EXPERIENCES OF A 'THINKING SCHOOLS' INITIATIVE: A CASE STUDY OF ONE WESTERN CAPE PRIMARY SCHOOL

Rabia Edries

Student No: 2816603

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Supervisor: Prof. L. Green

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ABSTRACT

Experiences of a 'Thinking Schools' initiative: a case study of one Western Cape primary school.

R. Edries

Magister Educationis (M.Ed) full thesis in the Department of Educational Psychology, Faculty of Education, University of the Western Cape.

In this study I researched the effectiveness of a 'Thinking Schools' initiative at a local primary school between April 2010 and September 2011. I looked at how the school began the journey, what has changed in the school, the contextual factors that have influenced the process and what has sustained the school's progress. As background to the study I discuss the importance and relevance of learned intelligence as explained by Vygotsky, thinking skills and cognitive education, and the whole school approach as opposed to individual teacher initiatives, as introduced by Burden in the United Kingdom. A local adaptation of Lipman's 'Philosophy for Children' was the focus of this study, as it was chosen by the school as the starting point on their road to becoming a Thinking School. A qualitative research approach was used, using a constructivist paradigm and case study methodology, following the guidelines established by Stake (1995) and Yin (2003). The participants included the principal, together with selected teachers and learners and a curriculum advisor. Data collection took the form of interviews and a rating scale. The study found positive changes in teacher and learner thinking, supported by the ethos and stability of the school environment. The major challenge was that not all stakeholders were involved.

November 2012

DECLARATION

I declare that *Experiences of a 'Thinking Schools' initiative: a case study of one Western Cape primary school* is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Rabia Edries November 2012

Signed: .....

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CONTENTS

CHAPTER 1

INTRODUCTION

1.1 Introduction

In this chapter I will introduce the context which prompted the study and explain its rationale. I present the objective of the study and the research questions. I then provide a brief overview of the theoretical framework of the study, the delimitations and the research methodology. Finally, I introduce the five chapters in this thesis and provide brief explanations of key terminology and abbreviations used.

1.2 Context

We live in a fast paced interconnected world with knowledge at our fingertips and technology constantly developing and changing the way we live and work (Small & Vorgan, 2008). There are computer devices and software becoming obsolete today that were essential to the way in which we communicated with each other a few years ago and businesses are trying to keep up with the changing needs of their clients (Ferrel, Hirt & Ferrel, 2011). There is a constant overflow of information and higher expectations in the workplace. How can the South African education system develop learners who are able to manage all of the changes that

are yet to come and create citizens who can think and learn effectively and responsibly?

Jansen (2012) expresses his concern for the crisis in education in South Africa:

> *The main problem staring us in the face is that despite many, many reforms striking the school system since the 1990s, we have not yet had a game-changing intervention that alters the essential character of dysfunctionality in the majority of our schools, or improved the life chances of most black learners. That is the hard reality.*

Jansen (2012) notes certain major mistakes that were made in South African education since the middle 1990s which have led to the crisis in education, including: the complex curriculum plan of Outcomes Based Education, voluntary severance packages offered to teachers at the dawn of democracy, closing good teacher education colleges, mergers of universities and technikons and the neglect of mother-tongue instruction. Thinking about the crisis in education in South Africa and all its complexities could be overwhelming, but it could also encourage the urge to do something about it. Grand intentions at government level may not relate to effective implementation at school level, but if each teacher can improve education in their own class and each school can improve education in their own school community then there is hope for a better outcome for alleviating the education crisis. Something needs to be done to try to improve education in South Africa. There is a need to develop life-long learners, entrepreneurs, employees and citizens who are able to solve problems, develop solutions, sift through the overflow of information and manage within constant changes. For this to be possible and effective, learners need to develop their thinking skills and strategies throughout their school years. The Critical Outcomes contained in the outcomes-

based Revised National Curriculum Statement describe the kind of citizen the education and training system should aim to create (Department of Education, 2002). One of the Critical Outcomes is for learners to be able to: identify and solve problems and make decisions using critical and creative thinking. Another Critical Outcome is for learners to be able to: collect, analyse and critically evaluate information.

Whereas some people think that intelligence is inherited genetically, many are now seeing the impact of learned intelligence (Maclure & Davies, 1991; Blagg, 1991; Burden, 1998; Fisher, 2003) and actually teaching thinking. It has been found however, that initiatives by individual educators are difficult to sustain and a whole school approach is likely to be more successful (Burden & Nichols, 1997; Burden, 1998; Crevola & Hill, 1998). The whole school approach is now being reconsidered. In the United Kingdom (UK), Burden (2008) has developed a set of criteria for accrediting schools as 'Thinking Schools' (Appendix A). There are also initiatives in South Africa to develop Thinking Schools. Teachers have been introduced to the idea of teaching thinking. A school that is able to foster a thinking culture amongst staff members and learners will develop learners who will not only achieve academic success, but who will be more ready to deal with changes and develop solutions beyond the school years.

1.3 Rationale for this study

With the above context in mind, I think that this research is worth doing because it is important to track how a school develops as a Thinking School using the whole

school approach. I think that it is important to research because it has the potential to give us valuable information regarding the road to becoming a Thinking School, so that we can build on what works and avoid pitfalls in future by learning from any previous mistakes or challenges.

There is a need for an in-depth understanding of how the Thinking School process unfolds in the context of South African state schools in order to provide the Department of Education and others with information about how a Thinking School might develop and find out whether it is feasible in local schools. If it is, it could help to improve the lives and the future of the majority of children in South Africa.

I strongly believe that change has to start with education, which includes the development of thinking skills and strategies. I think that developing the thinking abilities in every classroom will lay a very important and solid foundation for each child, which will benefit them in their schooling years and beyond. Many more study and career opportunities are open to learners who have good thinking and reasoning skills, can think logically as well as laterally and are able to solve problems.

In my experience teaching at a primary school, there are often one or two teachers on the staff who want to teach in a manner conducive to developing thinking skills, but this is done in isolation and may not be carried on by the next year's teacher. I think that it is important to teach and develop thinking skills and that the whole school approach is the best way for this to be done effectively.

I decided to do this study at this school because they have been exposed to the concept of cognitive education for a number of years and seemed interested in the research and developing their school. I therefore thought that it would be important to track their progress towards developing as a Thinking School.

1.4 Objective of the study

The objective of this study was to explore and describe the journey of one local primary school towards 'Thinking School' status, by means of a case study.

1.5 Research questions

The primary research question was: *What is the story of this journey?*

Sub-questions:

- How did the school begin the journey towards becoming a Thinking School?
- What has sustained the progress towards achieving Thinking School status?
- What has changed in the school since the start of the journey towards becoming a Thinking School?
- What contextual factors have influenced the process of developing as a Thinking School?

1.6 Theoretical framework

The theory that underpins this study is that intelligence is not inherited but acquired, as proposed by both Vygotsky (1962, 1978, 1986) and Feuerstein (Feuerstein, Rand, Hoffman & Miller, 1980; Feuerstein, Klein & Tannenbaum, 1991).

Vygotsky (1962, 1978, 1986) maintains that learning occurs from the outside in and that learning and development are closely linked to the learner's context and the way that they interact with their world, i.e. the people, cultural symbols and objects. Feuerstein et al. (1980, 1991) adds the importance of mediation with a human mediator in order move from the known to the unknown.

Given these assumptions, various approaches have been developed that operationalize these ideas in schools. Several of the best known are well researched and have proved successful if implemented properly. One of these is Philosophy for Children (P4C). Since it was central to the target school's initiative in its early stages I review it in some detail, together with its application in South African schools where it is frequently referred to as the community of inquiry approach. In the case of the target school, teachers referred to this pedagogy as 'Stories for Thinking' because this is the name of the materials they used when first introduced to philosophical inquiry.

I also address the importance of a whole school approach to the development of thinking, drawing on the work of Moolla (2011), Fullan (1993) and Burden (2008) and discuss the Thinking Schools movement in the United Kingdom (UK) and South Africa.

The above ideas are more fully developed in Chapter 2.

1.7 Delimitations

The study covers the school's journey from 2007 to 2011. The bounded system of the case study was intended to include the following stakeholders at the school: the governing body, the principal, teachers, learners and curriculum advisor. Although it would have enhanced the study I decided not to include the parents, as there was limitation of access and I had reason to believe that they were not yet well informed about the initiative.

1.8 Research Methodology

There are various paradigms (worldviews or ways of thinking), with regards to research. The paradigm that is chosen determines the lenses that are used when planning and conducting the research. The research paradigm for this study is constructivism, which uses the qualitative method (Guba & Lincoln, 1998). Within qualitative research, one popular method is the case study. A case study is valuable because it can present a complete description of a phenomenon within its context (Yin, 2003).

Research participants were selected from the school community and eventually consisted of the principal, together with selected teachers and learners and a curriculum advisor.

Data were collected by means of interviews and a rating scale, the details of which are provided in Chapter 3.

Data from the interviews and the rating scale were integrated into a coherent story which is presented as a narrative as described by Polkinghorne (1988, 1995). To structure this narrative I used the framework of Burden's (2008) criteria for a Thinking School (Appendix A).

An important principle of good qualitative research, with regards to data verification, is the notion of trustworthiness (Denzin & Lincoln, 2008; Lincoln & Guba, 1985). Two of the aspects of trustworthiness, as discussed in Chapter 3, are credibility and dependability. I hope to have constructed a credible 'story' of this school's progress by using direct quotations to persuade readers of the accuracy of my interpretations. I also maintained an audit trail that included field notes, memos, as well as process and personal notes.

1.9 Chapter Outline

Chapter 1: Introduction

This chapter introduced the context which prompted the study and explained its rationale. I presented the objective of the study and the research questions. I then provided a brief overview of the theoretical framework of the study, the delimitations and the research methodology.

Chapter 2: Theoretical framework

This chapter presents the theoretical framework of the study and the research that supports it and presents the arguments for a whole school approach to the teaching of thinking.

Chapter 3: Methodology

This chapter explains how the study was conducted. It provides information about the context, research participants, data collection, data analysis and the procedures used to promote verifiability.

Chapter 4: Research findings

This chapter presents a narrative of the school's journey from 2007 to 2011, integrating the data from various sources.

Chapter 5: Discussion and recommendations

In this chapter I discuss my findings and my methodology and I make some recommendations for both future research and immediate practical action.

1.10 Terminology

- *Philosophy for Children (P4C)*: A programme by Matthew Lipman to develop the ability to think and reason, which includes stories used as a basis for discussion.

- *Community of Inquiry*: A form of pedagogy central to Philosophy for Children and common to various related approaches that introduce children and young people to philosophical inquiry.

- *Stories for Thinking*: A set of story books for Grades 4 – 6 developed by local teachers in South Africa using Lipman's stories as a model. It was the name used by the teachers in this study to refer to the Community of Inquiry approach.

- *Cognitive education*: The active and intentional teaching of thinking skills and metacognitive awareness, which is the ability to think about one's own thinking.

- *Thinking Schools:*

  One definition provided by Burden (2008):

  A Thinking School is an educational community in which all members share a common understanding and vision of the nature of the high quality learning and teaching for all pupils, and are committed to working together to make this vision a reality. They think deeply about their work, reflectively, critically and creatively, and spend time discussing the best

ways to co-construct both a meaningful and purposeful curriculum and associated activities, drawing on a wide range of learning opportunities. They are committed to their own learning, keep abreast of research, learn from each other and are open to new ideas, considering these carefully before deciding whether they will usefully contribute to their vision for a thinking school.

The University of Exeter's Cognitive Education Development Unit (CEDU) provides formal accreditation to schools using criteria developed by Burden (2008). These are listed as Appendix A.

- *Foundation Phase (FP):* This phase of schooling in the South African education system includes Reception Year (Grade R - the pre-school year before Grade 1) and Grades 1 to 3, which are the first three years of primary school.

- *Intermediate Phase (IP):* The second phase of schooling in the South African education system, which includes Grades 4 – 6.

1.11 Abbreviations

- CAPS: Curriculum and Assessment Policy Statement
- CEDU: Cognitive Education Development Unit
- FP: Foundation Phase
- IE: Instrumental Enrichment

- IP: Intermediate Phase
- IACESA: International Association for Cognitive Education in Southern Africa
- IAPC: Institute for the Advancement of Philosophy for Children
- ICPIC: The International Council of Philosophical Inquiry with Children
- MLE: Mediated Learning Experience
- P4C: Philosophy for Children
- SCM: Structural Cognitive Modifiability
- SGB: School Governing Body
- SFT: Stories for Thinking
- UK: United Kingdom
- WCED: Western Cape Education Department

CHAPTER 2

THEORETICAL FRAMEWORK

2.1 Introduction

In this chapter I review the theories that have guided my study and the research that supports it. Previously, psychologists had the view that intelligence was fixed but through the work of Russian psychologist Lev Vygotsky (1962, 1978) and psychologist Reuven Feuerstein (1980, 1991), the idea that intelligence can be learned was developed. I discuss Vygotsky's theory of "learning to think" and Feuerstein's theory of mediated learning, as these theories form the theoretical framework for this study. I then focus on one specific approach to the teaching of thinking, namely Philosophy for Children, and refer to relevant international and local research. Finally I consider the arguments for a whole school approach to change and present emerging ideas about Thinking Schools.

2.2 Vygotsky's theory of cognitive development

2.2.1 Sociocultural origins and cognition

Vygotsky had a sociocultural approach to cognitive development. He argued that cognitive structures are formed historically in a sociocultural context and are not innate. Cognitive structures are acquired by every generation in sociocultural

contexts via mediation. Lower psychological functions are described as the natural functions that follow the path of biological maturation (Eun, 2010). In contrast, cultural or higher psychological functions are developed as a result of mediation, of which formal school learning is an important part. Vygotsky (1978) argues that the only way to effectively develop and acquire higher order thinking is to develop the higher psychological functions. Vygotsky (1978) further states that any function of human development appears twice: first on the social plane, between two or more individuals (interpsychological), and then later on the individual plane, inside the individual (intrapsychological), so social interactions are vitally important. There is a body of research regarding Vygotsky's sociocultural approach to human cognitive development (e.g. Daniels, 2001; Kozulin, 1998; Kozulin, Gindis, Ageyev & Miller, 2003, Moll, 1990; Schunk, 2008). In this body of research, the importance of social collaboration involving the child and the persons, objects and institutions in their world is emphasised, as it leads to cognitive change. Mediation occurs within this subtle social collaboration. Vygotsky did not, however, describe in details how this happens.

2.2.2 Mediation

Vygotsky (1978, 1986) saw mediation as the process by which higher psychological functions are developed. The higher psychological functions can be considered as functions of mediated activity. The three major mediational tools that he suggested were: material tools (e.g. forks), psychological tools (e.g. language: words and the way they are used, also referred to as symbolic tools) and other human beings. Adults introduce the mediational tools to the child and teach

him or her how to organise his or her natural psychological functions through these tools, or the child may experience the tools directly. Vygotsky (1978) notes that language is the most important cultural tool.

2.2.3 Language

Language is essential to learning as it is the basis for mediation and plays a central role in cognitive development. Language is used as a set of psychological tools, e.g. labels for thinking processes or names for precision in order to identify objects. A further example is the relationship between an apple and the word *apple*. The more you use the word *apple* and develop language regarding this word, the more you can think about it and use it abstractly. Mediation via other human beings takes place by using language or signs in two ways, i.e. the mediator may be a partner who reflects and/or as an individual who shows, models or teaches something. According to Vygotsky (1983), the meaning of our own activity as well as the development of our entire personality is formed by the mediation of other individuals.

Vygotsky (1983: 144) noted:

> *One may say that only through the other do we become ourselves, this applies to each psychological function as well as to the personality as a whole.*

2.2.4 Zone of Proximal Development

The Vygotskian concept of the Zone of Proximal Development (ZPD) is defined as the difference in the child's achievement between assisted and unassisted performance (Rogoff & Wertsch, 1984). The ZPD is the area just above the learner's current level of independent competence. Teachers or more capable peers can raise the learner's competence through the ZPD. Vygotsky (1986) contended that assisted performance reveals those capacities of a child which have not manifested yet but which have already undergone inner development. He notes that learning in the ZPD is also associated with an interaction between spontaneous, or everyday, concepts of the child and systematic concepts, also known as scientific concepts, introduced by the teacher.

The concept of mediation is very similar to scaffolding, a term first used by Bruner (1975). Similarly to Vygotsky's notion of mediation, with an adult's assistance children can accomplish tasks that they ordinarily could not perform independently. Scaffolded instruction optimises student learning by providing a supportive environment while facilitating student independence (Larkin, 2002). The use of scaffolding during mediation is essential to optimise the learning experience.

In the classroom environment, mediation should occur in the learner's ZPD together with peers, using scaffolding strategies at first. When the learner is ready, the scaffolding should be removed and learning will continue without the scaffolding strategies. An example of scaffolding strategies in the classroom is when the teacher provides the learner with clues.

2.3 Feuerstein's theory of cognitive development

2.3.1 Structural Cognitive Modifiability

Reuven Feuerstein (1980), the psychologist who developed Instrumental Enrichment (IE), agreed with Vygotsky that individuals have the potential to change and that cognitive functions can be 'modified'. This underpins Feuerstein's (1980) theory of Structural Cognitive Modifiability (SCM), which is described as "the unique propensity of human beings to change or modify the structure of their cognitive functioning to adapt to the changing demands of a life situation" (Feuerstein, Feuerstein, Falik & Rand, 2002). Essentially, SCM is not only focused on changes to specific behaviours and skills, but also changes to the development of cognitive structures, which can be modified at anytime.

2.3.2 Mediation and Mediated Learning Experience

Feuerstein differed from Vygotsky in his view of mediation. Whereas Vygotsky considered mediation to be broad, and unavoidable due to cultural influences and the influence of experience, Feuerstein refined mediation to be more specific. He claims that although direct learning does occur, for most learning to occur there needs to be a human mediator to mediate from the known to the unknown. While Vygotsky did not see the role of human mediator as central, Feuerstein maintains that the key to meaningful instruction for all children is the mediated relationship (Feuerstein, 1980).

Feuerstein's concept of Mediated Learning Experience (MLE) explains the interaction of the organism with its environment via a human mediator (Feuerstein

& Feuerstein, 1997). MLE does not include all interactions, but rather those experiences that influence the individual's ability to learn. MLE provides the quality of interaction that helps the learner "become modified by exposure to stimuli in the direction of higher and more efficient levels of functioning and adaptation" (Feuerstein & Feuerstein, 1997: 5). According to Kozulin (1998), the central aspect of mediation is the change that qualitatively influences the learner and enables him/her to develop cognitive prerequisites for learning on his/her own from direct stimuli. The role of MLE is not limited to the transmission of knowledge and presentation of facts. It also helps the learner to engage with the facts and form relationships between the facts to be able to develop an understanding. MLE generates the processes that underlie elaboration of the perceived data (Feuerstein & Feuerstein, 1997: 9).

Mediation is thus teaching content and thinking at the same time. This has particular implications for schooling, as through mediation learners can develop their thinking skills at the same time as acquiring content / information. An illustration of this is the example of making jam. Learners are taught the method of how to make jam, but at the same time they can learn what could be transferred to or from that method in order to perhaps make a home-made product or to pay attention to the details of a task.

The three universal parameters or criteria for MLE, as noted by Feuerstein & Feuerstein (1997):

1. *Intentionality and reciprocity:* The mediator must intend to use the interaction to produce cognitive change in the learner and the learner needs to be receptive to the learning.

2. *Transcendence:* The intended cognitive change must be a generalisable one, i.e. one that can apply to previous and even future experiences.

3. *Communication of meaning and purpose:* Mediators share the cognitive purpose, letting the learner know why a particular activity is being done. It provides learners with a reason for doing things.

Other important criteria for MLE are: mediation of a sense of competence, self-regulation of behaviour, sharing behaviour, individuation/psychological differentiation, individuation/psychological differentiation, goal seeking/setting /achieving/monitoring, the search for novelty and complexity, awareness of the potential for change, the search of optimistic alternatives and the feeling of belonging.

Although both Vygotsky (1986) and Feuerstein (1980) were familiar with and respected the work of Jean Piaget, who is considered to be the “father” of cognitive developmental psychology (Kozulin and Presseisen, 1992), they were each not entirely satisfied with the Piagetian approach, which assumed that ‘intelligence’ is a form of biological adaptation and that individuals develop independently according to a fixed sequence. According to Sternberg (1990), both Vygotsky and Feuerstein note the importance of socialisation for intelligence and its development. Learners will not always need a more knowledgeable other; they can develop the ability to self-mediate through metacognitive awareness.

Metacognitive awareness, a term first used by Flavell (1976), is being aware of how you think and being aware of how you learn. This means knowing about yourself as a learner, which is emphasized by Feuerstein (1991). Feuerstein has identified a number of basic cognitive processes, which he refers to as cognitive functions. Cognitive functions are specific thinking abilities or skills. They can be taught and learned and strengthened at any age (Wood, 2012). Examples of cognitive functions are: labelling, comparing, precision and accuracy, relating past to present, categorising and self regulation. How you are using these cognitive functions is what a person becomes metacognitively aware of.

If Vygotsky and Feuerstein are correct regarding mediation, then it follows that it must be possible to structure children's experience and learning so that they become more effective thinkers. Several people have developed practices that are designed to do just that; examples of which are Feuerstein's own IE programme, but also the work and programmes of: De Bono (Cognitive Research Trust – CoRT method), Costa (Habits of Mind) and Lipman (Philosophy for Children).

Although there are other applications of the theory of *learning to think*, the focus for this study is on Lipman's approach, because it has been selected by the school that is the subject of the case study as a starting point on its journey towards becoming a Thinking School.

2.4 Philosophy for Children

Matthew Lipman was a philosopher who believed that it is important for children to think for themselves, and that one way to achieve this is to have them engage in philosophical inquiry (Lipman, 1974, 1991a, 1991b). Lipman's Philosophy for Children (P4C) (1988, 1991, 1993) is a programme that was designed to develop children and young people in North American classrooms as effective thinkers. It is a programme used both in and outside the United States of America in its original form and has also been adapted to certain contexts.

Green (2011: 1) notes:

> *P4C is a programme to help children and young people of school-going age become better thinkers. Unlike many thinking skills programmes, its primary purpose is not to enhance school learning, although this is a common spin-off. Its purpose is to create the kind of citizens who can contribute to a successful democracy.*

Fisher (2003: 29) notes that it is the most widely used programme for introducing children to philosophy, and it continues to be expanded and developed. This worldwide educational movement began in 1972 with the work of Lipman and colleagues at the Institute for the Advancement of Philosophy for Children (IAPC) at Montclair State University. Lipman wrote special 'philosophical novels' for teachers and children to share. The novels were accompanied by comprehensive 'manuals' of additional resources and ideas. The novels are the stimulus to motivate what is central to Lipman, i.e. the community of inquiry pedagogy, using inquiry via the 'thinking moves'. The 'thinking moves' are the

vocabulary of thinking used in the community of inquiry approach, e.g. ask a question, agree or disagree, give a reason. The classroom *community of inquiry* is a reflective approach to classroom discussion built up over time with a single group of learners which develops their cognitive functions, i.e. critical, creative, caring and collaborative thinking. Lipman (1990) notes that a classroom becomes a community of inquiry when learners listen to each other with respect, build on one another's ideas, challenge one another to supply reasons for otherwise unsupported opinions, assist each other in drawing inferences from what has been said, and seek to identify one another's assumptions.

In a community of inquiry it is the process undertaken through dialogue, and not the content, that is central for developing thinking. Interaction with each other and with ideas is encouraged in the community of inquiry. This connects with Vygotsky's (1978) theory that the functions of the child's cultural development appears firstly between people (interpsychological) and then within the child (intrapsychological). If Vygotsky is correct in this respect, then a child would first have to engage in many conversations before being able to internalise thinking processes. The importance that Vygotsky places on the role of language during mediation is reflected in Lipman's emphasis on discussion and the specific words and labels to describe the thinking processes in the community of inquiry. The use of the 'thinking moves' develops the ability to acquire and find meaning and inquire in order to be more reasonable. With regards to concept development, Lipman is as interested in developing thinking as developing concepts, whereas Feuerstein's focus is primarily on developing thinking (cognitive functions). A similarity between Feuerstein and Lipman is the importance of the learning

climate when developing thinking skills. According to Lipman (1988: 69-70), the aim of the community of inquiry is "not to turn children into philosophers or decision-makers, but to help them become more thoughtful, more reflective, more considerate, more reasonable individuals". Fisher (2003) maintains that there is no better preparation for being an active, responsible and creative citizen than for a child to participate with others in a community of inquiry founded on reasoning, freedom of expression and mutual respect. Similarly, Splitter and Sharp (1995) indicate the importance of mutual respect and care of persons during the inquiry process. Social rules contribute to the structure of a community of inquiry, e.g. listening to and building on one another's ideas, helping one another formulate questions and creating time and space for timid voices to express themselves. Splitter and Sharp (1995) also indicate that the role of the teacher is to be part of the team and that there is an atmosphere of trust in a community of inquiry. The importance of trust, developing cognitive processes, understanding the meaning of what you are doing and how it can connect to the previous or future experiences connects to Feuerstein's (1997) criteria for MLE.

The are other authors who practice philosophy with children using similar methods to P4C, e.g. McCall (2009), Sutcliffe (2003), Murris (1994), Haynes (2002) and a number of others. In McCall's (2009) method, Community of Philosophical Inquiry (CoPI), the process is more strictly philosophical than P4C. One problem is that many of the people practicing are philosophers but not teachers and they do not necessarily have the mediational skills or the classroom experience to do this well. Only Lipman specifically produced his material with

the idea that ordinary teachers in classrooms could use it and develop a pedagogy based on inquiry.

There is a body of international research regarding the effects of P4C with primary school learners. Daniel (1999), Haynes (2002) and Hashim (2003) relate noticeable improvements in academic achievement with significant achievement by learners with higher abilities. They also note a positive change in the attitudes of the learners who were involved in the P4C process. Iorio, Weinstein & Martin (1984) indicate that P4C raises learners' ability to reason critically. Haynes (2002), Gardner (1999, 1996), Sigurdardottir (1999) and Niklasson, Ohlsson & Ringborg (1996) indicate an increase in learners' self-esteem and confidence in their opinions, tolerance and interpersonal communication. Similarly, Murris (1994) reports an improvement in learners' thinking and reasoning, listening skills, expressive language, discussion and debating skills, confidence and self-esteem. Doherr (2000) shows an improvement in learners' ability to recognize different emotions and to make links between thoughts and feelings. Trickey (2007) describes a shift in the role of the teacher from 'expert instructor' to 'curious facilitator' and indicates that although smaller groups are likely to be more conducive to collaborative inquiry, there is a potential for larger classes.

Sutcliffe (2003: 75) notes that the most significant tool of assessment so far used to validate P4C as a means of enhancing thinking was the New Jersey Test of Reasoning Skills (NJTRS). It represents 22 reasoning skill areas, including analytical reasoning, avoiding jumping to conclusions, detecting underlying assumptions, inductive reasoning, detecting ambiguities, discerning causal relationships and identifying good reasons. A study in 1994 (quoted in Lipman,

2002) found that learners were capable of superior reasoning as a result of being exposed to P4C for one year. Slade (1992) argued that reasoning tests, including the NJTRS, were too narrow, and a test that included elements of creative thinking that could be used in the analysis of classroom dialogue is needed, as that is the most immediate and arguably most relevant expression of children's thinking. More recently, various attempts have been made to use discourse analysis as a strategy, for example Green (2009a).

Fisher's (2008) findings echo worldwide research into P4C, stating that it has a positive effect on:

- Teachers' professional confidence and self-esteem
- Learners' achievements in academic tests
- Learners' self-esteem and self-concept as thinkers and learners
- The fluency and quality of learners' questioning
- The quality of their creative thinking and verbal reasoning
- Their ability to think for themselves and engage effectively in discussion with others

2.4.1 Adaptations in South African schools

P4C has been adapted to specific contexts in South Africa (Green, 2006, 2009a, 2009b). The central principles of the community of inquiry pedagogy remains the same but local stimulus materials have been created. Volunteer teachers made up

the team that developed and piloted the Stories for Thinking (SFT) material in 1999 (Green, 2000). Teachers at one local primary school were introduced to Lipman's ideas and collaboratively wrote brief stories for their own classes, hoping to engage students and to stimulate inquiry. Their students responded enthusiastically and the teachers who took the process forward began to develop their classrooms as communities of inquiry at a basic level. Green (2009: 180) notes that the challenge was "to explore with local teachers whether it was possible to adapt and borrow from Lipman's ideas in a way that would work in South African classrooms". She further describes how over a period of approximately five years teachers wrote and revised stories until, in 2005, 'Stories for Thinking' was produced. These texts are described as not being stories with a plot, but descriptions of moments in the lives of local learners and extracts from their conversations. Green (2009) notes that, as in Lipman's work, the stories offer models of children wondering and thinking together about issues that are of interest to them. These materials have been printed and used in certain local schools to stimulate a classroom community of inquiry.

1. P4C is not just about thinking more effectively in terms of critical analysis, but also about becoming a more creative and caring thinker. Recognises the place of emotions and values and their influence on thinking.
2. Lipman's beliefs that children can be assisted to become more effective thinkers and that talking together is an important way to make this happen, are highly consistent with the Vygostskian (Vygotsky, 1962,1978) and Kohlbergian (Kohlberg, 1968,1981) views about how human cognitive and moral development takes place.
3. P4C is not the only well designed and well researched initiative to 'teach thinking', but its focus on both the processes of thinking and the concepts under inquiry gives it a wide and flexible relevance.
4. There is a growing body of evidence that it can make a difference to children's thinking, learning, caring and self-confidence (Sutcliffe, 2003).
5. Lipman's story texts suggest clear possibilities for the construction of relevant and motivating materials for students in different contexts.

Fig.1 Green (2011) explains the argument for choosing P4C as a model for South African schools.

Green (2011) further notes that at a more practical level, the flexibility of the original programme makes it possible, and relatively easy, to tailor materials to the demands of the local curriculum. Locally tailored materials also address the concern for the cost of materials for local schools. In this way we see that Lipman designed a means by which ordinary teachers in ordinary classrooms could help children to think more effectively. However, contextual relevance is important.

Other initiatives to introduce philosophy in South African schools exist. There is a growing body of research regarding the use of philosophical inquiry in South Africa (Borman, 2005; Green, 2006; Higgs & Higgs, 2001; Ndofirepi, 2011; Permall, 2007; Roberts, 2006).

Borman (2005), Green (2006), Permall (2007) and Roberts (2006) report changes in classrooms, similarly to the findings of Fisher (2008) and other international researchers:

- Teachers have higher expectations of learners
- Teachers see the usefulness of P4C across the curriculum
- Teachers have a greater awareness their own thinking processes
- Teachers are more able to motivate learners and provide classroom structure
- Learners are more respectful of one another
- Learners are more reflective
- Learners' responses are more thoughtful and less impulsive

- Learners' self-esteem is improving
- Learners are more willing to own and express their opinions

This final point above is quite significant in the South African context, due to the history of oppression and authoritarian educational practices causing detrimental effects on the self-worth of entire communities. Adults, who lived under the oppressive regime of Apartheid, were deprived of the right to speak and many human rights that we take for granted in a post-1994 South Africa. Teachers who were educated and trained pre-1994, who were themselves deprived of the right to speak, are still discovering how to make this possible for the children in their care (Green, 2008). Higgs and Higgs (2001) indicate that P4C in South Africa could be a significant agent in the promotion and development of critical thinking and social skills for democratic citizenship.

Burden (1998) points out that a whole school approach to the enhancement of 'teaching thinking' is likely to be more successful, as opposed to initiatives by individual teachers. In the next section, a whole school approach to educational change and the notion of a Thinking School are discussed.

2.5 Thinking Schools: A whole school approach

Burden (2008) and his colleagues at the University of Exeter's Cognitive Education Development Unit (CEDU) analysed why so many thinking skills initiatives (e.g. Lipman's P4C, Feuerstein's IE, De Bono's Thinking Hats) offered valuable insights into the fundamental connection between thinking and learning,

but either petered out in schools or simply failed altogether. They concluded that the problem did not lie with the programmes themselves, but rather in the ways they were being introduced into schools.

Burden and Nichols (1997) maintain that in order for any innovatory programme to survive and make a positive impact on schools, it is necessary to have whole-school involvement in the programme. Prain and Hand (2003) agree with the importance of using a whole school approach, but emphasise the importance of effective leadership, staff consensus, planning and flexibility within school structures. Moolla (2011) notes that whole school development involves a multi-level approach incorporating various subsystems in an attempt to address all aspects of the school, so that they work together to ensure the provision of high quality, innovative education.

Schmuck and Runkel (1994: 5) describe whole school development as:

> *a coherent, systematically planned and sustained effort at school self-study and improvement, focusing explicitly on change in formal and informal procedures, processes and norms, or structures... The goals of organisational development include improving both the quality of life of the individual as well as organisational functioning and performance with a direct or indirect focus on educational settings.*

As Moolla (2011: 73) states, whole school development is therefore a comprehensive approach to developing schools, involving all stakeholders and all elements of the school as an organisation. It encompasses concepts such as school effectiveness, school improvement and organisational development in a process

that facilitates change in schools and classrooms. It is aimed at building the capacity of the school as an organisation to manage change through the development of people, structures and procedures with the ultimate goal of improving the quality of teaching and learning and creating an enabling environment wherein barriers to effective teaching and learning are minimized (Department of Education, 2001; Hopkins, 1996).

Moolla (2011: 105) states that whole school educational change is aimed at both school and classroom levels and at organisational and individual levels, and includes the following:

- Human resource development in terms of knowledge, skills and values.
- Empowering people to change and manage change.
- Policy development at school level.
- Creating an environment that supports effective teaching and learning.
- Access to appropriate support services.
- School-community partnerships

Change within schools is unpredictable, dynamic and complex, and is therefore seldom predictable. Even when goals are clear and plans are set, the expected outcomes that emerge do not always match the interventions due to contextual and unforeseen factors that impact on the change and developmental process (Fullan, 1993; Graham-Jolly & Peacock, 2000; Hunting & Tilbury, 2006).

Schools, therefore, need to be ready for change. Moolla (2011) notes that readiness of any system is crucial in determining the effectiveness of a developmental process. There needs to be a commitment and sense of ownership from the school from the beginning stages of their development. If there are members of the school community who are resistant to change or reluctant to engage in the change process, this needs to be addressed as a main concern.

Some of the factors considered to be central to the readiness of a school to engage in a consultative process towards its own development are identified by Burden, Green and Pettersen (1983), and Druker and De Jong (1996):

- The extent to which the school is proactive rather than reactive.
- Evidence of motivation and commitment.
- Recognition of the need for change within the school system.
- Open communication.
- The school's capacity for ongoing, creative problem-solving strategies.
- The school environment is receptive to feedback and new input.

Hunting and Tilbury (2006) indicate that innovations need to be sustained from within the system, where the system maintains the power to move or to stand still. Many school development initiatives are difficult to sustain in the long run if the project or initiative has been implemented by donors or outside organisations. Members of the school would then need to develop the necessary capacity and competency to maintain and persist with developmental processes once the

external facilitators have exited (Bertram, 1999). This reflects Burden and his CEDU colleagues' concerns regarding the introduction of programmes into schools.

School development is a long-term process. Programmes of at least a five-year period are required in order to see evidence of real change at schools (Department of Education, 2002). Burden (2008) and CEDU support this view, as the Thinking Schools journey is a minimum of three years. This is significant with regards to sustainability for the school on the Thinking School journey. Potential implications are identified below:

- Financial implications: The school needs to raise and provide funding for teacher training, Consultant fees and materials, unless they are producing their own classroom materials.
- Time for training: Training needs to fit into an already busy school schedule.
- Commitment: The need for buy-in by all the members of the school community is required.

De Jong (2000) notes the following strategies involved in developing schools as organisations:

- People development
- Relationships
- Critical entry points
- Workshops

- Strategic planning
- Quality facilitation
- Understanding how a school functions as an organisation

Moolla (2011: 78) further notes:

> *The process of developing the school as a learning organisation involves challenging learners, educators and other stakeholders in the school community to apply their collective intelligence, their potential to learn, and their creativity in order to transform the existing system within which they find themselves. It is not a programme, but rather a process of guiding the school towards understanding in order to facilitate learning, and consequently, change.*

Burden (2008) and his colleagues at CEDU therefore recognised the value of combining the lessons from the school development literature and cognitive education approaches, and this gave rise to the concept of the 'Thinking School'.

2.5.1 What is a Thinking School?

This is not one of my research questions, but it is a question I had to explore before seeing what was happening at the school. The source was primarily from CEDU at Exeter University because the term was invented there.

Burden (2008) describes a Thinking School as:

> *A learning community in which all members share a common language, where thinking strategies and tools are used across the curriculum and teachers and students have a sound understanding of their own learning; where all students are developing and demonstrating independent and cooperative learning skills; where the school generates high levels of achievement and an excitement and enthusiasm for learning.*

Burden (2011) also notes that no two Thinking Schools are the same; every Thinking School is unique, although they each meet the criteria for a Thinking School.

Fourteen criteria that reflect many of the aspects, described above, for identifying and achieving a successful Thinking School (Appendix A) were established and schools are offered the opportunity of producing a portfolio of evidence to show how these had been met. At the completion of the process, CEDU offers evaluation and formal accreditation to these schools and provides the school with a certificate.

CEDU (2012) indicates potential benefits from achieving Thinking School recognition and accreditation:

- external recognition from a high-ranking university
- high status within the educational community
- entry to a select network of centres of excellence
- key stakeholder (staff, parents, governors) ownership and commitment
- Pupil identification with and sharing of success

- a sense of pride in accomplishment
- a celebration of leading edge school culture and ethos
- the enhancement of teachers' sense of professional achievement
- an incentive for setting high expectations
- the communication of good practice to other schools and the wider community
- the arousal of media interest and general public recognition
- heightened emphasis to the importance of cognitive development within the culture of the school
- a guide to further development, as part of an ongoing process

Burden (2011) explains that accreditation is provided for a three year period, after which the school will need to provide evidence that it has continued to move forward in its quest to transform teaching and learning practices with a focus on thinking.

This time-period gives the school the opportunity for careful planning, recurring training opportunities and for all members of the school community to be involved in the process. Accreditation is not a rigid process. The criteria are only there to formalize the process. The accreditation is not as important as the move towards thinking.

Factors that could sustain progress towards becoming a Thinking School are noted by Burden (2011):

- The Principal and Governing Body are enthusiastic about developing the school as a Thinking School

- There is substantial buy-in from the staff
- There is a plan in place regarding how to take this initiative forward
- A whole school approach is used
- Regular training opportunities for the staff

Burden (2011) further notes factors that could hamper progress towards becoming a Thinking School:

- Commitment only by selected staff members
- Interest in the initiative by the Principal, but no enthusiasm or support from the Governing Body
- Not all of the stakeholders being involved in the process, including parents and curriculum advisors
- No time for training or curriculum planning
- High staff turnover

In the South African context, these factors are likely to be problematic (Stofile, 2008):

- Lack of support by the Education Department
- Lack of clear implementation plans and time frames
- Teacher's inability to cope with changing demands
- Negative attitudes to the initiative as a result of experiences with previous policy initiatives

- Teachers feeling overwhelmed due to a lack of adequate training and support
- Resistance to changing beliefs regarding teaching methods and how learners learn

2.6 Conclusion

In this chapter I reviewed the theories that have guided my study and the research that supports it. I discussed the theories of Vygotsky (1962, 1978) and Feuerstein (1980, 1991) with regards to learning to think. I then focused on one specific approach to the teaching of thinking, namely P4C, and refer to relevant international and local research. Finally I considered the arguments for a whole school approach to change and presented emerging ideas about Thinking Schools.

After reviewing the literature in this chapter, I conclude that it is important to track the process of a school that is on the journey to becoming a Thinking School because even though Fullan (1993), Graham-Jolly & Peacock (2000) and Hunting & Tilbury (2006) relate that educational change is unpredictable, schools and members of the school community need to be ready for change, as indicated by Moolla (2011). By tracking this process, practical solutions for various contexts could therefore be developed and shared in order to support all members of the school community.

CHAPTER 3

METHODOLOGY

3.1 Introduction

In this chapter I present in detail the methodology of how I conducted the study. Firstly, I present the objective of the study and explain the research questions and sub-questions. I explain my choice of research approach and provide relevant details concerning the research context, myself as a researcher and my data collection and analysis procedures. Finally, I explain how I tried to verify my data and ensure that the research was conducted ethically.

3.2 The objective of the study

The objective of this study was to explore and describe the journey of one local primary school towards Thinking School status, by means of a case study.

3.3 Research questions

During case study research, the research questions may change as the research progresses, as may the techniques for gathering data (Yin, 1984; Marshall and

Rossman, 1989). Because this was a case study, all of the research questions were not generated at the start of the study.

The primary research question was: *What is the story of this journey?*

Sub-questions:

- How did the school begin the journey towards becoming a Thinking School?
- What has sustained the progress towards achieving Thinking School status?
- What has changed in the school since the start of the journey towards becoming a Thinking School?
- What contextual factors have influenced the process of developing as a Thinking School?

3.4 Methodology

3.4.1 Research paradigm

There are various paradigms (worldviews or ways of thinking), with regard to knowledge and research. The paradigm that is chosen will determine the lenses that will be used when planning and doing the research. Guba and Lincoln (1998) describe and discuss four enquiry paradigms, i.e. Positivism, Postpositivism, Critical Theory and Constructivism. My study falls within the Constructivist

paradigm, which means that knowledge is not fixed and is not to be gathered, but rather it is constructed, often in conversations. Guba and Lincoln (1998) relate that when looking for criteria to judge the goodness or quality of an enquiry, trustworthiness and authenticity fall within the Constructivism approach. In this study, meaning was co-constructed by me and my participants, which combines both insider and outsider perspectives. It was therefore appropriate for me to use a qualitative research approach. Creswell (1998: 15) notes:

> *Qualitative research is an enquiry process based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyses words, reports detailed views of informants, and conducts the study in a natural setting.*

Qualitative research may take different forms, one of which is the case study approach. Wilson (2009) describes the case study as a versatile, qualitative approach to research which enables the researcher to understand a complex issue or object and brings with it a familiarity to the case that no other research approach is able to do. Wilson (2009) also notes that case studies excel at bringing us to an understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research. Case studies have gained popularity in educational settings, as noted by Stake (1995).

A case study often has mixed methods of data collection, using both qualitative and quantitative methods. In this study I used both interviews (qualitative) and a rating scale (quantitative) as data collection methods in order to answer my

research questions. Document analysis would have enhanced the study but this was not permitted by the school.

This case study follows the guidelines as set by Stake (1988) and Yin (2003). Yin (2003) discusses three types of case studies, i.e. the exploratory case study, the explanatory case study and the descriptive case study.

This case study takes the form of a descriptive case study, as I intend to present a complete description of a phenomenon within its context (Yin, 2003). Case studies make use of a wide range of data collection strategies but are characterised by the fact that they integrate the data into a coherent narrative intended to provide a holistic portrait of a bounded system. In this case the bounded system was one primary school community.

3.5 Research procedures

3.5.1 Context

The case study concerns a primary school in the Western Cape, South Africa. It is governed by the Western Cape Education Department (WCED). Although near industrial and business areas, the school is situated in a quiet suburb. Learners reside in the area in which the school is situated and in surrounding areas, as well as coming from areas at much further distances within the Cape Town metro. This co-educational school is accessible to learners and parents on foot and via car and taxi services. At the time of the study there were approximately 600 learners, with the amount of girls and boys roughly equal. There were a total of 32 staff

members, including administration and ground staff. There were 18 class teachers of which, at the time of the study, three were male and 15 were female. There is a female principal who does not have classroom responsibilities, but who visits the classes every morning. The school has a strong Christian ethos and values and accepts learners of different cultures and religions. The building is neat and organised. The school day is structured and organised with bells indicating the beginning and end of lessons. The school is in the process of becoming a Thinking School and has begun its journey by using the community of inquiry approach, based on P4C, as a whole school approach in order to develop thinking skills. Staff received training in the community of inquiry approach, which they refer to as SFT.

3.5.2 Research participants

The school community was the focus of the study. I chose to gather information from individuals and groups that would offer a range of perspectives. The principal and the project co-ordinator were interviewed individually. Group interviews were conducted with each of the teacher groups. Group A consisted of two Foundation Phase teachers and Group B consisted of three Intermediate Phase teachers. The co-ordinator suggested these teachers and the school refused to allow me to interview any other teachers or staff members. Of those teachers that I was allowed to include in the study, the numbers that I asked for did not arrive at the interview. The limitations of this are discussed further in Chapter 5.

Green (2009) justifies using learners for information about their own cognitive progress. She found that learners were able to rate themselves surprisingly accurately on various criteria. In this study, Grade 5 learners were asked to complete a rating scale. This grade was selected because learners are considered to be mature enough to offer useful insights. There were 30 Grade 5 learners who completed the rating scale. Although it was requested that all of the Grade 5 learners participate in this process, only 30 were permitted. Groups of learners from grades 1, 3 and 4 were also interviewed. The groups consisted of 12 learners from the same grade. The teachers were asked to send 4 learners who were verbally strong, 4 average and 4 verbally weaker learners in order to have a range of responses. These interviews were used to hear if the learners were using the thinking language, i.e. thinking moves, that they have been learning in class. If the SFT project was successful then they would have been using the thinking moves.

Education officials from the WCED's district office were contacted via telephone and email. With permission and advice from the WCED, a relevant curriculum advisor was contacted and interviewed individually.

Ideally, the parent community of the school is consulted during a case study of this nature. This would have been good to do, although all the informants at the school have related that the parents are not yet involved with the school's Thinking School process. Many attempts were made to reach and contact a member of the SGB but none were successful.

3.5.3 The Researcher

I am presently studying towards a Master's degree in Education at the University of the Western Cape. Teaching and learning has always been the focus for me. I completed my B.Ed Foundation Phase degree at Cape Technikon in 2004. I taught as a Foundation Phase class teacher at Kirstenhof Primary until 2009. I also completed my B.Ed Honours degree at UWC in 2009. My undergraduate and postgraduate education as well as work experience as a primary school teacher has developed in me an interest in the field of Cognitive Education and developing thinking skills. I am currently working as a Learning Support teacher with primary school learners at St George's Grammar School, infusing cognitive tools and strategies into their academic development. I believe that developing thinking skills is of utmost importance for children to be able to be effective learners and members of the global community. In my own experience, many of my fellow students at honours level did not know how to write a comparative essay. The lecturer had to explain how to compare and look at the similarities and differences of the two concepts.

I come from a Muslim, English-speaking background which may have caused me to misunderstand or misinterpret the data relating to the Christian ethos of the school or at times the language of some members of the school community, although I have been exposed to a Christian ethos at the schools that I attended or taught at, I am fluent in Afrikaans but not Xhosa, I tried to be aware of my possible biases at all times.

3.6 Data Collection

I started to track the process of the development of a Thinking School by visiting the identified local primary school in April 2010, to introduce myself to the Principal and to explain the research that I would like to do at the school. I visited the school on at least 10 occasions from September 2010 to September 2011 and had numerous telephone conversations with the secretaries and teachers. I used interviews and a rating scale in order to try and answer my research questions.

3.6.1 Interviews

Walford (2001: 95) notes that interviews can provide important data, as they can inform us of what the person interviewed is prepared to say about a topic in the social context, time and place of that particular interview.

Individual interviews consisted of open ended questions, following the broad guidelines indicated in Appendix B. The interview asked for opinions, perceptions, feelings and perspectives regarding the community of inquiry approach. Interviews with groups of teachers used the same framework as for the individual interviews but were modified to allow for discussion between the teachers, who were from different grades in Groups A and B. The broad guidelines for the group interviews are indicated in Appendix C. The duration of each of the interviews was 30-40 minutes. I recorded and transcribed the individual and group interviews, with the exception of the interview with the

curriculum advisor as I was not permitted to do so. I therefore took extensive notes instead.

As an interviewer I tried to be a good listener who is open minded, patient, flexible and responsive as recommended by Boyce and Neal (2006).

3.6.2 Rating Scale

The rating scale, Thinking About Thinking, developed by Burden (2008), was used as a measuring tool as part of the data collection process (Appendix E). The purpose of the rating scale, as explained on the document, is to find out whether learners enjoy thinking and whether they think they are good at it. I gave this rating scale to the Grade 5 learners, as I thought that they would be able to express themselves more clearly than younger learners. The Grade 5 learners have also been exposed to the community of inquiry approach for much longer than learners in the younger grades.

3.7 Data Analysis

Data from the interviews and the rating scale were integrated into a coherent story which is presented as a narrative as described by Polkinghorne (1988, 1995). To structure this narrative I used the framework of Burden's (2008) criteria for a Thinking School (Appendix A).

3.7.1 Interviews

I used thematic analysis to analyse the data from the interviews. I highlighted sections of the interview data in groups or categories (Glaser & Strauss, 1967) that appeared to belong together.

3.7.2 Rating Scale

The rating scale *Thinking About Thinking* was obtained directly from Prof Burden, from CEDU at Exeter University, who is currently working on it and who requested me to use it. He developed this rating scale to compliment his *Myself As Learner* (2000) which he has validated.

I analysed the data from the rating scale by means of a table with percentages. The only data from this rating scale that was worth discussing were the high and low percentages.

3.8 Verification

Validity is vital to all types of research. “Validity refers to the accuracy and trustworthiness of instruments, data and findings in research. Nothing in research is more important than validity.” (Bernard, 1995: 38). Denzin and Lincoln (2008) argue that the standards by which validity are determined are different depending on the paradigm under which the research is being performed. They suggest trustworthiness as the criterion for qualitative research. Trustworthiness is broken down into credibility, dependability, confirmability and transferability. Similarly, for Lincoln and Guba (1985) the key principle of good qualitative research is

found in the notion of trustworthiness, i.e. neutrality of its findings or decisions. The crux of trustworthiness is whether the inquirer/researcher can persuade his/her audiences that the findings are worth paying attention to. Babbie and Mouton (2001: 277) explain that just as a quantitative study cannot be considered valid unless it is reliable, a qualitative study cannot be called transferable unless it is credible, and it cannot be deemed credible unless it is dependable.

I hope to have constructed a credible 'story' of this school's progress. I use direct quotations to persuade readers of the accuracy of my interpretations.

Dependability refers to consistency within the process of gathering, analysing and interpreting data and confirmability refers to the development of logical understandings of the data that can be corroborated by other researchers (Denzin, 1994). As suggested by Denzin (1994), I maintained an audit trail that included field notes, memos, a field diary as well as process and personal notes.

It has been noted that generalization should not be emphasised in all research (Feagin, Orum & Sjoberg, 1991; Simons, 1980). Damage occurs when the commitment to generalise or to theorize runs so strong that the researcher's attention is drawn away from features important for understanding of the case itself. Lincoln and Guba (1985: 316) point out that it is "not the naturalist's task to provide an index of transferability; it is his or her responsibility to provide the database that makes transferability judgements possible on the part of potential appliers". Stake (1995) agrees, suggesting that generalization is not the purpose of the case at all, and prefers to use the term *particularisation.* He remarks that

"there is emphasis on uniqueness, and that implies knowledge of others that the case is different from, but the first emphasis is on the case itself (Stake, 1995: 8).

The bounded system that is the subject of this case study was intended to comprise the stakeholders at one local primary school within the time period 2010-2011. As will be discussed, further in Chapter 5 however, access to all stakeholders proved difficult.

3.9 Ethical considerations

It was important to ensure the privacy and confidentiality of all participants. Potential participants, i.e. teachers and parents needed to fill out a consent form (Appendix F), which was used as a formal agreement. Parents of the Grade 5 learners involved were also required to fill out a consent form (Appendix F) to give permission for their children to take part in this study. All of the names of the participants were changed. A document provided to the school explained the research and its purpose in simple language. The issue of confidentiality is a source of tension in a case study, which seeks to construct a portrait rich in detail. The principal's approval was sought and granted, however, for the information about the school to be included. Permission was requested and granted from the Western Cape Education Department, in order for me to perform research at a public school. Permission was also granted by the Research Committee of the University of the Western Cape and I followed the ethical guidelines of the University of the Western Cape at all times.

CHAPTER 4

RESEARCH FINDINGS

The primary research question was: *What is the story of this journey?*

The sub-questions were:

- How did the school begin the journey towards becoming a Thinking School?
- What has sustained the progress towards achieving Thinking School status?
- What has changed in the school since the start of the journey towards becoming a Thinking School?
- What contextual factors have influenced the process of developing as a Thinking School?

With regards to the first research sub-question, the school did not formally begin the journey, but the background to the process is described in section 4.2.3.

The answers to the second, third and fourth research sub-questions become apparent in the discussion of the chapter.

4.1 Introduction

In this chapter I present the story of one school's progress towards becoming a Thinking School, using the data I have collected to support my interpretations. After reading all of the data carefully, the themes that emerged aligned with Burden's (2008) fourteen criteria by which a Thinking School can be recognised and have been clustered into groups in order to structure the text. These groups are labelled: awareness and commitment, management of the process, staff training and implementation, learner outcomes and teacher and school outcomes. See Appendix H for an example of the thematic analysis.

A school need not necessarily use these criteria, but I decided to organise my data in this way because Burden has identified the conditions most likely to make the initiative sustainable. Much of what the school is doing is highly positive, but within this framework of Burden's (2008) guidelines there are areas that, as might be expected in a school working towards becoming a Thinking School, still need to be worked on. I will discuss this further in Chapter 5.

4.2 The context

4.2.1 First impressions

Before I even entered the school I heard children talking and laughing, but it did not sound out of control. As I walked towards the front gate of the neat face-brick building, I heard learners singing and the buzz of teachers teaching and learners

interacting with them. There was no screaming or shouting, but rather the sounds of eager but calm voices.

As I entered the school building I was greeted by the secretary who smiled at me and called the teacher with whom I was meeting. This teacher was a Grade 4 teacher and the Thinking Schools co-ordinator at the school. The foyer where I was waiting was a small but quiet area. When I looked at the walls there were posters and information about the school, its ethos, its heritage and an inter-school project that it had been involved in. The secretaries came across as organised and efficient, which mirrors my general impression of this school. The school is run in an organised manner, from the front office to the teaching staff. The school is a neatly maintained building with courtyards and playground areas for the learners. In the staff room and principal's office there are boards indicating the planning for the year and term as well as organisation for the week, such as events and staff duties. The school is well-managed and well-controlled, which speaks to the ethos of the school as well as the ethos of the teachers and management team. Not only are the school events and processes well- managed, but so is the discipline. My first impression of the discipline at the school was that there was an air of calmness and quiet controlled speaking and behaviour. Subsequently, on later visits I had the same impression. The principal spoke in a calm and controlled manner and this is reflected in the teaching staff in the way they interact and speak to each other as well as the way they speak to the learners. I did not ever walk into the school or a classroom where the learners were out of control. When I looked at the walls and boards of classrooms I noticed thinking vocabulary labels such as

agree, *disagree* and *ponder*. In one of the classrooms the teacher and learners were making posters regarding thinking skills.

4.2.2 School facts and history

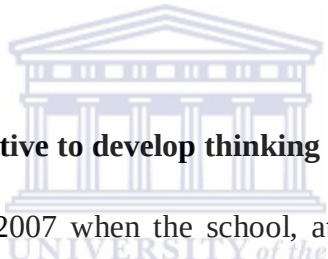
Bridgedale Primary School is a co-educational state school in Cape Town. This is a school that was originally established by a Christian church in 1916, but is now state-governed. It is a school that is situated in a lower-middle class area whose learners originally mostly lived in the area and surrounding areas. Learners now travel to school by car, public transport and lift clubs from further distances within the Cape metro. Since 1994 there are Xhosa-speaking learners who travel to the school by taxi. At the time of the study these made up approximately 40% of the learners. The remainder speak either English or Afrikaans at home, but the medium of instruction at the school is officially English. There are approximately 600 learners in 18 classes from Grade 1 to Grade 7. The staff complement includes: 18 class teachers, a librarian, a drama teacher, a computer teacher, two remedial teachers (one full time and one part time), a physical education teacher, two school counsellors, three administrative staff members, principal, deputy-principal and four cleaners (known as support staff). The deputy-principal teaches certain subjects, whilst the principal visits each class between 8:00am and 9:30am every morning.

The school's Mission Statement is as follows:

> *Bridgedale Primary School is committed to upholding and nurturing the vision of the Catholic Church of a community serving humanity. The*

values of truth, justice and tolerance are instilled in a loving, caring and sharing atmosphere whilst striving towards academic, social and cultural excellence in every learner.

Although this is a state school and no longer directly associated with the church, the values are still relevant. Reflections of the school's origins are to be seen in the way the principal speaks about values, the fact the learners are encouraged to attend church services and the religious objects displayed in the school foyer.



4.2.3 The initiative to develop thinking in the school

The initiative began in 2007 when the school, at the invitation of the WCED, became part of a project entitled 'Stories for Thinking'. At that time the concept of a Thinking School was unknown in South Africa. The project involved all Intermediate Phase teachers in nine local primary schools. In 2008 these teachers were introduced to the ideas of Matthew Lipman and given basic training in classroom community of inquiry practices in the course of ten one hour sessions over a period of several weeks. They practiced using both Lipman's P4C materials and simpler locally developed materials that used Lipman's work as a model ('Stories for Thinking' books and manuals). Teachers found the approach valuable and subsequently certain of the project schools (of which this school was one) requested similar training for their Foundation Phase teachers. The Foundation Phase teachers were introduced to community of inquiry practice in 2010 and

shown how to use the story books available in the school library to facilitate the community of inquiry approach in their classrooms.

Early in 2009 Professor Robert Burden had introduced the concept of a Thinking School at a conference organised by The International Association for Cognitive Education in Southern Africa (IACESA), at which staff from Bridgedale Primary School presented examples of their experience in creating classroom communities of inquiry. At that time the school began to see itself as on the journey towards becoming a Thinking School as described by Professor Burden. It is not clear whether this decision was taken formally or put to the School Governing Body (SGB) but in 2011 when I first approached the principal she mentioned that "the governing body supports the thinking initiative".

Teachers continue to encourage learners to think and use community of inquiry practices in their lessons and in other school contexts, as will be apparent in this chapter, which reveals both the achievements of the school to date and the challenges it has yet to overcome in its journey towards becoming a Thinking School.

4.3 Towards becoming a Thinking School

Criterion 1: Awareness and Commitment

This criterion is met when the school's principal has made a formal commitment to developing thinking skills as a means of school improvement as part of the school's development plans. This usually takes the form of printed documentation

that is available to staff, parents, SGB members and the wider community by means of the school prospectus, and/or records and reports. This commitment to developing thinking skills is expected to have the explicit support of the SGB and would therefore be evident in the minutes of SGB meetings and/or a statement from the Chairman of the SGB.

Bridgedale Primary School was already a school that was committed to creating a school ethos which includes caring, sharing and mutual respect. When they were approached by the WCED in 2007 to participate in the Stories for Thinking initiative, they felt it fitted with the ethos that they were already trying to develop.

As the principal told me:

> *Being a Catholic school, we are at the advantage in that there are still morals and values that are taught. With thinking it is obviously linked to the morals and values and it is a two-way thing. Our policy has always been that you teach children morals and values with respect.*

The principal and staff told me they have made the commitment to improve the school and develop an ethos of thinking. In 2008, they did not realise that they would be on the road to developing into a Thinking School. Community of inquiry practices were introduced to the staff and learners in order to develop learners' thinking skills and integrate it with the ethos that they already encouraged at the school.

In 2011, the school further explored the idea of Thinking Schools and what that would mean for their school and their development plans. Two staff members representing the Foundation Phase and Intermediate Phase, as well as the principal, attended the IACESA Conference "Thinking Schools – The Journey". The two staff members presented by explaining what they had done in their classes, using the community of inquiry approach in order to develop thinking. They each showed a video of a lesson and spoke about the experience, arguing that "schools do not need lots of money and resources to develop thinking".

Two months later, I visited the school and the principal told me:

> *Thinking skills and Stories for Thinking topics are always embraced during staff meetings.*

A further conversation with the staff confirmed this, as the following quotations show:

> *Teacher 1:* *We have our staff meeting on a Monday. Every Monday we have whatever issues there are to be discussed. Stories for Thinking is on that list as well, so we do discuss that and we share. We as a staff we share with each other ideas and we share our knowledge.*
>
> *Teacher 2:* *We learn a lot from each other. We lend a hand where it's needed.*
>
> *Teacher 3:* *We did report back and have a meeting when we came back from the conference. We had spoken about it and how we*

were impressed by it and how we need more people to go if we can afford it but we were definitely impressed by all that they gave at the conference. And then Teacher 1 and I did come back and report back to the staff. The staff was very impressed. Although we didn't have a follow up on that.

Teacher 4: *Everybody is doing what needs to be done. With this Community of Inquiry, when you speak to the children and question and so on.*

Teacher 5: *It's being done, definitely.*

Teacher 3: *Oh yes, and yes it's a whole school approach.*

From staff responses, it is evident that they include 'thinking' development in regular staff and grade meetings. They do not have special meetings regarding this. It is at this level that they consult with each other about how to manage the usage and implementation of the strategies that they have learnt in their training courses.

According to Burden (2008) there would be evidence of commitment and support by the SGB, but at this school it was not clear to me that the governing body was specifically aware of the commitment to becoming a Thinking School. I was told by the principal that the SGB supported the initiative but I could not access evidence of this because I was unable to reach a representative of the school governing body despite numerous efforts. However, the principal specifically expressed that "the whole school is on board; the governing body supports the thinking initiative."

There does not seem to be a clear vision of a long term plan, although further evidence of commitment may be in school documents (i.e. School Development Plan, policy documents, minutes of meetings) but I was not able to gain access to these documents. It appears that there is a strong commitment to 'Stories for Thinking' as a way of developing thinking but the school has not yet fully explored the implications of becoming a Thinking School, although there are signs from individual teachers that they are aware they could go further, as the following quotations show:

Teacher 3: *The children are really thinking about questions before answering. They are also more aware about solving problems by talking about it. There is so much that we need to learn about this approach. We need more training and opportunities to develop this process as a staff.*

Teacher 2: *I think as teachers we don't always realise the amount of knowledge that the children have. If you get into a discussion they are getting very good at going beneath the surface of what we are discussing. I think we need to plan the road ahead so we can continue this process that is starting to make such a difference in the classroom.*

All the people that I spoke to felt that they were very committed and mentioned that they were working towards developing thinking. Although the teachers are working hard to incorporate community of inquiry practices in their lessons, they have not yet realised all that they can do.

Although the parents are not yet officially aware of the thinking development process that the school has embarked on, the co-ordinator explained that "the next step is to inform the parents and get them involved".

Current strengths and remaining challenges in the area of awareness and commitment:

- The principal and staff are seriously committed to developing thinking.
- Practices at the school reflect the commitment to the use of ideas derived from input received about one approach to the active teaching of thinking (community of inquiry / Stories for Thinking).
- Ideas are actively shared by staff and remain on staff agendas.
- Staff actively adapt and develop ideas to suit their own context.

The challenges appear to be:

- The need for a written, practical long term plan agreed by staff to be formalised and made explicit to the school community.
- To develop awareness by all staff of the full implications of the Thinking Schools model as developed by Burden.
- The need for public and explicit acknowledgement of the commitment by the SGB.
- The need for parent awareness and commitment.

Criterion 2: Management of the process

A Thinking School is expected to have appointed a Cognitive Education co-ordinator to organise and oversee the implementation of the development of thinking skills at the school. This person would be expected to ensure that new staff received training if necessary and, together with a drive team, to plan future developments and to negotiate them with the staff.

There have been two staff members that have served as the Cognitive Education co-ordinator at the school thus far. The first co-ordinator that I made contact with showed her enthusiasm and commitment very strongly and explicitly whenever I met with her or spoke to her. As a grade leader in the Intermediate Phase, she was seen as having high formal status at the school. Seen as an experienced teacher as well as respected member of staff, she was willing and able to organise and oversee the development of thinking at the school. The second and current co-ordinator took on the role at the beginning of 2011. This co-ordinator is also a senior member of staff with high formal status. He is committed to the development of the learners' thinking skills as well as their education as a whole. He was always willing to share his experiences in class where he used Stories for Thinking to enhance the lessons. He explained that "it is important to develop thinking skills as it helps the learners in all their subjects". He further noted that "it is a good thing that the whole school is involved and on board because we help each other and we share". I was able to contact the co-ordinator via the school office in order to arrange meetings.

The co-ordinator at the school received training in Stories for Thinking in 2008 as part of the group of Intermediate Phase teachers that was initially involved. In

June/July 2011, the first formal Thinking School co-ordinator's training course was held in Cape Town. Trainers from Thinking Schools International (TSI) based in the UK trained Thinking Schools consultants from Thinking Schools South Africa (TSSA) together with school co-ordinators in Cape Town and Johannesburg. This was a valuable process where Cognitive Education theory and application was presented and discussed and the journey mapped. Action plans for the schools represented at the training course started to develop there. The Bridgedale Primary co-ordinator, noted that he would have liked to go for the training but that there were no funds available for him to do this. As he explained:

> *I could not attend the training for co-ordinators because our school could not afford to send me to the course. I would have liked to attend and hopefully I will have the opportunity to go to a course like that in the future.*

The school's budget for the year may not have allowed for the co-ordinator to attend the course, as the hiring of a replacement teacher would have been necessary. In future, the school may be able to budget for courses such as these. Nevertheless, the teachers do have ongoing conversations about how they are teaching thinking.

The co-ordinator explains:

> *We are discussing Stories for Thinking in staff meetings and we are also incorporating it into our Maths classes that we have in the morning. We have divided the kids into ability groups. This is the first session in the morning, for 40 minutes we have that. It's in ability groups. In one group you'd have learners from Grade 4 right up to Grade 7. We incorporate the*

> *Stories for Thinking in the first 10 minutes where we have a discussion. To calm them we have discussions and the Stories for Thinking allows them to respect the next person's view and that type of thing and then we immediately go into the Stories for Thinking. But yes, it was discussed at staff level.*

The co-ordinator implements strategies, such as developing Maths skills, but does not at this time actively lead the Thinking School journey. It is not clear that the co-ordinator fully understands the role, as he has had no training. The co-ordinator therefore does not fully engage the possibilities of the role, although the ethos of the school of *sharing* may make it difficult for anyone to lead.

Besides the co-ordinator, a Thinking School is expected to have a drive team that pushes the process forward. There are two members of staff that are seen as being the driving force committed to the development of thinking at the school. Together with the co-ordinator, one Foundation Phase teacher and one Intermediate Phase class teacher, this sub-group helps to ensure that both phases at the school are aware and involved with the process. The sub-group supports the co-ordinator and helps to keep the development process alive at the school by their enthusiasm and commitment to thinking skills development at the school. One teacher on the sub-group wrote a letter regarding their contribution to the IACESA Conference. As she explains:

> *I was so excited after the Conference that I wrote a letter to a teacher's newsletter. I was so proud about what we had presented at the Conference and about all that our school is doing to develop thinking. In the letter I express my joy at the difference in the way our children react to situations and the way in which they discuss topics in the classroom.*

Whenever speaking to these teachers they expressed their willingness to develop their own skills in order to teach and manage thinking skills strategies in their classrooms. They would mention that they "want to go for training" and that "there is so much more that can be done to develop thinking" in their classrooms.

A Thinking School is expected to have an action plan to introduce and teach thinking skills and strategies throughout the school. Although staff members at the school spoke informally about this, I was not shown evidence of a written action plan.

Current strengths and remaining challenges in this area:

- There is a high status co-ordinator in place.
- Both previous and present co-ordinators are enthusiastic.
- There are two teachers who support the co-ordinator to keep the process active.

The challenges appear to be:

- To develop a structured action plan with time lines and goals specified.
- To formalise a specified drive team with a core group of teachers together with the co-ordinator to plan future developments and liaise with the staff.

Criterion 3: Training and implementation

A characteristic of a Thinking School is that the Cognitive Education co-ordinator will have received appropriate training in the theory, application and assessment of thinking skills development. Another characteristic is that there is also an ongoing training programme in place which ensures access to a range of thinking skills, strategies and resources for established and newly appointed staff.

Teachers have so far only received training in one approach to the teaching of thinking, namely the community of inquiry approach. The school is using the community of inquiry approach as a starting point to develop thinking. They started this process in 2008 as a means to develop learners' thinking skills. The staff received training in community of inquiry practices from a trainer accredited by The International Council of Philosophical Inquiry with Children (ICPIC). The training involved introduction to the idea of community of inquiry discussion, experience of same, strategies for establishing ground rules, identification of various 'thinking moves', modelling of various ways of practising the moves, discussion of how ordinary stories could serve as stimulus for classroom community of inquiry discussions and/or topics raised by teachers. This process started with the Intermediate Phase teachers and now includes the Foundation Phase teachers. Intermediate Phase teachers were given Stories for Thinking storybooks and manuals that offer suggestions about how to use the stories to stimulate a classroom community of inquiry. Foundation Phase teachers were also given a Thinking Pack to refer back to. Teachers noted that "the training was

valuable to us because we were able to understand more about how to implement Stories for Thinking in our lessons."

As further explained by the teachers:

Teacher 4: *In terms of our own workshops with Prof X, what I liked about it was that it wasn't just an information sharing: here go and do it. It was a case of: this is how it's done, now let's practise it together. We had quite a lot of opportunities to practise to actually see how it works, and it made it easier to implement it in the classroom as we already had experienced it ourselves as learners.*

Teacher 5 *The training was so practical. Prof X would have us in a circle and then she would give us a question and then say Betty says I agree with Ali and then give a reason why. Then I would disagree with Nelia that was also in the group and then I'll give the reason why. Just to see the flow of how things actually work.*

Teacher 4: *It gave us the opportunity to use the different techniques that she gave us. She gave us the opportunity to experience it ourselves and use it ourselves and then implement it in the classroom. I think that was useful.*

The school does not appear to have formal training for new teachers. New staff members observe teachers that have received training. Although the school does not offer training in the community of inquiry approach as a formal workshop, the teachers do discuss it in grade meetings. One teacher who was involved from the start asked repeatedly for more information and training, mentioning that "it would be so useful to have more information about the development of thinking"

and “having more training is important” but teachers don’t seem to have time for ‘extra’ training. This will be discussed further in Chapter 5.

As the teacher explains:

> *Training for the new CAPS national curriculum is starting soon. A week during the next holiday is also going to be dedicated to Maths workshops and training. There is so much happening. We speak about thinking and Stories for Thinking during our grade meetings, which is very helpful because we help and share with each other.*

A Thinking School is expected to have implemented a wide range of ‘thinking skills’ programmes and resources have been analyzed and incorporated into various aspects of the school curriculum.

Teachers from both Foundation Phase as well as Intermediate Phase have noted that Stories for Thinking is used by infusing into their lessons. The Foundation Phase teachers expressed that “before we infused the approach into our lessons, we explicitly taught the terms and vocabulary to the learners. We taught the learners words such as: *agree, disagree, ponder, wonder, remember, imagine, decide* and *question.”*

Teachers are beginning to integrate community of inquiry practices into the curriculum.

The curriculum advisor states:

> *We need to get teachers to realise that Stories for Thinking can help in both Literacy and Numeracy lessons.*

As the teachers explain:

Teacher 1: *The Stories for Thinking book itself, the reader, we do teach that in isolation just using the reading material. It's not that difficult to incorporate it or to integrate it with another subject. But the child still needs to get to grips with the story itself and then you take snippets from it. But I don't just use it for reading matter, I use it for oral discussion. When there is an opportunity in any lesson, for example Geography, then the stories will come in so that the child can think 'is this the correct way to tackle a certain situation'. So it does make a lot of sense to integrate into your lessons and it is a good life skill too.*

Teacher 3: *I have been able to use it generally in lessons, but I haven't done a formal thinking story and doing something around that, or question based things because there simply just isn't time. So that's been the sort of down side for me personally. When I do comprehension and Life Skills then most of the strategies will come out, but it's not a Stories for Thinking lesson. We don't have time to include another lesson, but the strategies that we have learnt we will infuse and integrate into the lesson.*

Teacher 2: *Like in my class, I even do it in Maths Mental and someone says something like 'do you agree with Sebastian?' and they will say 'I agree with Sebastian because 6 x 9 is equal to 54' or I disagree with him because 6 x 9 is 36. So they agree and disagree, even in Maths. In any lesson I let them do that. 'Can I add?' or 'Can I ask you a question because I'm not quite clear on that?' It's the type of questioning that we try to implement.*

Teacher 5: *It is so much more child-centred now in the classroom. We encourage children to go and find out information. For example, at the moment one of our readers is about dinosaurs. We had this whole discussion about what they know about dinosaurs and then they had to go and find out their own information and share. I have been doing a lot more of that. Putting a focus on what they do know, instead of what I am giving them. Bringing their knowledge, giving them more responsibility and also a lot more predicting where they need to think what could possibly happen in a situation.*

Teacher 4: *We are using a lot more predicting to think about what could happen in situations. Especially when most of the children had watched the movie* 2012 *and I said "guys you know next year is 2012?" and they suddenly realised and were shocked! Then we spoke about fiction and non-fiction. So you see it's all integrated all the time. It's developing language and reasoning and analysing and everything.*

Grade 3 learners inquiring together

Teachers are using the community of inquiry approach for classroom management and to promote the school's values. A teacher explains:

> *Teacher 3:* *In the staffroom, problems within our classrooms can come up and then we sometimes say that the Stories for Thinking method is the one to use, to help deal with it. So we do use the philosophy of thinking in trying to overcome some of the difficulties that we have.*

The DVD presented at the IACESA conference shows teachers using the community of inquiry approach to develop and promote classroom management strategies.

Another characteristic of a Thinking School is expected to be that alternative and/or complementary forms of assessment have been explored and are implemented, including learner self-assessment.

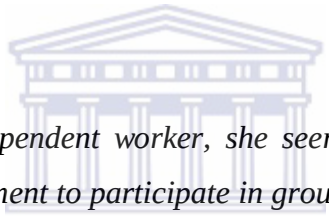
Teachers have started to infuse cognitive language in learners' report comments. The learners' management of their thinking skills, as well as their social and emotional development are commented on, in addition to their academic progress. This reflects that there is more of a description of the learner as a whole and not only one facet of the learner. Although I did not see any evidence of learner self-assessments, there is starting to be more of a multi-faceted approach to assessment at the school. Traditional forms of assessment, such individual written tests and individual orals are used and these are complemented by the use of group discussions, project work and debates. School reports refer not only to academic achievement but also to thinking processes.

Examples of report comments:

Jack participates willingly in classroom discussions. He is able to elaborate on ideas and experiences while working in a group, with a peer or individually.

Sally is a well-adjusted child who works happily in a group and readily joins in discussions.

Tara is inclined to be shy, but she is becoming more self-assured during group situations, where she has to express her point of view.



Shelly is an independent worker, she seems calm and self-assured. She needs encouragement to participate in group discussions.

Stacey is really coming into her element. She is focused and works to a high standard. She has a thinking attitude and is always a meaningful participant in class.

Marco has settled down and hopefully has come to the realisation of how important good choices are for him. He always contributes well in class and is eager to share his experiences.

Cindy is working well. She thinks deeply about things and contributes meaningfully in class. She writes creative and grammatically well constructed stories. She now has to develop a study routine.

Current strengths and remaining challenges in the area of training and implementation:

- The co-ordinator and staff members in both Foundation Phase and Intermediate Phase have received training in the community of inquiry approach.
- Teachers work well within their grades to assist and guide each other to implement community of inquiry practices in their classrooms.
- Teachers are motivated to implement community of inquiry practices in their classrooms.
- There are signs of change in the way teachers think about learners.

The challenges appear to be:

- To develop a long-term ongoing training programme for new and established staff members.
- To identify current support and training needs related to the community of inquiry approach and other approaches to developing thinking.
- To ensure all staff are aware of training opportunities and to give opportunities for all staff to be involved in shared planning for training.

Criterion 4: Learner Outcomes

Another characteristic of a Thinking School is that the learners are thoughtful, responsible and are able to articulate how and why thinking skills and strategies are an important aspect of all that occurs in their school. This can be seen in the learning outcomes, behaviour and attitudes of the learners.

In my discussion with the principal she told me that "there has been a shift in the actions and attitudes of the children."

She further explains:

> *It is definitely filtering through to the children and I suppose when you are busy with something all the time it is a bit difficult to see the changes and their improvement. But when you step back you can see the whole, the bigger picture. We don't shout at each other, we treat each other with respect. We speak in such a way to make the other person feel comfortable.*

A learner explains:

> *I think it's very good because we can all learn how to think with our brains and we can learn how to think for ourselves, like if our parents are not there to help us with our homework.*

Teachers also noted that they have seen a difference in the behaviour and attitudes of pupils since incorporating community of inquiry practices in their school day. Teachers noted that "you see it in group work, they respect each other and also they help each other".

The teachers explain further:

Teacher 4: *Children don't just think that this is the answer and that's it. They are actually thinking about their thoughts. They are actually thinking through things. So using it in every lesson it is helpful. It's not just the answer but just think about it, how did you get the answer? Why are you saying that? So that has helped the learners quite a lot.*

Teacher 5: *I had some very good feedback from parents telling me that the children aren't quite as withdrawn, they are more out there. They are questioning whatever they see on TV and they are questioning the parents. They ask them: "Is it necessary to be doing this?" They want to know the reasoning behind things.*

Teacher 1: *Children are starting to question why and what for and they are not just accepting all the time. So they are really probing the unknown as such and not being spoon fed all the time.*

Teacher 3: *I find as a teacher you actually underestimate the children's knowledge of the world around them and if you get into a discussion about any particular topic they are very good at going beneath the surface and scratching beneath the surface, which is wonderful to see.*

Teacher 2: *I also think that the children are going deeper. They are really thinking of things. I have had some amazing answers to things about bullying or who is God or where is God or all of that, so they have to think about it quite deeply and it is also a good tool for conflict resolution. When children fight with each other they are learning that we don't have to be physical, we can actually solve a problem by talking about it and trying to find a better way to solve a problem.*

Teacher 1: *The effectiveness is there and you can pick it up from the kids how they handle each other, how they deal with each other, especially with the conflict resolution, especially when they start questioning you. I say something and they will disagree with me and they will put their points across in a respectful manner.*

Teacher 2: *Also what the Stories for Thinking does, it helps them to see there's no cleverness or inability but there is just some of us that need to work a little bit harder and that is why I need to work a bit harder to get there. So the competition is not as fierce. It's there but it is a healthy competition.*

A conversation with learners:

Nathan:	*I like thinking because thinking is good for my brain and it helps me with my work.*
Anne:	*I agree with Nathan. Thinking is actually good for your brain.*
Nathan:	*When somebody comes in our classroom and they hear that we are talking about thinking then they will think that we are learning.*
Roy:	*I agree with Anne because when you thinking and then you feel happy and then you feel excited and then when they come and ask you a question then you can say you agree or you disagree.*
Nancy:	*I stay still when I think but sometimes when I don't stay still when I am thinking then I lose what I am thinking about then I must ask a question.*

A conversation with learners: *continued*

R:	*What is a question?*
Gavin:	*A question is something that you want to know but maybe you will ask another big person to help you out.*
Jamie:	*Questions are also some things when people are stuck or somebody wants to know 'is this yours?' or 'what is that?' or if you are doing your homework and you don't understand something then you can also ask 'can you help me?'*
Kasha:	*Questions are basically things that you say for something that you need to know or about a person or if you want to know the answer to something.*
R:	*Ok, so what is good about hearing other people say what they think? Sometimes we have got to listen to what other people say when they think about something. What's good about that? Jaden?*
Jaden:	*You listen to their problems and maybe you can find a way to make it right again.*
R:	*Jaden says that if you listen to their problems maybe you can find a solution. You can find a way to make it right.*
Jamie:	*I disagree with Jaden because sometimes you can't always figure it out for the person and it helps you also but sometimes you don't always get to answer the person.*
R:	*Do you always think in class?*
Tara:	*No, we don't always do thinking. We also do Maths and other things.*
Jamie:	*Excuse me teacher, but when Tara said we don't always do thinking in our class, I disagree with her because we are thinking all of the time, because we are thinking how to write and we thinking about how to do the stuff on the board. So we are thinking all the time.*
R:	*Jamie says actually you are thinking all the time.*
Jamie:	*Yes, because if we weren't thinking all the time then we wouldn't know how to do the sums or if we had to go to the toilet and then we wouldn't know that's why I say we are thinking all of the time.*
Sandra:	*I disagree with Jamie because you don't always have to think because your brain can get tired and you feel restless because you are thinking all the time. You also need to rest your brain.*

Almost all of the learners rated themselves highly as thinkers. See Appendix G.

In the definitely true category, the majority of the learners reported that they can usually work out why they have got an answer wrong, they enjoy lessons that make you think a lot and that their work is usually better when they think carefully about it. It was surprising that they reported that they were not good at thinking of new ideas. With regards to the statement that school learning has got nothing to do with thinking, all of the learners report that it is definitely not true.

Current strengths and remaining challenges in this area:

- Learners usually speak respectfully to teachers and visitors to the school and can respect the ideas of their peers.
- Learners are aware that they are implementing thinking strategies at their school.
- Learners are able to implement thinking strategies they have learnt; i.e. agree / disagree.
- Learners are enthusiastic and willing to participate in lessons.

The challenges appear to be:

- Learners need to further develop their ability to think about their thinking.
- To develop confidence in their own thinking in all learners.

Criterion 5: Teacher and school outcomes

A characteristic of a Thinking School is that the school staff demonstrates an understanding and commitment to developing thinking skills.

The Foundation Phase teachers, Intermediate Phase teachers, Principal and administrative support staff that I spoke to were all enthusiastic about the prospect of developing thinking as a whole school approach. The common view was that it was beneficial and necessary in order for their learners to not only learn more effectively at school but also for them to lead successful lives in the future. Teachers noted that they "recognise the importance of developing thinking and managing the process as whole school instead of just individual teachers."

Teachers explain further:

Teacher 1: *I think the thinking initiative is a positive thing. The immediate result is that you see the children in a positive light. Children are starting to question things and to wonder why things are done or said in a certain way. It is really a good thing for our school. It makes a lot of sense and develops good life skills.*

Teacher 4: *There are important life skills and tools that are learnt. I'm not sure about other schools, but the way my school is doing it, you can actually see the difference in the learners and the atmosphere at the school.*

Teacher 3: *Having the whole school on board and doing the same approach to develop thinking is essential. Otherwise what*

we do in one class may not be transferred to the following year.

Teacher 5: *I have found that my teaching has changed and I have been teaching for 22 years. I feel that I am not giving all the information. I am questioning them and they are sharing with their peers. That definitely was a shift for me. It's child-centred now instead of being all about the teacher. The children's attention doesn't have to be on me all the time so I don't have to worry about the discipline of getting all the children to look at me all the time and checking that they are listening to me.*

The principal elaborates:

We are on the right road. I will say that it's a discussion, it's a conversation. So the atmosphere in the school generally is different. There is a sense of peace. You do find that teachers are stepping back and having a conversation. There is more interaction from the children, so its not just teacher talking, it's more like children talking and teachers listening and guiding. So it's become that and obviously it takes longer, it slows you down because you need to follow a syllabus. The syllabus is about filling a child with values, a thinking child, preparing him for life. And once you are ready for the learning process then you can give the information. It's about the approach.

Another characteristic of a Thinking School is that it conveys a positive, caring and creative atmosphere to learners, staff and visitors, demonstrating that careful thought has been put into its organisational structure and visual presentation.

The school is built on a strong Christian ethos with their school vision and mission including the "values of truth, justice and tolerance instilled in a loving, caring and sharing atmosphere". The school offers "a disciplined yet nurturing approach to academic excellence". This is conveyed to parents and visitors to the school via signage in the front entrance and on school brochures and newsletters. This might suggest that academic excellence is all that the school may strive for in their learners, with the values of truth, justice and tolerance being developed consequently, but this is only part of what the school aspires to.

The principal explains:

> *At our school we are at the advantage in that there are still morals and values that are taught. When you are teaching the child must understand why you are expecting certain things. So if you are not going to talk while you are working, why? Because it is going to distract you, you won't be able to focus on the work. So there is this understanding that goes with it. And that is what a Thinking School kind of works towards. It's the reasoning. It is not just instructions given. It's a talking 'to you', it's not a 'talking down' it's a 'talking to'. We have a conversation with each other. It takes a long time. But generally we are starting to change it. A number of people have changed it. Again it is not perfect, so there are people that are still maybe grappling with it, but they do understand why we want it.*

The curriculum advisor explains:

> *The teachers are enthusiastic, energetic and display commitment to the values of the school. The principal encourages the staff and the learners interact with each other with respect.*

The atmosphere that I experienced at the school was that the teachers were striving towards creating a positive, caring and sharing atmosphere in their classes. Teaching is done in a disciplined and nurturing approach, as noted in their mission statement.

When speaking about how teachers manage the community of inquiry practices in their school, teachers would answer by saying "we speak about it and we share with each other". The common thread between all the participants is that they say they "share". They share with each other and fellow teaching colleagues, but also with parents during parent meetings. They also encourage their learners to share, whether it is regarding stationery, lunch or ideas and thoughts in class.

Teachers explain:

Teacher 1: *We share. We share with each other. We share ideas and we share our knowledge.*

Teacher 3: *We learn a lot from each other. We lend a hand where it is needed.*

Teacher 2: *In the staffroom, problems within your classrooms can come up and then we sometimes say that the Stories for Thinking method is the one to use, to help deal with it. So we do use the philosophy of thinking in trying to overcome some of the difficulties that we have.*

Teacher 5: *Sometimes the groups are a bit too large. Sometimes to do the lessons it is difficult to separate the class. So we discuss that and share ideas on how to handle situations like that in our classes.*

The principal explains further:

> *What is great about this school is that we are fairly open to criticism, because it is not seen as a criticism it is seen as a guide. We also don't have competition. We eliminated that over a period of time because when we are having a competition we are never going to have success because then we compete with each other so we work against each other. That is all part of the whole thinking that had to change with teachers. It's not about being the best, it's about everyone being good and everyone achieving. So we take that philosophy into the classroom as well. We share the knowledge, we share the information. There is a support within the group. Motivation plays a key role, extra break etc. The learners also help each other to learn. That's their support.*

Current strengths and remaining challenges in this area:

- Teachers are committed to thinking skills development.
- Community of inquiry practices are used for conflict resolution.
- There is a caring and sharing school atmosphere.
- Staff share ideas and thoughts with each other, learners, colleagues and parents.

The challenges appear to be:

- To develop further understanding of all staff in the community of inquiry approach.

- To make thinking more visible in the school, e.g. by creating and displaying posters by learners and by displaying photographs of learners participating in community of inquiry practices.
- To research and select another thinking approach to enrich the school's capacity for developing thinking.

4.4 Conclusion

The story does not end here. The school is on a journey to developing thinking skills and it will depend on the school how the project is taken further and where they go from here. In the following chapter I will discuss this narrative further from my own 'outsider' perspective.

CHAPTER 5

DISCUSSION AND RECOMENDATIONS

5.1 Introduction

In this chapter I discuss my findings and my methodology. I look at how my data answers or does not answer the research sub-questions, namely: How did the school begin the journey? What has changed in the school since the start of the journey? What contextual factors have influenced the process? What has sustained the progress towards achieving Thinking School status? I then discuss how the literature relates to the study and the limitations of the study. I make some recommendations for both immediate practical action and future research. Finally, I discuss what I personally gained from conducting the study.

5.2 Research sub-question 1

How did the school begin the journey?

According to Burden (2008) one of the criteria for a Thinking School is that before the school starts the process, they develop a plan of how they are going to take the process forward. This plan of action contains details regarding which thinking approaches and strategies they want to implement and how they want to implement it. The school will choose one approach to start with and then

commence with staff training and development. The parents will be informed and involved in the process.

Bridgedale Primary started developing thinking at their school before knowing about the concept of what a Thinking School was. This school started by recognising that they wanted to develop thinking to enhance the way that they were working in relation to the school's ethos. They started their journey by developing their knowledge and skills related to the community of inquiry approach to developing thinking. The school, however, did not have a plan of how they were going to take the process forward.

A positive aspect regarding how the school started the journey is that the school recognised the need to develop thinking skills. Teachers were able to develop their own thinking skills and receive training in the community of inquiry approach. Teachers could start experimenting with lessons without feeling pressurized by having to adhere to certain time limits in which to accomplish specific language or concept development in their classrooms.

However, if the school had first developed a plan regarding how to take the process forward, teachers might have had a clearer understanding about what a Thinking School entails, what they are working towards and what training opportunities there might be to enhance their teaching even further.

5.3 Research sub-question 2

What has changed in the school since the start of the journey?

There have been changes in the teachers, changes in the learners and changes in certain school processes.

With regards to teachers, they report that they have changed the way they think about their own thinking skills. Teachers report that they have changed the way they teach and have started to infuse community of inquiry practices to developing thinking into different lessons and subjects. Teachers report that they are seeing the value of developing thinking through the classroom community of inquiry and using a whole school approach. Teachers also report that they have changed the way they think about their learners, i.e. what their learners are able to do individually as well as part of a group, how they are able to contribute to discussions in class and how they are able to think about situations and share their opinions. The principal reports that there is a change in the way teachers interact with their learners and colleagues.

Teachers speak about their thinking:

Teacher 5:	*I have found that my teaching has changed and I have been teaching for 22 years. I feel that I am not giving all the information. I am questioning them and they are sharing with their peers. That definitely was a shift for me. It's child-centred now instead of being all about the teacher. The children's attention doesn't have to be on me all the time so I don't have to worry about the discipline of getting all the children to look at me all the time and checking that they are listening to me.*

Teachers speak about their thinking *(continued...)*

Teacher 3:	*I find as a teacher you actually underestimate the children's knowledge of the world around them and if you get into a discussion about any particular topic they are very good at going beneath the surface and scratching beneath the surface, which is wonderful to see.*

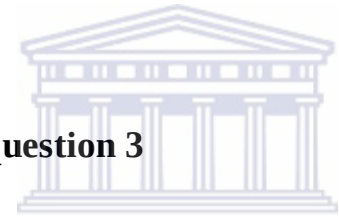
With regards to learners, teachers report that they are seeing a change in the way learners manage conflicts with their peers. Teachers indicate that learners are trying to use the concepts of agree and disagree instead of fighting to resolve conflicts amongst each other. Learners are developing their understanding of different thinking moves, e.g. agree, disagree, ponder and question. Learners indicate that they have developed the motivation to developing their own thinking. Learners report that they are more aware of their own thinking and how they manage their own opinions within a classroom or group situation. Learners also report recognizing that their peers and teachers also have their own opinions. Teachers report that learners are more able to listen carefully in group discussions with peers while agreeing and disagreeing with each other's opinions.

Learners speak about their thinking:

Jamie:	*Excuse me teacher, but when Tara said we don't always do thinking in our class, I disagree with her because we are thinking all of the time, because we are thinking how to write and we thinking about how to do the stuff on the board. So we are thinking all the time.*
Sandra:	*I disagree with Jamie because you don't always have to think because your brain can get tired and you feel restless because you are thinking all the time. You also need to rest your brain.*

The principal, teachers and learners indicate that they are able to communicate with each other using the common language and structure encouraged by the community of inquiry approach.

But there are certain aspects that have not yet changed or that still need to happen at the school. Firstly, the parent community is not yet formally aware that the school is explicitly developing thinking skills and that the school is using the community of inquiry approach as their first step on the journey to becoming a Thinking School. Secondly, the teachers need to develop even more understanding of how to infuse this approach into the curriculum.



5.4 Research sub-question 3

What contextual factors have influenced the process?

There are certain contextual factors that have impacted on the school's journey to develop thinking.

The school management and ethos has made a positive impact on the school's journey. The school is managed by the principal, deputy principal, the school's management team and the SGB. The principal is actively involved in the daily running of the school and keeps in touch with the learners by visiting each class at the beginning of the school day. This impacts the school positively because she motivates and encourages teachers to teach in a manner that is learner-centred and encourages mutual respect between teachers and learners on a daily basis. The principal is committed to upholding the values and principles based on their

mission statement throughout the school community and encourages staff to do the same. Staff members are also committed to providing a disciplined but caring environment for their learners. Their ethos of sharing is positive because teachers share information and strategies with each other in order to assist each other to deal with certain situations in their classrooms or with the curriculum. On the other hand, their ethos of sharing may inhibit a staff member or core group from leading the Thinking School journey and holding all the responsibilities that this entails.

Another contextual factor that has made a positive impact is that the staff at Bridgedale Primary is relatively stable. There have not been many staff changes with regards to teachers or administrative staff during the period of study. Therefore, many of the current teaching staff members have received training in the community of inquiry approach and practices. There is thus a sense of continuity with regards to the school's approach to teaching and learning and for developing thinking skills throughout the grades.

Teachers also reported that the training they received in the community of inquiry approach was good because it was experiential, i.e. teachers could experience what it would be like to be a student and how to teach using the community of inquiry approach and its strategies.

There are also contextual factors that have negatively impacted on the school's journey to develop thinking.

Firstly, educational policy and the prescribed national curriculum have impacted on the school's journey. Teachers need to follow the prescribed curriculum and

teachers have noted that it is challenging to find the time to develop thinking amongst all of the prescribed work that they need to complete by the end of the year. This suggests that they are not yet fully aware of the many ways that they can integrate the pedagogy into what they are required to teach.

Secondly, class sizes have impacted on the school's journey because teachers reported that at times it is challenging to manage group work or certain activities due to the number of learners in the classroom.

Thirdly, it is challenging for the teachers to create a sense of community in their classrooms due to the cultural and language differences of their learners. Learners of Bridgedale Primary do not only reside in the area in which the school is situated, but there are learners who travel to the school from different areas across the Cape metro and there are different languages spoken by learners. Learners tended to cluster in their own language / cultural groups, although this is starting to be overcome. Learners now share common vocabulary and communication strategies that are encouraged by the community of inquiry approach and practices. This is helping learners to communicate with each other.

The fourth contextual factor that negatively impacts the school's journey is the economic situation. Although the WCED provides the school with funding needed for the physical running of the school, the school needs to provide its own funding for extra teaching resources and staff training. This is challenging for the school because the learners may come from families that may not be able to contribute to school fundraising initiatives. This means that it may be more difficult for the

school to be able to raise the funds they need in order for teaching resources and staff training to be included in the school's budget.

5.5 Research sub-question 4

What has sustained the progress towards achieving Thinking School status?

There is a dedicated co-ordinator who manages the process of developing thinking skills and the journey towards becoming a Thinking School, as suggested by Burden (2008). The co-ordinator is sustaining the process at the school by encouraging teachers to share ideas and strategies with each other. The co-ordinator also encourages teachers to speak about their concerns or suggestions during staff meetings.

Learners are sustaining the process by using the vocabulary they have acquired during the community of inquiry practices in the classroom. Examples of the vocabulary or thinking moves that have been developed are: agree, disagree, contemplate, question, analyse, ponder and decide. There is a common language and way of communicating that the learners are able to use as a framework when speaking or listening to their peers and teachers.

Teachers are sustaining the process by using and developing the thinking moves in their lessons and classroom practices. There is a graded progression from the FP to the IP with regards to the thinking moves. The focus in the FP classes is to develop the concepts of *agree* and *disagree* and build confidence in expressing

opinions. The IP teachers can build on these to further develop the thinking moves and thinking vocabulary.

One aspect that can affect sustainability negatively is the timing of training and whole school change. At this school it coincided with change in the national curriculum (CAPS). Teachers needed to receive training for the new curriculum and make changes to their planning. Teachers noted that "there are so many changes for us to deal with now that the curriculum is changing again".

The principal commented on sustainability:

> *Ongoing support will help us sustain the programme. Maybe even just contact with another school or contact with speakers just to keep us in tune as to where we are at, to see what the next step is.*

5.6 Locating the study in the context of theory

Both Vygotsky and Feuerstein note the importance of mediation and language for learning to think and thinking to learn. In this study, the school used the community of inquiry approach to develop thinking. In this approach learners discussed topics as a group or classroom community of inquiry. Learners learned from their peers and teachers who were their knowledgeable others and were active participants in their learning (Vygotsky, 1986). In this school, language was developed in two ways namely, vocabulary of concepts was expanded, as learners talked about issues and vocabulary of thinking was developed using words to

describe mental processes (thinking moves). For example, words such as agree, disagree and question were used during lessons in the classroom and this has started to become common practice in the way learners speak to each other and to their teachers. Learners are also starting to use the framework of the community of inquiry practices and the language associated with it to manage conflicts with peers. Teachers are using the language not only as part of discussions in the classroom but also as a classroom management tool.

As found internationally (Fisher, 2008) and locally (Green, 2006), this study also found that:

- Teachers' professional confidence and self-esteem were developed
- Learners' self-esteem and self-concept as thinkers and learners were developed
- Learners' ability to think for themselves and engage effectively in discussion with others was developed
- Learners are more respectful of one another
- Learners' responses are more thoughtful and less impulsive

With regards to a whole school approach to 'teaching thinking', the school is not yet fully engaged in the process. According to Burden (2008), for a school to have a whole school approach to develop thinking and learning there needs to be awareness and commitment from all the sections of the school community.

Burden's (2008) fourteen criteria as shown in Appendix A, provide a framework and structure for schools to aspire to in order for them to become a Thinking School. In this study, the principal and teachers are aware and committed to developing thinking as a whole school approach. However, the parents still need to be formally informed and made aware of the process and there needs to be a stronger sense that the focus of everything the school does is on thinking and that it is not just another project. Certain teachers are highly committed to developing thinking, but I could find no evidence that the whole school community was fully committed at this time.

5.7 Limitations of the study

- One of the limitations of the study is that I did not access the opinions of the parents. This is because there were indications by the principal and teachers that they would not know about what was happening.

- It could be considered a limitation that because the study is a case study, it is not generalizable as it is specific to the school. However, case studies can sometimes be generalized using analogical reasoning. There may be schools that have similar contexts and problems at their school to those at Bridgedale Primary and who may be able to learn from their situation.

- Another limitation to this study was that the teachers interviewed were so enthusiastic that they tended to gloss over what might still be missing in order to become a Thinking School as defined by Burden (2008).

- The major problem with this study was that I was not permitted to access all of the data that I needed:
    - I was not given permission to speak to support staff, including secretaries.
    - I was not given permission to transcribe the interview with the curriculum advisor, although I took extensive notes.
    - The study would have been enhanced if I had been able to include class observation to my data collection and if I had been allowed to speak to more staff members. The study would have been further enhanced if I had been given access to school documents and records, e.g. minutes of meetings and managed to meet with a representative of the SGB, but I recognise that all research needs to happen with what is available to it.
    - The original intention was to present the school's journey as a narrative, but because of insufficient data due to limited access, I was not able to do this.

5.8 Suggestions for further action

- I suggest that the staff develop a formal plan of action in order to provide structure to the school's journey to develop thinking and towards becoming a Thinking School. This formal plan will include such aspects as who will research what else they could do, how the training will be paid

for, when the training will happen, who will provide the training and a timeline of where in the process they expect to be and when. This plan will also include how they will continue to implement the community of inquiry strategies and how they can infuse these strategies even more effectively into different aspects of the curriculum and throughout the school.

- I suggest that training in the community of inquiry approach continue to be experiential as the teachers reported that they appreciated the "hands-on approach" to the training they received.

- Because there are costs involved with training and certain resources that may be needed, I suggest that financial planning be an important aspect in this process. The school is in a unique position where although they are situated on privately owned land, they are under the jurisdiction of the WCED. Financial planning may prove to be more challenging in a government school than an independent school because of the amount of school fees that can be collected and the fact that parents may not be able to contribute to the school's fundraising initiatives.

- I suggest that the parents be formally informed, e.g. via a newsletter, and made aware of the school's process to develop thinking throughout the school as soon as possible. This is an important step to developing a whole school approach, as the parents are also members of the school community. This may encourage learners to transfer the strategies that they have learnt of the community of inquiry approach to their home lives.

This may give the school the potential to develop and promote the common language that they have nurtured within the school, pass the school gates and into the communities in which the learners live.

5.9 Suggestions for further research

- I suggest that more in-depth case studies are conducted. This will help the researchers to see what has worked in other schools and how the process can be enhanced or improved.

- I further suggest that research be conducted on how teachers integrate and infuse the teaching of thinking skills into the curriculum.

5.10 What I personally gained from the study

I have gained in many different ways whilst conducting this study. Firstly, I have learnt to adapt to circumstances and to be flexible rather than rigid in my planning, particularly during the data collection process. I know more about the process of conducting a case study and about the school that I have studied. I have learnt about the process of research and how valuable it is compared to showing how much you know or what you know during an examination. My academic writing and analysing skills have been developed. Being able to hand in a piece of writing that is not yet 'done' was very challenging for me initially. The process of getting my ideas down onto paper was frustrating initially which was followed by

a great sense of relief that I had achieved my goal of putting my ideas down coherently. This process has given me the opportunity to develop confidence in my own writing ability and to go for it even though it is not yet 'right'! My supervisor advised me that the right words don't always come the first time and that I should trust what I know. This advice guided me throughout the study and gave me the assurance that I could successfully work through the process. Finally, I am now more aware of my own thinking and my approach to tasks and situations. The thinking approaches and strategies that I have been exposed to while conducting this study, have given me insight into developing my own teaching. It has also given me a glimpse of the potential there is to enhance education and the lives of our learners.

Zara, age 7:

I like thinking because it is good for your brain. When you think your brain gets exercise and then your brain grows. This is good for your life.

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Appendix A:

THINKING SCHOOLS:

The criteria by which a Thinking School can be recognised:

1. The school's principal has made a formal commitment to cognitive education as a means of school improvement in terms of the school's development plans (i.e. to staff, parents and governing body members);
2. This commitment has the explicit support of the School Governing Body;
3. A member of staff with high formal status has been given the role of Cognitive Education Co-ordinator: to organise and oversee the implementation of the cognitive education development agenda;
4. There is a staff sub-group/task force committed to the ideals of cognitive education to support the Cognitive Education Co-ordinator and help keep the development process alive and vibrant;
5. The majority of school staff (including support staff) demonstrate an understanding of what is meant by cognitive education and a commitment to it as one of the school's main aims;
6. A wide variety of thinking skills programmes and resources have been analysed and incorporated into the various aspects of the school curriculum as appropriate;
7. There is an Action Plan by which thinking skills and strategies will be or have been introduced and taught across the school, both independently and as an integrated aspect of curriculum subjects;
8. A Cognitive Education Co-ordinator will have received appropriate training in the theory, application and assessment of cognitive education;
9. There is an ongoing training programme in place which ensures access to a range of cognitive skills, strategies and resources for established and newly appointed staff;

10. Alternative and/or complementary forms of assessment (including pupil self-assessment) have been explored and implemented to reflect alternative cognitive approaches to learning;
11. There is evidence in the learning outcomes, behaviour and attitudes of the pupils to indicate that they are operating as thoughtful, responsible learners who are able to articulate how and why thinking skills and strategies are an important aspect of all that occurs in their school;
12. There is a constant review of the strengths and weaknesses of the range of cognitive resources employed with specific reference to their effects on student metacognition and transfer of skills and strategies;
13. There are regular opportunities for staff to discuss the process of cognitive education and how it can be maintained and improved;
14. The school conveys a positive, caring and creative atmosphere to students, staff and visitors, demonstrating that careful thought has been put into its organisational structure and visual presentation.

Appendix B

Outline for interview with Project Co-ordinator:

- How would a parent see or hear that this is a school working towards becoming a Thinking School?
- What evidence would there be to show this?
- How does the school communicate to parents regarding this initiative?
- Have you had any feedback or queries from parents?

- What kind of contact do you have with your partner school in the UK?
- How has this contact impacted on your school?

- Are topics regarding the road to becoming a Thinking School discussed in staff meetings?
- What topics or issues are discussed?

- What are the plans for later in the year?
- What are the plans for next year?

- What helps to make the process work?
- What hinders the process?
- What support do you think will be needed in order to sustain the process?

- What do you see as your special responsibilities as co-ordinator?

- Is there anything else that you would like to tell me that you think is relevant?

Appendix C

Interview Outline for Teacher focus groups:

- What are your thoughts about this Thinking Schools initiative?
- What are your thoughts about the community of inquiry training?
- How do you feel about integrating this training into your classroom and lessons?

- How have you interacted with your partner school in the UK?
- What impact did this contact have on you and your classes? On the school?

- How often do you discuss issues regarding the 'Thinking School' topic in your staff meetings?
- What types of issues do you discuss?

- How does the school communicate to parents regarding this initiative?
- Have you had any feedback or queries from parents?

- What have you noticed in your classes since you have started the training?
- Learning? Behaviour? Other?

- How have you changed as a result of this process?

- What do you see as the next step towards becoming a Thinking School?

- Any advice for other teachers or schools?

- Anything I have not asked you about that you think is relevant?

Appendix D

Interview Outline for Learner focus groups:

- Do you know any thinking words?
- What can you tell me about that thinking word?
- What do you think?
- Who agrees or disagrees?
- What do you like about thinking about things together?
- Who can think of a difficult question? Something that you have been thinking about or something interesting that you have been wondering about.
- Who can give a question that we can all think about?
- Do you think it would help you if we could all help each other figure it out? Or do you think it would be easier to think about it by yourself?
- What do / don't you like about thinking about things together?
- What do you think you need to get better at when thinking about things together?
- Do you think your school is becoming a Thinking School? Why do you think so?
- If you had to walk into a Thinking School, what would it be like?

Appendix E:

Thinking About Thinking:

The purpose of this rating scale is to find out whether you enjoy thinking and think you're good at it. There are no right or wrong answers, so please be as honest as you can. All you have to do is put a (√) in one of the boxes alongside each numbered item. Be extra careful when you answer the items with a star (*).

(a) means DEFINITELY TRUE

(b) means quite true

(c) means not sure, may be 50 : 50

(d) means not very true

(e) means DEFINITELY NOT TRUE

		a	b	c	d	E
1.	I am good at thinking of new ideas.					
2.	I am good at organising my work.					
3.	I can usually work out things for myself when I get stuck with my work.					
4.	I know how to be a good thinker.					
* 5.	I often find it difficult to sort out my ideas.					
* 6.	I'm not very good at sorting out problems.					
7.	I'm a creative person.					
8.	I can usually work out for myself why I've got an answer wrong.					
9.	I'm good at helping other people solve their problems.					
10.	I can always think of new ways of doing things.					
11.	I like trying to solve difficult problems.					
* 12.	When I have to do a lot of thinking, it makes my brain hurt.					
13.	I enjoy lessons that make you think a lot.					
* 14.	Some people think too much.					
15.	Doing quizzes and games to improve your thinking is fun.					
16.	My work is usually much better when I think carefully about it.					
17.	If you are good at thinking it will help you do well in tests and exams.					
* 18.	I don't see the point of learning how to think.					

19.	I use thinking skills to help me with my homework.					
* 20.	School learning has got nothing to do with thinking.					

NAME:..... **BOY / GIRL**

DATE OF BIRTH:..... **FORM:.....**

APPENDIX F

CONSENT FORM

I hereby agree to be a participant in the research of RABIA EDRIES to conduct research regarding the

THE EFFECTS OF A 'THINKING SCHOOLS' INITIATIVE INVOLVING AN INTERNATIONAL PARTNERSHIP: A CASE STUDY OF ONE WESTERN CAPE PRIMARY SCHOOL.

I understand that I, _____ (name), will be participating freely and without being forced in any way to do so.

The purpose of the study has been explained to me and I understand what is expected of my participation. I understand that this is a research project whose purpose is not necessarily to benefit me personally but which is intended to benefit education generally.

I have received the telephone number of a person to contact should I need to speak about any issues that may arise in this rating scale or interview.

I understand that this consent form will not be linked to any rating scale or interview and that my answers will remain confidential.

_____

I understand that feedback will be given to my school on the results of the completed research and that the findings will be used in Ms Edries' M.ED. RESEARCH REPORT. No individual persons will be identified without permission in either case.

_____ _____

Signature of Teacher *Date*

_____ _____

Signature of Researcher *Research Supervisor*

RABIA EDRIES *Prof. Lena Green*

APPENDIX G

Thinking About Thinking Rating Scale Data

(Completed by 30 Grade 5 learners)

(a) means DEFINITELY TRUE

(b) means quite true

(c) means not sure, may be 50 : 50

(d) means not very true

(e) means DEFINITELY NOT TRUE

		Percentage (%)				
		a	b	c	d	e
1.	I am good at thinking of new ideas.	23.3	40	30	36.6	
2.	I am good at organising my work.	26.6	40	20	13.3	
3.	I can usually work out things for myself when I get stuck with my work.	33.3	33.3	23.3	10	
4.	I know how to be a good thinker.	36.6	43.3		13.3	6.6
* 5.	I often find it difficult to sort out my ideas.	13.3	33.3		26.6	13.3
* 6.	I'm not very good at sorting out problems.	6.6	16.6	20	23.3	33.3
7.	I'm a creative person.	60	20	16.6		3.3
8.	I can usually work out for myself why I've got an answer wrong.	63.3	26.6	6.6	3.3	
9.	I'm good at helping other people solve their problems.	33.3	33.3	16.6	10	6.6
10.	I can always think of new ways of doing things.	53.3	33.3	6.6	6.6	
11.	I like trying to solve difficult problems.	53.3	30	13.3		3.3
* 12.	When I have to do a lot of thinking, it makes my brain hurt.	16.6	16.6	13.3	13.3	40
13.	I enjoy lessons that make you think a lot.	80	20			
* 14.	Some people think too much.	50	20	10	10	10
15.	Doing quizzes and games to improve your thinking is fun.	50	33.3	6.6	3.3	6.6
16.	My work is usually much better when I think carefully about	66.6	30	3.3		
17.	If you are good at thinking it will help you do well in tests and exams.	66.6	30	3.3		
* 18.	I don't see the point of learning how to think.	3.3	6.6	10	13.3	66.6
19.	I use thinking skills to help me with my homework.	66.6	23.3	6.6		3.3
* 20.	School learning has got nothing to do with thinking.					100

APPENDIX H

Example of thematic analysis attached.