linking individual teacher development to meeting school needs... (Ministerial Advisory Committee for Educational Renewal, 2004, p. 10)

The influence of the OECD is evident in these statements which stress the development of innovative responses to changing economies, and set the benchmarks to be achieved. In fact in the latest report on the progress of Smart State strategy, the importance of keeping watch on organisations such as the OECD is emphasised.

Further work to measure innovation performance is being undertaken by many countries and regions as well as the Organisation for Economic Co-operation and Development (OECD). The Queensland Government is closely monitoring the latest developments to improve and develop better indicators of Queensland's smart growth (Queensland. Department of the Premier and Cabinet, 2006, p. 8).

Smart State strategy focuses on innovation and education to progress Queensland into a prominent position in a knowledge economy by combining an economic rationality with social welfare, a position identified previously as a neoliberal perspective prominent in the writings of the OECD. This position is evident in the quote located, amongst other places, on the front cover of the latest Smart State strategy document.

The Queensland Government has a vision of a State where knowledge, creativity and innovation drive economic growth to improve prosperity and quality of life for all Queenslanders (Queensland. Department of the Premier and Cabinet, 2005, p. 1).

As these extracts show 'Smart Queensland' focuses on the need to develop creative and innovative people to ensure economic growth and positions students as human capital who need to acquire a toolbox of skills and attitudes to become lifelong learners in a new work environment. This discourse, it has been shown, is not unique to Queensland but is shaped and influenced by global trends and the positions taken by prominent supranational organisations.

In this study the focus is upon how Smart State strategy, as a response to the dominant discourses surrounding globalisation and the knowledge economy, is designed to change the work practices of Queensland's teachers. However, although the objectives, outcomes, targets and strategies of Smart State policy are encompassed within a framework for school improvement and accountability, the interpretation of these policies within the classroom remains the teacher's domain. Yet, there appears to be very little research that directly links Smart State policy and teachers' work within the complexities of daily classroom life.

Through the literature cited above, defining features of Smart State discourses and their nodal discourses have been identified. Globalisation, the knowledge economy and neo-liberalism are explicitly stated as underpinning the rationale for reform in Queensland's education system. Discussion thus far identifies innovation, entrepreneurship, creativity, lifelong learning, and knowledge in the sciences as essential in this new economy according to official government texts. In chapter four two Smart State documents will be analysed to understand the extent that these discourses are apparent in Smart State policy and how they work to shape practices in schools. These issues are relevant to this study as they provide the units for analysis of teachers' work in the study as a 'Smart State' kind of work.

2.4 Policy

I have, thus far, been discussing policy as a course of action that is being taken to achieve a set of goals (Olssen et al., 2004, p. 71) and as if consensual understanding exists on this term. In fact, the literature shows that there is no common reading of what constitutes policy. To address this concern the views of some prominent authors in this field are now considered, and the understanding of 'policy' for this

research established. It is important to understand the nature of policy for this study because it is through policy that the ‘Smart State’ is attempting to establish its dominance as particular kinds of practices in schools. Simplistic understandings of policy that presume that, once written and distributed, policy will be automatically enacted according to policy writers’ ‘intentions’ in fact, elides the enormous investment of emotional, mental and physical work that teachers actually perform in their daily activities in order to ‘do’ the ideological work of the State¹¹.

Policy has been defined by Ball (1994) as both text and discourse. The perception of policy as text includes the linguistic features that combine to make up the policy text and involves a social dimension of policy influencing, yet acted on and responded to, by the policy consumers. For example, teachers translate the meaning and intentions of policy text and in so doing make their own meaning of the text. Ball (1994, p. 20) claims that, “policy texts enter rather than simply change power relations”.

Policy as discourse involves the historical and social context of policy that includes relations of knowledge and power in a Foucauldian sense - the truths that are implicit in policy, other discourses from which they came and to which they enter and so are reproduced (Ball, 1994, p. 21). Thus policy as discourse entails understandings of who can speak, what can be said, and with what authority. Viewing policy as discourse then not only incorporates certain language but the associated understandings of those terms which includes some perspectives while excluding others, producing an ‘assumed’ collective agreement on the rhetoric of the text. Thus policy as discourse frames our understanding of the world.

¹¹ This idea is further developed later in the chapter.

Policy, as that produced by government departments, emerges from the ontological and epistemological framework adopted by the dominant political party and influenced by the discourses they choose to adopt from the greater global perspective (Ball, 1990; Calderhead, 2001; Olssen et al., 2004).

Policy documents express and reflect these structuring realities, as well as perform certain functions of legitimization by establishing political consensus (Olssen et al., 2004, p. 71).

Olssen, Codd and O'Neill (2004, p. 71) believe that the value in viewing policy as discourse lies in the relations that can be established between policy text and the wider social structure and political system.

If policy is a discourse of the state, it is by its very nature political and must be understood as part and parcel of the political structure of society and as a form of political action (Olssen et al., 2004, p. 71).

Bowe and Ball with Gold (1992 in Ball, 1994) draw attention to three contexts of policy – the context of influence; the context of policy text production; and the context of practice where policy is adapted and moulded to suit circumstances. All three contexts are viewed as spheres of action and interaction which have influence on each of the other contexts. How policy becomes enacted is a complex process as policy as text and discourse intersects and collides with other texts and discourses so that there is never one reading of policy but multiple readings with commonalities and discordances.

Furthermore, Jones and Alexiadou (2001, in Ozga, 2005; Ozga & Jones, 2006) differentiate between policy that has been influenced by global/knowledge economy trends, which they term 'travelling policy', and that which has been influenced by local (understood as national, regional or community) contexts which they term 'embedded policy'. The outcome of 'travelling policy' can be seen in education systems where the development of creativity, innovation, flexibility and adaptability are stressed as necessary skills for the developing workforce of a knowledge

economy with common policy elements evident amongst countries, largely influenced by supranational organisations. The influence of ‘travelling policy’ on Queensland’s Smart State policy has already been shown with reference to the OECD and its neoliberal underpinnings. The importance of this distinction Ozga (2005) believes is in being able to identify the local amongst the global elements of policy and to show how the local continues to be influential amongst growing global imperatives. Lingard (2000, p. 103) agrees with this position maintaining that even with this global influence “educational policy remains a ‘palimpsest’” in that “it is always being reread and rearticulated against the micronarratives of schools and locales”.

Gale and Densmore (2003) however consider the understanding of policy as text and discourse, within an education context, as inconclusive of the scope in which teachers engage productively with policy. In this sense, teachers are viewed not only as recipients of policy and not simply as reacting against policy, but also as producers of policy. Gale (2003, p. 54) views the perception of policy as something that is handed down by the ‘producers’ and then performed by the ‘consumers’ as a narrow view. The text/discourse account of policy provides answers to “What is really going on?” but fails to answer “What can we do about it?” which limits our view and understanding of teacher’s reactions to policy and the way teachers may react to policy (Gale & Densmore, 2003, p. 46).

In this study, policy is perceived as text and discourse (Ball, 1994) while also acknowledging teachers as policy producers (Gale & Densmore, 2003) as they translate policy text into their daily practices. For this study I look at policy as a prime vehicle for the promulgation of Smart State discourses into teachers’ work.

The ‘questions’ for the study ask about the role of teachers in the production of the ‘Smart State’ which requires an understanding of the relationship between policy and teachers’ work as they are implicated in the building of a ‘Smart State’.

2.4.1 Policy reforms and teachers’ work

The production of the ‘Smart State’ involves an unparalleled quantity of reforms that aim to radically change Queensland’s education system and align it to the requirements for a new knowledge economy. In a recent analysis of educational reform in a diverse range of countries (including Australia) Calderhead (2001) claims that never before has such a bombardment of reforms been experienced by schools in every aspect of their operation. As chapter one has shown, governments in many countries around the world are calling for radical changes to their education systems to match global economic and technologic advances. Indeed, a recurrent theme in government policies and reports is of change, its necessity and inevitability which require an urgent and unified response (Ball, 1998; Helsby, 1999; Mulderrig, 2003). The plethora of policies that are presently being delivered to schools are testimony to the belief that schools are the agencies where change can be enacted, where education not only reproduces culture but also transforms it. In this section I investigate the complex relationship between policy reforms and teachers’ work as reforms are positioned as desirable and necessary, and teachers’ work in need of change.

Fullan and Hargreaves (1992) believe that the research into the relationship between teacher performance and educational reform can be categorised into two distinct phases. The first phase, from 1975, focussed on the successful implementation of an innovation. In this phase implementation was viewed as a learning process where steps were identified to ensure success. However, the confluence of so many

planned and unplanned factors undermined this process and success was not always achieved. Neat, linear models could not manage the multiple tasks and innovations in which teachers and schools were simultaneously involved. The second phase of research promoted a holistic approach focussing on the teacher's purpose; the teacher as a person; the work context within the real world; and the culture of teaching (Fullan and Hargreaves, 1991 in, Fullan & Hargreaves, 1992). This phase highlighted the imperative of listening to the teachers' voice by acknowledging teachers as individuals with a vast and varied array of life experiences. Whether current policy reforms take into account the teachers' voice is a highly contentious issue, therefore much of the literature reviewed in this section focuses on the conditions that have been established to promote the acceptance of reforms and how teachers respond (and should respond) to this process.

Within the literature relating to the need for reform of teachers' work is debate concerning the recurrent themes of failure to meet societal needs, the deskilling of teachers, the inevitability of change and the pressures the different reforms are having on teachers and schools. This study draws on this literature regarding reform for three main reasons. First, it is these perceptions of failure and repeated imposed changes on teachers that may be affecting how Smart State policy is being operationalized within teachers' work. Second, it is within organisations undergoing change that new discourses emerge and contestations occur that make apparent new ways of acting and being (Fairclough, 2005a). Finally, it is important for this study to understand the ways in which governments employ discourses to set up conditions for the acceptance of particular kinds of reform measures since the interest of the study concerns teachers' performance of discourses located in State mandated policy.

The process of policy to practice is a complex and contested terrain. Ball (1998, p. 122-123) considers that current influences on education policy can be divided into five spheres: neoliberalism; new institutional economics which appears as “a combination of devolution, targets and incentives”; performativity which is a “steering mechanism” and involves “target setting, accountability and comparison”; public choice theory; and new managerialism which applies business management systems to the public systems such as education. Phrases such as ‘site-based management’, ‘self-managing schools’, ‘school improvement’, ‘standards of excellence’, ‘quality’, and ‘innovation’ are common within this policy rhetoric. Ball views these developments in policy as paradoxical since they advocate a move towards self management giving schools the latitude to respond to local needs, yet impose greater surveillance and accountability than ever before ensuring an homogenous product.

The effect of these conflicting influences on policy are evident in contemporary times, where education is being regarded as both the cause and the cure for a country’s economic and social illnesses. This situation promotes the need for reform for underlying these changes is the assumption that all is not going well with teachers and their work (Apple, 2000; Gale, 2006; Sikes, 1992), and that teachers’ current skills are inadequate for changing times.

...there is a crisis of confidence in schooling, which is currently being played out by positioning teachers as the ‘problem’ and not just the ‘solution’ to this crisis (Gale, 2006, p. 1)

Helsby (1999) supports the assertion that accusations of falling standards and unmet needs have advanced the argument for reform. Troman (2000) identifies the media in particular, for promulgating the belief that the essential basics of knowledge are no longer being taught in schools which has exacerbated panic amongst parents and

distrust of what ‘those teachers’ are doing. Education is presently bearing the brunt of society’s ills with the system perceived as failing in its role to prepare our children for their responsible place in society (Calderhead, 2001; L. R. Smith & Riley, 2003). This position portrays schools as still clinging onto an industrial model of education that is outmoded and irrelevant to the needs of today’s global technologised society. Reforms to amend this situation abound, while some like Smith and Riley (2003), argue the need for a ‘paradigm zero’ approach. They use an illustration from the Swiss watch industry to advocate the clearing of our ‘educational slate’ as it is only through this process that we will be able to visualise what could be and how it could be achieved.

Then, and only then, we should overlay what it is we are currently doing, keeping those things that are compatible with our new paradigm, rejecting those things that are incompatible, and putting in place those things that currently are not part of the educational environment (L. R. Smith & Riley, 2003, p. 9).

Clearly, the current situation in education has become problematic with teachers being depended on for successful changes to occur yet receiving blame for the present deficiencies in education. In order to effect change, people need to feel that they want or need to change. This current situation sets up such conditions for teachers and schools.

One response to these pressures to change is the ‘new institutional economic’ influence (Ball, 1998) of decentralisation of schools which involves school-based management and the development of localised, relevant curriculum programs that respond to the challenges of educating for a knowledge economy. Although many recent studies (Australia. Department of Education Science and Training, 2001; Geijsel et al., 1999; G. E. Hall, 1995; van den Berg et al., 1999) have called for the devolution of authority and the decentralisation of schools, the literature reveals that this issue is still being contested. A study by Angus (1995) highlighted the

difficulties of adding more responsibility to schools and teachers. On the one hand the devolution of authority to schools allowed teachers greater capacity to perform as professionals, being innovative in their teaching practices and producing optimal learning as a function of demand-driven education. However the devolution of authority also entailed added responsibilities for the classroom teacher. This intensification of teachers' work took time away from professional development and direct contact with students, as well as time away from personal leisure and the pursuit of interests. This resulted in teachers being stressed and ultimately 'burnt-out'. It also limited their time to engage in professional conversations and sharing with their colleagues. These findings were supported by Hall (2004) and Hargreaves (1994). A similar finding from a 1994 study by Easthope and Easthope (2000) of Tasmanian teachers reported that intensification of their work practices due to the devolution of authority to the school had caused compromise in the quality of work, as efforts were made to ensure that the required quantity of work was accomplished. However, it was also reported that many of the teachers continued initially to commit to their professional ideology of caring which conflicted with the economic rationalist model under which they were now working. The study found that the two modes of operation could not be maintained and teachers were left stressed and distanced from their students. Moreover, Brian Caldwell (in Gale, 2006, p. 5), one of the key players in self-managing schools in Victoria has stated that the "evidence of a direct cause-and-effect relationship between self-management and improved outcomes is minimal". If student results are not improving, then teachers' work practices are called into question. However, a study conducted by Wong (2006) within seven schools in China found both conflicting claims to be correct. Whether deskilling or reskilling of teachers due to decentralisation measures occurred depended on the teacher's professional approach. These results are inconclusive of

the effects of decentralisation reform measures on teachers' work yet all the studies agree that in recent years teachers have had to effect a vast array of reforms in every aspect of their operation with a greater quantity of curriculum content to be delivered to a wider range of cliental with increasing demands in the administrative and pastoral care roles (see also Calderhead, 2001).

School based management is a feature of Queensland State schools where teachers are responsible for many other demands besides teaching their class. Through the devolution of authority, Queensland State schools develop their own operational plans and innovative responses. However these reforms also entail a high degree of accountability for schools. Data is collated and compared on almost every conceivable school operation; State mandated testing ensures that students are progressing at age appropriate rates; and curriculum, assessment and reporting frameworks are being delivered to teachers to implement. Queensland schools are indicative of decentralisation measures where responsibilities are handed over in some areas while imposing greater regulation in other areas.

Within these policy reforms Lingard (2000) believes that teachers have been largely ignored in the process of policy production and have become the 'objects' of policy. Reform conducted in a top-down process that is, produced by the government, results in policy, goals and outcomes delivered to teachers to perform. This has led many educational researchers (C. Hall, 2004; Smyth, Dow, Hattam, Reid, & Shacklock, 2000; Szabo, 2002; Wexler, 1987) to refer to this process as the deskilling of teachers, where their voice has become inconsequential, where their work has been converted to one of segmented, achievable blocks of knowledge.

Hargreaves and Moore (2000) however, have disputed the claims of deskilling of teachers especially with reference to outcomes based teaching propounded in new policy rhetoric, particularly in an environment of active professionalism and collegial support. Kanpol (1997) also supports the notion that deskilling is a way of behaving that teachers who creatively and reflectively engage with their work do not enact. This view is supported by other authors (Fullan & Stiegelbauer, 1991; Hargreaves, 2003; Sachs, 2000) who claim that for teachers to be successful in a knowledge economy they must be lifelong learners in their professional and private lives, establish themselves as ‘intellectuals’, not ‘technicians’ following mandated curriculum, and take on the responsibility for their own professionalism. Sachs (2000) developed a model she termed ‘activist professionalism’ in which teachers work collaboratively with each other and outside parties (for example, unions, university educators, parents, professional bodies) to actively research and formulate their own professional knowledge base upon which informed decisions are made. In this model teachers actively and critically discuss, debate and reflect on their ideas and opinions in a climate based on trust, obligation towards assisting each other in the best interests of their students, and solidarity, that is, a model where teachers take charge of their own professionalism. Popkewitz (1991) viewed professionalism as central in the issue of educational reform but warned against the development of a list of ideal characteristics that narrowed the view to one of perceptible actions and ignored the important function of intuition. He views the contradiction between competencies and professionalism as indicative of reforms that “called for teachers to be more responsible yet defined a world that called for less competence” (Popkewitz, 1991, p. 208). Likewise, Lawn (1996 in C. Hall, 2004) considered professionalism paradoxical being used to protect teachers’ autonomy yet also to control their resistance to reform measures. The perception of professionalism

adopted by teachers is paramount to their response. If teachers view themselves as professionals they *will* act in particular ways, however, if teachers are being told they are professionals, they will *need* to act in particular ways. Sachs' (2000) plea for teachers to be active in their professionalism calls for teachers to be in control of what they do and not blindly follow imposed reforms.

Davies (2005) believes that teachers should be aware of the discourses they are involved in and actively resist practices that are not conducive to the common good.

We must find the lines of fault in and fracture those discourses. And then, in those spaces of fracture, speak new discourses, new subject positions, into existence (Davies, 2005, p. 1).

Bowe et al (1992 in Helsby, 1999, p. 23) refer to these gaps as “spaces for manoeuvre” in which teachers may assert themselves into policy. O'Neill (in Carter & O'Neill, 1995, p. 8) makes the claim that for teachers to perform the practical changes imposed by new policy they must “understand the proposed changes both at the ideational and the programmatic level”. Yeatman (1998 in Gale, 2003, p. 54) believes that “policy occurs when social actors think about what they are doing and why in relation to different and alternative possible futures”. Teachers in Queensland State schools are not involved in policy text writing yet, according to Yeatman's definition, should be considered policy producers since in the act of teaching they are delivering ‘different and alternative possible futures’. Current policy theory which views the teacher as active in the policy process is significant for this study because it means that the ‘Smart State’ will not be just the result of policy text production, but of teachers' efforts to perform the surrounding discourses.

In much of this literature there is an assumption that teachers are engaging with policy to the extent that they can perform their own version of the policy. However

many authors offer a different view of the relationship between teachers and policy. Research data from Scribner (2005) suggests that teachers rely less on policy directives than on their past and present experiences and attitudes. Scribner (2005) maintains that inevitably these policies have minimal effect on teachers' daily work practices since teachers' work when examined at the capillary level is influenced by a multifarious network of possibilities. Furthermore, Helsby (1999) believes that it is due to the complexities of a teachers' daily work that regular monitoring of a teacher's practices is limited which maintains some sense of autonomy and control. Policy, according to Helsby (1999, p. 25) provides the "framework within which teachers are expected to work" while acknowledging that "many teachers never read formal policy texts, but instead rely upon the summaries of others to gain an understanding of what is expected of them". While Helsby (1999) and Ball (1994) agree that it is teachers who ultimately choose how, whether and to what extent they adopt and adapt new practices and ways of operating into their work. As Odden (1991, p. 189) noted, "what actually is delivered or provided under the aegis of a policy depends finally on the individual at the end of the line".

While acknowledging the role of the teacher in the performance of policy (or in the production of policy), this does not distract from the complexity of the process that occurs as policy as text progresses to teaching practice. This complexity is highlighted by Law (1992) who views it as a network consisting not only of interacting individuals with their own sense of self but also the many objects or artefacts involved within this complexing network, for example, the policy itself, the format in which it is presented, the school buildings, the room in which the teacher works, the resources that are available, the checking mechanisms that ensure the aims of a policy are being met, the dimension of accountability, the collegial team.

These components will all have some form of influence, imposing on the teacher's translation and performance of policy.

Helsby (1999) contends that the culture in which a teacher works will influence how actively or passively responses are made to policy reforms. Research (Helsby, 1999; Jilk, 1999; Ministerial Advisory Committee for Educational Renewal, 2004; Organisation for Economic Co-operation and Development, 2004a) has repeatedly shown that organisations work best when the 'team' act in a harmonious, supportive and collaborative manner with a shared vision of learning as a life long process. Other studies (Australia. Department of Education Science and Training, 2001; Geijsel et al., 1999; Organisation for Economic Co-operation and Development, 2004a; van den Berg et al., 1999) have highlighted the importance of a supportive administration team who promote and encourage the problem solving capabilities of their staff as a significant element in the success of innovative teaching practices. Collegial and administrative supports are part of the complex network surrounding innovative teachers. This study will also consider the support structures and the influence of leading staff in the school in relation to the uptake of policy reforms by classroom teachers.

However despite the variety of reform efforts, and the conditions that have been established to promote their uptake, Fullan's (2001) investigations into the history of school reform throughout the previous century shows that many aspects of schools continue to remain unchanged. Fullan states,

Innovations were adopted on the surface with some of the language and structures becoming altered, but not the practice of teaching (Fullan, 2001, p. 6).

The intention of Smart State policy is to change the practice of teaching. Clearly, historically the complexity of this process has inhibited substantial changes taking

place in the daily practices of teachers. How then is Smart State policy being positioned to achieve what, according to Fullan, has not been previously achieved by other reform measures, that is, to change teaching practices? It is evident that Smart State policy text will not implement change as it is teachers who need to purposefully engage with discourses and translate them for uptake by their students. Teachers, considered active in the policy process by some authors, ultimately bear the challenge of engaging and implementing change and reform measures. It is teachers who will give voice to the possible and probable future options for their students as in the act of teaching they perform the policies and the discourses that inform them. Education policies indicate the changes that should be occurring in teachers' work, however the 'how' to perform and enact these changes is still left to the teachers (Watt, 2002). Thus the interest of this study is to determine how teachers are engaging with policy discourses and whether these discourses can be evidenced in ways of acting and interacting, and in ways of being including styles, and material objects. This study questions whether teachers do engage with policy as text and discourse at both the ideational and programmatic levels as suggested by O'Neill (Carter & O'Neill, 1995) and thus investigates how teachers are exposed to policy, how they are engaging and performing policy, and the discourses in which they may be engaging that are bringing about change in their work practices. Clearly in order to make claims about the effect of Smart State discourses on teachers' work a close examination of teachers' practices in classrooms and schools is required in order to understand how different 'forms of influence' become different translations and performance of policy.

2.5 Conclusion

Within this chapter the literature review has been framed by the research questions to identify the social order existing around the Smart State discourses and their appearance within teachers' work. The literature has been positioned within a globalising economy that values knowledge as its main commodity and has focussed on Queensland's Smart State strategy as one government's response to changing conditions. In this chapter current debate on education policy, reform and teachers' work has been analysed and synthesized. The literature has highlighted the paradoxical requirements on teachers due to current policy and reform measures. A number of pedagogical and organisational requirements for the new knowledge economy worker were identified that teachers are meant to be performing as well as producing in their classrooms but how these factors come together in the work of the teacher remains unclear.

Other studies of teachers' work and policy have investigated the role of teachers as policy producers or as objects in the policy process (for example, Gale, 2005; Lingard, 2000). This particular study is unique because it investigates the process of policy (Smart State) as it moves towards operationalization through teachers' work within an organisation (Education Queensland) undergoing reform. The Queensland Government has identified education as one of the "building blocks" of the "physical and human capital" for a 'Smart State' (Queensland. Department of the Premier and Cabinet, 2006, p. 6). Teachers as education workers are engaged in the 'work' of the State which is to produce particular kinds of workers for a knowledge economy. This study is important because it will provide a detailed description of how Smart State policy may be becoming operationalized in the classrooms of two primary school teachers. In doing so, it will be investigating processes of how

discourses emerge and become a part of the operations of new practice in schools and classrooms.

Chapter 3: Research Methodology

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has.

Margaret Mead

3.0 Introduction

The previous chapters identified the focus of this study as change and innovation in Queensland State schools through the work of teachers in the context of a globalising knowledge economy. Queensland, like many western democracies around the world, has a strong policy focus on educational innovation as a key to global competitiveness. The Smart State of Queensland is a recent construct of the Queensland Labour government whose expressed intentions in official Smart State policy centres around developing a creative, innovative and sustainable State.

With teachers' work now so explicitly aligned with national productivity, stability and sustainability, questions must be raised about the relationship between teachers' work and the success of the 'Smart State' of Queensland. As discussed in chapter one, the 'Smart State' of Queensland is not a 'thing' able to be contained as one unit for analysis. It currently exists as loosely coupled associations between a disparate array of people and things including ministers, parliament, buildings, infrastructure, private organizations, law tomes and State-produced policy documents. The problem with a study of the relationship between teachers' work practices and an amorphous assemblage of elements such as a State is that it is difficult to know which particular elements contribute to any particular change in the multi-layered networks of people and things, especially when they are performing work in a complex workplace like a school. Yet, this study requires an analytical lens through which to understand the relationships between the State, government policy and teachers' work.

Traditional and modernist understandings of this relationship see it as a process of power ‘bearing down’ on largely acquiescent teachers from above, exercised through powerful State-authorised policy and handed down through the hierarchical layers of the bureaucracy. A postmodern understanding appreciates the relationship as much more complex, less linear, less rational and predictable, involving many actors who exercise their agency in multiple local sites. In this study, I understand the processes of change to teachers’ work as occurring through the work of discourses as they represent certain social realities and are able to effect changes in Queensland’s schools and classrooms.

Writers such as Foucault and Fairclough (2001a) argue the importance of discourse in effecting change in contemporary social processes. Foucault (1980, p. 93) emphasised the role of discourse in social processes, particularly with reference to relations of power.

...in a society such as ours, but basically in any society, there are manifold relations of power which permeate, characterise and constitute the social body, and these relations of power cannot themselves be established, consolidated nor implemented without the production, accumulation, circulation and functioning of a discourse.

The social structure made apparent through discourse includes the behaviours, actions, attitudes, language use and knowledge about the world. Discourses¹² in this sense encompass social, cultural and power relations and determine who can speak, the authority of the speaker, what can be included (and excluded) in the speech act, how to act and interact. Knowledge is viewed as socially composed, being generated through shared experiences where actions and language shape and are shaped by the many discourses that abound. Therefore, a disparate assemblage of elements that

¹² Fairclough (2005b, p. 2) uses the term ‘semiosis’ to distinguish this understanding of discourse and ‘discourse’ “as a category for designating particular ways of representing particular aspects of social life”. These understandings will be developed later in the chapter.

constitutes 'Queensland' and includes Smart State policy can be viewed as being enacted through the discourses that are also a part of its creation.

Government-produced policy as the 'imagined' future of the State is one vehicle for the promulgation of a discourse produced to effect change in social practices.

However, policy as text remains an 'imagined state of affairs' until it is engaged and enacted by those to whom the policy is directed (Fairclough, 2005a). Smart State policy will remain the Queensland Government's 'imagining' of the future until it is evidenced in social and material structures and systems. In other words, until teachers begin to take up the new policy into their daily work, the Smart State policy will remain just ideas or utterances or words on a page.

Chapter two viewed the relationship between teachers' work (as social practice) and education policy as 'engagement' (Gale, 2005) showing that many authors view engagement with contemporary education policy as involving more than just a reading of the text. Engagement involves 'understanding' the social structure informing the policy (Ball, 1998; Olssen et al., 2004). Elements of social structure that include the language, semiotic practices and cultural understandings translate into policy as discursive articulations that create, while being created by, particular social practices.

Contemporary governments intent on effecting systemic change, seek to establish their policy as the only possible version of future events. When viewed as discourse, policy can be examined in terms of its linguistic and other semiotic elements that are being employed to enrol members to that discourse. In this study I am looking for evidence that teachers are taking up the discourses embedded in school policy texts associated with the 'Smart State'. The intent of this study is to determine if such

evidence exists by mapping the discourses embedded in policy documents and the discourses surrounding teachers' work in schools to determine whether relationships may be established between the two. This is not to suggest that there is *necessarily* a relation between policy and teachers' work. As Fairclough (2001a) warns, policy may simply fail and fade away as a 'bearer' of the discourse. However, when any new official policy is introduced into schools it is important that we understand how (and whether) it affects teachers and their work.

This chapter serves two main purposes and is thus divided into two sections. Part A outlines the questions for the study and describes the theoretical framework through which the data is analysed, justifying its selection in light of the research problem and questions. Part B details the research design as it relates to the theoretical framework and the particular methodology that responds to the research problem and questions.

Part A

3.1 Research Questions

In framing the questions for the study, consideration needs to be given to the kinds of evidence that can be gathered to demonstrate how State policy materialises as language, practices and artefacts in schools.

The main organising questions for the study are:

1. *How are two Smart State policy documents designed to promote change in Queensland schools and classrooms?*
2. *What are the mechanisms by which Smart State policy becomes operationalized in schools and classrooms?*

The significance of these questions lies in their potential for identifying elements/strategies that enable the Smart State policy discourses to become operationalized. The questions require an investigation into the discourses surrounding the Smart State and teachers' work.

The first main question requires analysis of Smart State policy discourses as a part of the broader socio-political regime of discourses circulating globally, as well as the strategies (interdiscursive, linguistic and semiotic¹³) employed to convince schools and teachers that particular kinds of changes are required, and progress the policy towards operationalization. The sub questions are:

- *What dominant discourses are apparent within the regime of Smart State discourse?*
- *What changes are two Smart State policy documents suggesting for teachers and what is the stated rationale for these changes?*
- *What interdiscursive, linguist and semiotic strategies are employed within the Smart State policy documents to progress the discourse towards a state of operationalization?*

The sub questions have been posed in order to understand: the nodal discourses being translated as Smart State educational policy discourses; and the interdiscursive, linguistic and semiotic elements that signify and determine the content of the policies, the influences acting on the policy position, and the strategies within the policies to gain hegemony for these discourses.

The second main question requires a detailed understanding of what is happening in the classrooms of the selected teachers when they begin to take up and perform the

¹³ Fairclough's use of, and definition for, these terms will be explained later in this chapter.

Smart State discourses as work. The question is framed to investigate any relationship that may exist between strategies inscribed in school policies for change and the operationalization of these strategies into material practices and language.

The sub questions are:

- *What Smart State discourses are evident in the classrooms of two purposively selected teachers?*
- *How have these Smart State discourses become a part of the teachers' own discourses?*

The sub questions involve analysis of the teachers' classroom practices and language to find evidence of resonances with discursive practices of a 'Smart State' kind. The questions have been posed in order to understand the daily practices of classroom teachers as they engage with Smart State and other nodal discourses. The study does not assume that the teachers will have knowledge of the debates surrounding globalisation and the knowledge economy, nor that they will have read Smart State documents. However, it does assume that the teachers are accessing discourses of globalisation or a knowledge economy, as described in chapter two, and that they are aware of new curriculum and organisational documents that directly affect their work. The mechanisms of the operation of discourse are discussed more fully in a subsequent section of this chapter.

The questions for this study are concerned with the operationalization of discourses that are occurring in an organisation undergoing change. The study is looking for evidence that changing practices in schools and classrooms occur when teachers perform the powerful regimes of official state and global discourses as work, and take them up into their everyday language and actions.

3.2 Theoretical Framework

The study is based on a theoretical framework which guides the type and form of research that can be undertaken. A useful framework for this study will provide ‘tools’ that can be used to investigate relationships that may exist between policy and practice. Chapter two showed how Smart State policy is a response to changing global economic conditions, which requires a theoretical framework that accommodates the ways in which global discourses become embedded in policy and teachers’ work. Chapter two also showed how policy engagement has been understood as teachers taking up and translating the discourses embedded in policy as their own. However, the theoretical framework needs to be able to account for situations when there is limited direct and purposeful personal engagement with policy documents.

Chapter two argued for the view that the process of policy to practice does not occur in a linear fashion, neither top down nor bottom up, but involves many interacting factors that a logical linear model of implementation has trouble reproducing. Recent research (for example, Nachmias, Mioduser, Cohen, Tubin, & Forkosh-Baruch, 2004; Van Patten, 2000; Wright, Palmer, & Kavanaugh, 1995) into the implementation of new teaching practices has taken into account the complex factors involved in the process of policy to practice where the multifarious web of many individuals, settings and competing discourses may alter understandings, emphases and outcomes at any point in the process.

In other studies investigating policy to practice and changing social practices, researchers have analysed policy through a variety of lenses. Honan (2004) employed a rhizo-textual analysis of policy and a rhizomatic understanding of the

relationship between teacher and policy text. Understanding the relation between policy texts and teachers in this manner allows for a multiplicity of readings of policy, and linkages to be made at various points of engagement. Teachers were shown to be engaging with policy at multiple points of entry and exit to achieve the outcomes they intended and valued. Nicoll (2000) argued for a discursive analysis of policy that examined “how language is deployed in the attempt to produce certain meanings and effects”, and viewed discourse as “social action” (n.p.). This form of discursive approach to policy analysis, allowed the use of metaphor as “a form of conceptual mapping” so that assumptions and interpretations of, and within, policy text could be made apparent. Locke and Hill (2003) employed policy ethnography to analyse the values and influences underlying policy discourses, and the interpretations and enactment of teachers as they resisted and conformed to aspects of policy. Other studies (Rawolle, 2005; Taylor & Singh, 2003) have analysed policy processes in relation to social field using Bourdieu’s conceptual framework. These authors have found Bourdieu’s concept of fields of practice particularly relevant in the context of embodiment of discourses, and the relation between policy and practice. Each of these studies has viewed policy as discourse in relation to social practices, but each uses a different tool of analysis to delve into the levels of policy meaning.

This study is trialling Fairclough’s work in transdisciplinary¹⁴ research as one way to investigate the translation of current educational reform within ‘Smart State’ policy to teachers’ daily work practices. It is premised on the belief that the progression from policy to practice is a complex process of hegemonic contestation

¹⁴Fairclough states that “A transdisciplinary approach brings into focus ways in which theories, methodologies, disciplines, paradigms, traditions etc might be enhanced and developed through dialogue with others in interdisciplinary research” (Fairclough, working paper, p. 1)

and translation between discourses that may be engaged, enacted, inculcated and materialised in varying degrees in social practices (Fairclough, 2001a). Based on this premise my understanding of policy is that it may be manifested in different ways and to different degrees as it is translated in the various sites of practice (or that it may not be evident in practice at all which may explain why authors such as Fullan (2001) have claimed that despite decades of reforms, schools have not significantly changed). This approach allows me to view an amorphous entity like the 'Smart State' as regimes of discourse (and other semiotic elements) that exist in a dialectical relationship with elements of social practices. This framework is being employed as a way of inquiring into the processes of change in social practices as they relate to changes in discourses.

The current work of Fairclough (for example, 2001a; 2001b; 2002; 2005a; 2005c; 2005d; 2005e; c. 2004; working paper) examines social change as it is occurring in contemporary organisations due to the influence of 'processes' such as globalisation, knowledge economy, neoliberalism. Fairclough (1995, pp. 9,10; 2005b, p. 11) believes that there exists "a need to bring together critical discourse analysis of discursive events with ethnographic analysis" since "it is only by accessing insider perspectives in particular localities, companies etc that one can assess how discourses are materialized, enacted and inculcated." He maintains that social processes cannot be fully understood without recourse to the linguistic/semiotic systems of which they are a part; nor can linguistic/semiotic systems of an organisation be understood without recourse to the social practices of that organisation (Fairclough, 2001a, c. 2004). This study utilises these aspects of Fairclough's theory as it provides the structure to link policy discourses with changing teachers' work by relating changes in teachers' work to changes in

discourse (but not only change in discourse¹⁵), and relationships between discourses (Fairclough, 2005a). In this study, the discourses to be analysed are those of Queensland's 'Smart State' as they exist in relation to other discourses such as those of globalisation and a knowledge economy, and as they are engaged into the discourses and daily work practices of teachers.

The interest of this study lies in the work of teachers and how they are building Queensland into this vision of a 'Smart State', how they are acting as an arm of the State, but within spaces where the performances of their work are self-motivated and they are behaving as thinking professionals not as "routinized and trivialized deliverer(s) of a predesigned package" (Goodson, 1997, p. 137). The study is not concerned with the effectiveness of Smart State policies; rather it considers how and to what extent these policies, conceptualised as discourses, gain acceptance so that they are engaged and performed within the personal and professional discourses of the State's teachers.

In the next section, before I present an overview of Norman Fairclough's current work on critical discourse analysis and his view on the role of discourse in contemporary societies undergoing change, I will provide an overview of other notable theorists' understandings of 'discourse'. In particular, the work of James Gee and Michel Foucault will be discussed in terms of their beliefs on the operation of discourse in the formation of social practices.

¹⁵ Fairclough (2001a, p. 231) includes elements such as activities; subjects and their social relations; instruments; objects; time and place; forms of consciousness; values; and discourse, as part of every practice. These elements exist in a dialectical relationship where they influence each other but cannot be reduced to the other.

3.2.1 Perspectives on the operation of discourse

‘Discourse’ as a term is used within many disciplines and has several definitions.

For example, ‘discourse’ can refer to that being spoken about, or the act of speaking.

In linguistics, it can refer to “language and linguistic structures above the level of the sentence” (Mills, 2005, p. 1).

James Gee (1996; 1999) provides a definition of discourse that involves the connectedness of language utterances with social norms. Gee differentiates between a sociological view of discourse and the linguistic traditional definition by using big ‘D’ Discourse and small ‘d’ discourse. A ‘discourse’ as “connected stretches of language that make sense” is a part of a ‘Discourse’ which “is always more than just language” (Gee, 1996, p. 127). Gee defines Discourses as,

...ways of behaving, interacting, valuing, thinking, believing, speaking, and often reading and writing that are accepted as instantiations of particular roles (or ‘types of people’) by specific groups of people...They are ‘ways of being in the world’; they are ‘forms of life’. They are, thus, always and everywhere social and products of social histories (Gee, 1996, p. viii).

Gee maintains that language in any form cannot be understood if isolated from its social and cultural context in which lie inherent values and beliefs. Discourses for Gee are ideological. They contain sets of ‘rules’ to inform who is a ‘member’ and who is not (Gee, 1996, p. 132). However, this is not to imply that these knowledges are static for as new ways of doing or being are encountered, these new knowledges may be accommodated into an individual’s set of practices. As people may belong to many groups, for example family, work, an association, a profession, a community, a political organisation, they are a part of many Discourses which may, and inevitably do at times, conflict. There are areas of common beliefs, values and practices between Discourses. But often there are conflicts and it is at these junctures of conflict that one becomes aware of being a ‘member’ of a particular Discourse.

Gee (1996, p. 41) believes that it is impossible to study any text without the knowledge of the context in which it sits - the culture, the beliefs, the ideologies, the history - for to separate any of these gives an incomplete picture. Indeed, our actions are always an historically attained and history making co-ordination that exist within a “larger, more public and historic co-ordination” (Gee, 1996, p. 189). That is, to grasp the meaning of utterances, whether lunch time conversations, interviews, group discussions, classroom talk or written documents, one must also look at the bigger picture, a constant to-ing and fro-ing between the micro of what is happening right now in one instant of time and the macro of the historic and present influences on a set of values and beliefs.

Discourses are construed in particular socio-cultural contexts which inevitably involve a political dimension and issues of power relationships. Gee (1996, p. 150) views ‘political’ in a broad sense “involving human relationships where power and social goods are at stake”. Any value or belief sits in a social and cultural context influenced by political and ideological positions. As Gee asserts,

All texts are fully implicated in values and social relations. Any way of reading... involves apprenticeship to some social group that reads (acts, talks, values) in certain ways in regard to such texts (there is no neutral, asocial, apolitical reading) (Gee, 1996, p. 44).

In schools children are apprenticed into an ideology, a way of thinking, a way of being that are the practices of the dominant Discourse, to become particular people performing particular skills valued by society. This requires them to use particular language and interact in particular ways with people and artefacts. School-based Discourses contain particular values and beliefs that are a response to, yet also perpetuate, the current dominant Discourses.

Michael Foucault is another who adopted a broader definition of discourse, though Foucault in his writing also adopted a range of meanings for this term. However, Foucault (1980), like Gee, believed that it is through discourses that knowledge and power relations are able to be constituted. Discourses determine how a topic can be discussed and reasoned about in a meaningful way as well as who may participate in this act. Foucault viewed discourse as

...practices that systematically form the objects of which they speak...discourses are not about objects, they constitute them and in the practice of doing so conceal their own intervention (Foucault, 1977 in Kenway, 1990, p. 173).

Foucault believed that one's ontology is evident through the epistemology of one's practices. That is, we only know what is possible to know through the arrangement of the discourses, through our actions, words and thoughts. The philosopher, Ludwig Wittgenstein (1889-1951), wrote in 'Tractatus Logico' that "the limits of my language mean the limits of my world" (Richter, 2005, p. 2). That is, our discourses can explain what we know but they can also delimit what we are able to know. Foucault's interest lay in discerning how one discourse comes to dominate another and how ways of speaking certain practices are accepted over others. Foucault, when analysing the formation and production of knowledge in 'The Order of Discourse' (1981), makes apparent that is not just the words or thoughts but the practices behind them that have given them justification to be thought and understood in the way they have been.

Although the views of discourse from Gee and Foucault arise from different theoretical frameworks, certain similarities are apparent. Discourse involves more than language, encompassing the larger social aspect and the history that has shaped those practices. The social conditions that emerge through discourse influence behaviours, actions, attitudes and language use and so produce knowledge about the

world. Norman Fairclough's view of discourse also draws on different approaches to those of Gee and Foucault, yet also views discourse in a relationship with social practices.

3.2.2 Critical discourse analysis – Norman Fairclough

Norman Fairclough (2005b, p. 1) states that his current work involves understanding “processes of social change in their discourse aspect” particularly as they relate to contemporary processes identified by such terms as ‘neo-liberalism’, ‘globalisation’, ‘knowledge-based economy’. Fairclough's argument for the development of this approach to social research focuses on his perception of the increased importance of language in contemporary processes of change.

...the language element has in certain key respects become more salient, more important than it used to be, and in fact a crucial aspect of the social transformations which are going on – one cannot make sense of them without thinking about language (Fairclough, 2003, p. 203).

This entails employing a critical discourse analysis as part of a transdisciplinary approach in such a way that identifies the relation between social change and changes in discourse; and changes in discourse and changes in other non-discoursal elements of social life (Fairclough, 2005b).

Fairclough's approach to discourse analysis is positioned within a realist social ontology. This approach “regards both abstract social structures and concrete social events as parts of social reality” (Fairclough, 2005b, p. 1). The relationship between social structure and social events is mediated by social practices, the elements of which includes “activities; subjects and their social relations; instruments; objects; time and place; forms of consciousness; values; and discourse¹⁶” (Fairclough, 2001a, p. 231). These elements are dialectically related where each internalises and is

¹⁶ In later writings, Fairclough (for example, 2005b) uses the term ‘semiosis’ instead of ‘discourse’ when discussed in this manner.

internalised by the other, without being reducible to the other. A critical realist view argues that the social world is dependent on humans for its existence (but not the natural world) while acknowledging that there exist different knowledges of this reality, some of which can be incorrect. Thus, unlike Foucault, Fairclough's critical realism distinguishes ontology from epistemology believing that the nature of reality differs from one's knowledge of reality (Fairclough, 2005e, p. 922). Fairclough believes that social structures and practices are drawn upon to produce texts but in this process new texts are created (Fairclough, 2005b, p. 5). Thus discourse as an element of social practice mediates the shape of things. People and their translations of discourses and their subsequent practices and languages are central to how things become shaped. So to look at the discourses and to map them across what people are doing enables claims to be made about the presence of those discourses in practices.

In his current writing, Fairclough (c. 2004, p. 7) identifies four broad 'objects of research' or 'moments' in the processes of change as important moments¹⁷ to critique during "periods of major social change and restructuring": emergence, hegemony, recontextualization and operationalization. They can be defined as follows:

- **Emergence** of new discourses occurs through a process of 'reweaving' or 'texturing' of new discourses with existing discourses. It also involves the "condensation and simplification of complex realities into discourses" (Fairclough, 2005a, p. 2);
- **Hegemony** of discourses aims to discover the processes whereby one discourse becomes dominant over others that are present. It focuses on the role of discourse within the change strategies of particular social agents which

¹⁷ Fairclough defines 'moment' as "an element which is dialectically related to other elements" (Fairclough, 2005c, p. 5). Here he has drawn on work by David Harvey (Fairclough, 2000, p. 168).

Fairclough calls ‘strategic critique’. This is premised on the understanding that a ‘dominant nodal discourse’ is often used to produce “distinctive articulations of organizations in particular directions” (Fairclough, 2005e, p.933);

- **Recontextualization** of discourses considers the distinctive ways discourses are taken up by different organisations, moulding the discourse to their particular organizational structures; and
- **Operationalization**, which involves the shift of these discourses “from being just representations and imaginaries to having transformative effects on social reality” and includes the enactment of the new discourse, the inculcation into identity formation, and the materialization of the discourse in the physical world (Fairclough, 2005b, p. 11).

Fairclough’s four moments in the dialectics of discourse are elements of “strategic critique¹⁸” which focus “on how semiosis figures within the strategies pursued by groups of social agents to change societies in particular directions” (Fairclough, c. 2004, p. 7).

Defining the social and its relationship to discourse analysis

The relationship between discourse and social practices is important in this framework. Fairclough defines a number of concepts in relation to the social in the following ways:

- Social life is viewed “as interconnected networks of social practices of diverse sorts (economic, political, cultural, family etc)” (Fairclough, 2001a);
- Social practice is understood to be “a relatively stabilised form of social activity” with classroom teaching provided as one example. Discourse is apparent in social practices as part of the social activity where language is used in a

¹⁸ By focussing on ‘strategic critique’, Fairclough is not dismissing ideological and rhetorical critique but rather making the statement that strategic critique is more relevant to an analysis during periods of change.

particular way; in representations of personal and other practices where integration of new discourses is enacted in individual ways; and as identity formation (Fairclough, 2001a). Organisations like Education Queensland, or even single classrooms can be viewed as “networks of social practices” (Fairclough, 2005e, p. 918);

- Social order is a collection of social practices networked in a specific configuration (Fairclough, 2001a); and
- An order of discourse is the “discourse/semiotic aspect of a social order” (Fairclough, 2001a) and is “a relatively stabilized and durable configuration of discourses...which is a facet of a relatively stabilized and durable network of social practices” (Fairclough, 2005e, p. 918). Thus an order of discourse is an arrangement of discourses, genres and styles to produce a particular way of being.

Fairclough (c. 2004) believes that, especially in contemporary society, change in social practices can be observed in a change in discourses and other semiotic elements, and is often initiated with new discourses. He states that,

...more general processes of change are often ‘led’ by changes in discourse, which actually amounts to changes in relationships between discourses, new articulations of elements of existing discourses (Fairclough, 2005a, p. 2)

Thus, critical discourse analysis focuses on “how discourse figures in relation to other social elements in processes of social change” (Fairclough, 2005e, p. 924) and involves the analysis of:

...the dialectical relationships between discourse (including language but also other forms of semiosis, e.g. body language or visual images) and other elements of social practices (Fairclough, 2001a, p. 232).

Fairclough’s argument is that for relations to be established between discursive and non-discursive elements then these elements must be viewed as dialectically related – different but not discrete (Fairclough, 2005e, p. 924). Critical discourse analysis is

concerned with the relationships and tensions between stabilised orders of discourse and new ways of acting and being as they permeate (or attempt to permeate) social events (Fairclough, 2005e).

In using a dialectical theory of discourse in social research, one needs to take account, case by case, of the circumstances which condition whether and to what degree social entities are resistant to new discourses (Chiapello & Fairclough, 2002, p. 196).

This focus is cognisant that resistance to discourses can occur, and to differing degrees, so that uptake of the discourses at different local sites may be quite different. Furthermore, practices, while being shaped and changed, will also be shaping and changing those from which they draw (Fairclough, 2005e).

Discourse, genres and styles in social representations

In Fairclough's current approach to critical discourse analysis, the distinction and relationship between discourses, genre and style is of vital importance. These 'orders of discourse' give licence to act in particular ways while constraining behaviours to fit within the accepted boundaries of the framework. Discourse is described as "a particular way of representing certain parts or aspects of the (physical, social or psychological) world"; genre as "a particular way of acting socially, which means acting together"; and style as "a particular way of being, i.e. a particular identity" (Fairclough, 2005e, p. 925).

Fairclough (2001a, p. 232) describes discourses as "diverse representations of social life which are inherently positioned – differently positioned social actors 'see' and represent social life in different ways, different discourses". For example, neoliberalism can be described as a discourse because it is one way of representing, and responding to, a socio-economic situation. The 'knowledge economy' is another example of a discourse of "major social change" that is occurring in nation-states and cited as a reason for the restructuring of systems (Fairclough, 2001a, 2002,

2005a, c. 2004). Chiapello and Fairclough (2002, p. 195) reason that a knowledge economy is “discourse driven” that is, by particular discourses which vary from other economies as representations of economic reality. The term ‘knowledge economy’, they contend, suggests the importance of knowledge in contemporary society, and argue that since “economic and social processes are knowledge driven”, and since “knowledges are generated and circulate as discourses” then a knowledge economy is discourse driven. Fairclough (c. 2004, p. 5) views the knowledge economy as significant since “it seems to be emerging as a strategy for change which can effectively be operationalized in real change.”

... ‘the knowledge-based economy’ and the ‘information society’ have a partially discursive and partially material character. They are discourses, but not just discourses, they are discourses which are materially grounded and materially promoted (Fairclough, c. 2004, p. 5).

In this sense, the knowledge economy is a strategy for effecting change but also a discourse comprising a particular way of representing a system, including some realities while excluding others.

Fairclough (working paper) views change in discourses as the acceptance and embedding of a discourse within existing frameworks rather than the replacement of one discourse with another. New texts are incorporated in a dialectical process dependent on the resources available to a subject. When a discourse is inculcated into a person’s ways of ‘being’ and ‘doing’ it may be apparent through, for example, their speech, ways of interacting, dress, methods of operation or gestures. Thus Fairclough believes that “discourses become enacted as genres” (Fairclough, 2001a, p. 236). Examples of genres are the diverse ways of interacting, such as, an online communication group, a facilitative teaching style, or collaborative planning with colleagues. ‘Style’ involves people’s constructed identities in relation to their work (Fairclough, 2000). ‘Being’ a teacher is a particular style of operating, that is, one

can be identified as a teacher by certain ways of acting, certain ways of speaking and so on. Critical discourse analysis is useful to understand how new ways of ‘being’ and ‘doing’ become internalised.

3.2.3 Relating the theoretical framework to the research problem

For this study, classroom practices are understood as being influenced by, operating within, and reproducing (while also producing) the social, cultural and political dimensions of a discourse. To make apparent the complex relationships that exist between teachers’ work and State mandated policy involves investigation into how discourses, such as the Smart State policy, can become a part of the discursive and non- discursive elements of teachers’ normal daily practice, and so contribute to the building of a ‘Smart State’. Fairclough (2005b) claims that, through the use of particular interdiscursive, linguistic and semiotic strategies employed in discourses, those accessing the discourses can be persuaded that they should become enrolled in the discourse, become a performer of the discourse, and help to establish the discourse in a position of dominance.

The aim is also to identify through analysis the particular linguistic, semiotic and ‘interdiscursive’...features of ‘texts’...which are a part of processes of social change, but in ways which facilitate the productive integration of textual analysis into multi-disciplinary research on change (Fairclough, 2005b, p. 1).

Fairclough’s understanding of ‘interdiscursive’ analysis includes “how genres, discourses and styles are articulated together”.

Interdiscursive analysis...allows one to incorporate elements of ‘context’ into the analysis of texts, to show the relationship between concrete occasional events and more durable social practices, to show innovation and change in texts, and it has a mediating role in allowing one to connect detailed linguistic and semiotic features of texts with processes of social change on a broader scale (Fairclough, 2005b, p. 5).

Linguistic analysis is evidenced in the semantic, grammatical and lexical characteristics of the text (Fairclough, 2005a). Semiotic analysis of texts reveals the development of new genres as new ways of acting and interacting (Fairclough, 2005b, p. 6)

Discourses, while including certain realities and excluding others, present a particular view or imaginary of the future, which, if acceptable to teachers, may then materialise in the real world (as opposed to the imagined world of policy text).

It is only if it is a plausible imaginary that it will attract investments of time and money to prepare for the imaginary future it projects, material factors which are crucial to making imaginaries into realities (Fairclough, c. 2004, p. 5).

The analytical framework proposed by Fairclough is one way to investigate the processes of Smart State discourses that promote a particular view of the world with the expectation that they will be taken up and performed by teachers in their daily work.

For the Queensland Government, it is imperative that Smart State discourses gain hegemony and become accommodated into teachers' actions and languages. Rose and Miller (1989 in Fairclough, 1995, p. 102) described these complex and diverse networks of power used to enrol members as "action at a distance". In his current writing, Fairclough (2005c, p. 6) explains and refines this understanding to focus on the importance of genres for 'action at a distance' and 'changes in regimes of governance'.

...genres and networks of genres are a crucial semiotic condition of existence for any 'action at a distance' and any form of governance, and changes in networks of genres are a crucial part of changes in regimes of governance. Correspondingly, analysis of changes in governance needs to include analysis of genres - limiting the semiotic moment to discourses is missing these crucial semiotic characteristics of regimes of governance (Fairclough, 2005c, p. 6).

The Smart State discourse has arisen as a response to changing conditions incorporating strategies which offer to fix existing problems and provide an alternative future with new ways of operating and new ways of interacting (genres).

Fairclough's insistence that research into contemporary changes occurring in organisations, countries...must include a transdisciplinary approach is evidenced in the different methodology that he contends is necessary for researching each

‘moment’ or ‘research object’ (Fairclough, 2005b). Through the following discussion of each of these ‘moments’ I show why, in this study, I have incorporated elements of each. In the scope of this study it is not possible to analyse the data in detail through each of these moments since each one would constitute an entire study. However, an overview of each of these moments does allow a particular broad view of how Smart State policy is being positioned into a prominent position in the discourses of Queensland education to effect change in teachers’ work.

The emergence of a discourse occurs through a process of ‘reweaving’ or ‘texturing’ of a new discourse with an existing discourse (Fairclough, 2005e). Researching the emergence of Smart State policy discourses involves locating the nodal discourses of a knowledge economy and globalisation within the discourses of a ‘Smart State’ as well as articulating “the diverse discourses which are drawn together within these nodal discourses” (Fairclough, c. 2004, p. 6). Nodal discourses “subsume and articulate in a particular way a great many other discourses” (for example, the discourses of lifelong learning, sustainability, reform, productivity, flexibility), simplifying and condensing “highly complex economic, political, social and cultural realities” through degrees of inclusion and exclusion of certain realities (Fairclough, c. 2004, p. 5). The discussion of the emergence of a particular discourse also considers the questions, ‘Why here? Why now?’, that is, what events, circumstances or conditions have occurred for this discourse to emerge (Fairclough, 2005a). This, Fairclough (2005b, p. 11) asserts, requires a “genealogical approach which locates these discourses within the field of prior discourses and entails collection of historical series of texts and selection of key texts within these series”. In this study I select the key texts for education in the ‘Smart State’ which have clear connection with other educational texts in the recent history of schooling in Queensland. While

I do not analyse these historical documents to show the progressive emergence of Smart State discourses into Queensland education, the key texts being analysed for this study make reference to the dominant forces shaping schooling at this time.

A process of hegemony involves the strategies used by particular groups to change an organisation in certain ways, and the role of discourse in these strategies (Fairclough, 2005e). Researching the developing hegemony of a discourse will entail identifying how the relationship with other competing discourses is managed, and how texts of an organisation are dialogically related (Fairclough, c. 2004). Which discourses gain dominance is dependent on a number of factors including the openness of a structure to the discourse; the pervasiveness of the discourse into other discourses; the power of the social agents who undertake dissemination of this discourse (also termed 'generic power'); and the 'resonance' of the discourse in every aspect of a person's life (for example, their work and social worlds) (Fairclough, 2005c). Identifying a process of hegemonic struggle will involve textual analysis, and the identification of the nodal discourses and the strategies they employ to gain dominance as well as making apparent the contradictions that occur between discourses (Fairclough, 2005e).

Researching the recontextualization of a discourse will involve showing how various existing and new discourses have been textured together and how they are apparent at various levels within an organisation (Fairclough, c. 2004). Fairclough believes that recontextualization will involve a colonization-appropriation dialectic that involves an 'external' discourse colonizing an organization and positioning itself within the practices of that organization (Fairclough, c. 2004, p. 15).

...recontextualization is always an active process on the part of 'internal' social agents of inserting an 'external' element into a new context, working it into a new set of relations with its existing elements, and in so doing transforming it. This is often

manifested in the interdiscursive hybridity of texts, the mixing of 'external' with 'internal' discursive elements.

Recontextualization of discourses can also be viewed as relations between genres of different social practices, for example, the genre of Smart State policy and the genre of classroom practice, and also lead to a "view of genres as organised in 'chains' or 'networks'" (Fairclough, 2005c, p. 10). These 'networks' of genres function as 'filtering devices' as genres are performed in various structures or settings (Fairclough, 2005c).

The operationalization of discourses involves the transformation of discourses into genres and styles, and other social elements. As discourses move from "imaginaries for change" to effecting "real change" they will involve instances of enactment, inculcation and materialisation (Fairclough, 2005e, p. 934). Enactment involves the transformation of a discourse into new ways of acting and interacting. For example, a discourse of accountability in education has appeared in schools as the Year 5 test, a particular type of test whose administration demands specific rules and procedures and requires a specific genre of interaction. Inculcation involves the transformation of a discourse "into new ways of being, new identities, which includes new styles" (Fairclough, 2005e, p. 934). For example, a 'teacher' may identify herself as a 'learning manager' who designs learning experiences to meet the needs of individual students. Materialization involves the transformation of a discourse into a system of organising or operating as well as the physical objects that are a part of that organisation. For example, teachers being provided with laptops as 'tools of their trade' might be a translation of the dominant regimes of discourses around information and communications technologies (ICTs) and their application to modern learning.

In this study, these ‘moments’ are broadly described within the analysis of the policy documents and teachers’ work to show how policy is strategically positioned so that it may shift from “‘construals’ to ‘constructions’” (Fairclough, 2005b, p. 11). The framework is used to show how the interdiscursive, linguistic and semiotic strategies within the policy documents are used to emerge and gain a hegemonic position for the ‘Smart State’ discourses so that they may be recontextualized and operationalized in teachers’ work, that is, as a way to show the processes whereby policy becomes practice.

The theoretical framework described above provides direction for the design of the study insofar as the type of data that is required, the data collection methods that can be used to evidence any claims, and how the analysis can be conducted and presented. Social research, Fairclough contends, “proceeds through abstraction from the concrete events of social life aimed at understanding the pre-structured nature of social life and returns to analysis of concrete events, actions and processes in the light of this knowledge” (Fairclough, 2005e, p. 923). Through the daily actions of teachers’ work, an understanding can be developed of how the Smart State discourses are operating and what this means in practice as the genres of teaching change.

3.2.4 Limitations of critical discourse analysis

Critics have questioned the capacity of critical discourse analysis (CDA) to provide an unbiased and adequate version of social events. Franz (2003) and Potter (2000), for example, discuss CDA as potentially developing into a circular argument, claiming that this approach often leads to the outcomes that the researcher wants or expects to find through the assumptions that inform the study. Potter (2000) identifies this as a potential conflict between the researcher’s ontology and the

participants' constructions. For example, CDA is often used to identify relations of power that result in the domination of one group over another. In this case assumptions that these relations exist may preclude the researcher from considering other reasons for relationships and associated behaviours. Marston (2002) claims that one way to address these shortcomings is for the researcher to make explicit the assumptions, methods, data being used and the interpretations of the data for the study. Stubbs (2002, in van Noppen, 2004) also suggests incorporating text production and reception to overcome this insufficiency.

In this study CDA is not being used to identify power relations but rather how text is being employed to promote a version of events. The teachers in this study are not being viewed in a position of domination by the Government but as performing policy (and other nodal) discourses according to their position in multiple discursive networks. Thus the aim of this study seeks to determine how discourses emerge into a hegemonic position and how they are taken up into social practices.

CDA as a qualitative form of analysis is also criticised for the limited set of data that can be incorporated into an analysis which restricts the generalisation of claims that can be made. Pearce (2005) also views the process for the selection of texts and extracts that will be used in the analysis as a limitation to this method. This selection of examples, it is claimed, leads to using those examples that prove an argument or establish claims made, and disregards other contrary examples. Like Stubbs (2002, in van Noppen, 2004), Pearce also contends that the insufficiencies of CDA, in particular, the 'intuitiveness' of qualitative data analysis could be overcome by supporting the data with quantitative data collection and analysis. Pearce also believes that claims of a relationship between discourse and changes in social

practices needs to be substantiated with time-sequence data. In this study I have attempted to address this limitation by framing my questions to the teachers within a timeframe that incorporates the introduction of Smart State strategy which may allow tentative relations to be established between changes in teaching practices with the introduction of Smart State strategy.

A further limitation of CDA as outlined by Marston (2002) is that it favours the textual component of social practices thereby failing to adequately capture the non-verbal aspects of communication. Fairclough addresses this by including semiotics as a form of analysis which includes aspects such as body language, dress and the physical arrangements of texts and spaces. Marsden claims that CDA needs to be supported by ethnographic methods that connect the analysis of text with social practices:

...critical attention must be paid to the social actors that produce and interpret policy texts, not simply to the linguistic properties of the text itself (Marston, 2002, p. 89).

In response to these identified shortcomings, this study incorporates both the linguistic analysis of texts with a qualitative study of teachers' daily practices.

Part B: Research Design

3.3 Methodology

In this section I present the elements which constitute the methodology for the study in order to understand how and to what extent Smart State discourses may be appearing as languages and practices in Queensland classrooms.

This study consists of two parts: a policy analysis of two Smart State documents, *Smart Queensland: Smart State Strategy 2005-2015* and *Queensland State Education 2010*, and fieldwork involving two teachers conducted in one State primary school in the Central Queensland district. An understanding of both parts

needs to be established so that the relationship between policy text discourses and teachers' current work practices can be made apparent. To facilitate these two forms of analysis, the study combines discourse analysis of two key policy texts with an ethnographic study of teachers' daily work as suggested by Fairclough (2005a) as one form of transdisciplinary research. Researching the operationalization of a discourse will involve "ethnographic methods in the collection of data, in that it is only by accessing insider perspectives in particular localities, companies etc that one can assess how discourses are materialized, enacted and inculcated" (Fairclough, c. 2004, p. 6).

The policy analysis is conducted to establish the practices and behaviours that teachers are meant to be developing through their work; the language inherent in these policy discourses; and how these policy discourses promote their story of the future for Queensland, particularly as it applies to education. The fieldwork is conducted to make apparent the current work practices, the language employed, and the philosophies of the teachers as they work in the reality of complex classroom and school environments. The findings from the analysis of teachers' work are mapped onto the findings from the analysis of Smart State policy to identify resonances between the policy discourses and the practices and languages of teachers.

3.3.1 Policy analysis

The analysis of Smart State policy is conducted within a framework that acknowledges the interplay between discourse and social change, as detailed in the current work of Norman Fairclough. This critical discourse analysis is used to identify the discourses that are employed in the policy texts, and how the policy is promoted as the 'only possible' version of future events. Within this analysis, the

skills the Queensland Government is requiring in its future workers and thus those skills the State is depending on its teachers to develop in their students are identified.

The policy analysis involves two Smart State documents.

1. *Smart Queensland Smart State Strategy 2005-2015*. This is the overarching strategic document of the Queensland Government that aims to continue the development of a State “where knowledge, creativity and innovation drive economic growth to improve prosperity and quality of life for all Queenslanders” (Queensland. Department of the Premier and Cabinet, 2005, p. 1). This document delivers the next stage in a strategy that commenced in 1998. It is being included in this study to establish the place of education within Smart State strategy which encompasses every facet of life in Queensland.
2. *Queensland State Education – 2010*. This is the overarching strategic document for Queensland Education State schools providing the vision and broad directions for change (Queensland. Department of Education Training and the Arts, 1999). This document outlines the Government’s response to global changes for education so has been chosen for analysis in this study since the intent of the study is to determine how these changes are materialising in the classroom. It is from the proposals and the directions set in this document that all future education policies and papers have been written.

This analysis aims to identify the discourses and language incorporated in the documents, as well as identifying the interdiscursive, linguistic and semiotic aspects that are used to promote the ‘Smart State story’. These various discourses that incorporate particular ways of viewing and relating to different contexts are used to

develop a framework from which to analyse the data collected from the ethnographic study into teachers' work.

The aim of the policy analysis is to answer the first research question and its associated sub-questions.

How are two Smart State policy documents designed to promote change in Queensland schools and classrooms?

- *What dominant discourses are apparent within the regime of Smart State discourse?*
- *What changes are two Smart State policy documents suggesting for teachers and what is the stated rationale for these changes?*
- *What interdiscursive, linguist and semiotic strategies are employed within the Smart State policy documents to progress the discourse towards a state of operationalization?*

The policy analysis is conducted using a version of critical discourse analysis as proposed by Fairclough to make apparent the development and positioning of this new 'Smart State' discourse as a project of reform in Queensland schools. The analysis aims to show how the Queensland Government depicts present conditions in Queensland, specifically in education; how it envisages the future of education in Queensland; and how it justifies its intervention into education. In doing this, the analysis considers a number of aspects of the policy, such as, the pedagogy that is included or excluded; the themes that are represented and the discourses that are drawn upon and how they are combined; and the linguistic (semantic, grammatical, lexical) characteristics of the policy and how they are textured together (Fairclough, 2005a). In other words, the aim of this analysis is to tell the 'Smart State story' contained in each document, illuminating the interdiscursive, linguistic and semiotic

strategies used to advance this story as one shared by all Queenslanders and progressing the Queensland Government's aim of operationalizing the 'Smart State'.

3.3.1 Limitations of the Policy Analysis

There are many policies which could have been chosen for this study in order to understand how the Smart State is being built through teachers' work in schools and the choice of just two policies is certainly narrowing the field of data. Indeed, in education, there is a chain of Smart State policies that details experiences for students in the early years of education, the middle phase and the senior years and beyond. There are also specific policies for literacy, ICT, curriculum assessment and gifted and talented learners. Research could be conducted into Smart State initiatives and operationalization in any of these areas. However, this study's focus is on identifying the specific skills and attitudes Smart State policy is promoting for future Queensland workers and is looking for evidence of the development of these skills and attitudes through processes that can reasonably be construed as enactments of the discourses in the work of primary school teachers. By choosing one document that relates to Queensland's Smart State strategy and the other that is the foundation document for Education Queensland, it is hoped to gain the broad understanding of strategic policy directives as they explicitly state their relation to the nodal discourses of a knowledge economy and globalisation.

3.3.2 Fieldwork

The fieldwork component of this study addresses the second main research question and its associated sub questions:

What are the mechanisms by which Smart State policy becomes operationalized in schools and classrooms?

- *What Smart State discourses are evident in the classrooms of two purposively*

selected teachers?

- *How have these Smart State discourses become a part of the teachers' own discourses?*

Fairclough (c. 2004) maintains that an analysis of discourse alone will give a narrow view of an issue and that discursive analysis must be combined with an analysis of the social practices of which discourse is one dialectically related element.

Furthermore, Blommaert (2003) when discussing the sociolinguistics of globalization claims that ethnographic methods must be included alongside a sociolinguistic analysis.

Ethnography will allow us to unravel the details of how language varieties and discourses work for people, what they accomplish (or fail to) in practice, and how this fits into local economies of resources (Blommaert, 2003, p. 615).

The fieldwork component of this study therefore utilises ethnography as the best method to detail the complex happenings of teachers' work and to layer this with the teachers' explanations of these events. Ethnography is defined by Pole and Morrison (2003, p. 16) as,

An approach to social research based on the first-hand experience of social action within a discrete location, in which the objective is to collect data which will convey the subjective reality of the lived experience of those who inhabit that location.

Thus, the study is based on the assumption that the elements of a system can only be successfully understood in their environment of interactions and influences. For example, whether a 'Smart State' is being built (or not) through teachers' work can only be made apparent by observing teachers as they work, observing the physical structure and design of their personal work space, listening to the language they are using, reading their work documents...in other words, being involved in the lived experience of their daily work.

However, it is important to note here that traditionally, ethnography has been a form of anthropological inquiry dedicated to understanding 'insider meanings' - meanings

of participants who are insiders to a practice or 'culture'. From one perspective, teachers are not going to be insiders to a Smart State policy discourse - they are being recruited to the discourse and by definition, recruits are not insiders. This problematises the use of an ethnographical approach in its conventional sense. However, this study has not made claims that teachers are directly engaging with Smart State policy as texts. It is rather looking to map the congruities between Smart State policy discourses and the discourses that the two focus teachers are engaging within their daily work practices. Therefore, an ethnographic approach to the fieldwork is a useful way to understand their 'lived experiences' that includes discursive and other semiotic elements that may or may not align with the discourses of a 'Smart State'.

When researching the complex web of interactions that the teacher functions within, an ethnographic study is most applicable as "it allows researchers to connect linguistic forms with cultural practices" (Duranti, 1997 in Slembrouck, 2004, n.p.). This entails a "written description of the social organisation, social activities, symbolic and material resources and interpretative practices characteristic of a particular group of people" collected while paradoxically "distanc[ing] oneself from one's own... reactions" but also providing an "insider's perspective". This type of involvement is referred to by Smith (1990, p. 16) as "a bifurcation of consciousness". Smith (1990, p. 22) also maintains that "the only way of knowing a socially constructed world is knowing it from within". Similarly, LeCompte and Schensul (1999, p. 1, 2) state that "ethnography assumes that we must first discover what people actually do and the reasons they give for doing it before we can assign to their actions interpretations".

Ethnographic studies commonly occur over a lengthy period of time that can cover many years. This time period allows for the researcher to become familiar with the field and to be accepted as a ‘member’ of the cultural group (Brewer, 2000). As a past teacher of the school, I was already familiar with the setting and accepted as a ‘member’ of the teaching fraternity. This study covers nine weeks in the school year, quite short for an ethnographic study. Therefore although I adopt some of the research design and tools from ethnographic methods, I hesitate calling my study ‘an ethnography’. It is however a qualitative study of teachers’ work that incorporates the researcher as a participant in the daily school lives of these teachers, discovering their reasons for acting as they do before assigning interpretations to their actions. LeCompte and Schensul (1999) include the researcher as one of the tools of an ethnographic study since the researcher will be the primary means of data collection. This involves systematic observations and interviews with careful recording conducted in the normal environment of the participants, as well as the collection of artefacts and document analysis. The time period for this study is quite sufficient, I believe, as the focus of the study is on identifying particular practices in teacher’s work. This involves identifying a particular style of operating as it aligns with Smart State policy in classroom routines and practices that are established. During the field work, I stayed with each class observing their daily practices until I was confident I had learnt about the way each teacher worked with her class, and until the classroom routines and ways of operating became apparent and repetitious.

The fieldwork was conducted using three criteria:

- Geographically, the school must be located in Queensland. This study is concerned with one school located in a regional centre of Central Queensland;
- The school studied must be a State primary school since the *Queensland State*

Education 2010 document specifically applies to State education (although all schools take their direction from these documents); and

- The teachers selected must be regarded as innovative in their approach to teaching – willing to constantly improve their teaching to meet the needs of their students. The teachers involved in the study were acknowledged by their school administrators for their innovative approaches to education. The definition of an innovative teacher as one who is willing to take on new practices because they believe in the reason for doing so (Fullan & Stiegelbauer, 1991) is used in this study. Since the study is identifying change in teaching practices, it needs to be conducted within an environment where there is active and visible responses to change. My purpose in this study was not to investigate the work of any teacher but to investigate two ‘telling’ teaching situations so that data could be compared between the teachers’ innovative work practices and the requirements of Smart State policy.

The fieldwork occurred in one Central Queensland State primary school with two separate classroom teachers working in the middle phase of learning. The school has an enrolment of approximately 720 students and over forty teaching staff (this includes a teacher-librarian, a health and physical education teacher, a music teacher, a LOTE teacher, a Reading Recovery teacher, a Support teacher learning difficulties, and an attached Special Education unit). The school was opened in 1992 and is of a low set open plan. It is situated in a middle class area and receives children from all socioeconomic groups. The selected school is known for its ongoing innovative practices, particularly in the technology area on a whole school basis, which are driven by the teachers and supported by a transformative leadership team.

Two focus teachers identified for the study are known for their innovative practices that integrate all subject areas and make learning interactive and enjoyable. This is the first year of working at the school for one of the teachers yet she has already established herself as a leader amongst the staff. She is proactive in the area of middle schooling within the district. The second teacher has been working at the school since its first year and is presently working in a successful double teaching situation. She is particularly involved in the Arts. The teachers although both females and teaching in the middle school, differ in the year level being taught, the type of classroom/ teaching situation, their years of teaching experience and their age.

Specifically, the fieldwork consisted of observations of the teachers performing their daily classroom and school activities; interviews with the participating classroom teachers; interviews with the school Principal and Deputy Principal as leaders in the school who shape and influence the culture of the school; a panel interview conducted with a group of six teachers within the school who also are considered innovative in their classroom practices and also contribute to the school culture; and a collection of relevant artefacts from within the school and the classrooms. Data collected from the fieldwork is analysed in relation to the discourses identified in the Smart State policy analysis and through the literature review as those necessary for a new type of knowledge economy worker.

3.3.3 Data Collection Methods

Data collection for a qualitative study must be comprehensive and from a variety of sources so that relationships may be established with conviction for the story being portrayed. There must be a clear link between the research questions, the theoretical framework and the type of data collection tools that are chosen. Since this study is

interested in a particular kind of question, qualitative research is most appropriate.

Pole and Morrison (2003) describe the type of questions ethnographers (since in this study I draw on ethnographic methods) need to answer and link this to the type of research tools that are required.

... 'what is going on here?' requires researchers to get up close in order to describe and interpret meanings, behaviours, events, institutions and locations. Getting up close has specific implications for the ethnographer. These include particular types of association between researcher and research informant, and data collection methods that prioritize 'rich' and 'deep' understandings of, and immersion in, the educational 'field' or setting... Observation, interviews, focus groups, life histories... are prominent among face to face data collection methods... (Pole & Morrison, 2003, p. 18).

This study is seeking to establish 'what is going on' in the classrooms of two Queensland primary school teachers in relation to Smart State policy so incorporates the multiple methods of interview, observation, interaction, and collection of artefacts to detail the culture of a teacher's work. It also looks beyond the teachers to other significant people in the school who influence the work of the two focus teachers. This triangulation of methods is important to establish the reliability of qualitative research. Denzin and Lincoln (2005) call this mixture of data collection methods, a 'multimethod'.

3.3.2 Data collection tools

Observations

This qualitative study borrows from ethnographic methods where the researcher is the primary means of data collection. This involves the researcher becoming a part of the culture being studied, participating in it and observing and learning about it (Brewer, 2000; LeCompte & Schensul, 1999; Merriam, 1998; Pole & Morrison, 2003). To distinguish an ethnographic form of observation from other forms of scientific and non-scientific observation, Brewer (2000) offers this explanation.

It [participant observation] involves data gathering by means of participation in the daily life of informants in their natural setting: watching, observing and talking to them in order to discover their interpretations, social meanings and activities (Brewer, 2000, p. 59).

This requires the researcher to become both an ‘insider’ and an ‘outsider’ within the culture being studied that allows development of understandings from the participant’s viewpoint while remaining professionally objective about the information that is gathered and observed (Brewer, 2000). It also involves the researcher gathering information from other sources that have a relationship with the study’s participants so a deeper understanding of events can be developed. As a participant (an insider) in the field being studied, the researcher includes part of herself in the story, that is, her involvement and her interpretations of the events (Brewer, 2000; Pole & Morrison, 2003).

For this study, a number of whole day and part day sessions of observation (see table 1) were held in both of the classrooms over a nine week school period that spanned the end of term three and the beginning of term four. During this time I acted as observer at the back of the classroom at times, and as a participant at other times being fully involved in class activities working with groups or individuals. The teachers, students and parents were fully aware and informed of my role in the classroom and were willing for me to observe in the classroom and participate as a ‘helper’ in the class when needed. Fieldnotes were written regarding interactions as they occurred in the class with the teacher and amongst the students. Fieldnotes are “finely detailed written accounts of what was observed” (Lankshear & Knobel, 2004, p. 229). The fieldnotes from this study indicate time intervals and include general environmental and situational descriptions as well as direct quotations. These notes were transposed and provided to the teacher for the verification of details.

The fieldnotes assist in understanding how Smart State discourses are being taken up and operationalized in teachers' work in two main ways. First, teacher 'talk' may reveal Smart State terms and discourses in use. Second, new practices and ways of organizing may be evidenced that align with rhetorical changes for teachers within Smart State policy text.

An observation timetable has been included to position the study within a particular time frame (Table 1).

Table 1 Observation timetable and interview dates

Date	August, 2005						September, 2005			
	16	17	24	26	30	31	6	7	28	29
Time	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm
Participant	Sally	Fiona	Sally	Fiona	Sally	Fiona	Fiona	Sally (+ 10:00am interview)	Fiona	Sally (+ 3:30pm - 4:30pm panel interview)

Date	October, 2005						
	3	5	11	12	20	21	24
Time	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm	9:00am – 3:00pm
Participant	Fiona (+ 3:15pm interview)	Sally (+2:00pm deputy principal interview)	Fiona (+ 10:15am principal interview)	Sally	Fiona	Fiona (+ 9:30am interview)	Sally (+ 1:00pm interview)

The primary purpose of this timetable is to position my observations within the school term and year, and the events and interruptions that may occur. These are included in my discussion in chapter five and include the preparation for the mandated Year 5 Literacy and Numeracy tests, camp preparations and the two week September school holiday period. Since I was principally interested in practices that demonstrated performance of Smart State discourses, I was looking for evidence of regular classroom practice, or a regular pattern of interactions and actions for a teacher, not 'one-off' lessons.

Limitations of observations

Inherent in any method of research are limitations to the accuracy of data that is collected. All observations are filtered through the researcher's lens. Her philosophy, values and perspective impose on how situations are viewed. As Anderson and Biddle (1991, p. 163) state,

Inquirers are human, and cannot escape their humanness. That is, they cannot by an act of will set aside their own subjectivity, nor can they stand outside the arena of humanness created by other persons involved.

Therefore the researcher must question if the intended meaning has been correctly interpreted. In this study I have been careful to record direct speech acts and anecdotes of behaviour without any judgements or inferences made in the recordings.

It is questionable whether acknowledged observation can produce accurate records of behaviour. A 'guest' in a classroom will have an impact on the behaviour of the teacher and the children in the ways of operating, speaking, responding and behaving. However I contend that teachers and students cannot maintain an act and soon resume 'normal' behaviour especially over an extended period of time which accounts for the observation period of this study. The selected teachers, frequently have student teachers and parent helpers in their classes and so they and their students are accustomed to the presence of others observing and working with them.

Another limitation in being a participant observer involves the role of 'participant'. Offering to be a participant in the class entailed work with groups of students, which usually resulted in being in a different space to the teacher who was working with another group. In paying attention to groups of students, I at times lost contact with the teacher and her interactions with students. However, at the same time, I was

gaining a feel for the class which was also valuable in understanding the depth of the uptake of particular discourses.

Finally, research participants give of their own time and with the intensification of teachers' work, there is little spare time to sit and answer questions and explain procedures. Hopefully the benefits of the extra body in the classroom and the stimulus of engaging in professional dialogue as well as having someone interested in your practices have overcome these inconveniences. Both Brewer (2000) and Pole and Morrison (2003) advise that due to the inherent limitations of participant observation, it should be used in conjunction with other methods such as interviewing.

Interviews

Research that employs observation can determine acts as they occur but cannot determine the beliefs that motivated or caused actions. Therefore, this research includes interviews that aim to identify the basis for the teacher's actions. Interviews can vary from structured to unstructured. A structured interview involves pre-set, closed questions that the interviewer must adhere to in order to maintain consistency across all interviews. Unstructured interviews may have some questions or topics pre-set but mostly flow with the participant's responses. The interviewer prompts, probes and asks other questions as necessary to gain the respondent's 'story' (Brewer, 2000). It is more common to find this latter style of questioning in an ethnographic study.

The interviews in this research are unstructured and designed to allow for teachers' own conversations around their classroom practices. Two interviews were conducted with each teacher of approximately half hour duration for each. The interviews were

taped and transcribed. As well as the classroom teachers, the study involved an interview with the school Principal and another with the Deputy Principal, of approximately a half hour duration that were also tape recorded. Finally a panel interview was conducted with school staff representative of 'significant others', that is, teachers from other year levels who are also considered innovative in aspects of their teaching practice and leaders amongst the staff. The panel interview, conducted in the school's library was also tape recorded and lasted approximately one hour. These interviews were conducted with the aim of gaining a deeper understanding into the perceptions and foci of the school leaders. As the people in the school who have the power to encourage or inhibit innovative practices, it is important to understand this influence in the teachers' work.

The panel of teachers consisted of six staff members who also act as leaders within the school in some capacity or are identified as innovative in their teaching practices by the school administration. This panel consisted of the teacher-librarian who is well known for her expertise with the integration of technology into the curriculum; the school's Head of Curriculum which entails a 0.5 classroom teaching role; one of the focus teachers who also acts as the middle school co-ordinator; and three other classroom teachers. The panel were asked the same two leading questions as the two focus teachers allowing for the conversation to also develop with the teachers' interests. The views of the panel members are important to this study to establish other influences that may affect the focus teachers' work, and to identify any common discourses or language which may give some indication of how ideas are developed in this school's community (Pole & Morrison, 2003). These opinions are incorporated in the analysis to determine other factors why a selected participant teacher may be responding or working in a particular manner.

Basic guiding questions only are used in the interviews so that the teachers discussed what they felt was important in their work. For this study it is vital to gain the participant's understanding of events and not my interpretations of what I believe they may be doing. Keeping the interviews unstructured allowed for clarification and interpretation of statements which aligns with the ontological position of this research of the existence of multiple realities. The beliefs of the teachers identified through their statements were mapped onto their observed actions in the classroom.

Providing an opportunity for the participant teachers to discuss their beliefs about their teaching practices allowed them to illuminate those actions they believe are important in their work while also allowing them to reflect, verbalise and affirm what may otherwise have remained unvoiced. Data from the interviews has been compared with the discourses and language identified through the analysis of Smart State literature to determine congruencies and differences between the discourses of teachers' work and the discourses of Smart State policy.

The questions were designed to elicit information around the teachers' perceptions of change in their work and the innovative practices they now employ. The lead questions encouraged the teachers to focus on their current practices by verbalising how they perceived them to have altered over the past five to ten years. Since *Queensland State Education 2010* was published in 1999 with discussions in schools preceding its publication, this broad time frame of five to ten years encouraged the teachers to think about their work practices that have changed during this time which may be related to those included in Smart State discourses. The second question was framed to encourage the teachers to articulate why they have made

changes to their teaching practices which may identify the translation of discourses of *Queensland State Education 2010*, or the Smart State agenda, or knowledge economy discourses, or any other discourses which the teachers are engaging. The questions were framed as:

- *What changes have you implemented into your teaching practices over the last five to ten years?*
- *Why do you believe these changes have come about?*

The broadness of these questions allowed a degree of flexibility for the teacher to discuss areas of personal interest. Probing questions were also included in the interview to expand on comments the teachers made, and to clarify my understanding of the intended message.

Limitations of interviews

Inherent in this method of interview is the limitation of the researcher's impressions.

Since the researcher is formulating and interviewing subjects, personal bias can easily be implanted in the process. Clarifying and probing questions were used constantly to ensure the meanings of the teacher were accurately communicated.

Conducting some interviews on more than one occasion also lessened this limitation.

The interview transcripts were provided to each teacher for confirmation of their accuracy.

When conducting interviews I was also concerned that the teachers provided the answers they believed I needed or wanted to hear, and that I may have led the discussion to what I wanted to hear through my facial expressions, words spoken and gestures. To overcome this concern I have matched the interview responses with the classroom observations and the artefact collections so that each claim is

supported with other evidence to provide a detailed and accurate representation of the teachers' beliefs about their teaching practices.

Artefacts

Artefacts can provide much useful data for the researcher, adding certain advantages to an ethnographic study besides their important role of supporting the data collected through observations and interviews. Many of the documents, for example work programs, were written before the participant was aware that they were a part of this research and so provide evidence without researcher influence. The documents are authentic representations of the teachers' work documents since they have been written as a part of normal school practices and not contrived for the purpose of this study. These documents also provide greater depth to a study in terms of time frame since they include programs previously written by the teacher which can be used to be establish consistencies in approach between various programs, communications etc (Brewer, 2000).

Collected artefacts may be classified as primary or secondary forms of data. Primary data refers to that collected directly from the source, for example, a teacher's work program. Secondary data includes information or interpretations gained from another's primary document, for example, information gained through a newspaper report (Brewer, 2000). The artefacts collected in this study are from primary sources and include school letters to parents, staff notices, proceedings of meetings, teacher work programs, teacher communications to parents, and photos of classroom activities. Media permission was checked for all students in digital images. These artefacts were collected to add strength to the conviction of change, if possible, through the types of communications and discussions being conducted with the wider school community and as examples capturing the daily happenings in the

work practices of a teacher. They help to establish whether Smart State discourse and the wider knowledge economy discourse are becoming part of the school's and teachers' discourses as evidenced in the language structures used, the content discussed and the images captured.

The following table has been included to summarise the data collection methods used in this study and to situate them in the study. The information in the table relates the data collection methods to the participants; the method of data collection; and the reason for being incorporated in the study.

Table 2 Data collection methods

Data to be collected	Means of data collection	Relationship between data to be collected and research questions
Classroom teachers Data concerning teacher's current work practices.	Two unstructured interviews per teacher audio-taped Artefact collection - copies of letters to parents, class newsletters, teachers' planning documents, digital photos of examples of classroom life. Detailed observations as participant observer in classroom context compiled as field notes.	Interviewing teachers provides insight into their philosophies and beliefs of teaching and how they believe these have changed over the past five years. The interviews also provide evidence of genres and styles that are translating from Smart State discourses. Some of the teachers' utterances may evidence processes of engagement and inculcation of discourses. Planning documents and official forms of communication with parents provides insight into the language being used by teachers in their official documents and can be used as cross reference to the day-to-day practices and what they say they believe and do. Photos provide evidence of classroom events that may be linked to the materialization of Smart State discourses. Media permission to take the photos was cleared with the school through the formal channels they have in place. Observing teachers' day-to-day practices generates possibilities of comparing what teachers do and what they say they do; and provides evidence of Smart State discourses being operationalized through the appearance of new genres.

Other teachers Perspectives of other significant and innovative teachers within the school re their views of changes over the past five years; perceived reasons for the changes and their effect in classroom practices.	A semi-structured interview / panel discussion with six teachers – audio taped	This provides insight into how other significant teachers within the school view their practices as well as their current thoughts about the changing nature of their teaching practice. The panel format allows for observation of professional collegiate dialogue and may provide clues as to how discourses are being engaged and performed within the school, and the emergence of new genres and styles.
Principal/ Deputy Principal Data concerning the administrative perspective on organisational structures and implementation with regard to changes they have seen as relevant over past five years for schools and teachers; perceived causes of these changes; the processes of disseminating policy in the school; ways of communicating policy information with teachers.	An individual semi-structured interview - audio taped	Interviews provide contextual setting for how policy is promulgated in the school environment and how the administrative view aligns with that of the teachers' views.
School artefacts Daily notices to staff Information sent to - Parents - Letters from teachers - School newsletters Meetings - Staff - Community	Collect copies of relevant artefacts or photocopies Non-participant / participant observation	Artefact collection provides information regarding the uptake of discourses in communications to staff and the community; and how aspects of these discourses are being enacted and are materializing in the school. Observations of how these discourses are being enacted in meetings with the direct use of the policy language or as indirect conceptual references.

3.3.3 Fieldwork Data Analysis Methods

The data collected in the fieldwork component of this study has been analysed to identify new genres appearing in the teachers' work and the appearance of Smart State or related nodal discourses. The analysis of the work of the two teachers involved triangulating the results of the interviews, observations and collected artefacts. This information has been supported through the analysis of interviews

conducted with a panel of other significant teachers in the school, the school administrative team as well as a collection of other school artefacts.

This data has been categorised according to the discourses that emerged out of the language structures and vocabulary used by the teachers as part of their daily work in schools. In planning the study's design, it was envisaged that as the teachers talked about their work particular words, terms and phrases may resonate with various discourses that, through the analysis of the two Smart State documents, have been identified as discourses of the 'Smart State'. These discourses have also been identified through the analysis of the literature concerning globalisation and the knowledge economy. An example of a discourse, in this sense, for instance, could be 'collaboration' which is a component of a knowledge economy discourse that stresses the necessity for teamwork and transdisciplinarity. This discourse of 'collaboration' has also been taken up in the Smart State policy documents as they describe the benefits for teachers and learners in schools.

The data analysis program NVivo has been used to assist with organising the collected qualitative data by systematically coding information into conceptual categories for comparison. The fieldnotes and interview transcripts were saved as rich text documents and coded by assigning nodes to dominant discourses and linguistic elements of the text. This allowed different ways of viewing, organising the data and making connections between the data. Nodes were established as 'tree nodes' so that different elements were grouped together and this assisted with later comparison. The tree nodes headings were Smart State terminology/themes; teachers' work; Fairclough's moments; and linguistic elements. This tool allowed layers of data to be easily organised, compared, analysed and synthesised.

This analysis contributed to addressing the problem of the thesis through the identification of Smart State discourses as they relate to teachers' work; and through the identification of the discourses of teachers as they relate to changes in work practices. This allowed a mapping to occur of one to the other and relationships to be established. The analysis illustrates how the teachers are meeting the demands of a complexifying network of requirements and expectations of their work in relation to a Smart State discourse.

3.3.4 Representing qualitative data

Once again in this section I draw on the literature from ethnographic research to discuss various ways of presenting the collected data (Brewer, 2000; Hammersley & Atkinson, 1983; Pole & Morrison, 2003). Hammersley and Atkinson discuss presenting the data in the text through:

- The natural history, where accounts retell the finding of the data as it was discovered. Problems can occur here when the write-up mirrors the fieldnotes. However, this form of account does show how themes developed and progressed as the fieldwork progressed so long as there are limited themes to document (pp.215 - 217);
- The chronology, where accounts follow the development of an event in participants' lives. Problems occur when this version of relating the story portrays a more organised view than exists in reality (pp. 217 - 220);
- Narrowing and expanding the focus, where accounts provide a close-up view on a particular aspect as well as a broader more general view, starting with either perspective. This form of account allows layers to be examined but must be done within a theoretical framework that provides legitimacy for the relationships between the layers to be established (pp. 220 - 221);

- Separating narration and analysis, where accounts first present the ‘story’ of the data so that the reader can gain a “‘feel for’ the culture in question” before the author discusses the themes that are present in the data. Problems occur however in the separation where the relationship between the two may be rather tenuous than analytical (p. 221 - 223); and
- Thematic organization, where accounts are organised according to identified concepts, components or themes. There are many forms of categories that may be employed and each has potential problems if unable to be justified and if the categories become inflexible (pp. 223 - 227).

The authors do not recommend one form of writing over another but state that each has its limitations. Their advice rather is to choose the format that best suits one’s data and aligns with the methodology employed while acknowledging the limitations as they exist.

Similarly, Pole and Morrison (2003) maintain that there is no prescriptive method for representing data but that representation of the data is guided by the research methods and the analytical framework used. These authors discuss the method of representing data through other means than in written form. Visual representations include video and photography, and are able to convey some forms of information in a clearer fashion than written accounts alone. However, the written form as narrative remains the most frequent form of representation with its rich and detailed descriptions.

Brewer (2000) discusses three ways of telling the ethnographic story through texts that adopt a realist, a postmodern or a post postmodern style. The realist text employs thick description and much use of verbatim quotes as rhetorical devices to

present an authoritative reading of the data. It also establishes the ethnographer as an ‘insider’ to the cultural group members, yet able to present their data in a detached manner. One story is presented which claims a “definitive status” (Brewer, 2000, p. 137). Postmodernists reject this view claiming there are multiple versions of reality and this presentation is just one view. In this case, the ethnographer either presents their view as one perspective or they “capture the polyphony of voices in textual form” (Brewer, 2000, p. 138). This is at times delivered in new literary forms related more to aesthetics, for example data written up as poetry, ethno-drama or reflexive dialogue with the writing process (Brewer, 2000, p. 139). Post postmodernists believe that this form of postmodernist representation has gone too far and that data can be represented rhetorically and with authority without needing to claim a definitive version of events. Knowledge produced through analysis can be done with authority but “it will never be final or absolutely certain” (Brewer, 2000, p. 141). Claims that reality is being represented are valid but the limitations of those claims must be made apparent. These texts must provide enough evidence to convince the reader of the claims being made. This includes the use of narration as well as “extensive quotations and the use of exemplary types and vignettes” (Brewer, 2000, p. 141).

This analysis adopts the post postmodernism style of writing as described by Brewer which provides the structure to write with authority but also limits the type of claims that can be made. Furthermore, as the study aims to locate the broad discourses of a globalised knowledge economy, as represented through Smart State policy, in the specifics of teachers’ work, then the format adopted shifts between a narrow and a broader perspective, allowing the layers of classroom, school, education system, State policy and global conditions to be exposed. This analysis of the various layers

of Smart State discourses uses Fairclough's work concerning 'moments' of recontextualization and operationalization involved in the dialectics of discourse to establish relationships that may be occurring between elements of social practices (for example State policy discourses; discourses of globalisation, a knowledge economy; teachers' activities). To represent the data in this study I use examples of direct observations and interview transcripts interspersed with descriptive passages to illustrate the teachers' performances of various discourses, and the linguistic and semantic aspects that are integrated into specific enactments.

3.3.5 Strengths and Limitations of the fieldwork

In designing the fieldwork, a number of measures need to be in place to ensure the 'validity' and 'reliability' of the data collected. These terms, however, have their understandings based in quantitative research where variables and factors are controllable, and so lose their meaning when applied to a qualitative study. Yet criteria still need to be stringently established and applied. Within this study, three criteria are used to examine the strengths and limitations of the research design: veracity, objectivity and perspicacity (Stewart, 1998). Veracity is concerned with depicting the 'truth' of a situation, so that the story as depicted by the researcher has conveyed the story of the participants (Stewart, 1998, p. 15). Objectivity is concerned with the receptiveness of the researcher to the views of others. Perspicacity is concerned with the extent the 'construct or theory' regarding 'structures, processes, or relationships' can be transferred or applied beyond the site of the research (Stewart, 1998, p.16).

By applying these criteria, the following measures were employed during this research:

- The use of multiple sources of evidence - interviews, observations, artefact

collections. This provided different perspectives to view each situation, and a layering of evidential data so that stronger claims could be made;

- Paraphrasing the responses given, when necessary, in the interviews; and
- Having key personnel involved in the study especially those who are interviewed to read over the interview transcripts, the classroom observation notes and a draft of the case study report written in plain English.

Other issues that need to be acknowledged in this study involve my previous relationship with the school and the limited number of participants involved in the study. Both of these issues are now addressed. I consider my previous role in the school, to be of value not a hindrance to my work. I am familiar with the history and culture of the school so have a basis for comparison of present and past practices and conditions. I have established links to many of the staff who are accustomed to my presence in the school and in their classrooms as well as in discussing professional issues and their beliefs with me. As a past teacher and administrator within the school, there exists an acknowledged element of established trust. Having worked in a close professional relationship with one of the teachers has meant that I was easily able to resume that relationship in the classroom. Although unfamiliar with the other teacher in the study before the commencement of the research, a similar professional belief system was established early upon meeting (as well as many school staff commenting on how much our teaching practices were alike), and a bond quickly and firmly developed. Both teachers and their classes also frequently and routinely involved 'others' (for example, practicing teachers, parents, specialists) in their rooms so they and their students were used to 'observers' and 'helpers' working with them. However, it always remains a concern whenever people and their beliefs and opinions are involved that they may just be giving (acting and speaking) what

they think the researcher may want to see and hear. By observing practices on many occasions and mapping these onto teacher interviews and collected artefacts it is hoped that the effect of this concern has been limited. It is also a concern that my familiarity with the school may lead to overlooking or generalising some incidents that may be pertinent to my study. To minimise the possibility of this occurring I have incorporated the use of triangulated methods.

The study has considered only a small sample by looking at just the one school in the district where innovative practices are occurring. In terms of a quantitative study such a small, localised sample would certainly not validate any claims to knowledge about how a 'Smart State' is being built. However this study does not presume to be able to generate absolute evidence that may be generalised to each teacher in Queensland. It does however claim to identify meanings and patterns of social activity that will richly describe in these instances how the 'Smart State' may be being built. It is believed that only through this form of in-depth study of a particular social site can a picture be constructed of how the 'Smart State' may be built through teachers' work.

3.4 Ethical considerations

Ethical clearance for the study was granted from The Human Research Ethics Committee of Central Queensland University (approval number H05/06-73) with formal permission gained from the Principal of the school where the research was conducted. Copies of the ethical clearance letter, and the information and consent form for research participants are included in appendix A and B respectively. All original data arising from the project has been stored in a secure location for a minimum period of five years in accordance with CQU policy.

However, ethical considerations extend further than gaining consent from the official sources. They include attention to the research design with appropriate planning and preparation so that any negative sequelae may be minimised and possible benefits maximised with no harm occurring to participants for having been a part of this research. Aspects of this project with the potential to pose risk or raise ethical issues were: the presence of the researcher within the classroom and the school; the viewing of school and classroom documents; and the interaction that occurred with the students in the classroom. These aspects were handled as per the ethical application (see appendix A).

A plain language statement which included informed consent to be signed by the participants was issued to the teachers, the Deputy Principal and the Principal explaining the research to be conducted, the role of the researcher and the expected level of commitment of the participants (see appendix B). The letter contained the details of the study and included a statement informing the participants that they had the right to withdraw from the study at any time during the course of the study. Within this letter the participants were directed to the CQU Office of Research should there be any concerns with the nature or conduct of the research, and access to the CQU counselling service for any participants negatively affected by the research process.

The teachers, the school or any other participants used in the study were not referred to in the notes, in the transcripts or in the final report by their real names but pseudonyms used in each case. The questions asked during the interviews were of a professional nature only with all of the interviews audio taped and transcribed by the researcher. The transcripts of the interviews and copies of classroom observation

notes were shown to the interviewees for verification of content and meaning. Finally a plain language statement of results was provided to the teachers for confirmation of the accuracy of the recorded events.

Working in schools and classrooms always has the potential to hear information of a personal nature regarding a child's circumstances. These knowledges required that I behaved in a professional manner at all times as a degree of confidence was placed in me by the teachers, administrators and parents. No personal information of the children has been included in this report. The children in the classes as they interacted with their teacher were not identified in any way except by referring to them as 'student' in the notes and transcripts. A letter was sent home to the parents of the students informing them of my presence in their child's class and the nature of the research. School media permission forms were checked to ensure that digital images were not taken of any child without media permission.

Although each of these formal procedures was in place, I believe that what I needed to maintain most of all was respect for my participants as well as each member of the school community. I endeavoured to do this by being polite at all times; by not assuming access to places, people and their conversations but always asking permission to enter or join in; and by not criticising any event in the school or particularly in the classrooms of the focus teachers. For example, teachers use different behaviour management strategies effectively in their classrooms, of which some differ from my own philosophies on behaviour management. However at no time did I criticise in speech or writing aspects of another teachers' work.

I was also made aware of the effect of my presence in the working lives of the teachers through their comments on how much they had enjoyed and appreciated the

opportunity to engage in professional dialogue and talk about their work with someone who wanted to know (albeit for a research project). The teachers also spoke of their feelings of affirmation of their work by being involved in these conversations and in the research project. I was honoured by these comments but also retained a feeling of guilt knowing that the project and my presence would soon end, and comments from the teachers such as, “What will I do when you go?” only compounded these feelings for me. These are issues, I believe, for each researcher and were only resolved by me knowing that my friendships and therefore conversations about school life and work continue outside of this project.

Chapter 4: Analysis - Policy

4.0 Introduction

In the previous chapter the work of Normal Fairclough, in relation to discourse analysis has been investigated as a useful theoretical lens through which to analyse and understand how education policy may become operationalized as particular types of language, social organisation and work practices in schools. Schools consist of social processes, events and practices and, as such, are viewed as partly discursive in character (but not reducible to just discourse) (Fairclough, c. 2004, p. 1).

Fairclough maintains that change in social structures, practices and events can be traced to a change in discourses since each exists in a dialectical relationship with the other. This study of changing practices in schools, therefore, looks at the appearance of new Smart State discourses by investigating relationships that may exist between new discourses and new practices in schools.

Fairclough's work with four moments of the dialectics of discourse - emergence, hegemony, recontextualization, and operationalization - and the interdiscursive, linguistic and semiotic strategies employed in texts is a useful framework through which to understand how discourses become hegemonic, and how they may be taken up into ways of acting and being in social activities. Discourses that gain dominance may progress from an imagined future (such as that depicted in policy) to actual practices where they are enacted in daily activities, inculcated into a style of being and where they materialise as objects and organisational procedures.

The Smart State discourse of the Queensland Government is an example of a new discourse intent on changing social practices in schools. Over the past seven years, the 'Smart State' has produced an avalanche of policy designed to progress

Queensland as an innovative, enterprising and creative State that is a competitive player in a globalising knowledge economy. For Queensland schools, the key policy documents are *Queensland State Education 2010*, *Destination 2010*, *Education Training Reforms for the Future*, and the *Strategic Plan for 2006-10*. However, producing policy documents does not necessarily mean that practices in schools will change. Smart State policy documents are merely static representations of a vision, a set of bureaucratic inscriptions that are rarely compelling for teachers busy with their daily responsibilities in schools and classrooms. For governments to dedicate huge resources towards policy text production, however, must mean that they expect policy texts to be effective change agents. Indeed, since the 1980s, there has been an unprecedented volume of policy dedicated to modernising and streamlining the ‘business’ of schooling. With the new vision of the ‘Smart State’, Queensland schools are now becoming more firmly aligned with the business interests of a deregulated industry competing for funding, resources, labour, and viable and sustainable product. How does the work of teachers help to change schools in these ways when teachers are not necessarily involved in the production of policy texts or when they rarely read or engage with the documents?

This chapter is the first of two data analysis chapters in which a detailed analysis will be conducted to demonstrate to what extent the discourses of teachers’ work align with the discourses of Smart State policy, that is, to what extent the ‘Smart State’ may be being built through the work of two teachers. This will be accomplished in the two data chapters through, firstly, an analysis of Smart State policy and, subsequently, an analysis of the work of two innovative teachers.

The two data analysis chapters contribute to the thesis in two main ways. Through the analysis of two policy document texts in this chapter, it will be determined how a particular view of the knowledge worker in Queensland is being promulgated, as well as identifying the particular behaviours being required of future citizens and workers in a 'Smart State', that is, those skills and attitudes teachers are expected to be developing in their students. In this research the dominant discourses of Smart State policy need to be identified so that they can be used as a basis for comparison with the current work of teachers and the discourses they are choosing to engage and enact. The second data chapter then shows how Smart State discourses can become actualised through teachers taking up these discourses and making them a part of how they operate on a daily basis. That is, the 'Smart State' is not a monolithic structure operating independently of people. It is a particular formation of people and things being 'built' through the on-going daily negotiations and work efforts of Queensland's citizens and workers. For this study of changing practices in schools, the work efforts of teachers in schools are the particular focus.

This chapter will address the first main research question and its sub questions as discussed in chapters one and three:

How are two Smart State policy documents designed to promote change in Queensland schools and classrooms?

- *What dominant discourses are apparent within the regime of Smart State discourse?*
- *What changes are two Smart State policy documents suggesting for teachers and what is the stated rationale for these changes?*
- *What interdiscursive, linguistic and semiotic strategies are employed within the Smart State policy documents to progress the discourse towards a state of*

operationalization?

In this chapter, I analyse two policy documents generated by the State of Queensland whose intentions are to change practices in schools and transform schooling towards a model that will help achieve a 'Smarter State'. The two documents were chosen because they are key policy documents from which other documents are produced, and because they represent the work of other dominant regimes of discourses providing explicit links to the nodal discourses of, for example, globalisation and a knowledge economy. This study is searching for evidence of these discourses appearing in teachers' work, which makes it necessary for the discourses to be identified. The Smart State documents chosen for the analysis are:

1. *Smart Queensland Smart State Strategy 2005-2015* (Queensland. Department of the Premier and Cabinet, 2005). This document is the second stage of the Queensland Government's strategy to progress Queensland as a leader in a globalising knowledge economy. It is included in the analysis as it presents the arguments for why Queensland needs to change with reference to a new emerging economy and the challenges that must be met. Education is promoted in this document as the key to actualising these changes.
2. *Queensland State Education 2010 (QSE 2010)* (Queensland. Department of Education Training and the Arts, 1999). This document is the overarching strategic statement providing the vision and broad directions for Queensland State schools. Other education policy is linked to this document. It is included in the analysis as it presents the argument for the necessity of changes in teaching practices due to an emerging new set of requirements for young Queenslanders in a rapidly changing world. It outlines the plans for how Queensland's State schools will meet these challenges.

These two documents will undergo a textual analysis to identify: the new regime of requirements for teachers' work in relation to skills required for the new knowledge worker; the discourses that are drawn upon; and how these discourses have been textured together by describing the interdiscursive, linguistic (semantic, grammatical, lexical) and semiotic characteristics as they are used to promote acceptance of the policy and the wider discursual context. A detailed linguistic analysis is an important component to the interdiscursive analysis and the associated connection with social elements. As Fairclough states,

More detailed (including linguistic) analysis of texts is connected to broader social analysis by way of interdiscursive analysis of shifting articulations of genres, discourses, styles in texts (Fairclough, c. 2004, p. 2).

Fairclough considers this form of textual analysis an essential part of social research and describes some of the issues that can be addressed.

We need to analyse texts and interactions to show how some of the effects [of socio-economic transformations] are brought off. These include: making the socio-economic transformations of new capitalism and the policies of governments to facilitate them seem inevitable; representing desires as facts, representing the imaginaries of interested policies as the way the world actually is (Fairclough, 2003, p. 204).

Thus the focus of this chapter is to investigate how the Queensland Government is steering schooling in particular ways by employing particular interdiscursive, linguistic and semiotic strategies within the text so that Smart State discourses are positioned as the dominant discourse of Queensland.

The analysis will commence with the *Queensland State Education 2010* document then proceed to the *Smart Queensland: Smart State Strategy 2005 -2015* document. As *QSE 2010* was published first, it refers to a number of systemic changes presently evident in schools. *Smart Queensland: Smart State Strategy*, however, is a younger document and refers to programs that are only now being put in place. This sequence of analysis allows a progression to be identified from one document to the next even though *QSE 2010* is specifically focussed on education and *Smart*

Queensland: Smart State Strategy on all facets of ‘Smart State’. Each section will commence with a general overview of the document before proceeding to an analysis of the linguistic and other strategies used to promote this story as the only option for Queenslanders. I have chosen to bold words and phrases in the quotes to highlight their significance to the point being made; this is not a feature of the original text.

4.1 Engaging the ‘smart’ in education: *Queensland State Education 2010*

Queensland State Education 2010 (Queensland. Department of Education Training and the Arts) was published in 1999 as the strategic plan for Queensland public education over the next ten years. The document commences with a multidimensional discussion of change which is used to scaffold the resultant argument necessitating a new strategy for operating Education Queensland schools. Continual references to ‘democracy’, the ‘economy’, and ‘social coherence and stability’ helps to problematise schools as places which are presently not coping with the current climate of change. The solution is presented as the transformation of schools to meet the needs of all Queensland children by applying the framework outlined in this document. The intended audience of *QSE 2010* extends beyond educational professionals to parents and the wider community.

Although multifaceted, the overall goal of the policy is to ensure that the majority of school leavers complete Year 12 with academic levels suitable to ensure continued success in higher education or with an established trade qualification – earn or learn. The ‘New Basics’ are presented as the answer to meeting the needs of a rapidly changing society with the ‘Productive Pedagogies’ presented as the toolkit that will

provide teachers with the necessary qualities to achieve the necessary skills. The need for a new type of worker employing knowledge as a main asset is emphasised with references also made to the post-industrial environment we are leaving and have to leave behind if we don't want to be left behind. The role of information technology and technologically literate citizens is stressed and a commitment made to the development of such a community. *QSE 2010* commences with references to the problems brought about by rapid change and the movement into a knowledge economy, but it concludes with its proposal of how Queensland Education can solve these problems for the success of Queensland's economy and to the rewards of its citizens.

4.1.1 Interdiscursive, linguistic and semiotic analysis of *QSE 2010*

The initial pages of any policy document are vital to convince a reader of the relevance and legitimacy of the text for the purposes of the particular organisation. In this document, the Government uses the inclusive device of 'we' in the initial pages to ensure that the reader develops ownership of the Government's stance and opinions on education in Queensland. To illustrate the movement of the various conceptions of 'we', the opening statement by the Premier is used. Inclusive 'we' implies shared beliefs and understandings; in this document, a unity in all matters educational. This is certainly the case in the first example:

What do **we** want state schools to be like in 2010? (p. 3).

Here, Premier Beattie is aligning himself and his government with the people of Queensland making this a shared concern. However in the next appearance of this pronoun, the first 'we' in the sentence again implies a sense of unity, but in the second part of the sentence the 'we' becomes obscure. Since ownership of the context has already been established through the use of inclusive 'we', the shift to

‘we’, the government, is quite ambiguous and tacitly allows government actions to be included as those of the people.

If **we** in Queensland want access to the benefits of the knowledge economy of the future, **we** have to ensure the education levels and skills of our people are up with the best in the world (p. 3).

Is it everyone in Queensland who has to ensure these standards? Or is it the Government? In what current position does this statement imply schools are at? And still on the same page, ‘we’ is used in the exclusive sense, meaning the Government, when references are made to solving this problem:

We now need to give careful consideration to how **we** fund education in the future (p. 3).

However, by the conclusion of this statement ‘we’ again refers to its inclusive sense of the people of Queensland.

I hope **we** can work together just as diligently to bring the vision to life (p. 3).

From the very beginning of this document, the structure of the text develops camaraderie with the people of Queensland by presenting a situation that ‘we’ all have to deal with, but does this with the ambiguous use of ‘we’ texturing Government actions with those of the people of Queensland. The problems ‘we’ face are shared problems, and the solutions that ‘we’ have come up with are shared solutions. Fairclough (2000, pp. 178, 179) views this use of ‘we’ as “an ambivalence which is an aspect of the promotional character of the genre”. Through analysing one linguistic element (the use of ‘we’) of the Premier’s foreword it is apparent how this story has been promoted as the shared story of all Queenslanders even before the commencement of the formal policy text. This rhetorical device “levels the ground” between the Government and ‘the people’ (Fairclough, working paper, p. 13). This use of ‘we’ is described in Mulderrig (2003, p. 5) as signalling “a process of ‘democratization’ of discourse, of which one aspect is a tendency towards more informal language and the removal of explicit textual markers of power

asymmetries”. Thus, this section of the text also sets up conditions to which teachers are compelled to respond, since ‘we’ have to ensure ‘our’ education in Queensland is of a world standard. Identities are constituted in this section as belonging to the group of Queenslanders who want the best for their State which is “partly a semiotically constituted way of being” (Fairclough, 2005b, p. 3).

The Premier’s foreword, and indeed that of the entire document, is typical of current discourses promoting the need for drastic changes in an organisation by relating global movements to local contexts. The document is predicated on change – its occurrence and inevitability – and is framed in a problem/solution structure. Besides the many inferences to change, the word and its derivatives are used explicitly and constantly throughout the text, impressing this message on the reader. For example:

The world is **changing** rapidly. Teachers, parents and children face those **changes** in schools every day (p. 3).

The structure and character of the family is **changing** in ways that are unprecedented (p. 4).

Students face a diversity of experience of different cultures from the diverse ethnic groups in our society and from technologically and globally driven **changes** to our culture (p. 4).

The use of knowledge in the creation, production and the distribution of goods and services is increasing. So too is the global integration of economic processes. The speed and intensity of the **change** and their mutual interaction are of a new order (p. 5).

Fairclough views such text as “texturing a relation” between change as fact and “policy prescriptions, between what ‘is’ and what consequently ‘must’ be done”.

Characteristic features of this style include,

...the representation of ‘change’ as devoid of social agents...; in terms of modality, categorical assertions of fact, and more specifically of banal truisms...; the representation of change without temporal or spatial specification or limit...; and change represented through a logic of appearances (as a list of evidences) rather than through an explanatory logic which makes casual connections...(2005c, p. 9).

Change is depicted in these statements as something uncontrollable, something beyond an individual’s influence, something that must be accepted with an urgency

that drives us to action. Each statement is written in the present tense which accentuates the ‘now’ – this non-subject specific ‘change’ is occurring right now and therefore needs to be dealt with now. The consistent use of the verb ‘is’ allows for no other alternatives than the scenario presented here and positions the statements as fact.

The problems that ‘we’ are facing have been introduced from the beginning of the document. The solution to this uncontrollable change is first touted in the Premier’s foreword as ‘this strategy’, and positions the Government in “full and solitary control” of problem solving and is “part of the promotional rhetoric of the document” (Fairclough, 2000, p. 178).

This strategy is the way to get the best from these changes that are reshaping the life chances and opportunities of young Queenslanders (p. 3).

‘This strategy’ is developed in the document outlining the role our schools and teachers will need to take.

Rapid change puts stress on the social fabric of communities, creating **the need for schools to promote social cohesion, harmony and sense of community** (p.7).

...the need for schools to **embed themselves in communities in new ways, to work with families, to balance the benefits for society and individuals from education and address the growing disparities in the distribution of wealth** (p. 12).

These extracts flag some of the new regime of requirements for schools and teachers which includes a greater community involvement that will promote social stability. As the social fabric is changing so too are schools asked to work with those changes, reinventing their place and role in their communities which constitutes a ‘new way of being’ for schools.

The ‘newness’ of this strategy is also explicitly reinforced with the adjective ‘new’ used constantly throughout the document, solidly cementing the view that this is

something quite different and definitely not more of the same. Simply an overview of the headings reveals a number of instances:

A new role for government (p. 6)

A new model for helping schools (p. 9)

The New Basics (p. 15)

New pathways (p. 16)

New foundations (p. 16)

New opportunities to learn (p. 16)

A new deal on equity (p. 17)

New standards for central office (p. 24)

The ‘newness’ of this strategy is brought about by the repetition of ‘new’. ‘New’ is textured with standard educational policy rhetoric such as ‘role’, ‘model’, ‘basics’, ‘pathways’, ‘foundations’ and so on. These terms are not new but through the use of ‘new’ they are transformed to a state of ‘newness’. In this sense, ‘new’ acts as a cohesive tie to link ‘newness’, and this is echoed throughout the document.

Another linguistic device used in the document to promote the changes that are occurring as inevitable and therefore the necessity of this new strategy is the inclusion of an ‘if/then’ structure in the form of ‘if we want something to happen, then we are going to have to act in this way for these reasons’. For example:

If we in Queensland want access to the benefits of the knowledge economy of the future, **[then]** we have to ensure the education levels and skills of our people are up with the best in the world. **[Because]** Students who complete year 12 or its equivalent have better life chances. Increasing the number of our young people who achieve this gives them a ‘fair go’ at life’s opportunities and will improve our economic performance. It is the basis of a Smart State (p. 3).

This ‘if/then’ format is used throughout the document when discussing the different areas of change. For example, “If schools are to prepare students for” the changes in sociocultural and economic requirements, then “they need a new and more flexible model for managing learning” (p. 10). This format is used to lay the foundation for

this new framework that will encompass “curriculum, pedagogy and evaluation in providing an effective service to schools and teachers” (p. 10). The above extract also textures together democratic and economic discourses (“better life chances”, “improve our economic performance”) with the effect of achieving, in Fairclough’s terms, relations of equivalence between the two discourses.

The text oscillates between “informing and persuading (‘telling’ and ‘selling’)” (Fairclough, 2000, p. 178). For instance, inevitability of these changes is also implied through the description of facts depicting present conditions which result in declarative statements in the emphatic future tense using the verb ‘will’. This structure is used throughout much of the text. A large excerpt from page 5 is provided as this demonstrates how the argument is built up over successive paragraphs.

[Facts 1]

- Output and employment in new knowledge-based and person-based service industries **are** growing rapidly. They **are** supplanting manufactured goods industries that **are** growing slowly;
- The value of knowledge **has** increased dramatically. For many companies, the value of intangible assets **is** now a more important part of net worth than the value of physical assets;
- Rapid communications across cultures **has** become an essential component of media, business and everyday life.

These trends **are** driving a rapid transformation of the world of work. Jobs **are** shifting from traditional areas of employment like manufacturing, agriculture and resource development and other goods-based industries to communication, service and knowledge-based industries. There **is** an increase in the proportion of the labour force that **is** part-time or casual. There **is** a shift to employment in small and medium size enterprises and self-employment, increases in the proportion of professional and skilled jobs, a decrease in unskilled jobs and an increase in the level of qualification and skills needed to gain employment. The process of work **is** also changing with a decrease in repetitive and routine work and increased workplace reliance on skills, adaptability and problem-solving skills.

[Future 1]

The norm **will** increasingly be ‘portfolio’ careers, with people changing career direction several times in their working life and moving between employment, self-employment and unemployment. Some commentators believe the concept of a job **will** disappear to be replaced by work. Access to work **will** depend for many on the individual’s interpersonal skills - skill at networking and project management and the ability to organise a flexible life and career (p. 5).

The format of this extract presents the facts listed as dot points followed by a further factual account of the effects these changes are having on the world of work. With so many facts presented, the future changes indicated by ‘will’ also takes on the appearance of fact. The different verbs used in this extract work to promote a view that there is a high degree of probability of the future events occurring as depicted in the text. This extract is also indicative of how certain discourses are promoted within the policy while others are marginalised or excluded. For example, a discourse of ‘portfolio careers’ is promoted, marginalising the ‘traditional full time job’. This format of ‘informing and persuading’ is replicated on other pages, as the following two excerpts illustrate.

[Fact 2]

Information technology **is** the technical construct of the knowledge economy.

[Future 2]

Students **will** need basic skills in information technology to transact business and to work in the future (p. 6).

[Fact 3]

Completing school or its equivalent adds value to the competitiveness of individuals and the Queensland economy...

[Future 3]

Individuals seeking to gain post-school qualifications **will** increasingly require Year 12 to gain entry (p. 15).

By stating facts (although fact 3 needs supporting documentation to be called a fact), the validity of the next statement regarding future actions is implied. The emphatic use of ‘will’ that portends the action is going to take place used in these statements, is consistently employed throughout the document:

Schools **will** need to help students develop the skills and knowledge for the knowledge economy, lay the foundations for lifelong learning and ensure that students reach their optimal potential (p. 6).

In schools, learning **will** be transformed. Teachers **will** no longer be the gatekeepers of knowledge in a teacher-centred classroom (p. 6).

Quality schools **will** divest themselves of traditional industrial age and bureaucratic restraints to reinvent as dynamic ‘learning organisations’ in ‘learning communities’ (p. 10).

For schools, this **will** mean increasing the completion rate for Year 12 from 68 per cent in 1998 to 88 per cent in 2010. This **will** contribute to growth in school participation and participation in postschool Vocational Education and Training (VET). Secondary school enrolments in Queensland **will** need to increase by 23.5 per

cent over the period to 2010 (p. 15).

Schools and teachers will change to align with the demands of a knowledge economy. These statements enforce inevitability, there are no other choices presented. These statements also explicitly and implicitly identify some of the new discourses that teachers and schools are meant to be enacting, for example, the development of **lifelong learning skills**, teachers as facilitators in a **student-centred classroom** (if this is the implied result of ‘not teacher-centred’), and the materialisation of new ways of organising learning (into ‘**learning communities**’).

That schools are left with little choice can further be seen in statements where the auxiliary verb ‘must’ is used to express a modality of obligation. For example:

...the approach taken by different schools **must** match the characteristics of their communities, schools **must** be flexible enough to accommodate the individual learning needs of different students, and the curriculum **must** be sufficiently forward looking to anticipate their future life pathways and needs (p. 9).

Community expectation for learning that prepares students for the complexity of modern life means teachers **must** continually renew their pedagogy and skills (p. 9).

Professional development **must** target the skills needed for change and to deliver quality outcomes (p. 9).

Schools **must** analyse, weigh and negotiate community needs (p. 11).

Schools **must** seek new and innovative means of supporting students, taking account of individual needs (p. 17).

Through the use of verbs the text has been presented as facts with inevitable consequences that dictate specific responses. Again these statements continually flag the ‘new’ discourses that teachers should be enacting, for example, **collaboration** with communities, **flexibility** to manage change, the accommodation of **individual learning needs** and styles, and a **futures focussed curriculum**. Individually there is nothing new about these discourses. However, when configured together they constitute the new nodal discourse of a knowledge economy as described in chapter two. The words are not new but when combined together they transform into a discourse of ‘the future knowledge worker’. These are not discrete skills, they reflect

a ‘style’ of the new knowledge worker, identifiable in the nodal discourse of a knowledge economy (Fairclough, working paper, p. 14).

Another discourse promoted throughout the document is that of **information and communication technology** (ICT) which must be adopted into schools with all teachers proficient in its use. ICTs are put forward as one of the solutions for moving Queensland schools into a knowledge economy. Addressing teachers, the document states that they “need mastery of and access to information technology to manage the learning of their students” (p. 6). The students also need ICTs to be able to “work in the future” (p. 6). The case for competency in ICTs is presented by stressing the “threat” of “global competition” to our “national integrity” with information technology placed as the villain being “prolific” and “untrustworthy”:

Now information technology has put paid to the capacity of any government to protect its industries and economy from competition, or to control the flow of global capital into and out of the nation, or to limit the nature of the values children will learn (p. 6).

Due to this threat, “new skills of **critical analysis**” are also required “for students to sharpen their awareness” (p. 6).

The framework for developing these necessary skills is introduced a third of the way through the document.

The framework should be based on the *New Basics* required for work and social life of the future; recognise that P - 12 is a continuum; that different imperatives affect primary, middle and upper secondary schooling; and that completing Year 12 at an internationally recognised standard is an aim for all students (p. 10).

In reforming Queensland education, the document continues laying the foundations for change once again with the emphatic use of ‘will’ to depict the new skills that will be developed through this framework.

They will develop an *ability and desire to learn based on **critical thinking** and independent action* - a foundation for **lifelong learning** in both formal and informal ways and the pursuit of aesthetic, artistic, scientific and social discovery (p. 12).

Once again the discourses that teachers should be embodying and engaging are reiterated – the development of critical thinking, and a passion for learning across the spectrum of curriculum areas. By focussing on these skills teachers will develop lifelong learners who can combine the creative aspect of the Arts and Humanities with critical scientific investigation, which promotes a climate of innovation and discovery.

A significant purpose of *QSE 2010* is the progression towards ensuring that potential school leavers are either ‘learning or earning’ with the document setting the foundations for this change. The discourse utilises global examples that are disseminated to the local context. The value of completing school is discussed in economic terms – boosting the national, State and regional economies and ensuring competitiveness on the global market; increasing chances of being employed; and as a necessity to gaining post-school qualifications. The necessity of this change is presented as a result of the crisis in education that is occurring since “Queensland lags far behind the leading OECD countries and the gap is widening” (p. 7). Using quantitative data collected from OECD countries the percentage of students completing Year 12 in Queensland needs to increase “from 68 per cent in 1998 to 88 per cent in 2010” (p. 7).

Within many of the excerpts included in the above discussion is a discourse of ‘community’ and the ‘development of community’. However, as has already been indicated this is frequently positioned in the same sentence or paragraph with statements of economic advancement and prosperity where education is touted as the cure for economic inequalities and charged with the responsibility for revitalising and transforming communities. The role of education is described as ensuring that:

...the opportunity is there for the least able and those adversely affected by social and

economic change to be active in the life of the community (p. 13).

In fact the Queensland education system (its schools and teachers) will be:

...helping revitalise communities disrupted and impoverished by social and economic change (p. 30).

Education will equip children with the necessary skills for changing times but in doing so will also be the panacea to solve the social inequalities that exist in contemporary communities. In the following extract, citizenship, community, economics and political life are clustered together as one discourse of ‘cultural identity’ linking our cultural and civic pride and identity with a work ethic and schooling purpose.

Preparing students as citizens to ‘ride the rapids of change’ means they should acquire the ability and motivation to participate in and shape:

- **Community life**, which values **civil society** that network of relationships, neither government nor market, through which diverse groups interact on a basis of trust for the common good, and social capital - the fuel of civil society. This is the basis for social cohesion and fairness.
- **Economic life** requiring a commitment to the *New Basics* and a broad approach to vocational learning.
- **Political life** embracing **civic education** for voice and choice.

Schools will develop a commitment to and belief in *cultural identities* for young Australians that value the diversity of life experiences in Australia and our position in a globalising world (p. 12).

This extract positions the democratic imperative with an economic rationality, a texturing of democracy with economics which results in a ‘relation of equivalence’ between the two (Fairclough, c. 2004). Fairclough (c. 2004, p. 14) terms this a ‘colonization-appropriation dialect’ where existing elements are inserted into a new context “working it into a new set of relations with its existing elements, and in so doing transforming it”. Within this document, a discourse of ‘civic pride’ and democracy is used to disseminate these new discourses to schools and teachers yet it ignores the post-industrial discourse¹⁹ of social welfare. This excerpt also explicitly identifies the purpose of these changes as responding to ‘a globalised world’ and is

¹⁹ Discourses of social welfare were prominent in capitalist countries in the post-industrial era. These discourses are changing to “include discourses about recipient’s obligations to the state” (Green, 2002).

an example according to Fairclough (c. 2004, p. 15) of the “interdiscursive hybridity of texts, the mixing of ‘external’ with ‘internal’ discursive elements”. A ‘globalised world’ is being used as one reason for achieving the goals of a ‘Smart State’ (Fairclough, c. 2004, p. 9).

The nature of the professional development that teachers will need focuses on the changes that are occurring in Queensland society as a result of a globalising knowledge economy. The skills needed to work in this new economy are explicitly stated as skills that teachers must be developing in their students as the following and previous extracts have illustrated.

Professional development must target the skills needed for change and to deliver quality outcomes (p. 9).

...They include building **the new skills needed for work and a social life in the information age**, providing a **foundation for lifelong learning** in formal and informal settings, **problem solving** and **critical thinking** and **developing the flexibility to manage change** (p. 12).

As a result of these changes, professional development for teachers needs to be continuous, responding to the “complexity of modern life” and the requirement to address individual needs in a non-discriminatory fashion (p. 9). These arguments focus on change and the ‘newness’ of this solution (“shift to a focus”, “a new approach”, “new tasks”, “continually renew”). Fairclough (c. 2004, p. 10) views this type of “rhetorical structure” as constituting “a frame within which diverse discourses are articulated together in a particular way, within which relations are textured (textually constituted) between these discourses”. Fairclough’s concern here lies in “the placing of expressions which are associated with different discourses in relations of ‘equivalence’ through listing and other forms of paratactic connection”. Thus in the text above relations are textured between ‘new skills’ and ‘work life’, ‘social life’, ‘information age’ and the stated foundation skills for a knowledge economy, illustrating the discursive construction of power relations (as also

discussed in Taylor, 2004). By continually placing these expressions together in the text, we come to associate these individual skills in a new configuration impacting on our social and work lives.

The processes employed in Smart State policy to progress it as the discourse “selected for incorporation into the strategies of social groups” (in this case Queensland teachers) is viewed by Fairclough as a form of hegemonic struggle (Fairclough, 2005e, p. 933). Smart State discourses have been organised around a dominant nodal discourse of a knowledge economy which acts to establish “relations between other constituent discourses” (Fairclough, 2005e, p. 933). Woven throughout the text are the ‘constituent discourses’ that are a part of the nodal knowledge economy discourse - *lifelong learning, problem solving, critical thinking, networking, collaborative partnerships* and teachers as *managers*. Fairclough (2005e, p. 933) states,

The success or failure of strategies depends on various conditions, some of which have a discursive character: for instance, some discourses are more ‘resonant’ than others...better able to capture and encapsulate the experiences of social agents, better able to complement or organize existing discourses. The success or failure of strategies also depends on the resilience, resistance or inertia of existing organizational structures, including how well embedded existing discourses are.

This analysis has highlighted some of the interdiscursive, linguistic and semiotic strategies employed in *QSE 2010* to promote the view that there are no alternatives to the ‘Smart State story’, and that the changes occurring are inevitable by locating Smart State discourses within the nodal discourse of a knowledge economy and globalisation.

4.1.2 Discussion of *QSE 2010* policy analysis

The analysis shows that a number of interdiscursive, linguistic and semiotic devices have been employed in order to emerge the document into a hegemonic position. For example, ‘we’, is a linguistic strategy used to position the document as the view of

all Queenslanders, not just those of the Government. ‘Will’ and ‘must’ are used in statements that present conditions as inevitable. Potentially contradictory discourses are dealt with, not by excluding them from the document, but by blending or ‘texturing’ them into a discourse of economic rationality. Taylor (2004, p. 440) discusses this strategy (with reference to Fairclough’s work) as governments using ‘promotional genres’ to bring about change so that by their ‘one-sided’ communications “public perceptions are managed, new discourses are articulated and become institutionalized”. I have also shown how the document positions itself as the story of the future for Queensland Education, a process Fairclough (2005a, p. 11) describes as a ‘re-imagining’ of, in this case, the state of affairs for Queensland. He views this as a discursive process and an essential strategic project in the reformation of systems and organisations. Furthermore he maintains that hegemony cannot be established once and for all with just one instance but “must be ongoingly sustained and struggled for under shifting circumstances and shifts in the competitive field of hegemonic projects”. A new discourse for Queensland education is presented and argued for in this document through the texturing together of familiar discourses into one articulation of the ‘new knowledge worker’ for Queensland.

The document describes what will be discernible, that is, how it is intended that the plan will be enacted and inculcated through new ways of ‘being’ - **creative and critical thinkers; independent and flexible workers; problem solvers**; efficient users of **ICTs, lifelong learners in the cultural, scientific and economic spheres**, ; teachers who **plan for individual needs and interdisciplinary learning in student-centred** classrooms and are supported through ongoing professional development - and new ways of ‘doing’ for Queensland schools - school/business **partnerships**;

collaboration between schools and their communities; **multiple pathways** for students to post-school destinations; the development of **learning communities**; a focus on **futures**; a *Professional Standards Framework* for all teachers in State schools which outlines the abilities they need to provide relevant and worthwhile learning experiences for students'; teachers employing the *Productive Pedagogies*; **school-based management**; and individualised responses to suit the needs of communities, students and their families. This will occur within a flexible and adaptable system that has been reinvented as a dynamic "learning organisation" ready to merge into the knowledge economy with its "new demands, new markets, new information and new strategic goals" (p. 10). It will be materialised through the development by each school of "a clear educational rationale for the distinctive approach" taken to address changing needs in their communities with schools being "fully accountable for the achievement of system objectives"; and "efficient managers of resources" (p. 19). Thus, semiosis has figured in this document as a new way of being for schools and teachers with the constitution of a new identity for both within a knowledge economy.

QSE 2010 has laid the foundation for change and commenced to show how the new education system will appear. Particular knowledges have been made relevant in the text by positioning them in a global and knowledge economy context, and by providing evidence of a changing world. The discourses that have been identified were not randomly chosen. The message that these are the discourses that Queensland teachers need to be adopting into their practices to effectively work in this new era of education are repeatedly made as evidenced in the analysis.

In the following section I conduct a similar analysis of *Smart Queensland: Smart State Strategy 2005 – 2015* in order to identify some of the discourses circulating throughout the broader context of schooling as a State organization that is helping Queensland to become more competitive in the global market economy. Any similarities in discourses between the two documents will show how the reiteration of discourses throughout a range of State-produced texts helps to position the Smart State discourses as hegemonic. It will also provide another site at which to identify State discourses that teachers in schools may be accessing.

4.2 The development of a smart Queensland: *Smart Queensland: Smart State Strategy 2005 – 2015*

Smart Queensland: Smart State Strategy 2005 – 2015 (Queensland. Department of the Premier and Cabinet, 2005) is a continuing discussion of the Government's Smart State plans. The purpose of this document is not to introduce the 'Smart State' but to promulgate and progress it into the next decade, stressing the continual need for advancement in these goals. For these reasons, only a small portion of the text relates to the emergence of the Smart State discourse. In this document, strategies are outlined that will position Queensland as a competitive player on a global scale, developing it as an innovative and technological State, away from one that relies on its "rocks and crops economy" (Beattie, 2004). The strategy promotes the development of new industries and new jobs so that Queensland remains competitive in a global technological economy. Education from its earliest years through to higher education and science and technology institutions producing active researchers is a focus of this plan. Industries such as aviation, tourism, IT and biotechnology are used as examples of Queensland's innovative progress and areas of future development.

This version of Smart State strategy is introduced as a result of a two month period of consultation within the Queensland community that took place during 2004, and positions the discourse as emerging from the issues, concerns and opinions of Queenslanders, a reweaving of ‘our’ discourses into the strategy of ‘Smart State’. The texturing of statements resultant from the consultation process within this strategic vision is emphasised by the inclusion of direct quotes from selected submissions appropriately placed throughout the document. Descriptions of a changing world are textured with prescriptions for addressing these challenges and the quotations taken from the responses to the consultation process. The quotations are used to personalise the document demonstrating how ‘Queenslanders’ are thinking and how this thinking is being addressed by the solutions provided by Smart State strategy. Fairclough (2000, p. 180) describes this technique as a “technology for legitimizing the Government [to speak] for the public”.

This document was produced for all Queenslanders, not a specific group, and constantly refers to the progress of this plan as of benefit to the entire Queensland community and so requiring the efforts of every Queenslanders. It explicitly develops this inclusion early in the document, through relations of equivalence and relations of difference (Chiapello & Fairclough, 2002). When discussing relations of equivalence and difference, Fairclough draws upon the 1985 work of Laclau and Mouffe.

They theorize the political process (and ‘hegemony’) in terms of the simultaneous working of two different ‘logics’, a logic of ‘difference’ which creates differences and divisions, and a logic of ‘equivalence’ which subverts existing differences and divisions” (2000, pp. 182, 183).

Fairclough (2000, p. 182, 183) suggests that this can be used as a “general characterization of social processes of classification” and “can be applied specifically to the textual moment of social practices” thereby showing “the

integration of discourses with genres”. The following extract contrasts different groups in the Queensland community while using the difference to unite in a common purpose.

Smart Queensland reaches out to everyone: to the farmers across this vast State of ours, responsible for making Queensland such a great agricultural success; to today’s parents of tomorrow’s leaders, for whom education and opportunity are so precious; to scientists and artists, teachers and entrepreneurs, community workers and business people, plumbers and doctors. Whether you see yourself as a leader or team player, as a thinker or doer, whether you are an employee, a business owner, university academic or public servant, Smart Queensland needs you (p. 7).

It is also interesting to note the concluding phrase of this extract which is imitative of the US WWI recruitment posters “Uncle Sam needs you”²⁰ and implicitly accentuates the urgency of the changes promoted in this strategy while emphasising the inclusivity of the strategy. This integration of a promotional genre with the discourse of a ‘Smart State’ is considered by Fairclough as the “textual work of controlling and regulating social relations and interactions” (Fairclough, 2000, p. 183).

This analysis will first outline the broad structure and message contained within this document and then focus on two sections, the *Foreword from the Premier* (pp. 2-3), which establishes the Government’s argument for the necessity of change and reform in Queensland; and the section specifically relating to education, *Building the foundation for a sustainable society* (pp. 25-28), which details the requirements being placed on the education sector.

4.2.1 The Message of Smart Queensland: Smart State Strategy 2005 – 2015

The document commences by highlighting the progress the State has made toward its goals, and its future challenges while warning of the disadvantages of not continuing to be innovative and progressive in these fields. In this section, general

²⁰ Examples of these posters can be viewed at <http://www.loc.gov/exhibits/treasures/trm015.html>.

achievements that have occurred as a 'result' of 'Smart State' policy to date are featured. It is structured in the form of achievements to challenges; what 'remarkable improvements' have been made, to the future problems we 'will' face. Within the text, 'we' is used interchangeably between 'we' (the government) and 'we' (the people of Queensland) with no clear indicators of nomination. Fairclough (2000, p. 179) considers this an aspect of the "promotional character of the genre" as 'we' the people need certain changes to be made, while 'we' the Government provides the solutions with 'Smart State' strategy turning these challenges into opportunities.

The next section outlines the strategies for success. The strategy involves an all-encompassing investment in the elements of research and development; commercialisation and entrepreneurship; technological diffusion; collaboration; networks and alliances; connectivity; knowledge and skills; and a diverse, dynamic and creative culture (Queensland. Department of the Premier and Cabinet, 2005, p. 9) with the aim of providing the foundations for innovation to be established while increasing the rate of innovative responses. Furthermore the document promotes continued development of Queensland's creativity focus especially within the Arts area. The strategy involves development of the infrastructure, the people and the processes to achieve these goals within a program of sustainable development. This is a positive section promoting Queensland and the skills of Queenslanders.

The greater proportion of the remainder of the document is then spent in describing achievements and outlining new initiatives. It provides solutions in response to changing times (although it is implied we must flow with these solutions or face a devastating future). Here the initiatives are listed and outlined with the included

infrastructure that ‘will’ lead to their materialization supported by arguments on the benefits of these initiatives.

4.2.2 Foreword from the Premier (pp. 2-3)

In this section the Premier’s foreword will be analysed as this is a useful overview of the positions taken within the document and the reasoning behind these positions. This analysis is supported by references to the actual policy text to illustrate how the message of this section is reiterated and reinforced throughout the entire document.

The theme of this document is presented in the Premier’s first sentence:

Continue to innovate or stagnate (p. 2).

Here relations of difference are also established between those who are innovative (the good guys) and those who are not innovative (the bad guys who will cause us all to stagnate). This constructs a ‘bifurcation’ of Queenslanders into ‘innovators’ and ‘stagnators’. The ‘stagnators’ are those who will impede the progress of Queensland into a competitive position in a knowledge economy – they will cause the standard of living in Queensland to fall. Thus people who are not innovative are maligned and, in the text, shoulder the responsibility for the downfall of Queensland (Fairclough, 2005a, pp. 5, 6).

Innovation is a part of the nodal discourse of the knowledge economy and is apparent in many policy documents and current political speeches²¹. Furthermore, throughout the document, what it means to be innovative is explicitly and implicitly stated, for example, the inclusion of **technology** (p.2); a new spirit of **enterprise**

²¹ For example, the Foreword by England’s Prime Minister, Tony Blair to a Department of Trade and Industry White Paper in 1998 (discussed in Fairclough, 2005c, p. 8) where innovation is discussed as one condition the Government must promote.

(p.2); “a culture of **discovery, creativity, diversity** and **risk-taking**” (p. 4); to “work **collaboratively**” (p. 5) and with **sustainability** (p.12).

The discourse of innovative enterprise (and economics) is textured throughout the document with another discourse of ‘lifestyle’. The elements of a ‘Smart State’ are “articulated together in a particular way”, texturing an economic discourse with a lifestyle discourse (Fairclough, c. 2004, p. 10).

We instinctively look for ways to improve every aspect of our lives (p. 13).

This will give Queenslanders the best return for a healthy economy, environment and society (p. 14).

By combining universality (“we [all] instinctively look”) with the desire for ‘lifestyle improvement’, the Smart State discourse is being connected with ‘everyday values’ (Fairclough, 2000, p. 185).

It is also within neoliberal discourses that economic growth, innovative practices and enhanced lifestyle are textured together. Economic discourses (‘improved productivity’, ‘global competitiveness’) are articulated with social discourses (‘social stability’, ‘the chance to learn, discover, and to achieve’). This relationship is established on the front cover of the document which includes the following quote:

The Queensland Government has a vision of a State where **knowledge, creativity** and **innovation** drive economic growth to improve prosperity and quality of life for all Queenslanders.

Smart State strategy is the means to achieving a desirable lifestyle which sets up relations of equivalence between the ‘innovative’ changes outlined in the policy and “quality of life for all Queenslanders”. ‘Knowledge’, ‘creativity’ and ‘innovation’ are articulated together with ‘economic growth’ and ‘quality of life’ setting up particular relations that are a part of the nodal discourse of a knowledge economy (Fairclough, c. 2004, p. 10). Discourses of creativity, innovation and knowledge

production are introduced from the front cover of this document, reiterated in the Premier's foreword and continued in the policy text.

Although Smart State discourse stresses the importance of knowledge, creativity and innovation to drive economic growth with the emergence of new industries, it also acknowledges the value of existing industry while highlighting the advantages of new technologies within these industries. This strategic direction of Queensland is thus presented as a new articulation of already existing discourses. The Premier's foreword also positions this new strategic document within the existing framework of prior Smart State achievements.

When I first put the Smart State Strategy in place in 1998, we focused on broadening the economy from just a rocks and crops culture to create new industries and make traditional industries smarter. We worked hard to make Queensland a centre for new technology industries, from electronic games to biotechnology, and created an aviation industry with 5000 new jobs. We have expanded Queensland's export performance and reformed our education system. Queenslanders who used to go interstate or overseas to gain exciting jobs are now staying here or returning to Queensland (p. 2).

However this 'enviable' lifestyle of Queensland is soon held to ransom, as Premier Beattie continues to explain the downside of a lack of continued change and innovation.

If we don't continue to change, the Sunshine State **will** still be a comfortable place in which to live. But we **will** be overtaken by those states and countries that are willing and anxious to change and embrace the opportunities the future offers. **If** we don't continue to change, Queensland **will** become a technological and education backwater, slumbering in the sun.

If we don't change, we won't create the jobs of tomorrow. Unemployment **will** rise and once again we **will** start exporting our brains interstate and overseas. **If** we don't change, our standard of living **will** for the worse (p. 2).

In this foreword, Premier Beattie has presented his argument using contrasts from actualities to imaginaries (Fairclough, 2005a), from positives to negatives using an 'if/then' format and the emphatic use of 'will' to indicate action that is going to occur. If Queenslanders do not accept and embody Smart State policy then the climate will still be great but there will be little else that is good about life in the 'Sunshine State'. The argument is presented as offering choice, but only if an

“educational backwater” could be considered a viable option. We can “innovate or stagnate”. Fairclough (working paper, p. 13, 14) views this style of text as oscillating “between description and prescription”, texturing a ‘pervasive’ discursive strategy which he calls the “‘TINA’ (‘there is no alternative’) strategy: ‘this is the way the world is, so this is what we must do’”; as well as a rhetorical device used to persuade.

In fact, Premier Beattie in his foreword attributes the present positive attributes of life in Queensland to the innovative Smart State initiatives already in place which then justifies the introduction and continuance of this policy, and affects it as the new hegemonic discourse in Queensland.

We have a brilliant environment, great climate and an enviable lifestyle.

Our economy is booming, and our unemployment rate is the lowest in more than a generation. Much of this has come about as the result of the first stage of my Government’s Smart State Strategy (p. 2).

Within this frame of past achievements, the questions of change are again posed:

So why do we need to continue changing? Why do we need to move on to the next phase of Smart State? (p. 2).

These questions texture the emergence of Queensland’s new strategic plan paving the way for more changes.

4.2.3 Building the foundations for a sustainable society (pp. 25-28)

In this section “the foundations for a sustainable innovative society” are described as being built through the education system. Queensland education is being redesigned with a focus on the individual learner, high levels of achievement, and links between education and industry. To show that the values propounded by the Government are shared values, the text employs a number of devices positioning the government as the authority. For example, one strategy that is used to show that these are shared values is the inclusion of two direct quotes from the consultation process.

Formal education will become integrated from the very early Primary years, through Secondary and Post-Secondary education and the scientific method will be a core feature of all education, to provide for problem-solving, stimulation of curiosity and creativity, balanced decision-making and involved citizenship. (Submission to Queensland's future building on the Smart State from Dr Joseph Baker, Chief Scientific Advisor, Department of Primary Industries and Fisheries) (p. 25)

Note in this example the use of 'will' and the inclusion, explicitly and implicitly, of key terms and concepts, for example, creativity, problem-solving, balanced decision-making (collaborative?), early primary years (Prep?).

The first sentence in this section establishes the relationship between education and 'economic growth'. It also positions creativity and innovation alongside knowledge and skills, as necessary in this new society and as discourses that teachers need to embrace.

Through the Strategy's long-term investments in people and places, the Queensland Government will shape a society that uses **knowledge, creativity, innovation** and skills to stimulate our enduring economic growth (p. 25, paragraph 1).

This statement employs the emphatic modality of probability (the Queensland Government will...). This pattern is repeated throughout this section (indeed throughout the entire document) and positions the Government as the experts, the provider and the rescuer from imminent decline into stagnation. This statement also textures together knowledge, innovation and creativity with economic growth, again establishing a relation of equivalence.

Reference is then made to the effects of a changing world.

...In an innovative society, people **will** have several changes of career; they **will** no longer be exclusively tied to a single employer or industry. They **will** enjoy the benefits of new skills and capabilities through education. They **will** be avid life-long learners, returning to education - formal and informal - for their entire life (p. 25, paragraph 2).

This excerpt again demonstrates the emphatic use of 'will' to imply that there are no other options. Now the Government is portrayed also as the seer who can predict the future. In fact, the hegemony of the document relies on the Government's ability to

portray themselves in this manner, with this story the only possible version of events and outcomes. Within this discussion of change, the government foresees the future. This ‘story of the Smart State’ as it has been developed, the imagining of a future Queensland and a new education system, uses a discursive process to rhetorically eliminate all other arguments.

In paragraph three, the education strategy is related to the position of the OECD, a nodal discourse adopted by the Queensland Government to support and justify the positions it has adopted.

In 2001, an Organisation for Economic Co-operation and Development (OECD) survey concluded that ‘high levels of education and literacy are the key principal components demanded in the knowledge economy’ (p. 25, paragraph 3).

This quote from the OECD establishes education as a necessary element for success in a knowledge economy and continues to scaffold the hegemonic position of Smart State strategies for change and reform in education.

The text then returns to a specific discussion of Queensland’s education system and the implementations that are in place establishing a link with previous (but still current) Smart State education policy. This latest version of the strategy has emerged through the location of this discourse within the field of prior Smart State discourses (Fairclough, 2005b, p. 11) making direct links with the *Education and Training Reforms for the Future* (Queensland. Department of Education Training and the Arts, 2002a) first proposed in QSE 2010.

Queensland’s education system is being rebuilt from the ground up, across the early, middle and senior phases of learning as part of the Government’s **Education and Training Reforms for the Future** initiative that started in 2002... Smart Queensland will build upon the gains made by **Education and Training Reforms for the Future** (p. 25, paragraph 4).

The necessity of these current changes is explicated as education is:

...being reshaped to cater for students’ **individual needs**, provide more **diverse and flexible learning pathways**, inspire **academic achievement**, and equip students for the **world of work** (p. 25, paragraph 4).

Again repetitions of earlier discourses are textured into this paragraph, for example, meeting individual needs, diversity, flexibility, and high levels of knowledge that directly relate to work in a knowledge economy. Although the benefits of Smart State strategy for the good of all Queenslanders is continually reiterated throughout the document, when discussing changes to Queensland's education system, the argument focuses on economic and labour factors, texturing these with a discourse of welfare. Drastic changes need to occur to the education system to "equip students for the world of work" so that they can become the "future **entrepreneurs** and wealth creators" while also considering "students' individual needs" (p. 25). This will be assisted through collaboration between "industry and the education system" (p. 26).

Paragraph five explicates how the *Education and Training Reforms for the Future* (Queensland. Department of Education Training and the Arts, 2002a) are being met and will continue to be met with the new reforms. This paragraph textures the current educational context with the new requirements. Thus, "a firm grounding in the basics of reading, writing and mathematics" (current) will continue but will start "in the new Preparatory Year" and will also include "**new skills for the information age**". The materialisation of these changes is discussed through updated syllabuses, technologies in schools, and "support" for the "dedicated" teachers.

In paragraph six, the modality shifts from probability to obligation with the use of 'must' and 'need to'. The paragraph also continues to reinforce the new knowledge economy discourses teachers should be engaging with, for example, **enterprise, entrepreneurs, wealth creators, and networks.**

We also **need to** raise the profile of enterprise education. In a world where many

traditional jobs are disappearing, we **need to** encourage all people, but particularly young people, to see themselves as future entrepreneurs and wealth creators. Networks between industry and the education system **must** be developed so that our education system responds to the requirements of an ever-changing business world (p. 25-26, paragraph 6).

This shift paves the way from how things are and are going to be (will), to what needs to be done (must), to the remaining segments of this section which outlines the Government's plans for education in the 'Smart State' in three dot points with explanations of approximately a half page for each.

The new key initiatives in education of *Smarter Learning*, *Smart Classrooms* and *Smart Academies* are now introduced. In these paragraphs the emphatic modality of 'will' is mostly employed.

Smarter Learning involves a uniform approach to assessment and reporting across the State, setting benchmark levels for all key learning areas from Years 1 to 10, and will provide "greater clarity about what must be taught and how it is assessed and reported" for teachers and parents. This "consistent approach to assessing and reporting" employing "testing at three key points in the Preparatory to Year 10 years" is one initiative to operationalize Smart State policy. In this section a contrastive relationship is established between the current system and the 'new' one to be introduced.

For parents, this will mean easy-to-read reports that show how well their children are performing compared with others and with what is expected at their year level. At present, it can be difficult for parents to clearly understand their children's level of achievement (p. 26).

This is the only paragraph in this bulleted section that explicitly finds fault with the present system, where the new method is offered instead of the old. However, implicitly, other excerpts in this section also establish failure of the present system, for example:

For students, there will be more in-depth learning to help them gain the knowledge, skills, attributes and values necessary for their future (p. 26).

For schools, there will be greater clarity about what must be taught and how it is assessed and reported, and better feedback about students' performance (p. 26).

For teachers, there will be a clearer curriculum that has stronger and more explicit connections to teaching, assessing and reporting on student achievement and progress (p. 27).

The use of comparative terms, in this case, 'more', 'greater', 'clearer', and 'stronger' are used to contrast the current system with the new reforms and implicitly position the new reforms as the best option. This initiative is presently being trialled and is set to be in place in all Queensland State schools by 2008²².

Smart Classrooms involves the networking of all Queensland schools thus opening up the classroom to the wider global community by allow more electronic communication between teachers, parents and students. The provision of laptops or personal computers to 1500 teachers as a trial during 2006 is promoted as enabling teachers to access the "information age" and align their "tools of the trade" with those "readily available and accepted by knowledge workers in other industry sectors" (p. 27) recontextualizing the Smart State discourse from business and industry sectors to education.

Smart Academies are an initiative to attract the brightest Senior students in the Science, Maths and Technology fields as well as the Arts area to two new academies, located in the Brisbane metropolitan area, that are focussed on providing a suitably paced progressive education at a world standard. The building of these facilities started in 2006 evidences the materialisation of the 'Smart State' in terms of infrastructure but not yet in terms of producing a new 'type of worker'.

4.2.4 Discussion of *Smart Queensland: Smart State Strategy 2005 – 2015* policy analysis

²² This information and more on the assessment and reporting framework can be found at http://education.qld.gov.au/qcar/pdfs/qcar_white_paper.pdf.

Smart Queensland: Smart State Strategy 2005 – 2015 celebrates successes of the strategy to date, and uses these successes to pave the way for new initiatives and change that ‘must’ be adopted for the continued prosperity of all Queenslanders. The Smart State story is ‘colonised’ into each area of operation of Queensland (Fairclough, 2005a) so that its emergence into education is discursively mirrored in other areas of operation. In this sense, teachers are coming into contact with Smart State discourses not only through education policy but through multiple modes of operation within their daily lives (for example, through the various modes of media).

The ‘Smart State’ discourses have employed global resources, such as discourses surrounding a knowledge economy and globalisation, as well as supporting its position with reference to information emanating from the OECD to re-position its education system. Moreover, the document is based on problems facing Queensland due to global competition.

It’s an imperative if we are to outperform our global competitors (p. 10).

Smart State strategy contains the key initiatives to address and overcome this global competition.

It’s an investment in all of the elements of an innovative society to secure our future prosperity (p. 10).

Thus the key initiatives are explicitly legitimized through recourse to the looming threat of global competition in a knowledge economy and in an information age. The benefits of an ‘innovative society’ are established as a given, not as potential benefits. It is interesting to note here the similarities between this document, especially Premier Beattie’s introduction, and the foreword by England’s Prime Minister, Tony Blair to a Department of Trade and Industry White Paper in 1998 (discussed in Fairclough, 2005c, p. 8). Both focus on world change, new technologies and the need for innovation to back their policies. Both position their

economies in a global knowledge economy that requires the competitive edge to succeed. Both discuss a global economy as fact and their ensuing solutions as ‘musts’. Smart State strategy is one government’s response to meeting the challenges of changing world conditions but these conditions are causing similar responses by other governments globally.

Change is presented as a necessity for global competitiveness and economic prosperity; prosperity that, it is stated, will enhance the lifestyle of all Queenslanders. As chapter two described, some authors would claim that this is evidence of a neoliberal discourse, indicated by the absence of ‘other’ globalisation discourses as outlined in the literature review. For example, a neoliberal view stresses the advantage of improved economic conditions for the welfare of all, ignoring discourses of a widening gap between rich and poor, the educated and uneducated. Indeed, Fairclough (2001a, p. 6) believes that “the neo-liberal political project of removing obstacles to the new economic order is discourse-driven”. Semiotically the discourse of change presented in this document has been legitimised by the exclusion of other ways to view these issues.

Throughout the document the reasons for change are textured between examples of Smart State initiatives that are already underway and plans for new developments. There is also a strong prescriptive element – what will happen, what must be done, how to do it. These descriptions are explicitly stated. Implicitly we are lead to believe that there is a crisis in our system, particularly our education system. The Government positions itself as the expert, the authority who knows how to lead us into prosperity. The document progresses from description to prescription with statements that function as actualities with the aim to hegemonise the strategy.

Smart Queensland: Smart State Strategy 2005 – 2015 has continued a discourse of collaboration, networks and partnerships between schools, their communities and industry as established in *QSE 2010*. The importance of lifelong learning and the development of necessary future skills such as ICT proficiency and critical thinking can also be identified repeatedly. The skills of creativity, innovation and high knowledge levels are not only reiterated in this document but continually emphasised within new discourses of enterprise, entrepreneurialism and risk-taking.

4.3 Conclusion

The analysis of two key Smart State policy documents conducted in this chapter shows the development of the Smart State discourse in Queensland and the interdiscursive, linguistic and semiotic strategies used to promote the Smart State through policy. The two documents analysed illustrate the ongoing process of ‘re-imagining’ ‘Queensland’ as the ‘Smart State’ which Fairclough (2005a, p. 11) maintains is an important element in the political project of reform. The analysis shows that ‘Smart State’ is not a static strategy but a continuous discourse that is developing and responding to changing circumstances locally and globally. It also shows that the quest for hegemonic positioning is an ongoing project requiring constant iteration and reiteration through a range of State texts.

The two documents were chosen for analysis for the fundamental and key contribution they make to the Smart State strategy, and the direct links they make with the discourses of globalisation and a knowledge economy. The analysis identified a number of discourses common within both documents that are also identified as constituent discourses of a knowledge economy discourse. These discourses individually are not new but are combined to produce this new

configuration that translates as Smart State strategy. These discourses reiterate the skills and attitudes that future knowledge workers are meant to possess and that teachers are meant to be developing in their students. Workers of a knowledge economy, it is claimed in these Smart State documents, will need to develop skills in the following areas:

- problem solving
- critical thinking
- the flexibility to manage change
- calculated risk-taking
- information and communication technologies
- creative thinking
- independent work
- collaborative work
- a spirit of enterprise and entrepreneurship
- innovation
- high levels of knowledge and
- a firm grounding in the basics of reading, writing and mathematics.

Also teachers, as they work with their students, will need to facilitate a learning environment that promotes the following conditions:

- social cohesion
- harmony
- a sense of community
- collaborative work
- learning communities
- student-centred classrooms that individualise learning and allow for diversity

- a foundation for lifelong learning
- a focus on the future
- aesthetic, artistic, scientific and social discovery
- high academic achievement
- different learning pathways
- school/business partnerships and
- school/community partnerships.

Since the aim of this study is to show how a ‘Smart State’ is being built through teachers’ work it is important that these discourses articulated in the policy documents are identified. It is these discourses that are being used as my units of analysis of the fieldwork data where evidence is being sought for their presence in schools and classrooms. The identification of these discourses in teachers’ work will provide a way to see how the ‘Smart State’ is ‘becoming’ more than just policy texts.

This analysis has described the development of Queensland’s Smart State ‘story’ as it emerges as a new discourse and vies for hegemonic positioning within the discourses of all Queenslanders. It has also shown how this discourse is recontextualized into the context of educational policy. Recontextualization of Smart State policy may also be evident in teachers’ work as the policy transforms as a result of the uptake of new discourses. Operationalization of Smart State policy has been viewed as the Government’s vision of the future as well as claims of physical and structural changes already in place. However, operationalization of Smart State policy involves more than visions and systemic changes. It also involves searching for evidence of the uptake of Smart State discourses in teachers’ everyday practices.

The documents analysed have stated how the Government plans for these discourses to be operationalized but that does not mean that the discourses are being taken up into teachers' work.

The question remains that if teachers are not reading these documents, then what is the purpose of such an in-depth analysis to identify the strategies used to promote this future for Queensland in which teachers' work is so heavily implicated? Clearly, there are other mechanisms besides 'reading of policy' that convince teachers to perform State policy discourses. Thus, it is in teachers' work that I search for evidence of the identified 'Smart State' discourses being recontextualized and operationalized, and look for the mechanisms that may facilitate this process. The next chapter will investigate a specific context of teaching in Queensland to determine if indeed Queensland is, at these specific sites, being progressed towards a 'Smart State'.

Chapter 5: Analysis - Field Work

5.0 Introduction

The previous chapter illustrates how two State-generated policy documents deploy particular strategies and tactics towards the enrolment of schools and teachers in the Smart State strategy for Queensland. The analysis in chapter four identifies a range of discourses associated with work and education in a globalising knowledge economy which are common to the two documents. These discourses when deployed through particular semiotic and linguistic strategies, establish conditions for the emergence, hegemony, recontextualization and operationalization of the new Smart State discourses for education. Fairclough describes these elements as necessary moments in the change process as discourse transforms from an imagined future to a discourse that has become a part of what we do and who we are, as well as being evident in the material objects around us (that is, the enactment, inculcation and materialisation of the discourse).

Sending policy documents to schools and other State institutions is common practice for governments wanting to institute change to systems and practices. However, policy documents are simply inert inscriptions and hardly compelling reading for those whose work they are meant to change. The Smart State ‘story’ as depicted in the two documents analysed in the previous chapter is simply a projection of the possible state of social and economic affairs for Queensland as ‘imagined’ by the Queensland Government which includes certain discourses while excluding others. The documents present (imagine) a way of operating and the mechanisms of operation, with the aim of progressing Queensland to a prominent position in a knowledge economy.

For this study, the question is about work in schools and whether Smart State policy is being operationalized through teachers' work. Understanding the relationship between teachers' work and the 'Smart State', and whether teachers are helping to *build* a 'Smart State' (as described in the policies), requires more than an analysis of the discourses contained in Smart State policy. It is necessary to also investigate the work-context of teachers as Smart State policy is (or is not) becoming operationalized.

Fairclough describes the moment of operationalization as the "most complex 'moment' of the dialectics of discourse" since it is here that one seeks to demonstrate discursive influence on social life (Fairclough, 2005a, p. 12). Unlike the analysis conducted in chapter four which incorporated an analysis of the interdiscursive, linguistic and semiotic strategies included in the text to persuade readers to act in particular ways, this analysis is searching for discourses becoming apparent in the teachers' work and is therefore, a different form of analysis.

Fairclough (2005b) explains that different research methods are needed for each type of analysis since, although social elements are dialectically related, they cannot be reduced to the same element. Semiotics, for example, will be researched and theorised in a different manner to how language is theorized and researched.

Fairclough explains this concept in the following manner:

...social relations in organizations clearly have a partly semiotic character, but that does not mean that we simply theorize and research social relations in the same way that we theorize and research language. They have distinct properties, and researching them gives rise to distinct disciplines. Conversely...linguistic analysis of texts quickly finds itself addressing questions about social relations, social identities, institutions, and so forth, but this does not mean that linguistic analysis of texts is reducible to forms of social analysis. Nevertheless, the dialectical character of relations between elements underscores the value and importance of working across disciplines in a 'transdisciplinary' way (Fairclough, 2005b, p. 3).

Thus, in this chapter, I focus on the social relations of teachers' work in the form of teachers' philosophies, languages, routines and practices in schools. This analysis is

being conducted to determine if the discourses of the ‘Smart State’ that have been identified in the previous chapter are appearing as enactments and inculcations in the social practices of teachers.

Enactment involves the transformation of the imagined future projected in policy texts to “new ways of acting and interacting in production processes, and possibly material enactments in new spaces” (Fairclough, 2001a, p. 3). The discourses of policy promote an imagined state of affairs which “may be enacted as actual (networks of) practices – imagined activities, subjects, social relations etc can become real activities, subjects, social relations etc” (Fairclough, 2001a, p. 3). For example, chapter four has shown that the ‘Smart State’ envisions new ways of managing learning, new ways of interacting and new content to be covered. It is at this moment that, Fairclough (2005e) claims, discourses are transformed into genres, for example, the discourse of ‘middle schooling’ has entered schools in one instance as new ways of grouping teachers and conducting meetings.

When new identities are embodied, when people come to ‘own’ a discourse, when they “act and think and talk and see themselves in terms of new discourse”, then the discourse is said to be inculcated (Fairclough, 2001a, p. 235). Fairclough warns that inculcation is a complex process that people may (but may not) move towards. In the early stages there may be evidence of ‘rhetorical deployment’ of a discourse where it may be used in particular situations, but at a distance and without ownership. However, none of this need come about. Discourses may be evidenced in policy but be resisted and not ever be enacted or inculcated into the workers’ regimes (Fairclough, 2001a).

Discourses as being operationalized can also be evidenced in the physical systems, structures and objects apparent in organisations undergoing change. Fairclough terms this aspect ‘materialization’ (Fairclough, 2005e) and examples may include classroom resources, classroom design or systems of operation. The identification of these aspects of operationalization provides evidence of teachers engaging with “existing social resources in innovative ways which, subject to certain conditions, may contribute to changing the character of and relations between social practices” (Fairclough, 2005e, p. 926).

The main discourses of Smart State policy have been identified through an analysis of the policy that occurred in the previous chapter and through analysis of the literature surrounding a knowledge economy and globalisation. The aim of this chapter is to detail the discursive and non-discursive processes and events that are occurring in the classrooms of the two selected teachers to determine whether they align with the discourses of ‘Smart State’ and other nodal discourses. It relates to the second main question and its two sub questions:

What are the mechanisms by which Smart State policy becomes operationalized in schools and classrooms?

- *What Smart State discourses are evident in the classrooms of two purposively selected teachers?*
- *How have these Smart State discourses become a part of the teachers’ own discourses?*

Chapter four identifies a number of skills and qualities that the Smart State policy claims new knowledge workers will require to develop Queensland into a competitive player in a globalising knowledge economy. These are also the discourses that Smart State policy is stating Queensland teachers need to be

engaging and translating into their work. For example, discourses that focus on problem solving, critical thinking, creative thinking, enterprise, flexibility, information technology, independent work, lifelong learning and collaboration as well as on high levels of academic achievement, especially in the areas of literacy and numeracy. In this chapter, I am looking for evidence that these discourses are evident in the teachers' practices.

Representing the data

For this study, in order to find evidence of Smart State discourses shaping teachers' work in schools, it required me to conduct fieldwork in two schools. Through the collection of a wide variety of fieldwork data, I was able to map and describe, in rich detail, the languages, events and practices in the two schools. The rich description provides an opportunity to triangulate the data to add depth and rigor to the actual 'picture' of what is happening in those classrooms and schools.

In the sections following, I represent the data as 'snapshots' of each teachers' daily practices in the classrooms in order to assist the reader to develop a 'feel' for the classroom and how it operates. These snapshots are most effectively presented, as argued in chapter three, using a narrative style that includes the use of description and direct quotes. Observations of the classroom, the artefacts collected and the teachers' narrations, explanations and justification of their current work practices in this particular Queensland primary school, are compared and synthesised to present an image of some of the current practices for the teachers. The analysis makes apparent the aspects of pedagogy that are included (or excluded) in the teachers' work and how the complexities of daily school life are being managed and align with 'Smart State' requirements. That is, explicitly and implicitly how Smart State discourses are being translated and represented in the teachers' work, how they are

being engaged, and how they are being combined and articulated. The analysis I am working with here revolves around the identification of discourses at the level of new genres and styles of operating. The grammatical level of the text is important insofar as it signals that a discourse is being enacted and inculcated into the teachers' ways of acting and being.

The following three main sections of this chapter are structured to provide evidence of Smart State discourses translating into teachers' work. First, the focus teachers, Fiona and Sally (not their real names) are introduced. I do this by outlining who they are and what motivates them as teachers using direct quotes and information from the observations and collected artefacts. To understand Fiona and Sally as teachers is an important component to understanding the discourses they are likely to introduce and include in their teaching practices. As Fairclough (2001a, p. 4) states,

In using a dialectical theory of discourse in social research, one needs to take account, case by case, of the circumstances which condition whether and to what degree social entities are resistant to new discourses.

By providing a description of Fiona and Sally as particular 'types' of teachers and by contextualising their individual ways of operating, it illuminates the openness or the resistance they may have to the uptake of the new Smart State discourses.

Following the introduction of the focus teachers is a summary of two of the dominant discourses identified in chapter four, '**developing critical and creative thinkers**' and '**developing collaborative, interdisciplinary work teams**'. This is presented in table format to illustrate the range and type of evidence collected.

Finally these two Smart State discourses are examined in detail with multiple examples provided to support any claims being made of Smart State discourses being operationalized through teachers' work. These discourses are discussed in terms of Fairclough's moments of recontextualization and operationalization where

evidence is being sought for the translation, enactment, inculcation and materialisation of Smart State discourses.

5.1 Introducing the teachers

5.1.1 Fiona, the artist

Fiona is an experienced teacher who has been working in the middle to upper primary year levels for approximately twenty years of which the last ten have been at her current school. She is presently working in a double teaching situation with over fifty children in the class. She has taught with her present teaching partner (a younger male teacher) for approximately five years and they enjoy a productive professional partnership.

The room is a double classroom divided by concertina doors which are rarely closed even during split class lessons. The classrooms meet at a ninety degree angle so that the resultant shape is more like an arrow head. There is a teacher's planning/withdrawal room in one corner between the classrooms and another larger withdrawal room adjoining one of the rooms that is also shared by the other two classes in the block. Outside the classrooms is a shared wet area set up with large tables and chairs.

This environment provides a range of working spaces as well as classroom configurations and groupings that can be applied. The double class may come together as a whole group, split into two 'classes', work in small groups with support or independently, and individual work. The desks can easily be moved to create different work groupings. There are two class seating areas (one in each room) – at present the desks in one room are arranged in straight rows, while the other is in a horseshoe shape with rows in the middle section. There is an area

between the rooms for the entire class to sit on the carpet. At the back of the rooms is an area with collage scraps, and games. There are four computers in each of the rooms positioned along one of the walls and mirrored in the other room around the corner.

The classrooms are full of displays of the children's completed work and work in progress that spills out to the benches and hanging spaces of the wet area. Displays include:

- a large mural depicting the classes' current thematic work;
- an energy poster produced using computer graphics and depicting different forms of energy production;
- students' projects and story maps of Australian explorers;
- students' written descriptions, diagrams and the circuit boards which are their current Science projects;
- newspapers and a teaching poster on the analysis of the various sections of a newspaper;
- a project board for creative responses to tasks e.g. create a board game;
- an awards chart for achieving different levels e.g. 5x table, reading, behaviour;
- limericks produced by the children; and
- wanted posters produced using a half section of an image of the student's face with the other half drawn in by the child using shading techniques.

The first section of my visits to the class occurred at the end of term two when the class was being prepared for the Year five test²³. The thematic work for the remainder of my visits that occurred in the beginning of term three focussed on ‘Our Marine Environment’. This was an integrated unit of work that was collaboratively planned by the Year five teachers and focussed on the Queensland Studies Authority Outcomes Syllabus Level 3 Science (Life and Living) and Studies of Society and Environment (SOSE) outcomes while also including work from Mathematics, English, Health and Physical Education, Technology, Information and Communication Technologies and the Arts (Media). The purpose of the unit was to enable the students “to explore and investigate a variety of aspects of the Marine environment” including human impact (Year five planning document ‘Our Marine Environment’, 2005). The unit established partnership with the local North Keppel Island Environmental Education Centre. As part of this unit, the students were involved in a number of activities that required higher level thinking and reasoning skills; creativity; collaborative team work; critical thinking; and communication skills. These included:

- Investigating the type, and hypothesising the origins, of the litter on the local beach;
- Investigating the North Keppel Island mangrove system;
- Creating clothing for the camp ‘mascots’;
- Producing an effective and informative travel brochure to advertise the North Keppel Island camp to the next Year fives (computer generated); and
- Participating in a three day camp at the North Keppel Island Environmental

²³ The Years 3, 5 and 7 tests are standardized tests administered to Queensland primary school children during August of each year. The tests are designed to provide information on aspects of literacy (reading, writing, spelling in standard Australian English) and numeracy (number, measurement and data, space), based on the Queensland Curriculum. The results of the tests score the children in each aspect and compare their results with others across the State, and against National Benchmark Standards. (<http://www.qsa.qld.edu.au/testing/357tests/index.html>)

Education Centre.

Each day in Fiona's classroom starts with the whole class sitting on the carpet where the class is greeted, the roll is marked and the routine for the day is established.

Throughout the day, the children are regularly regrouped on the carpet area as new instructions are given for each activity. The frequency of this event and the time spent in providing instructions demonstrates the priority placed by the teachers on establishing routines and providing clear expectations so that classroom order is maintained.

The triangulation of observations of Fiona's work practices as well as her discussion of her teaching practices and the artefacts collected during this time supported a strong focus in Fiona's work on developing collaborative skills; creative and critical thinking skills; and various aspects of technology. However, when I asked Fiona her main goals in teaching, Fiona's response focused on meeting individual needs through the development of each child's strengths. Indeed to assist each child in their development was stated by Fiona as her ambition but it also fuelled her greatest concern, as she explains:

(Friday 21 October 2005, 9:30am. Day 9 of observations)

Event: teacher interview 2.

Fiona: I think that's why we keep coming back, to make a difference, and some children you don't make a huge academic difference every year but we can see other little things, other ways that they're growing. I think it's the saddest part is when you think, 'I didn't make a difference' and that's the most worrying thing that you don't think that you've made a difference in some way in their life.

Fiona claims that satisfaction in her work comes from 'making a difference'. She operates the classroom, from its design, to the grouping of the students, to the types of activities they are engaged in, to the way she interacts with the students, to

achieve this goal so that by the end of the year, she can see that she has made some difference in each of their lives.

5.1.2 Sally, the leader

Sally has been teaching for nine years. This is her first year at this school but her expertise in middle schooling was known before she arrived at the school. Sally has continued her role in this school as a leader in this area. She cooperatively runs the district middle schooling group with another teacher (high school). She is also presently working on the development of a Middle Schooling CD-Rom that provides information on a variety of aspects in this area as well as links to websites. Prior to her involvement with middle schooling, Sally had been involved with in-servicing colleagues on the *Productive Pedagogies*²⁴.

Sally works in a single classroom but at times she and the other Year six teacher in the block open the doors and the two classes combine for group activities in Maths, Literacy or thematic work. All of the classrooms in the school are of a similar design so a geometric description of Sally's classroom matches that of Fiona's room. In Sally's classroom, the desks are arranged in three main groups of ten but are rearranged into smaller groups at various times during the day for other activities. There is an area for the whole class to sit on the carpet at the back of the room. There are four computers in the room for the students' use. There is another computer and a colour printer in the withdrawal room that is shared by Sally and the other Year 6 teacher.

²⁴ The *Productive Pedagogies* project stems from the *Queensland School Reform Longitudinal Study* (QSRLS) report, conducted by the University of Queensland on behalf of Education Queensland, to research the impact of school-based management on student outcomes. The findings and recommendations of the QSRLS report are consistent with the objectives of Queensland education policy as put forward in *Queensland State Education 2010*. For further information refer to http://education.qld.gov.au/public_media/reports/curriculum-framework/productive-pedagogies/.

The room display is made up of the children's work as well as curriculum and organisational displays. At present, in the room can be seen displays of:

- Thematic work focussing on proposed bridge sites with enlarged photos of local bridges;
- Books of bridges on display;
- Bridge models made by class groups;
- KWL chart (What I **K**now, What I **W**ant to know, What I have **L**earnt) for bridge building task on butcher's paper written by groups of children;
- Laminated cards displaying the twelve stages and tasks to complete for the Bridge building unit;
- The class rule amongst photos of the children in the class;
- Student of the week including photos of all class members;
- New designs of the Australian flag sent to the Australian country singer, John Williamson, with a letter from the class explaining what the activity involved and why they did this activity;
- Signed poster and response received from John Williamson;
- De Bono's Thinking Hats;
- The table cloth on the display table is painted with the names of the students;
- Student drawings of Australian icons (harbour bridge etc);
- Report card for 'Bob' who is the invisible class mascot made up by a class member earlier in the year and adopted by the class and teacher. Bob is responsible for most unexplained (and unimportant) happenings in the class;
- Task cards for Maths, Language and Unit activities.

This year so far the children have worked on imovies, interviewing community members, producing new Australian products and dissecting brains. In term one the

class work focussed on what it means to be Australian and developing a sense of identity. The work in term two engaged the children in investigations of the brain that included a diverse range of activities from dissecting a lamb's brain to developing understandings of individual learning styles as well as designing and constructing a brain-healthy product for consumers to purchase at the end-of-term brain expo. In term four, the class unit involved rock stars - Geology rock stars. The aim of this unit was to develop understandings of the "geological processes and their impact on society as they examine, create and illustrate the formation of rocks and crystals" (Term 4 class newsletter, 2005). This involved investigations into the role of a geologist as well as 'the geological history and possible future of well-known Australian landforms' (Term 4 newsletter, 2005). The activities for this unit involved "a variety of hands-on learning experiences" ranging from "'cooking' metamorphic rocks to growing crystals, making concrete, to designing a model of a geologist at work" (Term four newsletter, 2005). At the end of each term an expo is held to showcase the students' work and allow them the opportunity to demonstrate their knowledge and understandings of the topic as well as develop skills of communication, explanation and public speaking with a range of age groups. Visitors to the expos are asked to record their impressions, which are later shared with the class. Within the various activities during the year, peer assessment is used as well as self-assessment. The children are provided with criteria sheets to assist in this process.

The majority of my visits to Sally's class occurred in term three during which the class worked on a 'Bridge building' unit. This unit of work was titled 'Bob's Friends – the Bridge Builders!' and involved work from the Queensland Studies Authority Outcomes Syllabus Level 4 of Energy, Technology and Design but included work

from Mathematics, English, Studies of Society, Health and Physical Education, Science, Information and Communication Technologies and the Arts (Media). The purpose of the unit was “Through the life-like experience of establishing a business, students will challenge their thought processes and cooperative group work skills by designing and constructing a bridge using a range of processed materials” (This extract was taken from Sally’s unit of work but was also used in the beginning of term letter to parents.). In their ‘companies’ the students had to organise and manage the design and construction of the bridge according to time restrictions, resource limitations and budgetary constraints. Before my visits, the class had:

1. completed a KWL on bridges and produced concept maps, discussed the concept of a business/company as well as the roles and responsibilities of the individuals involved in the company using a think/pair/share strategy;
 2. investigated group dynamics, and the roles people take on in a group situation (leaders, tyrants, workers and fringe dwellers) using the Six Thinking Hats and the PMI (plus, minus, interesting) strategies (de Bono) as well as role play. They used this information to decide who they would work productively with in a group;
 3. formed bridge building companies with four students in each group;
 4. assigned company positions to each group member: Project manager, Architect, Builder and Accountant;
 5. collaboratively developed their own company name, logo, motto and business card by deconstructing local companies’ names, logos, mottos and business cards using a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats).
- Each student has also produced their own personal business card made with logos and company slogans using Microsoft Publisher;

6. investigated the history of bridge building in ancient times as well as in their local area;
7. investigated the structural properties of bridges related to strength and durability by analysing a variety of bridge types and using construction materials to make a model of each type;
8. been on an excursion to the proposed bridge site;
9. commenced a journal of their experiences (after deconstructing this form of text for generic structure and textual features);
10. prepared and submitted a design proposal that included scale drawings completed with graph paper, and a computer representation; and
11. investigated the report writing genre in preparation for the writing of their bridge construction report.

Every day in Sally's class starts with Sally checking the roll and saying good morning to each student. The class plans for the day are also discussed. There is a convivial atmosphere in the room. I observed the class on most occasions interacting in a friendly and supportive manner with each other as well as visitors to their room. This atmosphere appears to be actively promoted by Sally even in her casual comments to the class. For example, on my first visit to the class, Sally commented that there are quite a few sick today so "*we will have to look after everyone*". Sally purposefully changes activities or modes of instruction frequently (as evidenced in her daily planning and through observations) so that the children are able to stay engaged with their work. Although the children have time at their own desks, they also move to other spaces and desks throughout the day. During activities involving prolonged engagement on a task the students were able to move around the room while collaboration with group and class members was encouraged.

This way of operating, Sally stated, has been purposefully incorporated into her style of teaching due to her involvement with the Middle Years of Schooling Association and research into the work of John Joseph²⁵: (*I've really embedded that knowledge into my planning and my practice*). Sally believed that it was this involvement that had focussed her teaching on individual needs and directed the professional development she sought for facilitating those needs.

In terms of her present planning, Sally discussed the explicit inclusion of the *Productive Pedagogies*, including in her statements terms used within those documents, *'...the recognition of that difference, the connectedness, that high intellectual quality...'*; and referred to herself as being *'accountable for their learning'* with the goal of producing *'active citizens in society by having those skills'*. She also included *'those life long learning processes such as being a reflective learner, a creative thinker, a problem solver'* as now being an explicit part of her planning and teaching. *'...that really big push on connectedness'* Sally described as an influence in her teaching practices so that she now included *'contexts that are more realistic, that are more hands-on, that are practical and are relevant to their world...'*. Her classroom organisation was *"more flexible"* with the *"students being more self-directed"* and *"able to negotiate their learning"*. Her programming included a greater element of *'hands-on'* work for the students. She actively aimed at *"getting on a kid's level, communicating with them, getting to know them, engaging in that informal conversations in the mornings, really spending time with them"*. She further explained, *"For example in the classroom helping them with their tasks. I'm not one for sitting down at my desk and getting my own work done while they are just left to go and do whatever"*. Another important

²⁵ John Joseph's work focuses on connecting brain research with learning particularly in the adolescent years. Further information can be accessed from www.focusededucation.com.au.

aspect of responding to her students' needs was *"That sense of humour... You know that you're willing to have a joke and it's ok to laugh, it's ok to have a good time"*.

Sally's class responded positively to her style of operating as demonstrated in the relaxed and confident manner in which they interacted in class readily sharing a joke yet also working seriously on problems.

Sally stated her goals as a teacher as focussing on the development of individual student needs for the present and the future, focussing on the development of interpersonal skills²⁶.

(Monday 24 October 2005, 1:00pm. Day 8 of observations)

Event: teacher interview 2.

Sally: There are a couple of goals that I strive to achieve every day. One is obviously to be here to make a difference, to be a leader for the students in order for them to be themselves, to learn through the mode of their own learning styles so they feel comfortable within that framework, to embrace their individuality and basically assist them in developing the skills that are going to enable them to be active and informed citizens and to be able to be resilient in the real world. So that's my goal as a teacher. Yes the academic skills are important but I believe that in this day and age that the interpersonal skills and the relationship building that I can take an active role in is just so paramount in order for them to be able to function effectively in society.

Sally has used in this conversation a number of Smart State goals for education, for example, a focus on meeting individual needs, the development of active and informed citizens and lifelong learners (for example, Queensland. Department of Education Training and the Arts, 1999, p. 12).

Sally also spoke of a professional goal that reflected her teaching goal in her desire for other teachers to also be meeting individual present and future needs of their students.

²⁶ This was also the focus discussed by Nordgren (2002) in chapter two for developing a 'Global Village'.

(Monday 24 October 2005, 1:00pm. Day 8 of observations)
Event: teacher interview 2.

Sally: The other goal that I have as a professional is to be still a leader, but in terms of being a leader amongst colleagues. Being a leader in so far as modelling effective practice, giving advice, being a mentor. I believe I have the characteristics and the skills to be able to do that in a way where I can facilitate that leadership and drive change... and driving change in a way that mirrors what's happening in society. While those goals are very firm in my mind I realise that the journey to get to those goals may change along the way but the ultimate goals are the same in the end.

Sally is focussed on meeting student needs in response to current societal conditions. She has a firm conviction in her chosen style of teaching as being most beneficial to her students and eagerly shares this knowledge with other professionals.

5.2 Overview of Smart State ‘qualities’ and summary table of evidence

This section uses a table to summarise the information collected from the teachers’ work and within the school with regard to two of the dominant discourses identified in chapter four. A general overview of the evidence collected of other Smart State discourses that are also apparent in the teacher’s’ work is tabulated in appendix 3. In presenting this evidence in table form, I have attempted to present different aspects of the teachers’ work as they engage and enact various discourses on a daily basis. These snapshots are representative of the types and forms of happenings that occurred daily. Although the subject matter changed, the style of the teachers’ work and the organization she employed did not change. To include all observed and recorded incidents would result in a voluminous product, so I have chosen to illustrate each Smart State quality using multiple but representative examples. The use of a table format will allow a ‘sense’ of the type and form of the collected data which could be used as evidence of Smart State discourses in teachers’ work.

Table 3 Evidence of critical/creative thinking, and collaborative work skills.

Smart State discourses	Observed in... (observations)	Discussed in... (interviews)	Viewed in... (artefacts)	Supported by... (within the school)
critical thinkers / problem solvers	<ul style="list-style-type: none"> •questioning techniques of teachers in all lessons; •Problem solving web site for Year 5 students; •Making clothes for camp mascots – Year 5; •Journal writing; •reflection after class tasks. 	<ul style="list-style-type: none"> •development of thinking skills highlighted as an area Fiona is including more of with her class; •as part of lifelong learning skills for Sally. 	<ul style="list-style-type: none"> •Teachers’ work programs; •KWL chart, de Bono’s thinking hats – Year 6; •Letters to parents; •Questionnaire re middle school teacher qualities – Year 6; •Students’ mind maps for writing task assessment practice. 	<ul style="list-style-type: none"> •School Opti Minds teams’ presentations; •panel teachers discussed increased incorporation in pedagogy.
creative thinkers	<ul style="list-style-type: none"> •Art lessons for both classes; •the sharing and valuing of creative responses to Year 5 writing test practice task; •‘Radical readers’ -Year 5; •Naming camp mascots – Year 5; •Making clothes for camp mascots – Year 5; •Variation to Maths task – Year 6. 	<ul style="list-style-type: none"> •importance of Art in Fiona’s program; •project work and personal development in Fiona’s interview; •as part of lifelong learning skills for Sally. 	<ul style="list-style-type: none"> •charts around both classrooms; •craft area in Fiona’s room; •displayed activity cards requiring creative responses; •Year 5 Science ‘circuit’ projects; •Year 5 Art work; •Year 5 limericks; •Teachers’ work programs; •Letters to parents. 	<ul style="list-style-type: none"> •panel teachers discussed increased incorporation in pedagogy.
collaborative working skills	<ul style="list-style-type: none"> •team teaching, particularly in Fiona’s class but also at times in Sally’s class; •year level planning and meetings; •teachers’ negotiation of work with classes; •students and parents helping with preparation for Year 5 afternoon art lessons; •arrangement of desks; •daily incidents 	<ul style="list-style-type: none"> •importance of collaborative planning with year level teachers; •developing these skills with students; •highlighting individual strengths to be used in group situations in Fiona’s class; •identifying strengths through thinking hats activity in Sally’s room; •involvement of community 	<ul style="list-style-type: none"> •Year 5 Key Learning rotation program •Teachers’ work programs; •Letters to parents. 	<ul style="list-style-type: none"> •School board, P&C association, teachers and upper school students to collate ideas for the direction of the school in 2006; •panel teachers discussed increased incorporation in pedagogy and in children’s ability to work in this manner; •role of technology – panel teachers; •organisation of

	of group work in both classes where the collaboration of individual skills is emphasised; •reflection after class tasks – Year 6; •organisation for the day; •‘ball’ discussion activity; •Presentations to parents; •Group activity relating to Maths assessment – Year 6.	volunteers in Sally’s class.		support network of specialist teachers in school; •closer liaison between outside and department agencies with the school; •between cluster schools; •Organisation of meetings – whole school, middle /early school, and year level; •Whole staff decision making on school’s focus and direction.
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The purpose of the table is to illustrate the type of data that has been collected to identify the discourses in ‘Smart State’ policy that are also apparent in the discourses teachers are using in their work which may lead to the operationalization of a ‘Smart State’. It does not however explain or provide justification of how this data may be used to understand the current practices of teachers in relation to the building of a ‘Smart State’. To do this, the two discourses of developing critical and creative thinkers and working collaboratively, as outlined in Table 3 will be examined in detail.

5.3 Analysis of two Smart State discourses

The analysis in chapter four has shown that the building of a ‘Smart State’ requires the uptake of particular discourses in a particular configuration, thus it has promoted the discourses that articulate the ‘new’ knowledge economy worker as a new ‘order of discourse’ (Fairclough, 2005e). However, taken individually, these discourses can also be located in other time periods and in a range of educational contexts. For example, arguments for strengthening the links between industry and education can be located in literature from the mid 1960s with claims that

education's inability to keep up with workforce requirements was one of its major failings (Marginson, 1997). A discourse of individualising instruction also appeared in the 1960s with the production of a vast array of curriculum materials to support teachers in catering for individual differences in the classroom (Crittenden & D'Cruz, 1976; Keeves, 1999). During the 1970s discourses of teaching for creativity, and working in team teaching situations appeared (Fenley, 1969), as well as the incorporation of group work in quality education programs (Crittenden & D'Cruz, 1976), and debates concerning the teaching of the basics (Marginson, 1997). A discourse of lifelong learning and experiential education were significant movements in Australian education in the 1980s with Ford (1981) raising the concern during this time of the lack of skills possessed by many teachers to meet these new challenges. Also in this period the development of problem solving processes was given high priority in federal and State government documents as key competencies to be developed (Rowe, 1999). In Queensland in the 1990s a discourse of community involvement appeared due to the increased opportunities brought about by decentralisation measures in Queensland schools. In this context, education is discussed as "becoming a partnership between the school and the community" with participation by community members "in most facets of school-based decision making" (Queensland. Department of Education, 1990). These examples are being used to show that these discourses are not new to education. What is new is the packaging of them into the one 'new' discourse of a knowledge economy worker.

For this analysis, an effective way to show the presence of these discourses in teachers' work is to artificially focus on one main discourse at a time while using these examples to illustrate how the other discourses are interwoven as part of a new configuration.

5.3.1 Developing critical and creative thinkers

The skills to critically assess a situation and then to think creatively for solutions have been stressed in the literature and in Smart State policy as necessary in societies undergoing rapid change. In much of the collected data it is difficult to separate critical and creative thinking since activities that extended and refined student thinking involved both critical and creative processes, therefore this section considers the development of both. However, precisely defining these terms has proven to be a far more difficult task. To do this I have turned to the Education Queensland website

(http://education.qld.gov.au/tal/tips/hot_topics/01593a.htm#critical) on the assumption, and evidence of genre chains (Fairclough, 2000, p.174), that these links are placed in response to meeting Smart State policy goals. A number of definitions for critical thinking have been provided that focus mainly on reasonable and reflective decision making. What is more useful in terms of analysing teachers' work however is the list of attributes of a critical thinker that is provided (The Curriculum Exchange, 2003). Thus, a critical thinker:

- asks pertinent questions;
- assesses statements and arguments;
- is able to admit a lack of understanding or information;
- has a sense of curiosity;
- is interested in finding new solutions;
- is able to clearly define a set of criteria for analysing ideas;
- is willing to examine beliefs, assumptions, and opinions and weigh them against facts;
- listens carefully to others and is able to give feedback;
- sees that critical thinking is a lifelong process of self-assessment;

- suspends judgment until all facts have been gathered and considered;
- looks for evidence to support assumptions and beliefs;
- is able to adjust opinions when new facts are found;
- looks for proof;
- examines problems closely; and
- is able to reject information that is incorrect or irrelevant.

This list outlines the type of behaviours teachers developing critical thinking skills will be endeavouring to include in their teaching genre and style; as well as the types of behaviours that may be enacted and inculcated in their students' ways of operating.

Creative thinking is also referred to as 'innovative thinking' and is defined as:

... the kind of thinking that leads to new insights, novel approaches, fresh perspectives, whole new ways of understanding and conceiving of things. The products of creative thought include some obvious things like music, poetry, dance, dramatic literature, inventions, and technical innovations. But there are some not so obvious examples as well, such as ways of putting a question that expand the horizons of possible solutions, or ways of conceiving of relationships that challenge presuppositions and lead one to see the world in imaginative and different ways (The Curriculum Exchange, 2003).

This definition is also useful as it discusses creativity in terms of new ideas and the Arts but it also extends to the teachers' questioning and interaction skills; qualities that can be identified to provide evidence of the enactment of this discourse.

Furthermore, 'productive thinking' is the term given in this reference to situations which call for the combination of critical and creative thinking.

This section will examine in detail how the teachers are fostering the development of these skills in their students through the style of their teaching, the atmosphere they create and promote, and the activities and resources they provide and use. In this analysis evidence of Smart State discourses will be accentuated in bold font.

Aspects of critical and creative thinking were evident in almost every activity undertaken in Fiona's and Sally's classes, implicitly but mostly explicitly being developed. The students were constantly being challenged to think, evaluate and create. Fiona, in fact spoke of now purposefully incorporating a greater emphasis on thinking skills in her lessons.

(Friday 3 October 2005, 3:15pm. Day 6 of observations)

Event: teacher interview 1.

Fiona: *I think we tend to put in more thinking skills - we are tending to make sure that those are included...*

(Friday 21 October 2005, 9:30am. Day 9 of observations)

Event: teacher interview 2.

Fiona: *...thinking skills, you could be really happy with the way they've come on in their thinking that they're able to think for themselves, be creative in their thinking.*

Fiona's claim in these statements that her inclusion of thinking skills in her programming has purposefully increased in her current teaching practices is evidence that her thinking about what types of activities she provides for her students has changed over recent years. Fiona's thinking about the importance of these skills is apparent in this text but evidence must still be shown of the enactment of this discourse, its inculcation into her style of teaching and how this discourse may materialise in classroom artefacts.

It is quite an easy exercise to list the types of activities in which the teachers engaged their students to develop skills of critical and creative thinking. However, there was more occurring in these classrooms than simply teacher initiated activities and this is what I make apparent in the remainder of this section. Although in a primary school classroom, much of the skill and content development occurs in an integrated framework, some segmentation is necessary to adequately present this data. For this reason I first highlight the way the teachers developed creative

thinkers through their ‘regular’²⁷ class work, followed by the development of critical thinking skills in the same fashion. I will then use the example of Fiona’s ‘Our Marine Environment’ unit to articulate the purposeful development and inclusion of these skills through the teachers’ thematic work.

Being creative

The value of the Arts and creativity is apparent in all of Fiona’s work ranging from the actual Arts lessons to project work and presentations. Fiona purposefully includes time in the first term of each year teaching children presentation skills that they then use, develop and make their own throughout the year and incorporate in the many projects and presentations that they complete. She is careful to present basic styles, showing how the styles can be varied but then ‘steps back’ and allows the children to experiment for themselves. The results are materialised in the artefacts and displays of the children’s work around the classroom, and evidenced in Fiona’s planning documents.

Fiona is also the Art teacher for all four Year five classes. The lessons that I observed involved a similar format of Fiona demonstrating a skill, discussing possible alternative ways of applying the skill, then allowing the children to experiment and develop their own styles. This style of operating – of presenting, demonstrating variations then allowing the children to experiment – was a pattern I also saw repeated in lessons other than Art. During the Art lessons Fiona would constantly show and discuss creative examples that individuals had produced, to the extent that this way of talking and thinking was evidenced in the children’s talk in class discussions and in group work activities. Indeed, each day that I was present in

²⁷ I am using the term ‘regular’ here to refer to syllabus work that excludes the classes thematic unit work.

Fiona's class 'being creative' was explicitly and purposefully developed. During her interview the value she placed in being creative was reiterated.

(Friday 3 October 2005, 3:15pm. Day 6 of observations)

Event: teacher interview 1.

Fiona: ...*we did land yachts and then they constructed them and the children saw how **different they were** and **how good they were** and everyone had such **different ideas** and they could see that...**how creative some of them were.***

In this section of the interview, Fiona textures together 'difference' and 'good' and 'creative' establishing a relation of equivalence between the terms (Fairclough, 2005a, p. 7). Fiona equates being different as 'good' and as being creative. Fiona's focus in discussing land yachts was not initially on the 'basic' skills that were being developed in this unit but on the development of creativity and the example this set for others in the class. 'Ideas' are important and Fiona is developing the concept that there are many ways of responding to a problem and finding solutions – that there is not only one correct solution.

I also was present for a specific Art lesson in Sally's room. Although Art was not included in Sally's programming to the extent that it was in Fiona's, Sally's class were involved in other creative responses, particularly in their thematic work, as will be shown later. The Art lesson I observed involved string painting where Sally demonstrated how to do the string painting, and then the children commenced their own. The task involved the children painting a piece of string, arranging it on one half side of their sheet of paper, then folding the paper over and pulling the string out. This was a seemingly simple and straightforward task. Some of the children planned what they were going to do; others barely listened to the instructions but simply commenced working. The children however were not to be contained to this level of simplicity. They painted their string in specific places with specific colours then intricately wove their string into various patterns. Some chose to create a

picture of a real object, for example, one child created a tulip print; while others created abstract works that they then turned into a game of deciding what creature they depicted; and others pulled their string through a number of times. None of these instructions were provided by Sally – her demonstration was simple and straight forward - but **each new trial and attempt was encouraged, congratulated and celebrated with the class.** As the children completed more pictures, it was interesting to observe the greater degree of creativity that developed and the more chances the children were willing to take. In this activity, **Sally provided very little instruction but by doing this and by her responses to the children's attempts encouraged each class member to move beyond what could have been a simple and quite uninspiring task, to develop their creative thinking.** In analysing discourses what is not included can be as important as what is included (Fairclough, 2000). Sally's purposeful withholding of explicit instructions and then her enthusiasm for her students' experimentation created a climate in which creativity could develop but only because Sally's students were aware that this type of behaviour would be valued. The same activity conducted in a similar manner in another class may have resulted in frustration from lack of instruction or very bland uninspiring art work. The value of creativity is inculcated in Sally's style of teaching as evidenced by her student's responses and their willingness to continuously experiment and move beyond the initial instructions.

At the end of the Art activity, Sally's class sat on the carpet together and discussed the activity with regard to the different strategies used and what they enjoyed and didn't enjoy about the activity. Students suggested variations to the activity such as using white or black paper to do positive and negative prints; and using different materials to paint and pull through. All alternatives were discussed. Other ideas

flowed from the initial suggestions. Maths concepts of symmetry and reflection as well as the prefix of 'a' as in 'asymmetrical' were discussed. The students then made suggestions for next term's Art lessons. **By encouraging the children to reflect on the activity, Sally is also actively promoting critical as well as creative thinking.** The activity was examined, the children justified their opinions, they provided examples, and they listened to each others' opinions and gave feedback. Sally's comments in her first interview supported this observed practice.

(Wednesday 7 September 2005)
Event: teacher interview 1 - Sally.

Sally:... *In my context planning **now I include** Productive Pedagogies which is the framework that obviously **came in about four or five years ago** and there was a big push for that and **I used those to really pinpoint in my planning the direction in which I would like the students to head...**those life long learning processes such as being **a reflective learner, a creative thinker, a problem solver**. I didn't...I suppose they were imbedded in my planning years ago but just not explicitly. I'm sure they would have been there implicitly but just not very black and white.*

Sally's statements show that although developing these skills in her students is not a new practice, it is certainly one that has now become a purposeful focus in her teaching. Sally is **enacting** this discourse, it is a part of her teaching '**style**' and it has **materialised** in her planning. Her students also have taken up these discourses and enthusiastically engage in critically analysing their experiences and offering creative suggestions for future activities. Sally refers to the *Productive Pedagogies* as being an influence in her work. This project has clear links with the objectives of *QSE 2010* and forms part of the 'genre chain' (Fairclough, 2000) of Smart State education policies and documents.

Besides developing creativity through the Arts, the definition for creative thinking also included questioning and activities that encouraged different ways of viewing situations. Further evidence that this discourse was a part of Sally's teaching style

can be found in even a routine Maths lesson where Sally continued to promote this style of thinking.

(Tuesday 30 August 2005, 9:00am. Day 3 of observations for Sally)

Event: observed Maths lesson.

Sub-event: partner activity on calculating perimeter of a rectangle

While the students are seated at their desks, Sally explains the activity to them: They are to roll two dice, add the results together to represent the length of a rectangle, repeat this process for the width; then draw, label and calculate the perimeter of the rectangle. The students move to any space in the classroom and begin working with their partner. One student suggests to Sally to use the two dice as representing tens and ones instead of adding them together. **Sally stops the class and has everyone listen to this student's idea. The class was given the option of using this idea instead of adding the two dice. The class applaud the student for thinking of this idea.**

This idea exchange and sharing took less than a minute of the lesson, yet delivered many messages to the children. Sally showed that she is willing to listen to new ideas; that new ideas are worth sharing and celebrating; and that there are different ways to approach a situation. By the student's offer of an alternative way to use the numbers on the dice, and by the rest of the class' choice to try this suggestion and offer congratulations for the idea, the discourse of creative thinking is being **inculcated** in the students' styles of operating and **enacted** by them in the classroom. This process need not have happened – Sally could have responded negatively and told the student to follow instructions as they were given – and the valuing of creative thinking would not have occurred in this instance. Sally's act clearly provided the conditions for this discourse to be taken up by her students.

In a similar fashion, Fiona's lesson on mental arithmetic purposefully and explicitly involved her students in thinking of, and articulating a variety of strategies to achieve the same outcome. Using this open ended questioning strategy is another way Fiona is developing the skill of creativity by encouraging her students to conceive relationships in a variety of possible ways.

(Friday 26 August 2005, 9:35am. Day 2 of observations for Fiona)

Event: observed Maths lesson.

Sub-event: mental maths strategies

Fiona commenced by writing on the board, $100 - 65$, and then proceeded to ask the class: ***'How do you work it out?'***

Students responded with their strategies and each were discussed, for example,

Student 1: *I take 60 from 100, that gives 40 then I take 5 and that leaves 35.*

Student 2: *I take 5 from 100, which is 95, then I take 60 which equals 35.*

Student 3: *I count up to 100 from 65, so I go 65 plus 5 is 70, plus 30; or 65 plus 40 is 105 then I need to take the extra 5 from the 40 which leaves 35.*

In this example, Fiona could have told the children a strategy and then proceeded to practice it. Here, the teacher is not acting in the traditional role of teacher as 'holder of all knowledge'. Instead, the teacher, using an open-ended questioning strategy and an acceptance of all correct methods, enacts a facilitative style of teaching that is informing the children of the multiplicity of ways to view a situation and solve a problem. By posing this style of question Fiona is implicitly teaching her class that the horizon of possible solutions²⁸ can be expanded beyond the first correct answer.

In this instance, the children were asked to choose the strategy they found 'the quickest and best' for them. Both of the extracts from sections of Fiona's and Sally's Maths lessons support the claim that creative thinking is **inculcated** in the teacher's style not only in the traditional area of the Arts but also in the questioning style adopted by the teachers and the promotion of this style of thinking in their classes. This style will again be examined as the teachers purposefully develop critical thinking in their students.

Critical development

At the end of Sally's Art lesson, it was shown how she purposefully made time to encourage her class to critically reflect on the lesson. This was a process she undertook consistently with each activity in which the class was involved. Another

²⁸ See the definition for creative thinking offered at the beginning of this section.

example of Sally purposefully developing this type of thinking illustrates her style that gently encouraged the children to reflect on their statements, feelings and opinions. After spending the morning session investigating decimal fractions in various grouping activities and whole class work, the class moved to the carpet area to discuss the Maths group activities:

(Tuesday 16 August 2005, 10:25am. Day 1 of observations for Sally)

Event: observed Maths lesson.

Sub-event: class reflection activity

Sally: *What do you like about maths groups?*

Student 1(responding about maths groups but not directly to the question of the positives of group work.): *Sometimes there's nothing to do.*

Sally: *Remember Maths Activity stations.* (These are task cards pinned to one of the display boards.)

Student 2: *We've done this activity before.*

Sally: *Yes, this was to reinforce this concept.*

Student 3: *I like it because you get to talk.*

Sally: *You get to communicate with others.*

The students appeared comfortable with this form of analysis after a lesson, discussing what they liked and did not like. They were confident they would be listened to and taken seriously, and so freely contributed, listened to others while agreeing or disagreeing through nodding etc. Although two of the students did not respond directly to the question Sally asked, she continued to respond to their comments, directing their thinking beyond their initial negative feelings to search for solutions. Critical thinking is a process of assessment but also a process that examines our assumptions and opinions which is what Sally is implicitly teaching her students. The view put to the students is that activities can be improved through a process of reflection, in this case collaboration, where criticisms can be aired and acknowledged, perhaps answered, which is an enabling mechanism supporting the children to become future critical workers. A critical discourse is **enacted** as Sally interacts with her class. This is part of her teaching **style** and **materialised** in her daily planning program.

This style of questioning where Sally is encouraging students to provide explanations and evidence for their statements was apparent in explicit class lessons as well. For example, on another occasion, Sally and her class were examining tall tales.

(Tuesday 16 August 2005, 10:25am. Day 1 of observations for Sally)

Event: observed Literacy lesson.

Sub-event: comprehension and critical reasoning activity

Sally commences the lesson by questioning regarding the meaning of the text:
What could this story be about? Where are you getting clues from?

Various students answer with responses relating to the pictures or by scanning the text. The lesson continues with students selected to read sections of the text and Sally stopping at various points in the text to discuss the development of meaning within the story. At this point, the phone rings and a student runs to answer it. Sally is called to the phone. While she is gone, **the children discuss the truth/falsity of the text amongst themselves without any direction from Sally**. Sally returns and reading recommences, with Sally continuing to question regarding the comprehension of the story and the general knowledge needed for full understanding.

Sally requires the children to justify their answers, explaining how they reached their conclusions. Discovering the meaning of the text was accentuated through Sally's questions. Sally's use of probing questions, "*Why do you say that?*", "*What evidence supports that idea?*" throughout this lesson supports the claim that a critical thinking discourse is being **enacted** and **inculcated** into her practices. This is further evidenced by the **uptake of these discourses in her student's actions** during her phone conversation. Undirected, the students continued to search for evidence and debate the possibility of this tale, or aspects of it, being true. It may be the case that the students responded in this fashion due to my presence as it was my first day of observations in Sally's class. However, over several visits to Sally's class I repeatedly observed instances of these students taking control of their own learning in a similar manner. Sally's style of teaching provided many opportunities for the students to voice their opinion as well as opportunities to simply joke and

chat in a classroom that was energetic but never disorganised or unruly. However this was a style that many teachers had not yet adopted.

In a similar fashion to Sally's class work, Fiona's classroom activities included the purposeful development of critical thinking skills. In Fiona's program, the class were involved in Literacy groups that rotated around a variety of reading, comprehension, spelling and grammar activities. One of these activities, 'Radical Readers' engaged the children in a book response activity based on Gardner's Multiple Intelligences and Bloom's taxonomy. During her interview, Fiona emphasised her focus on developing 'thinking skills' and the close relationship of this to creative thinking.

(Monday 3 October 2005, 3:15pm.)

Event: Interview 1

Sub-event: Year 5 literacy groups

Fiona:... 'Radical Readers' is based on thinking skills where they can actually take a novel that they've read and from that presenting it into...like reviewing ...based on Bloom's, Gardner's, thinking skills, and they're showing us their novel in a different way or some way that they see it. It could be constructing something, presenting it in an Art format. It could be reading into a tape recorder. There's lots of things that they are doing. So that's virtually...that's where their creativity comes in. And that's what we are pushing at the moment that they need to think for themselves of how they're going to present that particular novel.

Fiona's talk focussed on the strategies that she was including in her lessons to enable her students to gain 'thinking' skills. Building a 'Smart State' involves teachers in breaking a skill like critical thinking into its component parts and scaffolding its development. Building a 'Smart State' does not occur by simply stating that we require workers who can critically analyse situations. It is teachers' work that is so important in this process. The development of critical thinking has **materialised** in Fiona's room in the form of the response activity. The provision of this activity and Fiona's justification support the claim that this discourse is being **inculcated** in her style of work. Importantly, Fiona is recognising that she must translate skills like

critical thinking as practical classroom activities that will provide practice for her students to develop the necessary skills. During the reading activities, I spoke to four students in the group working on these responses. They showed me the book where they were keeping their responses and were able to explain their choices for the activities they had completed as well as discuss the reasoning behind their responses, thus providing initial evidence of a critical thinking discourse starting to be **enacted** through their work.

The development of critical thinking is evident in Sally's and Fiona's work. That the development of this skill is being taken up by others in the school and viewed as becoming an essential part of their work is supported and accentuated in the panel discussion. Furthermore, the style of questioning used by Sally in her reading lesson was also discussed by one of the teachers in the panel interview in reference to her classroom teaching style. The teachers had been discussing how negotiation was now a practice they regularly used in their classrooms as one way of individualising learning. The development of critical thinking skills was realized in this teacher's talk as she discussed the changes that had occurred in her teaching style over recent years, and how she recognized this as teaching her students a different way to think in response to meeting new needs. This comment demonstrated how the development of critical thinking skills was being **enacted** in her class and also **inculcated** as part of her teaching practices.

(Thursday 29 September 2005, 3:30pm.)

Event: Panel interview

Teacher 1: *But with that hands-on as well, like, I have always been a very hands-on teacher with materials but ten years ago I would have had the purpose in mind. It would have been a lesson, I would have had it totally mapped out and we would have been using materials for a certain purpose **whereas now it's, "Here's the materials, you tell me what you do with it and you tell me why you're doing that and what you come up with"**. Whereas before, I mapped it and I mapped how they were using their materials, what the end purpose was, so that it was just a part of the lesson but it wasn't really meaningful, it was still meaningful to them because they were still using it but now it's more open-ended. I'm saying to them, "**Why do you use this? What are you getting out of it? What are you doing with that? How did you get that answer? Can you show me how you work that out? Show me what you did with this**". So it's a lot more them coming up with the answers and it's not so much as strategy with maths, of teaching the way to do it, it's like, "OK, well how did you do it, and how did you do it, and how did you do it?" They've all got the same answer so...yeah, using materials in a different way, I think.*

By having the children's needs in mind, this teacher is encouraging the children to think for themselves and not rely on the teacher; the children are involved in directing their learning and reaching personal goals. The difference in this strategy in the teacher's current practices was how she approached the activity – it was now open-ended with the children being given the responsibility for a higher level of thinking. The teacher's use of questioning was paramount in this example. Activities where children manipulate materials is not, in itself, a new experience in classrooms but the way the activity is directed and the goals of working in this manner, appear to have shifted and changed.

However, the advent of ICTs in schools is a relatively new phenomenon which has brought another set of challenges for teachers. In this extract, information technology is viewed as important but also a problem, in a similar fashion to how it is presented in *QSE 2010* (Queensland. Department of Education Training and the Arts, 1999, p. 6). Technology is presented as an ultimatum that requires teachers' direct responses since the alternative of not responding to the influx of technological devices would be impeding life chances for their students. In meeting these

challenges, the teachers talk about the importance of skilling the children to identify appropriate and inappropriate sources of material on the internet.

(Thursday 29 September 2005, 3:30pm.)

Event: Panel interview

Teacher 1: ... *it's teaching the children to discern from so many sources of information like, you know, with the internet, getting them to read those little blurbs that come up, and say which is a valuable source of information and which is a load of rubbish, and how do you decide. That is such a hard skill to get across to them, because you know, it's got the right heading, it's come up with the right search term so...*

Teacher 2: *And that's where our job is coming into it - is the fact that it's not so much what knowledge we're teaching them, it's how to access that knowledge and our job's become teaching them the skills to be able to access that knowledge because we can't possibly teach them everything so we need to give them the key to open the door to any further learning that they want to do...*

Teacher 1: *But to access and interpret the knowledge. They've got to be able to use it.*

Teacher 3: *And they've got to be discerning enough to be able to decide who wrote this and is this appropriate, you know? And who put this here and did they have an underlying reason for doing such, you know all that sort of stuff? **That critical literacy stuff is so important now. It's much more important than it was.***

During the panel discussion it became evident that there was a shared notion of the value of teaching critical thinking particularly in relation to computer literacy. The last comment by one of the teachers on the current importance of '*critical literacy stuff*' contributes to the claim that this is a purposeful response by teachers to address the changing needs of their students in a changing society. As another teacher said, "*They [the children] are different, our society is different and we just have to build upon that and fill in what gaps are there...*" The teachers are purposefully including these new practices in their teaching to address the changing needs of students in a technologised world. This informal exchange between the teachers is witness to a shared concern to develop skills necessary for a knowledge economy though these terms are not used or necessarily known. The teachers however recognise that critical literacy must be taught because of changing times and the need for a different set of tools to progress in this society. Technology as a

tool to *'any further learning that they want to do'* is also accentuated by one of the teachers, sounding but not stating, a discourse of lifelong learning.

A final example of the development of critical thinking becoming a part of a new style for the teachers comes from Sally's classroom work. Pursuing the development of critical thinking skills in her students is explicitly connected with her belief in making connections between the curriculum and her students' life experiences. Not long before I arrived at the school, Sally had conducted a survey in her class to discover what the students were 'thinking' about different aspects of schooling²⁹.

The survey questions were:

1. How would you define/describe a 'great' middle years' teacher?
2. What qualities/skills do you feel you need when you leave school in order to actively participate in the 'real world'?
3. How can a middle years' teacher help you develop these qualities/skills?

In this example, Sally has demonstrated the application of school based critical thinking skills to real life. The children needed to think critically about facets of their everyday school lives. They were not being treated as passive recipients and they were implicitly led to believe that their opinions were valued, and that they had the skills to critically assess their own life predicaments. Each question required the students to relate pieces of information from one question to the next so that the issue is examined closely and beliefs are supported with other evidence.

The use of thematic work to develop critical and creative thinkers

Our marine environment – Year 5

In term three Fiona's class was involved in a series of integrated activities that culminated in the Year five camp at the North Keppel Island Environmental

²⁹ The responses were being used in a regional Middle Years of Schooling Association Newsletter article that Sally was writing.

Education Centre. As discussed in previous chapters, the Smart State reform process focuses on developing innovative entrepreneurial future workers. This requires teachers engaging children in opportunities to practice and develop these skills in their component parts. That is, the teachers scaffold the learning experience dividing the main skills into sub-skills that they explicitly develop with the children. This Year five unit was designed to promote critical and creative thinking skills but in the real life context of time frames, budgets, precise and accurate report writing, solving personal conflicts, and reflecting and evaluating. The following snapshots broadly illustrate how Fiona goes about purposefully developing the acquisition of these skills in her students.

(Monday 3 October 2005, 9:30am. Day 6 of observations for Fiona)
Event: Observed lesson – thematic work ‘Our Marine Environment’
Sub-event: Introductory lesson

Today the class were introduced to their first assignment in this unit of work. There was a buzz of excitement from the students. Since arriving back from holidays there have been two stuffed animals - a small green turtle and a big purple dog - sitting above two of the computers. The teachers had not explained why they were there, until now. The turtle belongs to North Keppel Island and will be returning to the island when the class goes on camp. The dog will also go to camp but will return with the class from camp. They are the camp mascots for this year and both need names. The children’s first task was to name each of the mascots with **Fiona emphasising creativity**. Many names were suggested, **the children becoming more creative with each suggestion**. The decision was left for tomorrow.

For the next task that was introduced, the children work in pairs to **design, make and evaluate** a piece of clothing or other item for their camp mascot to take on camp. Fiona explained that the children were required to find creative bits and pieces in their homes to bring to school to use. Each mascot needed a minimum of fourteen items for camp and each pair of children was given one item to make for one of the mascots, for example, sunglasses, flippers, board shorts, sun safe hat, t-shirt (tie dyed like the children’s shirt that they will be doing in Art). The actual work they were told would start tomorrow giving them time to process the information they had so far received; to think about what they had to do and how they were going to do it. The students were given two weeks to complete this project.

The introduction to the unit has emphasised creative thinking with the students adopting known objects to the obscure dimensions of the stuffed animals. **The**

priority given to creative thinking has been displayed in the teachers' planning and in their chosen form of response by the students. How effective the teachers are at operationalizing this discourse of creative thinking will materialise in the student's response to this project. Fiona had stated during the course of the day: *"It's going to be really interesting to see what they come up with but **what we're really interested in is the process of getting there, how they work together, how they use the materials, how they solve problems...**"*. Fiona's talk here shows that for her, being creative is a process, not an end product, and that her role in this process is multi-dimensional spanning the children's social, emotional and academic progress. For Fiona the discourse of creativity is not something that simply materialises in the classroom, but something that requires in-depth planning and continual on-the-spot evaluating and revising as situations arise. That this discourse is a part of Fiona's identity is evident in her expressed thinking, the language she uses, and in her preferred style of working.

The development of critical thinking skills has been embedded in this unit in a variety of aspects. First, on the day that the students were introduced to this project, they were provided with the task criteria sheet which they read with their partner. By providing their students with criteria sheets and progressively discussing each section, the teachers are showing the students how to use criteria to analyse and evaluate their own work. Second, the students were required to record their progress in a journal with responses framed by De Bono's Blue Hat thinking, 'What thinking is needed? What problems have occurred? What thinking is required to solve our problems?' requiring each child to critically reflect on their work while directing

their thinking to solutions³⁰. Third, the progressive sequence of the unit tasks was displayed on cards which focussed on each stage of development in the project. This physical representation demonstrates to the students how tasks can be broken down into component parts so that the children are learning lifelong skills of how to approach and tackle real life problems. Finally, these skills are further enhanced by enforcing a budget with the children required to record all transactions. It was necessary for the students to make amendments to their project, if necessary, to stay within their budget.

The development of critical thinking skills is also facilitated through Fiona's questioning and response style. Fiona does not appear to directly answer the questions of her students but instead poses other questions so that the students work out the answers for themselves. For example, the students discussed their ideas for their mascot's clothes with Fiona as she passes them. Fiona's responses were usually open-ended suggestions or encouragement.

(Thursday 20 October 2005, 11:35am. Day 8 of observations for Fiona)

Event: Observed lesson – thematic work 'Our Marine Environment'

Sub-event: Constructing the clothes for the camp mascots

Fiona: *You'll have to think about that.*

Fiona: *It's a strange shape so there's your problem.*

Fiona: *I know what to do but you need to think...think of a piece of material. Go and get a piece of material...*

Fiona: *Show me what you think...*

Fiona (aside to me): *I think if they touch something it means more to them.*

By placing the onus to solve problems back onto the students or by appearing to offer help by directing the students to an idea ('strange shape') or an object ('a piece of material') Fiona is giving legitimacy to a discourse of creative and critical

³⁰ A similar response activity was also observed on two different days in Sally's room as the class worked through their unit work. This unit will be examined in the following section on collaborative work.

thinking. This unit of work is illustrative of how creative and critical thinking is embedded in Fiona's work in the enactment of the discourses through a variety of modes, the inculcation into her style of operation, and the materialisation into her work programs, classroom artefacts and the children's responses. Different sub-skills of critical and creative thinking have been progressively developed in the unit.

Discrepancies in the teaching of critical and creative thinkers

Most problematic here is the disjunction that appears to arise between the teachers' commitment to developing critical and creative thinking skills in each student and their concern with accountability levels and the associated style of assessment particularly characteristic of mandated testing as in the Year five test. The teachers appear to view a focus on 'the basics' as important and lament the amount of time they have to further refine these skills amid competing demands for outcomes in other curriculum areas. Although aspects of critical and creative thinking are included in Year five test assessment items, they are not the focus for the teachers. The development of critical and creative thinking is most explicitly developed within other class work particularly in all thematic unit work. One of the inhibitive factors of these tests was the conditions under which the tests were to be given. Fiona practiced over many days the type of items on the Year five test and the exam conditions required for the test even down to the reorganisation of the desks to mimic exam conditions. She attempted to lighten the atmosphere by turning the desk reorganisation into a fun activity by timing it and having the students try to beat their previous record. However, it remained a different atmosphere and organisation from everyday routine.

Even though items on the test included aspects of creativity and in particular critical thinking, it was the physical arrangement of the desks, the different style of teaching

that was adopted, and the different presentation of the material that affected the children's responses. As Fiona commented, "*Look at the amount and size of the text here. This will just be too much for some of these kids. Oh, they can read it, no worries, but not when it is presented like this. They'll just look at it and switch off. But we know what they're capable of.*" What they were capable of was shown in their class work, particularly their project work when their individual talents were promoted.

Having said that, at the end of the test practice session that I witnessed, Fiona did discuss the value of being creative in the writing task and shared the work of some students with the rest of the class, discussing how a creative response had been achieved. The children enthusiastically discussed this topic and creativity appeared to be valued within the class. So amid the formality of test practice, the value of creativity was still being stressed.

The process of mandated testing, whether State or school based is discussed by Fairclough (2005e, p. 921) as 'the management of contradictions'. Fiona's work depicts a process of resistance where she conforms but still attempts to include her own priorities. For example, the games and 'fun' times that Fiona built into the test practice sessions are a form of resistance to this process. However, although she conformed to the testing regime, her attempts at managing these contradictions adds support to the claim that discourses of creative and critical thinking are embedded and enacted in her personal work discourses.

Conclusions

In this section on critical and creative thinking, evidence has been provided of how these discourses are a part of what the teachers do, how they interact with their

students, the explicit language they use and how their students are engaging with and taking up these discourses into their own ways of doing and being. The teachers also described these discourses as now more prominent and explicitly developed in their teaching practices over the last five years.

Literature of the new skills required for workers in a knowledge economy consistently lists creative and critical thinking as essential skills for innovative workers. Smart State policy drawing from these nodal discourses also promotes these as important skills that teachers should be developing in their students so that they may be productive citizens contributing to a 'Smart State'. Evidence from Sally and Fiona's work and supported by talk from the panel discussion illustrates that a critical and creative discourse is currently a part of these teachers' styles of teaching. It is being enacted in their work as ways of acting and interacting with their students that is occurring in a way that the teachers claim is now more explicit in their programs. As Sally stated, "*I'm sure they would have been there implicitly but just not very black and white*". For example, in a 'new' genre of 'being creative' (Fairclough, 2005e, p. 934), the teachers are now explicitly talking with their students about ways to think creatively, and their students are able to respond with multiple suggestions then apply these in their work. The discourses of creative and critical thinking have also appeared as new genres in the form of the 'design, make and evaluate' process used in Fiona's thematic unit plan, or in the criteria sheet used to critically self evaluate by the students.

Creative and critical thinking has been inculcated in the teachers' work as the new identities they model to their students in valuing this style of thinking in their

classrooms. It has also materialised in their unit and daily programs, in the activities around the classroom, and in the way they organise their students.

The next section will now discuss and develop the argument for the teachers increased engagement with a discourse of collaboration in a similar fashion to this previous discussion of creative and critical thinking.

5.3.2 Promoting collaborative work habits

Establishing collaborative relations is identified by the Queensland Government (Queensland. Department of the Premier and Cabinet, 2005, p. 7) as one of three ideals inspiring Smart State strategy with the Government further describing the benefits and some of the features of working in this manner.

Good ideas emerge from an environment that supports collaboration: shared aims, camaraderie and rapport are just some of the features of ‘collaboration at work’ (Queensland. Department of the Premier and Cabinet, 2005, p. 8).

In Education Queensland's *Professional Standards for Teachers*³¹, Queensland teachers are encouraged to work collaboratively with their colleagues and with their communities so that the “best learning outcomes” are achieved for their students.

The development of collaborative skills has been identified in the literature review as a necessary skill of the knowledge worker – collaboration involves the sharing of interdisciplinary knowledges so that a synergy results where the product is more than the individual parts. Smart State policy, as shown above, also promotes this discourse for teachers in their work relations and as a skill to be developed in their students.

³¹ The *Professional Standards for Teachers* (Queensland. Department of Education Training and the Arts, 2005a) was directly developed as part of *Queensland State Education - 2010* strategy. The Standards apply to all State education teachers and describe the required knowledge and behaviours for teachers to progress their students into a future Smart State.

This section will investigate the development of collaborative skills on three dimensions – through teacher and school/community relations, through teacher/teacher relations, and in the development of these skills in students through purposeful teacher activities.

Collaboration between schools, teachers and their communities

In the past schools have been places where collaboration was not actively promoted or pursued. Schools have traditionally been places where decisions have been made by the Principal guided by central office regulations with little input from parents aside from the Parents and Citizens (P&C) or the Ladies Auxiliary groups whose functions often fell to raising necessary funds. There has also been little sharing of information between the various agencies involved in child welfare (for example, families, schools, social services). In my interview with the school's Deputy Principal when asked how she saw changes to schools over her eight years in school administration, her response focussed on current welfare issues as they were affecting relationships between teachers, students, parents and other agencies. In her conversation, organisations and other departments outside Education Queensland were spoken of with reference to the *QSE 2010* policy document. She identified current collaboration between the various groups involved in a child's welfare as a direct result of the *QSE 2010* policy discourse.

(Wednesday 5 October 2005, 2:00pm.)

Event: Interview Deputy Principal

Deputy Principal: *We have an increasing number of children with higher needs... So the expertise we are expecting from our teachers is broadening but also **their ability to work with a number of other experts that they can call in and also the family unit**... we've moved into **a team of where now we have the parent, the child, the teachers, Education Queensland experts and then we go across sector** and we will get, when we need to, we will get assistance from groups like 'Strengthening Families'... now with child safety in schools, **Education Queensland is now working with Social Services directly** and strategically which makes it far more accessible for us because we can actually give a case background to our person on the [Social Services] committee... and a lot of our conversation just then about partnerships, **that directly comes from 2010** those cross-sector partnerships where we were told that's where we wanted to go... **well we do have that now.***

The intensification of teachers' work is evident in this statement ('*the expertise we are expecting from our teachers is broadening*'), as well as the need for teachers to be able to work with a variety of groups where the teacher is not necessarily expert on only the child's academic development but also on the child's social and emotional development. These collaborative relations linked to *QSE 2010* are not spoken of as initiatives of the school but as mandates that have been followed ('*we were told that's where we wanted to go*'). This final statement articulated in this manner attributes the school's actions to the *QSE 2010* mandates and positions the school as responsible for following those mandates. This conversation was supported by the Principal's comments as she spoke about changes that had occurred in education in recent years.

(Thursday 6 October 2005, 10:15am.)

Event: Interview Principal

Principal: *I believe that there has been an increase in agency support and **a closer liaison between local agencies and communities. We have access to far more people than we probably did ten years ago.** We know about these people who are individual counsellors and psychologists who are working with kids and some of them with their parents as well.*

The **materialisation** of collaboration involving a multidisciplinary team working with child welfare is in place but as the Deputy Principal indicates, there is still development to be accomplished in this area.

(Wednesday 5 October 2005, 2:00pm.)

Event: Interview Deputy Principal

Deputy Principal: *We mightn't have it as seamlessly as we'd like but we do have those partnerships.*

The Principal and the Deputy Principal also spoke of the amount of time they spent with parents promoting and advising the benefits of working in this collaborative team. They believed in the successes that were currently occurring as a result of the collaborative relations that have been formed. Nevertheless, the Deputy Principal's last comment highlights that reform is not a 'yes or no' occurrence but a continuum of movement towards an ideal.

Open communication between the school and its community was also evident in the form of weekly school newsletters and specific letters sent home relating to current issues (for example, asbestos in schools). Parents were encouraged to be a part of the development of the school community through their responses to surveys of issues relevant to the school; and their participation on the school board, the P&C, in the school tuckshop and in the classroom. For example, the school board had recently completed a brainstorming activity where members listed the skills they perceived the students would need in their adult life. Similar exercises were conducted with the school staff and senior students. These were used to help determine the future direction for the school in its next planning phase. The school actively encouraged collaboration – it was **inculcated** into its operations and **materialised** in artefacts, processes used in the school, school bodies and planning documents.

In Sally and Fiona's classrooms collaborative relations with parents were also actively promoted. To illustrate this I will use an example from Sally's work. Sally's thematic work for the first period of my observations involved a bridge building unit. Within this unit the involvement of a range of community members was planned and negotiated. This involvement was necessary to access the expertises of a range of community roles. The students in Sally's class were learning how a range of specialists can provide different aspects on the same project all of which need to be taken into consideration, and which, when combined, produce a better quality project.

(Tuesday 16 August 2005, 02:00pm. Day 1 of observations for Sally)

Event: Thematic unit "Bob's Bridges".

Before lunch Sally had reminded the students that the Auditor (a parent) was coming in this afternoon and for the group accountants to make sure their record keeping was up to date... However when the class returned after lunch

Sally informed them that unfortunately Arnie the accountant was sick so I was nominated as her assistant. My job entailed auditing each group's record keeping of expenditure for the bridge building project. Each group had started with a budget and were required to purchase all required materials, paid with cheques.

(Wednesday 24 August 2005, 02:00pm. Day 2 of observations for Sally)

Event: Thematic unit "Bob's Bridges".

After a visit during the week of the local Land Care coordinator, one 'company' have decided to surround their bridge with a mangrove because of the value of this type of environment.

(Tuesday 30 August 2005, 02:00pm. Day 3 of observations for Sally)

Event: Thematic unit "Bob's Bridges" – demolition day.

On demolition day, Inspector Brickmeister, the construction engineer (another parent who just happened to be a construction engineer) was present to give his official opinion on the breaking point of each bridge. This was quite a stressful job as an audience of parents as well as the bridge building companies were there to defend the strength of their bridges!

The students had accessed for their project the expertises of accountants, environmentalists and engineers and used these knowledges to refine their projects. Community participation is evident in Sally's class. Whenever a visitor came to the

door, the class would stop and invite them inside to look at their work or share stories of local or school events. Sally enthusiastically welcomes every visitor and the children have adopted this welcoming presence. I witnessed this on many occasions and was also included in this group of welcomed visitors. This style of operating for Sally is explained in her interview as providing opportunities for her students to be involved in quality conversations with other significant adults.

(Wednesday 7 September 2005)
Event: teacher interview 1 - Sally.

Sally: I have an open door policy so even if a volunteer, a community member was to walk up to the door now they would be welcomed in, I would encourage them to talk with the kids, engage in those quality conversations. They never feel as if they're not wanted in the room. We have a very warm classroom and they want to be in here and the kids love having that extra time with other significant adults. For example we have had several volunteers come in over our bridge building context over the last term, one who is heavily involved in land care in our school and throughout the cluster. And since his invitation to come in, he's been in several times and it's not just during construction phase. He's come in yesterday afternoon and he chatted with the kids and he said, 'I'm spreading the word at how wonderful these kids are going' and I said, 'Well that's great. I'm glad you're enjoying it.'

A discourse of collaboration is realised in Sally's talk and behaviour in the classroom as she models a welcoming approach and the value of different working relationships. Her enthusiasm for this style of operating is evident in the words and phrases she chooses to use as she describes this aspect of her work (*welcomed, encourage, quality conversations, warm classroom, love, other significant adults*); and in her excitement as she relates the story of the district's land care organiser who '*was spreading the word*'. Sally's belief in collaborative work and involvement with community members was **enacted** in her classroom and also **inculcated** in her student's relationships with class visitors. Sally's sharing of classroom experiences and strong belief in developing collaborative relations extended to communications with parents where a similar enthusiasm is evident. At the beginning of each term,

the parents receive a newsletter, detailing the work for the term and extending invitations to visit the class.

(Term 1 newsletter - Sally)

Event: artefact collection – Sally’s parent newsletter.

Please feel free to pop into the classroom [location] and say hello – I would love to have a chat with you!

This message is reiterated in a similar fashion in newsletters throughout the year.

Sally explained her beliefs in her interview.

(Wednesday 7 September 2005)

Event: teacher interview 1 - Sally.

Sally: It’s communicating with parents about what’s going on. It’s sending home information letters at the start of the term. It’s sending home a bit of an overview as to what context we are going to be doing, what areas we are going to be covering, asking for any volunteers to come in any time. So it’s very open door and parents respond well to that and so do the kids.

When explaining her actions, Sally uses the active mode of ‘*is (it’s)*’ to denote her conviction with this style of operating. She is not suggesting this may be a good way of operating; rather she is stating that this is a good way to operate and supports this with the evidence that ‘*parents respond well to that and so do the kids*’. Pursuing these beliefs Sally involves a variety of community members in her class’ activities, modelling to her students how different talents can be accessed and incorporated to achieve a better product. Sally’s statements, her actions in the classroom and her classroom artefacts all support this belief in involving community in her classroom and encouraging her students to access the expertises of other people. A discourse of working collaboratively has been promoted by Sally through her modelling and enactment, and through encouraging her students to repeatedly see the benefits of working with other community members.

The concern to develop collaborative relations is realised in the school administrators' talk and in the systems established in the school to facilitate these relations as well as in Sally's talk and organisational systems. However, the administrator's concern is driven by education policy for example, *QSE 2010*, while Sally continually relates back to the value of these relationships for her students. The grammatical choices of the different respondents indicates the positioning of themselves in a collaborative discourse (for example, the Deputy Principal's use of 'partnerships', 'across sectors'). This may be seen as symptomatic of a more direct involvement with Smart State policy.

Collaboration between teachers

During my time in the school collecting data for this project I was aware of a number of changes that had occurred over the last five years. One of these was the collaborative planning that now formally occurred between teachers in the various year levels. This originated at a school organisational level, and the teachers had embraced it and extended it in many cases beyond collaborative planning to collaborative teaching. For example, the four Year five classes were involved in a *Year 5 Key Learning Area Rotation Program*. This program had been devised by the teachers as a response to middle schooling initiatives exposing the Year five children to other adults in their learning. In the last session of each day (2:00pm - 3:00pm, excepting Friday), the students rotated around various specialist areas: ICT, SOSE, Science, and the Visual Arts taken by each of the teachers. The written rationale for the program introduced this plan by stating that the "Year Five teachers believe, 'work smarter'"³². The teachers had conducted a survey of parents, students and teachers of Year five to ascertain opinions on the effectiveness of this program

³² These quotes and the others in this paragraph are taken from two documents concerning this program: *Rationale of co operative planning and teaching in Year 5*; and *Report of Year 5 key learning area rotation program* (Terrina Bailey, 2004).

with the result that it was “considered to be a valuable and meaningful system of teaching and learning”.

Collaboration is evident in the Year five rotation program among the teachers, and is promoted in the types of activities in which the children were involved. In her interview, Fiona spoke of her collaborative relationships with other staff within the Key Learning Rotation program.

(Monday 3 October 2005, 3:15pm.)

Event: Interview 1 - Fiona

Fiona: ...all of the Year 5s are taught individually ICTs, Science, SOSE and Arts - we have different teachers teach that... at the moment we are swapping - specialising in one area like Science, SOSE and so on - that we are specialising in that one area, that we are trying to cover those things - trying to get different teachers - different teachers covering different areas and specialising in that area.

In this extract, Fiona highlights ‘differences’ and ‘specialising’, realising an understanding of collaboration where the benefits of different areas of expertise can be used to develop a better program than one she could develop on her own. Fiona’s next comment elaborates on the school context that underlies this form of collaborative work amongst the teachers. The planning and information sharing times are highlighted in this conversation about professional development.

(Monday 3 October 2005, 3:15pm.)

Event: Interview 1

*Fiona: Most of the development happens in school. We have **team meetings** where we get together and talk about what we are doing and I would say that is the only professional development I have done this year... **Year level meetings**, team meetings. We have two different kinds of meetings. **One is a year level meeting where we get together with the other four Grade 5 teachers and we talk about where we are going, what we’re doing and our program is written together. We do it together. We have everything organised. We then can take it away and unpack it differently... You then have team meetings as well and that’s middle school. We have middle school and the lower school. And the middle school we go and we discuss things that pertain to the middle years of schooling. So we do that every three weeks and we have meetings there deciding on which way we are going, how we want our money spent, things that we need to do in our class, in our SOSE, things that we need to do.***

This collaborative involvement of staff was important to Fiona and provided her with the information she required in relation to middle schooling and other policy. This importance is realised in the number of instances Fiona uses ‘we’ in this response (20 instances out of 179 words, or approximately 1 in every 9 words). ‘We’ includes Fiona as part of a team that meet together and discuss issues important to the school and more importantly, her teaching. Outside opportunities to collaborate with other middle school teachers were also mentioned in Fiona’s conversation and her inability to attend was justified through the development of her school’s team meetings.

(Monday 3 October 2005, 3:15pm.)

Event: Interview 1 - Fiona

Fiona: ...there is also an after school that I have been to one meeting for a middle school where people present their ideas. But I have only been to one of those but generally in our school that is what we are doing we’re deciding which way we are going in order to cover the middle school philosophy.

The different levels for collaboration that the school provided were enough support for Fiona to feel informed as a middle school teacher. Collaboration amongst the staff was explicitly evident in the school and all the teachers I spoke to appeared to value these styles of working, which then flowed into classroom activities.

Collaborative planning amongst staff members was actively organised and supported by the school. The role of a curriculum coordinator initiated through Education Queensland schools had enhanced these opportunities for staff. Through the variety of professional meetings the teachers were involved in, as opposed to the one large staff meeting that had been the previous model five years ago, a shared sense of purpose had been fostered with a common language for discussing aims.

However, as occurred in the previous section on collaboration between the school and the community, enactment of this discourse occurs as a continuum. Fiona,

although valuing the degree of collaboration now operationalized in the school's organisational framework, also spoke of her desire for a greater element of collaboration between teachers which involved a dimension of professional trust.

(Monday 3 October 2005, 3:15pm.)

Event: Interview 1 - Fiona

Fiona: I'd love to know how different people cover different areas. I'd love to see how different classrooms handle things, like I think it's the actual...not the philosophies...I would like to see how different teachers handle all these new ideas and the way they do it. That's what I would like to do...Like at the moment we're trying to set criteria sheets... and I'd just like to see what other people do that's interesting, different.

Fiona's use of 'I' statements assigns ownership of these beliefs and also adds support to the claim that Fiona is inculcating a collaborative discourse. As the above text illustrates Fiona desires ('love to know', 'love to see', 'like to see') a higher degree of collaboration amongst staff than is presently available in the system in which she works. She is aware of 'new ideas' but would like to see how others translate them into their teaching practices. Fiona is constantly on the lookout for new and better ways to engage her students. The meetings she attends in the school meet this need to an extent but the isolation of her own classroom and ideas is a constant frustration for her.

However, in highlighting this tension, Fiona also expresses the value she places in working as part of a cooperative teaching team. This relationship is obviously important to her as she spoke of it in the first sentence of her first interview. It was not just her in the classroom or planning work, she had a teaching partner who shared in all these facets of school life ('I'm saying we because I plan with somebody). Later in the interview she also spoke of the benefits to the class of this teamwork.

(Monday 3 October 2005, 3:15pm.)

Event: Interview 1 - Fiona

Fiona: We can like...take Maths - we can divide them according to needs and in different areas. We do it in Literacy - we have Literacy groups running in our Literacy time. And having so many children – fifty-five children and two of us - we tend to be able to cover more areas and you’ve got such a broader range of children.

This collaborative relationship with her teaching partner was highlighted in the class repeatedly. The following observation is one example.

(Friday 26 August 2005, 10:00am. Day 2 of observations for Fiona)

Event: Observed lesson – Maths operations

As the doors between the classes are kept open, while the students in the English group were working quietly, the other teacher came into the Maths room and quickly glanced at the work the children were doing commenting aloud that, ‘*We need to do a lot of work in this area*’. His comments were taken as support for what was happening in the room at the time with Fiona and other students nodding in agreement.

This ‘intrusion’ by the other class teacher was welcomed by Fiona and caused no signs of surprise from the students. In fact, the class appeared comfortable with the communication that occurred between the teachers continuously throughout the day as they focussed on different levels or aspects of the curriculum.

The teachers in the panel discussion also spoke of their planning with other Year level teachers and sharing appeared to be an accepted practice in the school.

However, the informal discussion of the focus group although highlighting the positive benefits the teachers felt from such interaction also highlighted the lack of time for such a degree of informal discussions across year levels. The various meetings allowed this but they still needed to adhere to an agenda. The teachers involved in the panel discussion happily continued their conversation well past the allocated time and commented the next day on how much they had enjoyed this chance to discuss their work and current ideas with other staff.

The collaborative practices that have been discussed in terms of Fiona's and Sally's work are focussed on in Smart State policy as ideals to deliver a 'Smart State'. Certainly resonances of Smart State policy are evident in the teachers' work yet the teachers make limited reference to policy documents. Fiona states that she has a 'vague memory' of *QSE 2010* but it is evident from her statement that this policy is not driving her work. However, other documents linked to *QSE 2010*, for example, the *Productive Pedagogies (Queensland. Department of Education Training and the Arts, 2002b)* are specifically referred to. Rather than reading policy documents, Fiona and Sally rely on the filtering process through the staff administrative team and school meetings to introduce new initiatives that they, in turn, develop as teaching strategies in their work.

Developing collaborative skills in students

The teachers have embraced the discourse of collaboration in their relations with the community and other staff, and in the organisational structure in the school, so that it seems a natural translation for the development of this skill in their classrooms. Both Fiona and Sally actively valued and promoted this style of operating through the example they set, their chosen methods of operating, and the explicit articulation of the necessary skills to be able to work in this manner.

In Sally's classroom this was initially evident as I entered and saw the physical organisation of the desks arranged in three groups of ten. As the day progressed this was changed to groups of four. The different ways of organising the learning space signals Sally's belief in this style of working. This is supported by Sally's frequent statement to her class, "*We need to learn from one another*". In her first interview, Sally discussed her classroom relations with her students accentuating the collaborative nature of this relationship.

(Wednesday 7 September 2005)

Event: teacher interview 1 - Sally.

*Sally: I find that **I'm a part of the team and I treat them as part of the team as well, it's our classroom**, not my classroom...and certainly I don't believe in the power struggle whereas I'm the teacher and these are my students, so I'm not going to speak down to them...**It's a very even relationship**...it's very equal.*

Sally is positioning herself as a team member (albeit the 'head' of the team) which necessitates a certain way of acting and interacting with her students. That team work was enacted in every aspect of Sally's work and valued by the students in her class is further evidenced in the following examples.

I observed a number of Maths lessons in Sally's room with the format usually following a similar sequence. First Sally would introduce the concept to the whole class. Then the class were given a task involving manipulative materials that they were free to work with anywhere in the room and within any grouping arrangement. Finally, they worked in their three table groups of approximately ten, rotating every twenty minutes for each task. One group worked at the front of the class on the floor with Sally; another group worked at the back of the room on the carpet individually, in pairs or in small groups with manipulative materials; while the third group worked at their desks on a worksheet. The children were free to move around and discuss their work with their peers which they appeared to readily do with any class member who was close at hand while staying on task.

(Tuesday 16 August 2005, 02:00pm. Day 1 of observations for Sally)

Event: Maths lesson - perimeter

As I walked among the class, two students with an incorrect answer were discussing it. They worked out that they had only added the length and the width but not doubled it. One of the students then explained and assisted the other to work out the correct answer and to understand why they needed to double the length and width to find the perimeter.

The boys had observed me stop to listen to their conversation and had acknowledged my presence through their eye contact but continued this interaction regardless of my presence. These two boys were involved in a serious conversation involving their school work, demonstrating a willingness to be responsible for assisting each other with their learning.

On another occasion, the bridge building session started with the first ten to fifteen minutes spent on a reflection sheet using the De Bono's Thinking Hats to focus on 'How I/the group are going'. The students used some of the Thinking Hats to review how their group worked (Yellow hat - good points; Black hat - not so good points; Green hat - how to improve; and Blue hat - where to next). Sally has used this structure to enable the children to focus on how they are collaborating and how they can improve this skill. A collaborative discourse is being purposefully translated to the students through the activities they engage in and the organisational arrangements used.

Group work has been shown to be a purposeful feature of Sally's work and even in assessment activities, Sally could incorporate this aspect. During one Maths lesson I observed, the children worked in groups on a maths assessment sheet they had completed the previous week. The entire group had to answer correctly and understand each question; so much peer tutoring was involved. Sally was using the children's skills to help others in the class, valuing the children as teachers and demonstrating how to learn from each other.

Sally's beliefs did however come into conflict with formal testing procedures. When her class were required to sit for a Year six test (school based), Sally refused to reorganise the desks to a new configuration maintaining that the atmosphere that the

children felt comfortable in was most important for them to perform at their best and produce their best. Sally's inculcation of a collaborative discourse into her teaching style caused a tension with the physical configuration of formal test procedures. Although the children still worked individually and quietly on the assessment task the desks remained in their group arrangement.

Fiona also explicitly transferred a collaborative discourse to her students by identifying the components of collaborative work and consistently promoting them with the class. Fiona's involvement with middle school philosophy through team meetings had helped her to realise the importance of '*getting the kids together more*'. When asked whether she was currently including more group work in her lessons, Fiona responded affirmatively but showed in her response that she still maintained control over operations.

(Monday 3 October 2005, 3:15pm.)

Event: Interview 1 - Fiona

Fiona: *I think **we do more group work now** - different size groups. It could be...we've done some with larger groups. This one is going to be a smaller group, probably three. We haven't done that smaller group. We've done some with four, five...but yes this is going to be a three. And we are thinking of deciding which groups go so that some of the lower ones can be linked with...by the others so that we have some sort of control there. We need to have that as well, otherwise it gets very uneven.*

The students were developing collaborative work skills but still needed direction from their teachers and each other. However, Fiona's next comment identifies that group work was not necessarily being used and developed to assist the students to meet the future requirements of a knowledge economy or a 'Smart State'; group work was more of a necessity for other reasons.

(Monday 3 October 2005, 3:15pm.)

Event: Interview 1 - Fiona

Fiona: *In order to cover...use the computers... we only have limited access - we have small groups. In order to do some of the things we're doing, we really have to have a small group. You just can't do it as a whole class. We have quite a large class so we find that the smaller groups work really well and **for ease of using resources, groups work better**. You only have one or two digital cameras; you have to plan it so that different groups are using different times... **I think you get more out of them**. I think that the good children tend to take the others on board - you know that they are teaching the whole time. **There's always teaching and discussion going on in small groups that you don't get in a whole class.***

In this extract, Fiona's movement from 'we' to 'you' to 'I' signals a shift in ownership of each aspect of collaborative work and the use of technology. First, the problem of limited resources is a shared one with her teaching partner so they ('we') respond by using groups. Next, by moving to 'you', Fiona is referring to all teachers – all teachers cannot use limited technology resources except by working with small groups. 'You' deindividualises Fiona's response, including her as one of a group who teach and so share certain understandings and concerns (Fairclough, 1992). Finally, when discussing the benefit of groups, 'I' denotes her individual positive view of this type of organisation. This movement between pronouns, I understand as Fiona stating her membership of a discourse of collaboration as part of her membership of 'being a teacher'.

Furthermore, in Fiona's class the children were constantly being reminded of their skills and how these could be used to advantage in group work. Every day the children were involved in some form of group activity where the development of communication and co-operative skills were explicitly being reinforced. The lack of resources may have necessitated small group work but the benefits Fiona sees in group work indicates that this style of operating would occur in any case.

On another day towards the end of the second term, the children were working in groups of three or four on mini-projects concerning bioenergy or thermal energy. They had been given the responsibility for their own as well as the class' learning. Fiona's discussion focused on how to successfully work in groups discussing aspects such as the allocation of tasks and using the various strengths of different group members. During this time, I observed Fiona talking to two students about their group roles. The students were both working on the same task producing two individual products instead of one as a group.

(Wednesday 31 August 2005, 09:30am. Day 3 of observations for Fiona)
Event: Alternate energy group work project

Fiona: *What are you really good at? Tell this to the other student.*

Student 1: *I'm a really good drawer.*

Student 2: *I'm really good at writing and spelling.*

Fiona: *So...*

And the conversation was left there as the students started to discuss their plans and combine their projects, allocating tasks.

The promotion of each individual's strengths was a scenario that I evidenced on each visit to the class. The described scene was one example of the promotion of individual strengths to foster the development of collaborative work skills. But there was also evidence of the **inculcation** of this behaviour in the discourses of the children. I observed as I walked around the groups that some groups had allocated roles to their group members so that the children identified themselves to me as the illustrator, or responsible for drawing the map, researching the information on a particular topic or designing and producing the title on their chart. In her interview, Fiona discussed this focus on individual strengths and indicated how this skill is promoted in the class and developed in group work activities, and was a skill that was actively being taught and modelled to the students.

(Monday 3 October 2005, 3:15pm.)

Event: Interview 1 - Fiona

Fiona: *Everyone is good at something and I think the other children tend to think, 'Oh look you're such a good drawer, why don't you go and do this, and you're a good writer, you do this', and they tend to negotiate and work out what they're doing. They tend to, as a group...they know what they're good at. One girl is really good doing PowerPoints, the others researched it and she put it together so **there is this working together that works. If you see them working in their groups, you can see it, it's obvious that they...the others help to get the best they can out of it... I think a lot comes down to the developing of the children, that they become aware. You know this just doesn't happen overnight. This happens over time that they become aware of what they're good at and we always say things like, 'Gee such-n-such, isn't he great at this'... So you've always got to be aware that there is a lot of teacher input there too... I think they know that is the way we work and the kids pick up on it very quickly. We often say things like, 'Aren't they really good at these skills.***

Fiona's enthusiasm for this topic was evident in the flow of speech as she progressed from one idea to the next. It was important that students were "good" at different skills ranging from Art to research with no priority given to any particular subject area. The value of these individual skills was apparent when individuals came together to work collaboratively on a project. Fiona spoke of frequently and purposefully making the class aware of another student's strengths which I witnessed on many occasions throughout each day as a part of all lessons. ('*Oh [student] can help us here he's really good at working out these problems... Look at [student's] mask he's great at creating just the right effect.*') This behaviour was replicated in the class with the student's also aware of, and acknowledging, other class members' strengths, and using these in group work times.

Another event depicting the development of collaborative working skills occurred when Fiona's class were examining the criteria sheet for their marine environment technology task. Fiona had explained that the first step in the task involved discussing the criteria with their partner and deciding on the rating for which they were aiming.

(Tuesday 06 September 2005, 09:15am. Day 4 of observations for Fiona)
Event: Marine environment group project

Fiona: *Who's aiming for an 'Always' [on the criteria sheet]?*

Majority of the class put hands up however a few do not and in particular one boy in the front row.

Fiona speaks to this particular boy: (Name) *who are you working with?*

The student responds with his partner's name.

Fiona: *You know (partner) will be aiming for an "Always" so you have to work with him.*

Another student mentions that his partner is aiming for a 'Rarely'.

Fiona: (Name) *is aiming for a 'rarely'. What should (partner) do to get (name) to aim higher?*

Another student provides a suggestion: Give (name) jobs that he can do well.

Fiona: ***Use the other person's talents that they can do well. Think about your partnership and what you can do to make it work for you. Make your partnership work for you.***

Again the skills of working collaboratively are explicitly discussed and developed in the class with the students also showing that some can verbalise these skills. In this example, the teachers are also implying that the results of working collaboratively can be better than what could be produced individually as Fiona states, "*Make your partnership work for you.*" In this statement Fiona is explicitly developing the concept of collaborative work while also placing the onus back on her students to actively work to develop productive relationships.

Working collaboratively is also modelled to the children as the teachers negotiate with them about various aspects of the curriculum. Fiona had discussed giving her students choice in the presentation for the next project:

(Monday 3 October 2005, 3:15pm.)
Event: Interview 1 - Fiona

Fiona: *Their storyboard might be a movie. Their storyboard might be PowerPoint. Maybe just a storyboard up - like a visual...digital photos with their writing on it. It could be...yes, they're the main ones. I'm just trying to think of the other ways they could go **but they're going to decide actually how they are going to present this.***

In describing an upcoming project, Fiona's talk includes two features that support the claim that a discourse of collaboration is a part of her way of acting and being.

First, Fiona uses ‘their’ – their work might be in this form but it’s going to be their decision. Second, she uses ‘might’ and ‘maybe’ with regard to the final presentation suggesting that these are some possibilities but she is open to new ideas from her students, that there is no closure on how this project will be presented. However, to progress to this stage in term three had been purposefully planned and scaffolded by Fiona with various presentation skills taught to the class at the beginning of the year. Collaborative work for this project also involved the children agreeing on the format for presentation by identifying and working with their talents. The teachers provided opportunities for their students to practice and develop skills of negotiation as part of the collaborative process.

Sally, also discussed using negotiation in her class and identified this as a strategy that she now purposefully included in her interactions with her students:

(Thursday 29 September 2005)

Event: panel interview - Sally.

Sally: *Definitely more flexible arrangements in terms of student direction, negotiation. I’ve really tended to make that a focus particularly in the last four or five years.*

In fact, one of the teachers in the panel discussion described negotiation as ‘*the big word*’ while supporting and adding to Sally’s statements. During this segment of talk the other teachers expressed their agreement with nods and ‘yeahs’.

(Thursday 29 September 2005)

Event: panel interview - Sally.

Panel teacher: ... *There’s a lot more of negotiation with curriculum delivery and content with the students, you tend to discuss with them a lot more not so much content but what tasks to do and what direction to head...why you are doing it.*

The teachers as they negotiated with their classes were demonstrating how to work collaboratively as well as developing skills in their students to direct their own

learning. In other words, these discourses were being modelled and taken up (inculcated) into the discourses of their students.

The panel teachers also identified collaboration as one of the areas they were now explicitly developing with their classes. They discussed the use and teaching of co-operative group skills and why they believed this had become far more important in their work practices. This next extract from the panel discussion occurred between two teachers and highlights the agreed changes that have occurred in their daily practices.

(Thursday 29 September 2005)

Event: panel interview

Teacher 1: ***We do a lot more of that [group work] now. The other thing is, I think they've [the children] got to learn those skills because there are so many changes, they're moving around the classroom, there is so many different things happening in the classroom all the time that they've got to learn to work independently because you're not always having the whole class at the one time sitting down doing one activity. You've got to have that flexibility because not all the kids are there; some kids are off doing other courses or other activities...***

Teacher 2: *And that's helping them to problem solve as well.*

Teacher 1: *It is.*

Teacher 2: ***When kids sort out some of their own issues within their group activities so that they have those skills for... in other situations.***

'You've got to have that flexibility' signals the purpose for this teacher of group work. In the previous quote, Sally also discussed her teaching as now being more 'flexible'. School life now involves such a variety of activities in which the children are involved (for example, instrumental lessons, learning support, enrichment) that the teachers believe that the development of group work skills and flexible arrangements needs to be part of the social practices for a school. Although the teacher speaks of this arrangement as a necessity ('You've got to'), she agrees with the second teacher that skills in problem solving are a positive outcome that can be transferred to 'other situations' or in Smart State terminology as 'lifelong learning'. Flexibility is another attribute of the new knowledge worker also located in Smart

State policy. The significance of this extract is in the theme of this teachers' message which could be stated as 'change': since the dynamics of the classroom are changing as teachers we have to incorporate strategies that meet these needs, translated as flexible group activities of which one benefit is the development of lifelong learning skills such as problem solving. Group work was being **enacted, inculcated** and **materialised** as a way of operating in these teachers' classrooms. It was discussed as a way of organising that was increasingly being enacted in their practices, and materialised in the groupings of the class. Technology was cited by the teachers as an important factor in this materialisation of collaborative work between students.

(Thursday 29 September 2005)

Event: panel interview

Teacher 1: *...with the digital camera too, assessment-wise as you're talking about doing more and more hands-on activities and more and **more group work, the digital camera lets you assess that so much better.***

Teacher 2: *And peer tutoring, if it happens with ICTs is just incredible. Last year I found that I had a couple of boys who were really, really skilled with ICTs, knew more than I did and I would say to them, '**Well you show the rest of the class, it's your job now, you can get up and you can tell us how to do things**'. And they [the rest of the class] just pick it up, just like that.*

For the teachers, technology legitimated collaborative work as an authentic teaching/learning strategy when used as a means to assessing work. Moreover, technology was also used to develop collaborative teaching skills with students who are 'experts' in an area that not all teachers are as familiar (teachers are not digital natives).

Conclusions

Collaborative work environments have been promoted and purposefully built into the school's operations since the publication of *QSE 2010* (as stated by the Deputy Principal). Collaboration is evident at every level of the school's operations – an increased degree of communication between the agencies involved with a child's

welfare and the discussion of these aspects with parents; new ways of meeting together and working together for the teachers (for example, a new genre of ‘the middle school meeting’); and increased use of group work (as claimed by the teachers) in the classroom with the identification and development of specific skills to work in this manner (identifying talents, negotiation) and equipment to aid in this process (ICTs). The consistency of this discourse being enacted in the classroom and the school, and its materialization in specific ways of organizing people and objects, and in planning documents are evidence of a collaborative work discourse being a part of the teachers’ and the school’s style of operation. That is, working collaboratively has been inculcated as a part of their discourse, as their way of acting and being. The dissatisfaction expressed by the Deputy Principal, Fiona and the teachers on the panel of not having enough of this way of operating, or of wanting this form of operating to go even further, is evidence of the importance of this discourse in their way of being. Further evidence has been provided by the uptake of these discourses into the students’ language and practices, for example, the identification of their talents, their skills of negotiation with their teacher and each other, and their apparent comfort and enthusiasm for working in this way.

5.4 Summary

This study has aimed to contribute to the discussion of the role of teachers in building the ‘Smart State of Queensland’ by examining the reform process in Queensland education and looking for evidence of its occurrence in the work of two teachers. Smart State discourses repeatedly stress the need for creative and critical thinkers as well as collaborative work skills in the present and future Queensland economy. These are powerful discourses constantly accentuated in our current policy documents as demonstrated in chapter four. These discourses emphasize the

need for workers in a new economy to develop essential skills that will lead to a sustainable and efficient society. The nodal discourse of a knowledge worker as discussed in the literature review promotes the development of mode two knowledge that requires higher level thinking skills, incorporating creative and critical thought, and the need for collaborative transdisciplinary work teams.

The evidence presented in this chapter of teachers' daily practices is being used to argue that the two focus teachers have engaged with these discourses and translated them into their ways of acting, interacting and organising. Data collected from observations, interviews and artefacts supported the position that the 'Smart State' was being operationalized through the work of these teachers but not that the discourses being engaged were necessarily from the 'Smart State'. Although specific to a local setting, the practices considered in this study cannot be considered as just 'local' happenings. They are translations of discourses which span local and global spheres of influence. As Harvey states,

While we may all have some 'place'/or 'places' in the order of things, we can never be purely 'local' beings' no matter how hard we try (Harvey, 1996, p. 357).

While certain connections can be made to Smart State policy through the genre chain of education policy documents and other related material, it is also evident that the teachers are drawing on other global happenings that are effecting change in their teaching practices. By examining a teachers' daily work practices through the way she interacts with her class, organises her day, and how she explains and justifies these actions (that is, the discourses she is enacting and inculcating), I am able to argue that these social practices of the teachers are not accidental or purely idiosyncratic, but are a translation of discourses that have also been translated as Smart State policy.

Crucial to the success and progress of Smart State strategy is its enactment through teachers' work. This chapter has presented snapshots of one school's, in particular two teachers', daily activities as they respond to changing circumstances. The discourses and other semiotic elements analysed in chapter four are part of a complex network of current measures to reform education in Queensland – reform measures that are meant to change the way teachers work. Although the teachers in the study acknowledge the existence of *QSE 2010* in that they can articulate some of the related documents (such as *Productive Pedagogies*), in their opinion, *QSE 2010* has not been the motivation for changes to their work, nor do they acknowledge the 'building' or development of a 'Smart State'. However, the Principal, Deputy Principal and the Curriculum Co-ordinator of the school do engage directly with these Smart State policies, and through school meetings their message is disseminated. The profusion of the Smart State message in each document in this genre chain has ensured that this strategy has been adopted as the way to progress Queensland into a new knowledge economy. The relation between what Smart State policy says and what teachers' actions and talk says is developed along the genre chain with the administrators and curriculum coordinators linking teachers to policy. As this chapter analysis shows, these discourses have been repeatedly evidenced as teaching practices in Fiona and Sally's work. Indeed, Fiona and Sally, state that their work practices have changed over recent years in a timeframe that aligns with the introduction of Smart State policy. These changes include the greater and more purposeful inclusion of critical and creative discourses, and collaborative work discourses, into their programs, their language, and the physical organisation of daily classroom work. The teachers also referred to their work with *Productive Pedagogies*, and Middle schooling which is part of the genre chain of Smart State

policy. It is through this genre chain (which includes dissemination of the message by others) that the teachers have responded to Smart State policy discourses.

However, it is also through the teachers' contact with the nodal discourses of a globalising knowledge economy in their everyday life that the teachers have changed their teaching practices. The changes depict responses to a range of influences on teachers' work, and not necessarily, a direct response to 'Smart State' mandates. The desire to equip students with the necessary skills for them to work productively in a future society remains in the foreground of the teacher's actions as well as Smart State policy. Fiona and Sally were responding to meeting the individual needs of their students within a rapidly changing world. For example, the inclusion in the teachers' programs of the development of critical analysis skills that they believed the students would need to navigate the quantity of information now available on the internet. The teachers have accessed similar nodal discourses to those informing Smart State policy as well as engaging with Smart State policy through the related documents along the policy chain so that they too are enacting discourses in their work that align with identified Smart State discourses.

The thesis underlying this study is that a 'Smart State' does not exist beyond the imaginaries of policy text unless there is proof that the discourses are being performed. The evidence of this chapter makes apparent the performance or operationalization of two of the Smart State discourses in the work practices of two teachers. The second main research question asks how teachers are operationalizing Smart State discourses in their classrooms. In the case of the development of critical and creative thinking, and collaborative work, evidence has been found in teachers' work programs and activities, in their explicit language, and in the environment they

construct for their students, of these discourses appearing as teaching strategies. The teachers acknowledge these discourses as now more explicitly developed and focussed in their work. The observation of Fiona's and Sally's work, and their explanations of their choice of actions, was supported by the teachers in the panel interview as a way of performing and a way of thinking within that school's environment. These discourses have also been evidenced in the students' conversations, and through their work practices and the products they produced. The teachers have persistently made their students aware of the multiple skills needed to perform these discourses so that these ways of acting and interacting are also a part of their students' classroom experiences and ways of responding. Although the teachers do not acknowledge 'building a Smart State', they do acknowledge the need to equip their students with the necessary skills for their future in a rapidly changing society.

Chapter 6: Conclusion

As a teacher with over twenty years of experience in various educational systems I have witnessed and been a part of an array of reforms, all claiming to improve the operational efficiencies of schools and the educational outcomes for students. Over the years, many of these reforms³³ have come and gone, relegated to the archives of Queensland education, but all of them at least having some implications for the work of teachers in schools. With my interest focussed on providing the best opportunities for my students, the value of these reforms has been at times mystifying because they seemed to only increase my paper work and take time away from my important work of engaging children with their learning. In the latter years of my teaching career, an increasing number of reforms and new initiatives have emerged to build Queensland as a strong State with the aid of the State's teachers. However, amid these reforms that claim to value teachers' work are also increased accountability and measurement of schooling through managerial and testing regimes that appear to value a teacher's own professional judgements less and less. The frustrations of teachers who are trying to meet all of the new administrative and policy demands being placed on them, amid an overwhelming sense of being devalued, is a subject that dominates conversations in many school meetings and lunch breaks. It is this most recent spate of change that has brought me to this study to try to understand why teachers' work is so implicated in the future of the State and thus subject to constant scrutiny, restructure and reform. The tensions that are evident around teachers' work begs questions about their role in this massive 'whole of government' initiative called the 'Smart State'.

³³ For example, SBS (School based assessment) reforms for the primary school; Leading schools project; Collaborative school review; Process writing programs; ELIC (Early literacy inservice course); SEMP (social education materials program), MACOS (Man: A Course of Study) .

This study set out to find how the Queensland Government's plans for a 'Smart State' are being operationalized through teachers' work, that is, how the skills and attitudes identified by the Government as necessary for a new type of worker and citizen are being developed through teachers' work. Two key questions have been formulated to meet this aim:

- *How are two Smart State policy documents designed to promote change in Queensland schools and classrooms?*
- *What are the mechanisms by which Smart State policy becomes operationalized in schools and classrooms?*

The questions have arisen out of a deep interest in teachers' work and how it is implicated in the recently introduced Smart State policy of the Queensland Government which identifies teachers as performing a vital role in preparing the next generation of workers for a new globalising knowledge economy.

In recent years the raft of Smart Queensland policies, which is at the centre of this study, has become the major driving force behind Queensland's social and economic future. Indeed, 'Smart State' is possibly the most comprehensive array of linked initiatives that Queensland schooling has ever experienced. As chapter two illustrates, much of the responsibility for the success of the 'Smart State' has been delegated to Queensland's schooling system and its teachers. The dizzying volume of policy reaches into every aspect of school operation through organisational and curriculum reforms which have, thus far, produced fundamental changes in most facets of schooling and teachers' work including professional development, ICTs, assessment, pedagogy, curriculum, and the early, middle and senior years of schooling. The literature also evidences future moves to more heavily regulate the work of teachers through national frameworks of teacher registration, setting

benchmark levels for all key learning areas from Years 1 to 10 (QCAR), and plans to bring in performance based pay. These reforms are argued to be in response to the demands of a new knowledge economy which requires more hi-tech, entrepreneurial, professional, highly literate, mobile and self-managing teachers. Clearly, the vast array of resources being deployed by the State is testimony to the Government's faith in teachers to deliver a 'Smart State'.

Chapter two established that there have been very few studies that have investigated the role of teachers in building the 'Smart State' of Queensland. Yet it is important that we understand the processes involved in teachers changing their practices to align with the demands of the 'Smart State' because, as many studies of work and innovation have shown, successful change is often attributed to the 'imagined' qualities of the policy itself or to a government or State or some other powerful, 'rational' entity. When teachers experience policy mandates as actual emotional, mental and physical work that they have to perform every day however, they are often confused about these kinds of understandings. This study set out to identify the daily work practices of teachers in a period of rapid change that has brought an influx of new policy to bear on the already complex process which is teaching practice, and the extent to which this policy can be evidenced as new 'Smart State' work practices.

Fairclough's work with transdisciplinary approaches involving discourse analysis was chosen as one way to look at current practices in teachers' work in contemporary times. Within this approach Fairclough argues that discourse is an important element when investigating changes occurring in social practices, especially in relation to the nodal discourses that inform them, for example, the

discourses of a knowledge economy. By employing discourse theory, the 'Smart State' is not viewed as a whole physical entity with a discrete form that acts on things, but consists of different discourses that are textured together to become the Smart State strategy. Seen in this way, a degree of clarity is added to what is otherwise a confusing array of policies aiming to radically reform Queensland education. Conceptualising the 'Smart State' as multiple competing discourses has enabled me to investigate the operation of power through State mandated policy to broadly illustrate how the 'Smart State' is being placed in a hegemonic position in Queensland with the aim of becoming manifested as new kinds of practices in schools and classrooms through the work of teachers.

In relation to question one, the study's findings show how Fairclough's theory on the dialectics of discourse has been useful to identify particular interdiscursive, linguistic and semiotic strategies that are employed within the two policy documents to promote this 'Smart State' version of Queensland's future. The policy analysis shows how Smart State policy has been positioned as the only possible version of events for Queensland while drawing on the nodal discourses of a globalising knowledge economy to support the claims made in this document. Smart State policy is the result of the texturing together of these dominant nodal discourses in such a way that the effects of these 'processes' and the solutions they suggest appear inevitable. Furthermore, the discourses of a knowledge economy although not new to education, when configured in a particular way become the 'new' discourses that 'make up' the 'knowledge worker'. These particular discourses, such as those of lifelong learners, creative and critical thinkers, innovative and entrepreneurial workers, and collaborative work skills, are reiterated and textured together in Smart State policy in a way that packages this discourse as new and important to the

welfare and survival of the 'Queensland lifestyle'. These discourses are apparent in every level of operation in Queensland and are recontextualized in education as a way to progress Queensland into a knowledge economy with skilled 'knowledge economy' workers.

The aim of Smart State educational policy is for the State's teachers to translate the discourses that make up the 'new knowledge worker' into their teaching strategies and perform these as particular practices that are adopted into their students' styles of operating. Fairclough's theory on the dialectics of discourse is central to an understanding of how Smart State discourses become recontextualized and progress to operationalization, that is, how discourses become a part of what we do and who we are. By adopting Fairclough's view of the dialectical relationship between elements of social processes, I am able to relate the changes occurring in the social practices of the teachers to changes in discourse which then enables me to establish a tentative relationship between the discourses of policy and the discourses of teachers' work. It is quite possible that what is being operationalized in the classrooms (as portrayed in chapter five) might simply exist as a general association among elements that go beyond Smart State discourse. For example, the teachers might just be trying to make sense of how to use the internet intelligently and not responding to demands for 'the new knowledge worker of Queensland'. However, by applying Fairclough's theories to these findings, it is clear that the teachers are engaging with similar discourses to those textured in Smart State policy and, whether intentionally or not, are engaging their students with a new set of 'knowledge economy' skills, meeting Smart State policy goals, and helping to build a 'Smart State'.

To summarise the findings in relation to research question two, the analysis shows the mechanisms through which Smart State policy becomes operationalized through teachers' work as a combination of the pervasiveness of Smart State policy and the emerging hegemony of the nodal discourses from which Smart State policy draws. Although neither of the teachers in the study is directly engaging with the two key Smart State policy documents that were analysed, they are familiar, and interact within, the genre chain of Smart State discourses. It is through this interaction in various components of the genre chain that the Smart State reforms are being accessed. For example, it is through the teachers' engagement with documents such as the *Productive Pedagogies* and syllabus documents; as well as through the internet web links that the teachers access for work programs; through curriculum advisors and the school administration team; and through the media as initiatives are written about and discussed. The all-pervasive nature of Smart State discourse and its links with dominant nodal discourses have positioned 'Smart State' as a hegemonic discourse in education cultures with the discourses realised in the focus teachers' work. Yet, as chapter five evidences, the teachers are not explicitly aware of the part they perform in their daily practices towards the building of a 'Smart State'.

The particular nature of the Smart State reform is that it is about a different kind of teacher with a different outlook and a different attitude to her work, that is, an attitude to teaching that is underpinned by a 'futures' perspective. 'Futures' is a core curriculum priority in all Queensland school syllabi and a futures discourse is strongly evidenced in the analysis of Sally's and Fiona's work. For example, Sally emphasises that her role is to enable her students to "be active citizens in society" equipped with "life long learning processes"; Fiona repeatedly speaks of "making a

difference” in the lives of her students in a range of ways. The teachers are aware of the enormous changes occurring in the world and the need to provide their students with a somewhat different set of skills for their future lives. Sally said that she is purposefully “driving change [in schools] in a way that mirrors what’s happening in society”. The influence of increased technology with new ways of working and new ways of interacting is being enacted in Fiona’s and Sally’s classrooms in response to this. When Fiona and Sally purposefully plan the incorporation of ICTs into every facet of their work, they are meeting one of the requirements of Smart State policy for teachers’ work. An awareness of the effects of a rapidly changing society on their teaching practices is also apparent in the panel discussion as the following extracts show.

Teacher 1: I think the world has changed. I mean you look at technology that’s out there now in the real world...

Teacher 2: And our children certainly know a lot of different things to what they did ten years ago and whether that’s better or worse, that’s just the fact of how it is. They are different, our society is different and we just have to build upon that and fill in what gaps are there...

Teacher 3: They’re also a lot more globally aware of things that are going on outside, like even though they’re still very self-centred they’re still aware of, you know, there’s so much bombardment with the media and TV and...yeah, they know what’s going on out there and, you know, with the internet and things like that, you know, music and all those normal things they’re interested in but there’s so much more now coming at them with those sort of things... The way technology is advancing in the world is at a phenomenal rate...it’s just moving at such an amazing rate.

Teacher 4: The way that everything has changed so fast is a big part of it. Isn’t it?

The rapid rate of change occurring in the world, the teachers imply, cannot be ignored and must be responded to so that their students can be engaged in learning and their future needs met. The teachers are aware of a ‘different’ style of student and a different style that they must adopt into their teaching practice to meet the present and future needs of their students. For example, the transformation of their teaching practices to meet the current needs of their students is apparent in the explicit development of the skills of negotiation, the identification of individual

strengths, and the development of a supportive class environment to promote a collaborative work ethos. Smart State policy also emphasises a futures perspective and a new style of working that teachers must adopt to meet the changing needs of their students.

By viewing teachers' work through Fairclough's moments in the dialectics of discourse, congruence can be established between the discourses of Smart State policy and the discourses that teachers are taking up into their work. However, Fairclough (2005c, p. 6) maintains that analysis of new discourses (for example, a discourse of collaboration) is inconclusive unless combined with an analysis of changing genres. Fiona and Sally identified new 'genres' in their daily practices as they worked towards meeting the challenges of changing times. For example, the formalised 'Middle School' meeting was a new way of grouping teachers and having them come together to discuss the diverse range of issues relevant to them such as budgeting, curriculum matters, new policy, and teaching strategies. Another example of a new genre in the teachers' work is negotiation as a new way of interacting between the teacher and her students, as the students are given the responsibility for making decisions about aspects of their school life. This way of operating is a part of the teachers' 'style' and is not reliant on the activity in which the classes are involved.

The theoretical framework adopted for this study has proved useful in illustrating how the work of these teachers is a major component of building a 'Smart State' - that the 'Smart State' is not built through the 'magic' work of policy - but that, teachers' work on a daily basis is, in a micro sense, the work of building the 'Smart State'. The fictitious future teacher from chapter one, Ms Samantha Stewart,

incorporates into her teaching practice all of the skills that a new knowledge worker requires in this rapidly changing world. Fiona's and Sally's classrooms may not yet replicate that of Ms Samantha Stewart but the study shows that a new way of operating is starting to unfold in their work practices. In Fiona's and Sally's classrooms the new worker of a 'Smart State' is starting to materialise. The children in the classes are engaged in authentic learning experiences that are developing the skills of the 'knowledge worker'. For instance, the children are, on a daily basis, negotiating; working as a team utilising individual strengths; and involved in activities where they have to employ critical and creative thinking, literacy, numeracy, and ICT skills to develop useful products that they have to justify to a variety of audiences. This study has shown that it is through the efforts of teachers as they strive to meet the challenges of changing times that the new discourses of Smart State policy are transformed from "imagined activities, subjects, social relations etc...[to] become real activities, subjects, social relations etc" (Fairclough, 2005b, p. 6). Thus as discourses are engaged by teachers they materialise as organisational and operational styles of working and talking with their classes which translate as component skills that can be articulated and practiced on a daily basis. It is the performance of these everyday practices that progresses the operationalization of a 'Smart State'.

This study shows the productive work of two teachers who are constantly thinking about how they can meet their students' current and future needs, and through that process meeting many of the goals of Smart State policy. However, to make the claim that the teachers' work is aligning with the requirements of Smart State policy, requires evidence of not just one or two new teaching strategies or tools but a whole new way of interacting, organising and operating that was not packaged together in

the same configuration before the emergence of Smart State policy. The teachers in the study spoke of how many of these practices have always been a part of their work but that in the past they were not as explicitly developed. The practices, to develop a new 'knowledge economy worker', although not individually 'new', have come together as a new way of acting and interacting, and thinking about their work for these teachers. The analysis in this study focussed on two of the requirements for a new knowledge economy worker while demonstrating how other aspects are integrated into the teaching/learning process. Specific evidence of the other discourses is included in appendix 3 and could be taken up and worked in a similar manner to the analysis conducted in this study to also add to the evidence of the building of a 'Smart State' through the innovative work of these teachers.

Another limitation of the study is that it shows the work of only two teachers in a State with over 35 000 teachers in the State education system alone. Claims that a 'Smart State' is being built through teachers' work would need to involve studies that spanned year levels and school systems in Queensland, not just the work of two innovative middle school teachers. However, I would argue against any notion that the teachers selected for this study are two isolated cases of innovative teachers in Queensland's school system. My assumption is that the practices of these two teachers may resonate with other innovative teachers' practices in the State and thus the assertion can be made that multiple teachers at multiple sites are building the Smart State through their daily work.

The literature on policy engagement discussed in chapter two strongly suggested that teachers take a more active role in reading and understanding the message of policy and how it is structured to be a persuasive text. Carter and O'Neill (1995),

Gale and Densmore (2003) and Taylor (2004) believe that it is only through this process that teachers will be active participants in the operationalization of a Smart State, (or actively choose not to be). In this context, teachers need to develop skills so that they can actively engage with policy at the level of discourse. In this study the teachers did not directly engage with policy texts, accessing these discourses through other means. Additional research would be necessary to show the result of providing teachers with skills in critiquing policy, and whether this affected their teaching practices and the approach they took to developing the required new set of skills in their students.

This study is important for teachers because it shows who is doing the work of the State in education – it is not policy makers or governments. Rather it is *teachers* as they access, engage and enact discourses. Yet teachers are by no means automatons or ‘well-drilled’ agents of the State without capacities for resistance or circumvention of State-produced policy rhetoric. The study shows that teachers actually translate policy discourses and other nodal discourses through processes related to their own value systems and histories as educators and people. While this study did not attempt to find out precisely what teachers drew upon to take particular actions, I suggest that further research would be useful to make apparent the actual mechanisms involved in the appropriation of policy into teachers’ work. It is here that theories of embodiment and identity formation could be utilised to progress understandings in a transdisciplinary study as proposed by Fairclough.

The work of Michel de Certeau may also be useful in subsequent studies to understand the processes of policy translation and operationalization in schools, especially his notion of the ‘uses and tactics of consumers’. Certeau’s interest lies in

the reception of power and a subject's response to the subjection of power. His focus is on how people operate within everyday life, how they use 'objects' and how they organise their space, adapting and transforming available 'objects' for their personal purposes (Giard, 2003). His work is particularly significant for this study of teachers' work and policy engagement because of his interest in how the dominant discourses of a society are seemingly followed yet are done so, not in a climate of acquiescence, but are accommodated and reappropriated in quite a creative fashion to fit an individual's needs or beliefs. For example, when Fiona discusses her increased use of group work in the classroom she is clearly not drawing upon the dominant Smart State discourses for schools because, as she states, she needs to "*effectively use available resources*". Rejecting the notions of mass consumption and passive conformity of authoritative mandates and rules, Certeau instead considers the actions of people as 'creative action', 'imaginative appropriation' and 'inner freedom' (Giard, 2003). He proposes that research should start with the actions of the users.

The presence and circulation of a representation...tells us nothing about what it is for its users. We must first analyse its manipulation by users who are not its makers. Only then can we gauge the difference or similarity between the production of the image and the secondary production hidden in the process of its utilization (de Certeau, 1984, p xiii).

Thus, Certeau's theories may be useful to develop a deeper understanding of the mechanisms of 'consumption' of Smart State discourse into the working lives of teachers.

This study provides evidence of the operationalization of Smart State discourses to show that the skills that are stated as required for the new knowledge worker are being developed to some degree in the classrooms of the two focus teachers. That is, Smart State discourses can be mapped and aligned with the discourses of the teachers' work practices. The study also shows that teachers and their work are

central to the success of the 'Smart State'. Clearly, however, the 'Smart State' is predicated on teachers of a certain kind, that is, innovative, creative and flexible teachers who are willing to take up new technologies of administration and teaching and learning and apply these knowledges into their work. What this could mean for teachers is a further intensification of their work as they strive to meet the new curriculum and pedagogy demands of schooling that will feed a competitive global economy. This study is important then, because it shows how much work it requires of teachers themselves to build a new 'Smart State'. The 'Smart State' is not something that can be conjured up by policies. It is actual emotional and physical work performed by teachers on an on-going daily basis.

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Appendix 1: Ethical approval and modification to approval

MEMORANDUM

From the Office of Research



Secretary, Human Research Ethics Committee

Ph: 07 4923 2603

Fax: 07 4923 2600

Email: ethics@cqu.edu.au

05 August 2005

Ms Lenore Adie
Faculty of Education and Creative Arts
Building 33, Central Queensland University
ROCKHAMPTON QLD 4702

Dear Ms Adie,

HUMAN RESEARCH ETHICS COMMITTEE

ETHICAL APPROVAL

PROJECT: 05/06-73 CENTRAL QUEENSLAND TEACHERS' RESPONSES TO BUILDING A 'SMART STATE'.

The Human Research Ethics Committee is an approved institutional ethics committee constituted in accord with guidelines formulated by the National Health and Medical Research Council (NHMRC) and governed by policies and procedures consistent with principles as contained in publications such as the joint Australian Vice-Chancellors' Committee and NHMRC *Statement and Guidelines on Research Practice*.

On 05 August 2005 the Human Research Ethics Committee of Central Queensland University acknowledged your compliance to the conditions placed on your ethics approval for the research project, *Central Queensland teachers' responses to building a 'Smart State'*.

The period of ethics approval is 15 August 2005 to 28 October 2005. The approval number is H05/06-73, please quote this number in all dealings with the Committee.

The standard conditions of approval for this research project are that:

- (a) you conduct the research project strictly in accordance with the proposal submitted and granted ethics approval, including any amendments required to be made to the proposal by the Human Research Ethics Committee;
- (b) you report immediately anything which may warrant review of ethics approval of the project, including:
 - (i) serious or unexpected adverse effects on participants;
 - (ii) proposed changes in the protocol;
 - (iii) unforeseen events that might affect continued ethical acceptability of the project;

(A written report detailing the adverse occurrence or unforeseen event must be submitted to the Committee Chair within one working day after the event.)

- (c) you provide the Human Research Ethics Committee with a written “Annual Report” by no later than 28 February each calendar year and “Final Report” by no later than one month after the approval expiry date;

(A copy of the reporting pro formas may be obtained from the Human Research Ethics Committee Secretary, Nicole Turner please contact at the telephone or email given on the first page.)

- (d) if the research project is discontinued, you advise the Committee in writing within five (5) working days of the discontinuation;
- (e) you comply with each and all of the above conditions of approval and any additional conditions or any modification of conditions which may be made subsequently by the Human Research Ethics Committee;
- (f) you advise the Human Research Ethics Committee (email: ethics@cqu.edu.au) immediately if any complaints are made, or expressions of concern are raised, in relation to the project.

Please note that failure to comply with the conditions of approval and the *National Statement on Ethical Conduct in Research Involving Humans* may result in withdrawal of approval for the project.

You are required to advise the Secretary in writing within five (5) working days if this project does not proceed for any reason. In the event that you require an extension of ethics approval for this project, please make written application in advance of the end-date of this approval. The research cannot continue beyond the end date of approval unless the Committee has granted an extension of ethics approval. Extensions of approval cannot be granted retrospectively. Should you need an extension but not apply for this before the end-date of the approval then a full new application for approval must be submitted to the Secretary for the Committee to consider.

If you have any queries in relation to this approval or if you need any further information please contact the Secretary, Nicole Turner or myself.

Yours sincerely,

Associate Professor Ken Purnell
Chair, Human Research Ethics Committee

Cc: Project File
ISDALE, Dr Lindy (Supervisor)
Application Category: A

MEMORANDUM

From the Office of Research



Secretary, Human Research Ethics Committee

Ph: 07 4923 2603
Fax: 07 4923 2600
Email: ethics@cqu.edu.au

30 September 2005

Ms Lenore Adie
Faculty of Education and Creative Arts
Building 33, Central Queensland University
ROCKHAMPTON QLD 4702

Dear Ms Adie,

HUMAN RESEARCH ETHICS COMMITTEE

EXPEDITED ETHICAL APPROVAL

MODIFICATION TO PROJECT 05/06-73 CENTRAL QUEENSLAND TEACHERS' RESPONSES TO BUILDING A 'SMART STATE'.

The Human Research Ethics Committee is an approved institutional ethics committee constituted in accord with guidelines formulated by the National Health and Medical Research Council (NHMRC) and governed by policies and procedures consistent with principles as contained in publications such as the joint Australian Vice-Chancellors' Committee and NHMRC *Statement and Guidelines on Research Practice*.

On 30 September 2005 the Human Research Ethics Committee of Central Queensland University acknowledged your compliance to the conditions placed on your ethics approval for the research project, *Central Queensland teachers' responses to building a 'Smart State'*. This approval is subject to ratification by the whole committee at the next scheduled meeting.

The period of ethics approval is 21 September 2005 to 28 October 2005. The approval number is H05/06-73. Please quote this number in all dealings with the Committee Secretary.

The standard conditions of approval for this research project are that:

- (a) you conduct the research project strictly in accordance with the proposal submitted and granted ethics approval, including any amendments required to be made to the proposal by the Human Research Ethics Committee;
- (b) you report immediately anything which may warrant review of ethics approval of the project, including:
 - (i) serious or unexpected adverse effects on participants;
 - (ii) proposed changes in the protocol;
 - (iii) unforeseen events that might affect continued ethical acceptability of the project;

(A written report detailing the adverse occurrence or unforeseen event must be submitted to the Committee Chair within one working day after the event.)

- (c) you provide the Human Research Ethics Committee with a written “Annual Report” by no later than 28 February each calendar year and “Final Report” by no later than one month after the approval expiry date;

(A copy of the reporting pro formas may be obtained from the Human Research Ethics Committee Secretary, Nicole Turner please contact at the telephone or email given on the first page.)

- (d) if the research project is discontinued, you advise the Committee in writing within five (5) working days of the discontinuation;
- (e) you comply with each and all of the above conditions of approval and any additional conditions or any modification of conditions which may be made subsequently by the Human Research Ethics Committee;
- (f) you advise the Human Research Ethics Committee (email: ethics@cqu.edu.au) immediately if any complaints are made, or expressions of concern are raised, in relation to the project.

Please note that failure to comply with the conditions of approval and the *National Statement on Ethical Conduct in Research Involving Humans* may result in withdrawal of approval for the project.

You are required to advise the Secretary in writing within five (5) working days if this project does not proceed for any reason. In the event that you require an extension of ethics approval for this project, please make written application in advance of the end-date of this approval. The research cannot continue beyond the end date of approval unless the Committee has granted an extension of ethics approval. Extensions of approval cannot be granted retrospectively. Should you need an extension but not apply for this before the end-date of the approval then a full new application for approval must be submitted to the Secretary for the Committee to consider.

If you have any queries in relation to this approval or if you need any further information please contact the Secretary, Nicole Turner or myself.

Yours sincerely,

Dr Graham Davidson
Acting Chair, Human Research Ethics Committee

Cc: Project File
ISDALE, Dr Lindy (Supervisor)
Application Category: A

Appendix 2: Information for school staff and informed consent

Information for school staff

Central Queensland teachers' responses to building a 'Smart State'.

My name is Lenore Adie. I am a Masters candidate at the Central Queensland University working under the supervision of Dr Lindy Isdale and Dr Colin Lankshear.

Project Overview

As part of my Masters of Education I am undertaking a study of the teaching/learning practices of innovative teachers. Globalisation and the knowledge economy are changing the work environment. The Queensland Government's Smart State policy addresses these changes and calls on the education system to 'produce' these 'new citizens'. Teachers through their innovative practices are producing some excellent work. In order to examine how teachers are enacting these changes it is necessary to observe their daily practices and talk to them to gain their perspectives.

Participation Procedure

Your contribution to this study would be in the form of participation in informal and some semi-structured interviews about your beliefs regarding your teaching practices. It is expected that these interviews will take time during work breaks and at some suitably identified time and will not exceed 30 minutes. A tape recorder will be used in the semi-structured interviews. No visual images will be recorded. Taped recordings will be transcribed. The transcriptions will then be presented back to you before analysis for confirmation of accuracy.

You will also be asked to tolerate the presence of the researcher in your classroom for a term. The researcher will act as a participant observer, recording interactions as they occur and interacting with the class at your discretion.

The study also includes an analysis of your work programs and any other information regarding your classroom curriculum.

You may withdraw from the study at any time. Participation or non-participation in the study will not affect your employment or academic standing in any way.

A copy of the final report will be available to you on request.

Benefits and Risks

Over the last 15 years teachers have felt the pressures of work intensification and complexification. The research will help teachers to understand their work in light of the broader socio-political context of schools. By making apparent innovative practices, participants may be positively empowered instead of negatively pressured by the change process.

The study will not be an evaluation of a particular teacher's practices. Nor will it compare teachers between classes or schools. Instead it will analyse how innovative

teachers are enacting change: what they do in their day-to-day schedule that is working so well.

The study is important and timely since the Smart State is still a fairly new concept and is embodied within the *Queensland State Education 2010* document. By detailing, discussing and documenting these practices, it may become more apparent how innovative teachers are moving Queensland into the new knowledge economy.

I foresee no harmful risks to you by participating in this research project, however in the event you should experience any negative sequelae as a result of this study, counselling will be available to you through the Central Queensland University.

Confidentiality / Anonymity

As participants in the study, the researcher will protect your identity at all times. Your name and the name of your school will be substituted with a pseudonym and no real names will be entered into any computer, recorded as raw data or published in any writings. Names will be masked so that linkage cannot be identified. The researcher will transcribe all interviews. Transcripts of interviews will be shown to the interviewee for verification of content and meaning.

Children in the classes as they interact with their teacher will not be identified in any way except by referring to them as student or by a pseudonym in the notes and transcript. A letter will be sent home to parents of students informing them of the presence of the researcher in their child's class and the nature of the research.

All original data arising from the project will be stored in a secure location for a minimum period of five years (This includes the audio cassettes that are later transcribed and data relating to identification of participants). During the study, all data will be stored at the researcher's home. At the conclusion of the study it will be stored in special facilities within the Faculty of Education, University of Central Queensland.

Outcome / Publication of Results

Details of the outcome of the project will be published as part of my Masters of Education thesis and may be used in conferences and in education publications.

Consent

You will be asked to sign an informed consent.

Right to Withdraw

You may withdraw from the study at any time without penalty.

Feedback

The case study report will be made available on request at the completion of the study.

Questions / Further Information

Any questions or information may be obtained by contacting the researcher;

Phone: 49 336 577

Mobile: 04 02 118 220

E-mail: l.adie@cqu.edu.au

Concerns / Complaints

Please contact Central Queensland University's Office of Research should there be any concerns about the nature and/or conduct of this research project:

Telephone: 07 4923 2607;

E-mail: ethics@cqu.edu.au;

Mailing address: Building 351, Central Queensland University, Rockhampton
QLD 4702

Thankyou

Lenore Adie
CQU Researcher

Informed Consent Form

I consent to participation in this research project and agree that:

1. An Information Sheet has been provided to me that I have read and understood;
2. I have had any questions I had about the project answered to my satisfaction by the Information Sheet and any further verbal explanation provided;
3. I understand that my participation or non-participation in the research project will not affect my employment;
4. I understand that I have the right to withdraw from the project at any time without penalty;
5. I understand that research findings will be included in the researcher's publication(s) on the project and this may include conferences and articles written for journals and other methods of dissemination stated in the Information Sheet;
6. I understand that to preserve anonymity and maintain confidentiality of participants that fictitious names may be used in publication(s);
7. I am aware that a Plain English statement of results will be available to me on request;
8. I agree that I am providing informed consent to participate in this project.

Signature: _____

Date: _____

Name (please print): _____

Where relevant to the research project, please check the box below:

	YES	NO
1. I wish to have a Plain English statement of results posted to me at the address I provide overleaf.		
2. I wish to be acknowledged in the Acknowledgements section of any publication(s) from the research project.		
3. I am prepared to be named in any publication(s).		
4. I give permission for photographs and digital images of me to be used in any publication(s) from the research project.		

CQUHREC clearance number: H05/06-73

Appendix 3: Extra evidence

Table 4 Appearance of Smart State discourses in teachers' work - non-focus discourses

Smart State discourses	Observed in... (observations)	Discussed in... (interviews)	Viewed in... (artefacts)	Supported by... (within the school)
flexibility	<ul style="list-style-type: none"> • In class arrangements/structure throughout the day; • In class project presentation. 	<ul style="list-style-type: none"> • Discussed by Fiona through the range of activities and responses required of the class; • In class structure and available choices – Sally. 	<ul style="list-style-type: none"> • Teachers' planning documents; • Project presentations. 	<ul style="list-style-type: none"> • Panel discussed a focus on greater flexibility needed in organising their day and ways of working with students; • Promoted through choices in technology – panel.
skills in information technology	<ul style="list-style-type: none"> • Integral part of all classroom activities in both classes – production of imovies, use of digital photos in student's work and teacher's assessment, computer graphics for design work, research, projects, writing tasks; • Teachers as 'technicians'. 	<ul style="list-style-type: none"> • Discussed in Fiona's and Sally's interviews in terms of personal skills and children's skills, and as an integral and important part of all work every day; • Tensions caused by technologies – Fiona. 	<ul style="list-style-type: none"> • Computers and printers in classrooms; • Use of digital camera for student portfolios, assessment records, and student project work; • Use of digital video camera and imovies to present class work; • Teacher displays and student work produced using ICT; • Teachers' planning documents. 	<ul style="list-style-type: none"> • School infrastructure and documents; • Computer room within the school Resource Centre and another 20 computers (approx) setup around the Resource Centre; • ICT focus from Teacher Librarian; • Discussed as changing teachers' pedagogy, students' learning styles, and relationship between student and teacher – panel; • Change in language used – panel; • Fast rate of change - panel
independent workers	<ul style="list-style-type: none"> • Preparation techniques used by teachers to progress children in this area; • Negotiation between teachers and students including developing an understanding of 	<ul style="list-style-type: none"> • Discussed by Fiona as 'thinking for themselves'; • 'More self-directed' – Sally; • Negotiated 	<ul style="list-style-type: none"> • Self assessment reports; • Project task cards allowing the students to self pace and progress; • Teachers' 	<ul style="list-style-type: none"> • Panel discussed negotiation as 'the big word'; • 'hands-on' activities – panel.

	<p>the ‘why’ of particular activities;</p> <ul style="list-style-type: none"> • Multiple classroom incidents. 	learning.	planning documents.	
a spirit of enterprise	<ul style="list-style-type: none"> • In group work projects – designing real clothes for mascots, bridge building project; new product making, design and selling; • End of term class presentations. 	<ul style="list-style-type: none"> • Discussed by Fiona and Sally in terms of project work and initiative shown. 	<ul style="list-style-type: none"> • Bridge building business cards; • Letter to singer John Williamson; • Products produced for sale at Year 6 expo; • Teachers’ planning documents. 	<ul style="list-style-type: none"> • Whole school parade run by school leaders; • Woodwork teacher making moveable chicken pens with students that are for sale; • Year 4 sell the eggs from the school’s chickens to pay for the chickens’ feed; • LST ‘healthy food’ enterprise; • Panel discussed class book production; • Panel discussed connecting activities to authentic learning experiences.
high levels of literacy and numeracy skills	<ul style="list-style-type: none"> • Year 5 test practice; • Integrated into every class task using a variety of teaching strategies; • Correct spelling on a handwritten task – no teacher proof reading – Year 5. 	<ul style="list-style-type: none"> • Discussed by Fiona in terms of the different ways to engage children and promote development of these skills (e.g. karaoke), and through integration of subjects; • Year 5 test practice; • Integrated into every aspect of work – Sally. 	<ul style="list-style-type: none"> • Year 5 test practice; • Task cards to practice basic skills in a variety of ways; • Teachers’ planning documents. 	<ul style="list-style-type: none"> • Tension created by quantity verse quality – panel; • Changing of skills required by students especially in relation to internet - panel