Cape Peninsula
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THE TEACHING OF CRITICAL THINKING SKILLS IN GRADE THREE CLASSES AT THREE PRIMARY SCHOOLS IN KUILSRIVER

ALISON JANE FEBRUARY

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Supervisor: Professor Pam Christie

DECLARATION

I, Alison Jane February, declare that the contents of this dissertation represent my own unaided work, and that the dissertation has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

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ABSTRACT

The change in focus of the curriculum policy statements since 1996 have caused many teachers to feel abandoned and helpless in their pursuit of the objectives of the new curriculum.

One of the issues that leads to this feeling of abandonment is that of critical thinking. A stated objective of the new curriculum is that learners must be able to engage critically with their environment. However, leading learners to be able to do this seems to be lacking. Classroom practice currently, does not address this adequately and in many cases, the ability and capacity to nurture a critical thinking classroom environment is absent.

The teachers who participated in this study recognised that in order for them to be more successful in terms of the curriculum objectives, critical thinking as a core competency had to be developed as a strategic imperative. They also recognised that viewing the child in their class in isolation from their environment is fatally flawed. The child after all is a product of his/her environment.

It is for this reason, that this study used the Productive Pedagogies as a basis for the research. This approach was selected because of its comprehensive quality in terms of viewing the development of the child holistically. The ability of the child to connect to his environment is dependent on the capacity of the school as a forum to draw all of the threads together and then to make meaning. The teachers on their own would not be able to do this without the help of their institutions. The development of critical thinking must be recognised at the level of management as a key classroom strategy that must be managed and supported. This would imply that important curriculum discussions and decisions must be based on how the teaching of these skills will be affected.

The significance of critical thinking and the weak systemic evaluation results prompted this study to investigate whether the teaching of critical thinking skills is part of everyday classroom practice. The instrument of the Productive Pedagogies for classroom observations was used to obtain quantitative information. Interviews with the educators were also conducted to add to the qualitative data.

ACKNOWLEDGEMENTS

DEDICATION

I dedicate this dissertation to my late father, John Larey and my mother Anne Larey. Thank you for all the sacrifices you made in order for me to attain this qualification.

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GLOSSARY

OBE	Outcomes Based Education
NCS	National Curriculum Statement
RNCS	Revised National Curriculum Statement
PIRLS	Progress in International Reading Study
SACMEQ	Southern and East African Consortium for Monitoring Educational Quality
UNESCO	United Nations Educational Scientific and Cultural Organisation
EMDC	Education Management District Centre
WCED	Western Cape Education Department
SACE	South African Council for Educators
SASA	South African Schools Act
QLSRS	Queensland Longitudinal School Reform Study

CHAPTER ONE

INTRODUCTION

1.1   Background

With the dawn of a new democratic South Africa, changes in the education sphere were necessary. Outcomes based education (OBE) was introduced in 1996 with much anticipation from all involved. It has been reviewed on numerous occasions since then (2000, 2008 and 2010).

This major change in South African education caused many among the citizens of South Africa to be disappointed and even upset. Educators were most affected, as they were responsible for the implementation of these policies.

The current national curriculum, its complexity and the amount of information available to us, demand of learners and teachers to be critical thinkers. Isaksen and Murdock (1993), state that all sectors of society require learners who can think critically and creatively. This vital concept was therefore included as a main outcome of the new curriculum.

Shaughnessy (1991) suggests that it is imperative within the education sector to include excellent communication, consensus, consistency, clarity, coherence, consideration, community, commitment, concern, care and cooperation in order to be successful in the implementation of the policies that underscores the curriculum of the country.

It is therefore important for all school leaders to accept responsibility for the development of critical thinking in the classrooms. School leaders need to ensure ongoing professional development that specifically targets the concern of the study. It is felt that school communities do not do enough to ensure that the objectives of the curriculum policy statements are met. The major role player here is the Department of Education and its delegated authorities. School management teams and the district officials must strive to develop an environment that is conducive for the optimal delivery of the curriculum. Teachers are hindered in this pursuit because of a variety of factors. This paper serves to explore what teachers perceive these problems to be. Suggested strategies aimed at mitigating this, is a core purpose of this study.

This study reveals that most school environments do not support the stimulation of critical thinking and thus produce learners who are losing their critical thinking potential. In this regard, the study investigates the importance of effective classroom practice. The study specifically looks at the role of the educator as well as the learner. To provide learners with opportunities to develop their critical thinking skills should be incredibly rewarding to the educator. For the student, the rewards are innumerable. It can change their lives, academically and secure job success in the future. As highlighted in chapter 2, they will also expand their view of how they see the world, and assist in making crucial decisions in life.

1.2 Problem Statement

Currently the learners in South Africa are performing extremely weakly in the annual national systemic tests. The literature review highlights the poor performances of the learners in international tests that were done previously. One of the main skills learners lack when undertaking these tests, is the skill to think critically.

Therefore it is the aim of this study to investigate the level of teaching critical thinking skills in the classroom.

1.3 Delineation of the Study

The purpose of this study is to provide research and recommendations related to the teaching of critical thinking skills in order to improve specific outcomes of the national curriculum. The research was done at three primary schools in Kuilsriver, Cape Town. The composition of the study is as follows:

Chapter 2 examines the definition of critical thinking and the cognitive impact it has on the educational development of a child. It further explores in detail the approach the Productive Pedagogies offer to educators to critically develop the learners and all the necessary elements attached to this development. Chapter 2 clearly illustrates that the development of critical thinking cannot be done in isolation and that all stakeholders should form partnerships to ensure the effective development of this significant concept. It also investigates the teacher preparation and professional development that are crucial to the development of critical thinking.

Chapter 3 attends to the research approaches that were used in the study, the data collection methods, the sampling, ethical considerations, recording equipment, coding of instruments and the data preparation.

Chapter 4 presents the findings of this study. It firstly analyzed the observations that were done in class and secondly the interviews that were conducted with the educators. The lessons were observed within the framework of the Productive Pedagogies in relation to critical thinking.

Chapter 5 completes this study and makes certain recommendations that will aid in the pursuit of the development of critical thinking skills. These propositions stem from the findings in chapter 4. The recommendations are posed in the form of a training programme that school can use to address the teaching of critical thinking skills in the classrooms.

CHAPTER 2: CRITICAL THINKING: A LITERATURE REVIEW

2.1 Introduction

The post-apartheid era has necessitated many changes in South African society. The post-apartheid government has tried (and is trying) to remedy past injustices by introducing policies, procedures and practices to give effect to the vision of the new rights-based Constitution of South Africa. The forefront of this battleground has been the development of meaningful legislation that would not only stimulate a societal paradigm shift, but also ensure meaningful change in accord with a new vision of South Africa.

A number of changes have happened in the sphere of education. These changes try to address ways in which the spirit of a new education system can be fostered in terms of the vision of an education of increasing quality for all, and how this vision is to be delivered. Among the changes, an Outcomes Based Education (OBE) model was introduced to enhance the quality of education in South Africa. Whether or not the OBE version that the Department of Education chose to adopt is the best one, is yet to be tested. Meanwhile, we can only make educated projections of what the outcome will be regarding the success or failure of the NCS. If one could place South Africa's thoughts on a continuum regarding this issue, it would probably reflect at its limits, extreme pessimism on the one hand and extreme optimism on the other. The responses I feel, would largely depend on who you may be speaking to.

With change of this magnitude, there were bound to be at least some teething problems. Eleven years since the introduction of new education policy, there are still manifestations of these change stresses as the Department of Education tries to marry visions with practice.

This is a major concern for all educators, as they are the workforce that needs to guarantee the successful implementation of these policies. They are the individuals that because of their experiences and knowledge gained in the classroom are aware of the loopholes and the weaknesses regarding implementation of these policies. This is due to the bureaucratic top-down approach that was used by the educational authorities when change was brought about. This type of approach usually lets the educator into the planning circle when they reach the final stage. A bottom-up approach where the educator is on board from the beginning is a definite ingredient for a successful recipe. If our society is to be even remotely competitive in the global village, there must be an unrelenting and concerted attempt to simplify the intent and context of our policies with what is actually taking place in our institutions.

Some of the main objectives of OBE are to guide all learners to be astute thinkers, to function optimally in a fast changing world, to be able to make the right choices and to be able to make a difference in the country (RNCS Statement, 2002). All the above-mentioned relate to the concept of critical thinking.

This chapter will elucidate the importance of critical thinking, critical thinking and OBE, critical thinking in the schools, critical thinking in the classroom, the role teachers play with regards to the stimulation of critical thinking at schools, the role of the stakeholders and the relevance and choice of using Productive Pedagogies as a research tool within the dimensions of critical thinking.

2.2 The importance of critical thinking

The world that we live in today is different to the one our parents and grandparents lived in. Each day brings about new changes and these changes have a direct influence on our lives. In order for us to survive in this ever changing world, we need to develop certain skills that will equip us to be survivors. Critical thinking as explained by Gough (1991) and Beyer (1985), in my opinion, best fit the context of change mentioned above. They maintained that critical thinking skills are crucial for people to cope with a rapidly changing world; to think clearly, independently and rationally; to make individual and communal choices; to provide evidence in support of one's choices; and to establish the validity, precision and merit of information or knowledge. This approach to critical thinking is underscored by the argument of Paul (2007) which argues that if the concept of critical thinking could be more widespread, then that would result in a new and entirely different world. Can the skill of thinking critically then result in better and more conscious societies? Societies where kids think critical about the choice to do drugs; murderers reflect critically about their intentions to harm another person; teenage pregnancies will be something of the past? Idealistic as this sounds, it is nonetheless a vision worth exploring.

Critical thinking is certainly not a new concept. Back in the seventies, Levinson (1978:53) pointed to the importance of critical thinking in our lives. He stated that the main task in managing adulthood is being able "to question and reappraise the existing structure, to search for new possibilities in self and the world, and to modify the present structure enough so that a new one can be formed". This accentuates the significance of developing critical thinking

and the fact that it is a process. The present study proposes to look at the stimulation of critical thinking at an early age. If teachers can seriously address critical thinking within their classroom, then the "managing of adulthood" will be less problematic once these learners reach that stage of their lives. This skill is certainly not limited to the classroom, but a lifelong ability that can be utilised wherever and whenever needed. The question that still remains is, if critical thinking was on the educational agenda since the early seventies, why do the systemic evaluations done by the South African Department of Education demonstrate that our learners are not critical thinkers. Could it be that critical thinking remains a vision rather than a practice in our classrooms?

Christie, Butler and Potterton (2007:3) highlight the evidence that proofs that there are major concerns with quality in education in both primary and secondary school performances and that South Africa's performances are weaker than other countries in international tests that were done.

South Africa participated in an international study, Progress in International Reading Study (Pirls), which looked at the reading literacy in South African schools. The learners that were participants in this study were grade four and grade five learners. The Pirls Report (2007) clearly indicates that the reading abilities of these learners are extremely weak. McGregor (2007) claims through his study that "poor teaching practices, poor or non-existent training in reading practices indigenous languages, a lack of a drive or a will to alter the situation", are some of the reasons that can be attributed to the test results. The TIMSS test that was done in 2003 on Maths and Science proficiency (grade 8), showed that South Africa was the weakest of the fifty countries that participated. SACMEQ tests (2005) revealed South Africa scored ninth out of fourteen countries. The UNESCO Monitoring Learner Assessment tests for Grade 4 learners confirmed that the numeracy level of the South African learners was 30%, lower than countries smaller and poorer than South Africa. The Grade 3 systemic evaluations that were done in 2001, found very low achievement across all the provinces in literacy and numeracy.The Grade 6 evaluation (2004) also showed low performance levels across Language of Learning and Teaching (LOLT), maths and science(Christie et al, 2007:36-37).

The schools that have been chosen as the sample of this study reside under the auspices of EMDC East. The last systemic evaluations for Grade Six learners in the EMDC East on Numeracy and Literacy were done in 2007. The following tables illustrate the test results of this evaluation (Western Cape Education Department, 2008).

Numeracy	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7	
	Average %	Pass %	Average %	Pass %	Average %	Pass %	Average %	Pass %	Average %	Pass %
EMDC: East	35.8	31.7	38.0	27.7	29.1	16.5	23.7	10.3	19.1	11.1
Province	43.1	43.0	43.7	37.7	34.2	23.6	27.9	14.0	23.4	15.1

Table 1

Literacy	Grade 3		Grade 4		Grade 5		Grade 6	
	Average %	Pass %	Average %	Pass %	Average %	Pass %	Average %	Pass %
EMDC: East	65.9	77.7	44.9	40.6	45.2	45.8	37.0	31.6
Province	72.3	50.6	84.0	54.6	51.3	45.0	50.1	44.8

Table 2

These results indicate clearly that less than 50% of grade six learners obtained a pass on their grade level while most of these learners' performances are on a grade 3, 4 or 5 levels.

This apparently weak performance for the district and the province is certainly an issue for grave concern. Two observations that must be noted here are:

a) That there is an apparent discrepancy between the expectations of the National Curriculum Statement (or from the people managing it at national and provincial level) and the actual skills and interpretations of the people operationally involved viz. the educators.

b) That critical thinking as a skill is not taught and facilitated within the classroom.

According to the WCED's Literacy and Numeracy Strategy 2006 – 2016 (DoE, 2006), the education authorities in post apartheid South Africa did not train teachers to deal with the new curriculum statement, but merely oriented them towards it. Even though critical thinking is

one of the main concepts that underpin the NCS, it was largely overlooked in terms of training. There seems to have been an assumption that teachers teaching numeracy and literacy would automatically be able to pursue the goals of the NCS without been specifically trained to do so. The organisational expectations of "better" results have been compromised due to the lack of effective training for educators with regard to an appropriate approach to teaching and learning strategies. It gives the impression of a formula one racing car trying to race in a suburban driveway. Futile. The NCS may be a revolutionary in its design, but without its operational specialists (teachers) receiving the correct support in terms of training and resources, it may just remain a good idea. The under-emphasis applied to key pedagogical approaches in terms of the NCS has seriously undermined its efficiency and effectiveness. The systemic evaluation results for 2007 apparently testify to this.

The Ministerial Committee wrote in their report (Schools that work) that although the South African authorities had succeeded in providing access to schooling for all learners, it has lacked in providing all learners with a quality education. This means that the educational authorities are failing in their endeavors to provide all learners with the necessary skills and attitudes that they need in order to cope with a rapidly changing world, as expressed earlier. The above data is distressing and what is even more worrying is the lack of specific interventions (not on paper) to address these shortcomings (Christie et al, 2007:37).

2.3 Critical thinking within schools

According to the South African National Curriculum Statements (NCS, 2006), institutions of learning and specifically schools, should provide the learners with a holistic, structured and broadly-based curriculum that will reflect and address their distinct needs and circumstances. This holistic approach is intended to ensure that the citizens produced will be able to take their rightful place in society. The ultimate goal would be to ensure that each citizen has learned the necessary skills to be self sufficient, acquiring knowledge and skills needed for adulthood, to be trained in a profession or trade, earn a living and therefore contribute to the welfare of the South African society.
As mentioned earlier, these expectations assume the ability to think critically. It is therefore safe to say that one of the responsibilities of schools is to foster a climate of critical thinking. If schools are serious about stimulating a culture of critical thinkers at the school, then the curriculum needs to be advocated among the staff, the parents, the school governing body and most importantly, the learners (South African Schools Act (SASA), 1996). Van Deventer and

Kruger (2003: 37) states it well by saying that change represents the struggle between what exists (problem) and what is desired (critical thinkers).The significant role of all stakeholders comes through very clearly in their research (2003: 37). Fullan (1991) argues exactly the same theory that in order for this innovation to bring profound change about; all role players need to adjust their own situations to suit the required outcome. Kimbrough and Burkett, in their research add force to the above by affirming that innovations at schools can only be successful if and when all involved concur with the motivation and purpose of the projected innovation (Kimbrough & Burkett, 1990: 131).

This venture would be directed towards learners understanding of the need for and the importance of critical thinking in their lives. By developing critical thinking skills, schools can guide learners in a direction where they develop certain approaches, like "a desire to reason, a willingness to challenge and a passion for the truth" (Fisher, 2005:53). For this reason it is essential that schools adopt an attitude of becoming "thinking schools" in order to deliver outstanding critical thinkers at their schools, and not see it as the duty of individual teachers. If schools do function as "thinking schools", then the teachers at the school will operate as reflective practitioners. Critical reflection will permit teachers to investigate own values, feelings, personal experiences and beliefs, which impacts on the quality of curriculum delivery .They can also create and evaluate alternative approaches to challenges within their classroom practices (Siebert, 2005). This quality is likely to translate into more effective practices and ultimately a sound curriculum for the school. An effective "thinking skills school" would require thinking teachers who are highly motivated, focused and have the necessary support from the senior management team, the school governing body and the community they serve. Schools should see the need to take on this innovation of developing their current curriculums into "thinking curriculums".

Fisher elaborates on this topic by stating factors that can assist in nurturing critical thinking skills. These factors are:

- Building of a strong self-esteem
- Reaching every learner in the school community.
- Teachers should listen with care, be genuine, clear and positive.
- Teachers should be learners too.
- The environment should be enticing for critical thinkers.
- The institution should form affiliations, within and outside the school community, increasing individual and organizational

intellect by involvement with a broad range of critical partners (Fisher, 2005).

The factors posited by Fisher link up strongly with the elements of the Productive Pedagogies that looks at teaching as an integrated approach.

2.4 Critical thinking in the classroom

There are specific skills that the NCS policy document requires of a grade three learner to demonstrate in all three learning areas. The teaching of a learning area in foundation phase does not happen in isolation, as teaching in the foundation phase is seen as an integrated approach of all three learning areas. The required skills can therefore not be limited to one learning area. Some of the skills are illustrated below:

Evaluation

Analysis

Investigation and Exploring

Interpretation and application

Decision making

Thinking and Reasoning

Literacy Numeracy Life Skills

Argumentation

Sorting and classificatiion

Problem solving

Reflecting

Communication

Synthesizing

Collecting information
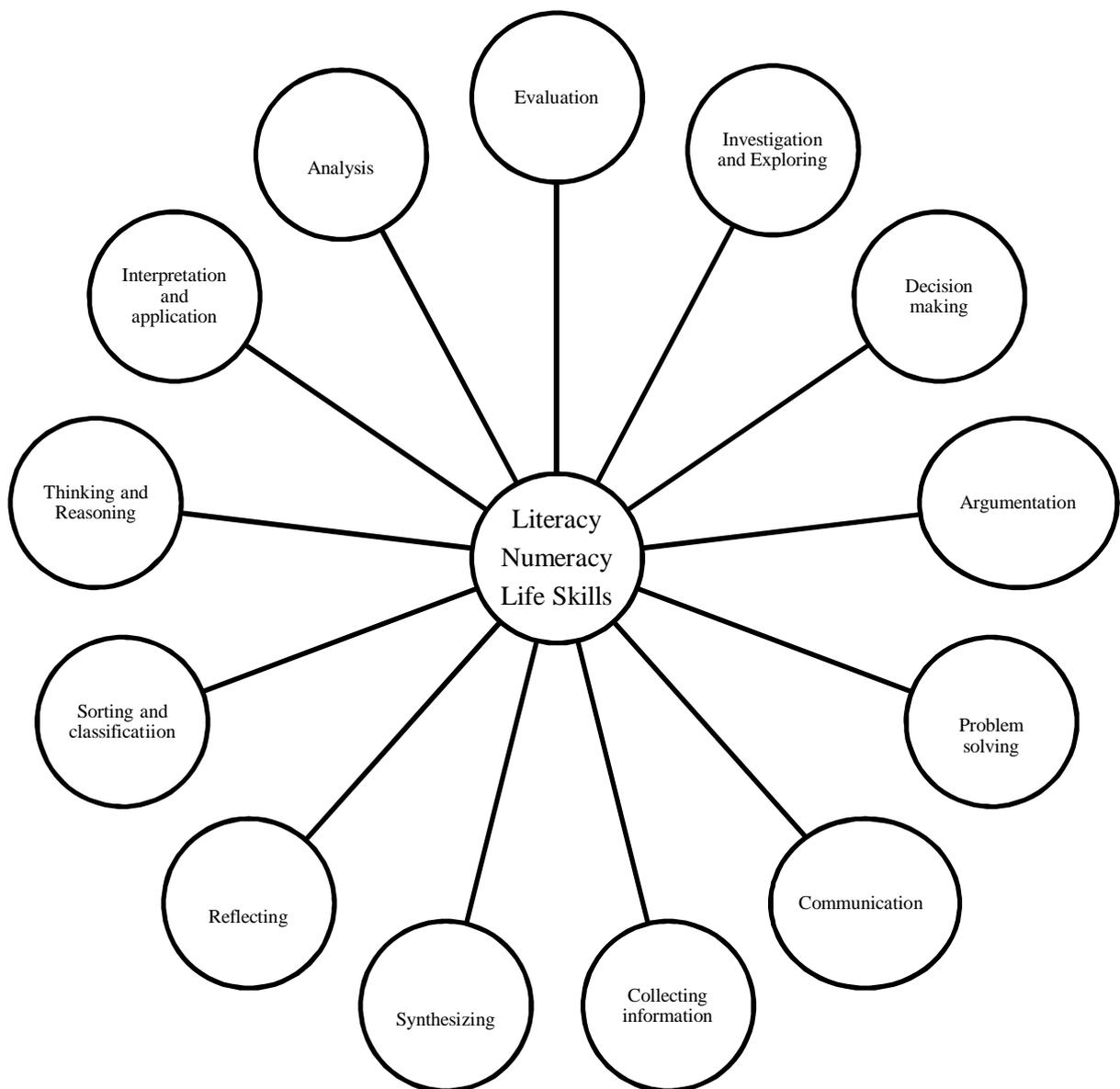
Figure 1

Following are examples of how grade three learners integrate these skills in all three learning areas.

Thinking and reasoning: Learners will use thinking and reasoning skills when gathering information to complete a graph in Numeracy, use this skill to complete a survey in Literacy as well as conducting a scientific investigation in Life Skills.

Communication: Learners must be able to communicate their ideas, opinions and views within all three learning areas more specifically when asking questions for clarification, recounts a sequence of events, participates in a conversation on a specific topic and describes a process.

The continuous stimulation of critical thinking skills in the classrooms will result, according to Paul & Elder (2001), in certain lifelong attributes. A skilled critical thinker will:

- pose questions and solve problems, formulating it clearly and accurately;
- gathers and assesses information, using conceptual ideas to understand it effectively;
- draw well-reasoned conclusions and solutions, testing them against appropriate criteria and standards;
- think objectively within alternative systems of thought, distinguishing and consider their theories, implications, and practical consequences; and
- communicate effectively with other in discovering solutions to complex problems.

There is a definite correlation between the above stated attributes and the critical thinking skills illustrated in Figure 1. It is therefore imperative for schools to find ways in which the stimulation of critical thinking skills can be enhanced in order for all learners to attain these attributes and become critical thinkers.

In order for the learners to have critical thinking skills they ***must*** be exposed to instruction and ample opportunities which promotes critical thinking. Therefore the teacher must create activities which stimulate critical thinking within the learners. The above statements clearly direct attention to the teacher. One of the responsibilities of the teacher is to promote, instruct and fuel critical thinking. Teachers play a major role in providing learners with the best

instruction in thinking skills and this role cannot be taken for granted. What transpires in the classroom can impact on whether critical thinking skills are being taught in class or not. Teachers may realise the importance of teaching critical thinking skills, but is it part of their classroom practice?

I am in agreement with Fisher (2005) that currently the educational authorities cannot guarantee that after the implementation of the proposed curriculum (solving of problems, investigating, reasoning, making discoveries, etc.) there is a qualitative difference in the learners' thinking. He further claims that with every educational process lies the concern of transfer. A question he asks, that particularly pertains to this study, is whether the teacher knows *how* to transfer learning into learners' thinking and thereby develop them into becoming critical thinkers.

2.5   The role of the teacher

This research starts from the assumption that the skill of critical thinking can be taught and learnt. The critical outcomes of the NCS document state that all learners should be able to:

- identify and solve problems and make decisions using critical and creative thinking;
- work effectively with others as members of a team, group, organization and community;
- organize and manage themselves and their activities responsibly and effectively;
- collect, analyse, organize and critically evaluate information;
- communicate effectively using visual, symbolic and/or language skills in various modes;
- use science and technology effectively and critically showing responsibility towards the environment and the health of others; and
- demonstrate an understanding of the world as a set of related systems by recognizing that problem solving contexts do no exist in isolation (Revised National Curriculum Statement, 2003).

This clearly demonstrates the importance role critical thinking plays in the current South African education as this concept is crucial for the demonstration and understanding of each of the above stated.

How can we solve the problem of learners who are not displaying critical thinking skills at schools and in their everyday lives? Researchers such as Ristow (1988), Presseisen (1986), Worsham & Austin (1983) and Hudkins & Edelman (1986) all claim through their research that the direct teaching of critical thinking that is infused in the curriculum of the institution can produce better critical thinkers. Further claims that emerge through their studies show that the direct instruction of critical thinking skills will promote intellectual growth and academic achievements for all learners.

On the other hand researchers such as Freseman (1990), Matthews (1989), Pogrow (1988) and Baum (1990) believe that teachers should have separate programs (guided practices) to address the need for critical thinking.

I am in agreement with Pearson (1982) that a combination of both practices will be most effective for schools. If we look at our current school situations, then both approaches can definitely be of value. The teachers can promote critical thinking in the class through the lessons and separate programmes like the Khanya programmes can be used to stimulate thinking skills outside of the classroom. This is where the stimulation of the critical thinking skills will be evident as the learners will have to use these skills acquired in the classroom to actually work with the educational computer programmes.

Paul (1993: 93) maintains that the process of teaching learners to become critical thinkers should not be a hasty process, as teachers who strive to improve the teaching and learning process understand that developing critical thinking skills in their classrooms will require extra work to successfully communicate complex ideas to their learners. Teachers need to look at their current curriculum and develop it into a "thinking curriculum". A good starting point is to study the literature on critical thinking to create an educational philosophy that reflects the latest research studies and teaching ideas that other academics use to the benefit of stimulating critical thinking skills within their own practices and to conduct research of their own. Action research is a focused, participatory, reflective classroom based application that offers solutions to areas of concern that teachers identify (O'Hanlon, 1996:225). The aim is

that the findings ought to result in improvement of the educator's own practice in class, the organisation and also the curriculum innovation that they are committed to.

Schools must endorse quality staff development that will enable teachers to think about their own thinking within their classroom practices and how to improve on that. Schools must develop a policy for professional development. By doing this, they educate the teachers with specialised knowledge and the necessary skills to put that knowledge into good practice. In – service training in educational institutions is vital for learner performance and quality instruction. Where staff development is strongly present, new skills are acquired, knowledge is broadened and positive attitudes are adopted. One of the initiatives of SACE (South African Council for Educators) is that good quality professional training depends on the increased knowledge of the practice of teaching by the everyday changes of what teachers have to learn in order to deliver. Paul (1993: 121) advocates that innovation should not be seen as a once off exercise, but should incite teachers on to engage in lifelong learning. Professional support is a key aspect when an innovation (teacher development) is introduced at a school. Christie et al (2007) claims through their report to the Minister of Education, that the most vital factor in schools that have a pivotal effect on learner achievement is good teachers.

Currently in South Africa, teachers are reluctant on engaging in this venture, because of the lack of adequate incentives. SACE promotes lifelong learning because the specialised knowledge is vital for further progress in the educational field and also for upliftment of people who suffered in the past educational system of apartheid.

Teachers have the responsibility to do thorough planning if they are serious about steering learners to become critical thinkers. Factors such as effective teaching and presentation of knowledge depend a lot upon the preparation of an educator. Teaching strategies, involvement of learners, methods and approaches must be well planned in order for the set out objectives to be achievable. There are quite a few types of planning that teachers can engage in:

- Long term planning – This is where the curriculum comes into play. The teacher needs to be au fait with the learning content of the lessons and be effective in the planning of enough opportunities that stimulate critical thinking.
- Short term planning – This caters for the teachers' daily preparation, that is directly linked to the quality and the efficiency of teaching. Teachers should be very specific and detailed around the educative value of the planned activities, the co-ordination of the activities as well as the purpose of the activities. This type of

planning will influence the success of the lesson presentation, and is a useful tool in the refinement of the art of effective teaching.

As stated earlier, the accountability of shifting a school into a "thinking school" with a "thinking curriculum" is not the sole duty of the teachers, but a collective effort of all stakeholders is an absolute necessity. The educational authorities (nationally and provincially), schools' management teams, communities and teachers should all be partners in managing the core curriculum to such an extent that it promotes and actively encourages the teaching and learning of critical thinking at the school.

2.6   The role of the stakeholders

The SASA adopted in 1996, directs schools on how to function. Vandeyar and Killen (2004: 3) stipulates South Africa requires a national system for schools which will deal with past prejudices, make education accessible for all people, present learners with a high quality education and thus laying a strong foundation for the development of their talents and capabilities.

To achieve the above, the South African Schools Act (SASA) of 1996 stipulates the significant role of school governing bodies with regards to the desired outcome of the education system. This act delegates diverse powers to the school governing bodies one of which is to establish schools' policies. Later in the paper, the importance of a strong connection between the school and the community for a successful curriculum and holistic development of the learners will come to the fore. The driving force behind strengthening this connection should be the school governing body. They should stipulate and ensure that the school curriculum is one that is intellectually challenging and suitable for their children.

The principal (who is part of the school governing body) should be at the forefront of those who steer this innovation by playing the role of a curriculum leader. Van Deventer and Kruger (2003) disclose through their leadership manual that if principals apply concerted effort to their abilities and aims at attainable goals for their institutions, they will be successful. One of the questions that the manual addresses is what do school leaders do to create a curriculum and instruction that push all students to higher levels of proficiency? According to the manual school leaders can make use of three strategies to assist them:

- Strategy1 – Modeling learning: School principals should encourage teachers to share knowledge amongst each other and they should eagerly share this with the

learners as well. Some of the most important teaching a teacher can do is to be a critical thinker audibly and to model learning at the school.

- Strategy 2 – Providing vigorous reasons for others to learn: Teachers should have high expectations for their learners and present them with enough stimuli that provide learners with the determination to learn and the teacher can then take a back seat as the learning becomes the motivating force for success. Schools should provide parents with the necessary tools that they can use at home to promote the concept of critical thinking. They should know unerringly what critical thinking means and the significance thereof. Teachers must enlighten parents about what the core curriculum demands from their children, what opportunities the learners have at school to strengthen their competencies and how to draw on the principle of motivation at home. A sincere interest in their children's' school life will also bring a sense of belonging about in their households which is a potent ingredient for academic success. If this can filter through the community, then it will assist in the growth and development of the community as an educated workforce will benefit everyone in the community.

- Strategy 3 - Creating a co- environment for continuous growth: The manual describes the ideal environment for optimal learning as a stable, safe, supportive and positive environment for both teachers and learners.

These strategies are exactly what the Productive Pedagogies tries to address through the four dimensions which will be discuss in detail further on in this chapter.

Figure. 2

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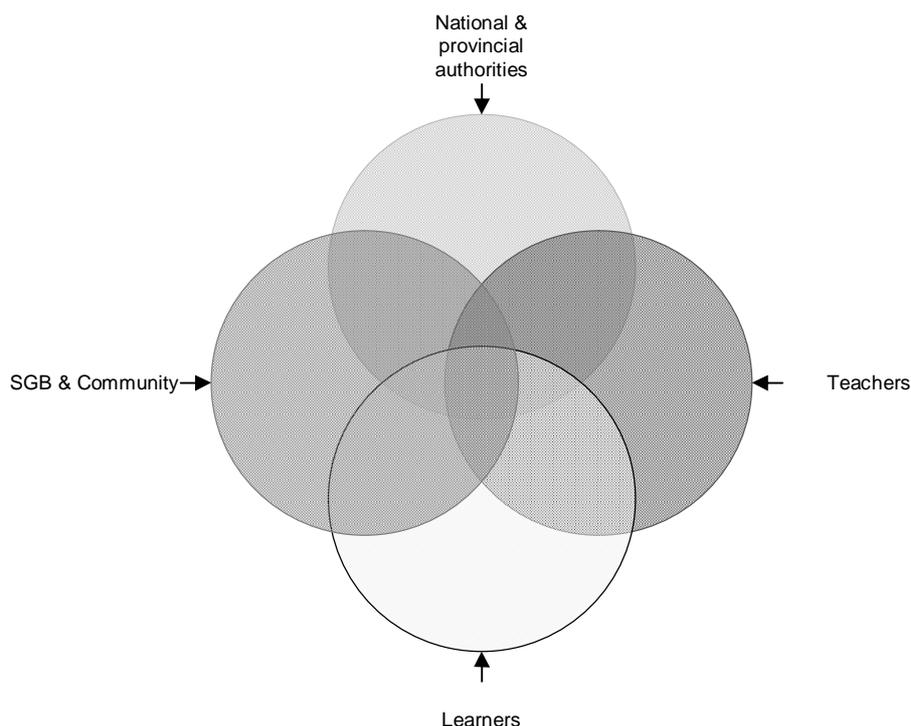
This shared responsibility of establish a critical learning environment for all learners at school is illustrated in Figure 2. Each component should acknowledge own and others' asset and value all contributions to the shared innovation. It is good to have teams functioning collectively at school to meet set objectives, but the need for strong leadership in managing and sustaining these structures is of the outmost importance. Christie et al (2007:25) make the same claim in their Ministerial Report. They state that "powerful teaching and learning depend on a range of internal relationships in schools that need to be engaged with, and successful change cannot simple be mandated. Leadership is important".

The role of the stakeholders is so significant and its resemblance with the research tool of this study is very clear.

There are different educational frameworks e.g. Bloom's Taxonomy etc., that schools and more specifically teachers can use when developing their learning objectives for teaching and assessment within their curriculum and thereby acquire assistance in developing a deeper understanding of the teaching and learning process. The Productive Pedagogies is such a tool and is an integrated approach to teaching and learning and can be applied across all three learning areas in the foundation phase. It is very closely linked to the critical and developmental outcomes that are present in our current national curriculum document (NCS) and are fundamental to teaching and learning in all public schools in South Africa.

The Productive Pedagogies is the result of an intensive research project, Queensland Longitudinal School Reform Study (QLSRS) by Education Queensland that focused on classroom practices to bring major educational change about (Lingard et al, 2001). The study highlights the importance of a sound pedagogy for successful teaching, the encouragement of learners to be able to construct intellectual knowledge of a high standard, and to develop the needed skills to inquire and learn further in life (Zyngier, 2005: 1) .The focus of the QLSR research has many similarities to this study and this accentuates the reason to use the Productive Pedagogies as the research tool.

2.7 Productive pedagogies and critical thinking

Hayes et al (2006) describes the Productive Pedagogies as a research tool that all educators can select and apply to improve the area of classroom practice. It is extremely important to focus on teaching, learning and assessment in any classroom practice, as all children learn

things differently and this leads to diversity within the parameters of the classroom. Although diversity is a very common word these days, it is also very realistic and influences what we do in the class and how we go about doing it. Diversity is much more than just race or gender. It encompasses cultural differences, discrimination, religion, abilities and sexual orientations (Brown, 1997: 144).

The success of the learners, the performance of the educators and the quality of teaching are directly linked to one another. The Productive Pedagogies is an influential framework that permits teachers to place greater emphasis on creating the best learning opportunities which can assist all learners to expand their knowledge in such a way that it enhances their quality of thinking and their associations and interactions with others (Chinnappan, 2008: 188). This study will focus on and use the framework of the Productive Pedagogies in relation to teaching and learning, as it will direct teachers to think more deeply and focus about their objectives for the lessons.

Productive Pedagogies is the term used for the study of classroom practices in Queensland. It brings together 20 elements of classroom practices in four dimensions. These elements focus on how classroom practices, student learning, both academic and social can be enhanced (Zyngier, 2005). Included in these elements and dimensions are aspects of critical thinking (Lingard et al, 2001). The 20 elements within the four dimensions are:

2.7.1   Intellectual Quality:

Higher-order thinking – Are the learners using higher-order thinking within a critical framework and is it continuously stimulated in class? The Productive Pedagogies identifies certain higher-order thinking skills such as synthesizing, hypothesizing, problem solving, analyzing, judging, evaluating, inventing, decision-making, investigating, exploring etc. that all learners should be able to demonstrate at school and in their everyday lives. There is a distinctive link between the mentioned skills and the required skills of a grade three learner as illustrated in Fig.1.

- *Deep Knowledge* – Do the lessons engage in addressing real life world issues, do the learners focus on key concepts rising from the topic discussed in class, are they investigating these concepts and do they make the needed connections to guarantee that their knowledge is deep?

- *Deep Understanding* – Do the learners' reactions in class and their work show signs of a deep understanding of ideas or views regarding content

matters? Deep understanding and deep knowledge are entwined as the learners must be able to demonstrate and understand the acquired knowledge and must be able to apply the principles of these concepts when illustrating, comparing, demonstrating, relating, advising, calculating, etc.

- *Substantive conversation* – Are there unrelenting discussion or discourse between learners, and between teachers and learners, in order to make meaning of subject matters?

- *Knowledge as problematic* – Are the learners critically probing texts, ideas and knowledge? Learners should also be aware that knowledge is always evolving due to the political, historical, social and contemporary influences.

- *Metalanguage* – Are characteristic of language, grammar and technical vocabulary being given prominence? There should be explicit talks in class where the teacher attend to the implication and origins of words, technical vocabulary, text structures and the construction of good quality sentences (Queensland, Department of Education, 2002).

Drawing on the work of Newman and Associates, Hayes et al (2006) claim that through the stimulation of intellectual quality, learners from different surroundings can experience academic success and that inequalities can be reduced. Intensive research that has been done over the years claims that one of the reasons why learners perform poorly academically at schools, is because schools do not have adequate structures in place to allow learners to perform work of high intellectual quality (Clark, 2009) .The QSRLS also proposes that a focus on intellectual quality is an absolute necessity if teachers want their learners to do well academically and that educational institutions are the most fundamental place where higher-order intellectual skills can be developed and nurtured. This does not mean that intellectual quality is enough for academic success.

The Queensland study clearly indicates that high levels of intellectual quality will be of no use in meeting the set objectives if the classroom is not socially supportive, there are no satisfactory links with the world outside the school gate, the voice of the learner is silent, the learner does not show responsibility towards work, all cultures are valued and respected and democracy is absent in the classroom. The intellectual quality of a school will depend on the appropriateness of the curriculum, the attentiveness of the teachers, the nature of the learning environment, the relationships between teachers and learners and the willingness from all stakeholders to make a difference. The person who is in the best possible position to

vigorously stimulate intellectual quality at educational institutions is once again the teacher. The teacher must be aware of what intellectual quality in a classroom demands. Learners who are intellectually impaired should be recognised and with the essential programmes that should be part of the school's inclusivity policy, these learners should get the necessary attention.

Christie et al (2007:17) uses the Coleman Report to highlight certain concerns. These are some of the concerns that can be addressed within the dimension of intellectual quality.

- The learners' personal and family uniqueness have a direct influence on their performances in class;
- Schools do not ameliorate the inequalities between learners, but rather aggravate them;
- Schools do not compensate for social disadvantages;
- The significance of the learners' background to successful performance in class,
- Performance tests e.g. systemic evaluations, cannot be cultural free, but must be connected to the power of the society and the skills it rewards.

The high intellectual quality classroom demands from the learners to interact with each other and with the teacher. These interactions are universal and promote a collective understanding of the deep knowledge that the learners engage with in the classroom. It is vital that the dialogues have scholarly essence and that the connections are sustained to the highest level.

With regards to the above dimension (Intellectual Quality), Ailwood and Follers (2004:1) state that if teachers are serious about motivating intellectual quality in their classroom, they need to be seen to function as intellectuals. The QSRLS (2001) found and proposed that all teachers should be encouraged and supported to partake in professional development, around related school issues and those teachers through their professional development take accountability for student learning.

2.7.2 Connectedness:
- School Knowledge Integration – Does the lessons cover more than one learning area?
- Link to background Knowledge – Does the lessons make the indispensable clear links with the learners' background knowledge?

- Connectedness to the world beyond the classroom – Are the lessons of the teacher and the activities of the learners connected to interests beyond the classroom?
- Problem-based curriculum – Is there a clear focus on identifying and elucidating rational and/or real-world problems? (Queensland, Department of Education, 2002).

This refers to the relevance of the school's curriculum to the experiences of the learners outside the parameters of the school. The magnitude of life outside the school cannot be taken for granted, and drawing on the work of Msila (2007:147) posits that education is subjective to the economic situation of the nation, community life, literacy levels of the community, cultures and the political agendas outside the classroom.

The school should draw on the cultural capital of their community and share the responsibility of educating the learners with the community they serve. At the same time, they will extend local relevance to ensure their work and intellectual substance is covered. Learners need to make a clear connection between the knowledge they gain in the classroom and their own background knowledge. The learner's external connectedness is as important to his academic achievements as the cognitive development that takes place in the classroom. Through connectedness learners are taught to take control of their own lives, to learn about his/her own and collective rights and to take responsibility for it. Teachers should stimulate learners to such an extent that they show eagerness to learn about the world outside the classroom and their communities, to build relationship with others and to reflect and thinks critically about the world they live in. This of course should happen within the dimension of intellectual quality. It is then imperative for teachers to present learners with excellent critical classroom teaching and assessment practices and to follow a rigorous curriculum that it incorporates a high intellectual programme combined with all the other facets (as discussed in this study) needed for high learner achievement (Zyngier, 2004:4).

Hunsberger (2007) argues that culturally related teaching is of the essence to develop critical perceptions in the classroom. He further asserts that the chances of developing critical thinking skills are much higher in classes where connectedness are evident as the learners can identify with their educational experiences and they feel that their experiences and where they come from are valued. His paper also illuminates that so often educational authorities place too much emphasis on the test result of the learners and this leads teachers to focus on preparing the learners for these tests (coaching). By doing this, they completely ignore the

fact that the outside life of the learner and the academic life inside school is connected and that the absence of this connectedness is often the reason why learner cannot engage with the curriculum and thus fair poorly when undergoing these tests. Should the construction of knowledge in a classroom not be set up in such a way that it drives all learners to critique knowledge and challenges them so that it can be meaningful for them in their own environment outside the school?

The language used in the classroom often impacts on the quality of "meaning making" by the learners. Drawing on the work of Wertsch (1998), Chinnappan mentions that language is a tool that mediates learners' cognition, especially in mathematics. The language used in the classroom or in textbooks might not be the same as the language use by the learners and those in the community and this can lead to uncertainty and confusion when engaging with classroom matters. This is certainly the situation currently in our classroom as the classroom language differs from the language used in the communities, especially in the township schools. Christie et al (2007:37) found through their research that there is a big difference in performance between learners whose LOLT was the same as their home language, and those for whom the LOLT was different. It is therefore essential that teachers are familiar with the language used in the community and try to incorporate it in the lessons.

2.7.3   Socially Supportive Classroom Practices:

- Student direction – Are the learners allowed to determine the outcomes of lessons and specific activities if how they will meet the objectives of the lessons?
- Social support for student achievement – Does the classroom have characteristics of a classroom where there is an ambiance of mutual respect, support and empathy between teacher and learners and amongst learners?
- Academic engagement – Are the learners' actively occupied and on-task during the lessons?
- Explicit quality performance criteria – Does the teacher make the criteria for assessing the range of learner performance explicit?
- Self-regulation – Is the learners' behaviour towards gaining knowledge implicit and self-regulatory? (Queensland, Department of Education, 2002).

All students require a stable, supportive classroom environment where learning can be supportive, structured and safe. Orr and Klein (1991: 131) states that "teachers and administrators should evaluate the general culture of their classrooms and schools and should

estimate how this culture affects their ability to promote critical reasoning habits among their learners". All the factors that sustain a positive learning environment within the classroom e.g. high expectations, encouragement, physical surrounding, social support, etc. improve all kinds of learning (Gough, 1991). He further asserts that the learners should have the freedom to explore, express their opinions, to examine alternatives and to separate the right from the wrong. Socially supportive classroom environments enable learners to take the intellectual risks that are necessary for critical thinking. In this socially supportive classroom, the voice of the learners must be heard. They as active participants should have a say in the how the set outcomes will be met by them and take ownership of these objectives in order to realise them.

The Queensland Longitudinal School Reform Study as discussed by Hayes et al (2006), found little evidence of student direction although the dimension of socially supportive classroom was clearly present. In our current schools situation teachers are so set on working through the content of the NCS document, that they do not allow the learners to have a say in how they prefer to complete activities in the classroom, and they (teachers) explicitly determine how the objectives will be met and which activities are suitable for this. A teacher's behaviour, remarks, body language and teaching efforts can definitely be indicators of whether the classroom is socially supportive. In order for the teacher to be socially supportive, there must be mutual respect between the teacher and the learners, and amongst the learners. The teacher must instill in the learners that in spite of circumstances, they are capable of mastering challenging intellectual work, they can learn important knowledge and skills and that if they foster a climate of respect and mutual understanding for their peers, they all can achieve success. This is not always possible in a class, but the teacher has an extremely important role to play in resolving conflict in a constructive way.

Zyngier (2004) poses the following question in his paper. What do school kids want? In a study conducted by Zyngier, the learners revealed that they had little or no say in their educational schooling. This paper (What School Kids Want) highlights evidence provided by practicing teachers that learning needs to be an interactive process and it should be relevant to the learners in order to be effective. It needs to be enjoyable and communicative if schools want learners to productively engage in their learning (Zyngier, 2004:2). He further states that "young people want to be included in the decisions about what is taught in schools. Most particularly, they want to learn *with*, and not just *from*, their teachers" (2004:2). Christie et al (2007:19) affirms the above by maintaining that when disadvantaged learners acquire a sense of control over their schooling, it can only be to their advantage.

In a classroom that shows strong social support the learners should be motivated to raise questions about current issues, should be of assistance whenever someone in class needs help and be an active and conscientious participant in group activities. Classrooms where the learners have this privilege of free speech, these learners will demonstrate high levels of reflection and deep understanding of gained knowledge.

2.7.4 Recognition of difference:

- Knowledge values all cultures – Do the non-dominant cultures in the class feel valued and respected?
- Inclusivity – Does the teacher make purposeful efforts to guarantee that learners from different backgrounds are vigorously engaging in learning?
- Narrative – Is the teaching style in class predominantly descriptive or is it expository?
- Group identities in a learning community – Does the instruction in class build a sense of community and identity?
- Active citizenship – Does the teacher encourage active citizenship in the classroom? (Queensland, Department of Education, 2002).

The past education system, according to Msila (2007:146), was a true reflection of a fragmented society and this system hardly formed assiduous, critical citizens. This type of education which was used as an unconstitutional social control, caused learners to be compartmetalised when it came to racial and cultural issues. Msila further asserts that democratic principles such as access, full participation and equity failed to be addressed by the past education system (2007:146). Christie et al (2007:9) argue that equity and quality are still elusive on the current education agenda. Why has it not changed much? Is it that those in authority are more concerned about having policies around these issues (just for the sake of having it), than dealing with the implementation of the policies where it matters (educational institutions, communities etc.).

The above dimension of the Productive Pedagogies deal with the issue concerning quality education for all sectors of society, especially those who come from scholastically underprivileged backgrounds, race, gender and ability (Hayes et al, 2006). These elements of the Productive Pedagogies can be found in our own constitution. It states the following:

- to heal the divisions of the past and establish a society based on democratic values, social justice and fundamental human rights;

- to improve the quality of life of all citizens and free the potential of each person;
- to lay the foundation for a democratic and open society in which government is based on the will of the people and every citizens is equally protected by law South African School's Act, 1996).

This connection between our current education system and the Productive Pedagogies is evident and hence the decision to use this framework as the research tool for this study.

Drawing on the work of Shor, Msila states that critical teachers at schools can confront inequality through a critical curriculum in a democratic learning process (2007:147).Teachers need to ask themselves whether the learners in the class, despite of their circumstances, engage in an intellectually demanding and relevant curriculum in a stable and accommodating environment (Queensland, Department of Education, 2002). This dimension (Recognition of difference) acknowledges that in a democratic society all parties have rights and responsibilities and this should be respected by all. Sayed (2001 : 254) asserts that the examination of the quality of contact between learners from diverse surroundings lies not only in the personal attitudes of teachers and learners, but also in the institutional arrangements, policies and ethos of the institution.

The study done by Vandeyar and Killen (2006) found that race hierarchization is still present in all the schools they used as a sample. The observations showed that African learners were ignored and only attended to when dealing with discipline or the issue around homework. White learners were actively involved in the lessons and Indian learners were given a higher status as African learners. The general observation was that African learners were not treated as full citizens with a rich cultural capital that they can offer schools. They were expected to absorb the predominantly white culture of the schools. This type of classroom and school practice is the opposite of what the Productive Pedagogies advocate through the fourth dimensions, what the OBE approach and the constitution demand from all. Christie et al (2007) states that the inequalities of the past may be lessen, but explicit targeted interventions are needed if we want to root it out completely.

This means that the schools and more specifically the teacher must engage all learners in active involvement on contemporary issues external to the school (Productive Pedagogies, 2007). Msila (2007: 157) posits that all teachers should be dynamic advocates of democracy, yet currently they are not harnessing it in their classroom practices. This according to Msila is

due to the unimportant role teachers played in the past education system and the fact that they were not seen as intellectual beings nor as part of the democracy.

Some might even argue that not much has change since then. The policies make provision for the stated to be untrue, but reality tells a different story when one looks at the treatment and support teachers get in their workplaces and with service delivery. The Minister of Education (2008) says the statements made by teachers that they do not matter, is a myth. She stated at the second Curriculum Advisor Appreciation Awards in 2008, that teachers are the essential keys to successful learning and that they need to formulate strategies that will refurbish the self-confidence of the teachers. Yet, teachers have been complaining about their administrative overload and stated that this burden is taking up too much of their teaching time. Reality is that still on a daily basis the administrative load is still getting more and the teachers become less enthusiastic about their jobs. Msila also argues that if communities are to adopt and embrace the current education system through formal schooling, then teachers need to be consulted and appropriately skilled in order to ensure that classroom practices can be rewarding (2007:157).

Critical thinking will enable learners to cross cultural barriers in learning and in sharing understanding with others in the class and that according to Shulman and Shulman (2004: 263) constitutes intelligence and adaptive action. In order for the above to truly be reflective in the classroom, the teacher needs to create a classroom that learners can freely debate and inquire about issues that concern them (Chinnappan, 2008: 183). He further states that social surrounding of where learning takes place is as essential to the learners as the knowledge itself and how understanding of the knowledge is being constructed by the learners. This form of participative learning that is socially supportive, reflects knowledge that is obtain through personal construct and not through getting the knowledge from the educators. This ties up directly with what has been said about a socially supportive classroom. This clearly shows the interrelated approach of the Productive Pedagogies.

All learners have a constitutional right to education and therefore all institutions offer supporting learning to those learners who need extra attention. All learners need to be active partaker in the education practice and should be permitted to develop and realise their potential to become fully integrated members of our multicultural society who can add to the national economy (Nel, 2006). This means that all educational institutions should reform their practices and policies in term of the following:

- The current morals and mind-sets that are present in classrooms when dealing with diversity;

- The organisational culture of the school;

- All school policies should respect the notion of inclusivity;

- The teacher and classroom practices (Nel, 2006).

Schools need to practice a policy of inclusive education. This means that the schools must endow all the different groups of learners, irrespective of colour, ability etc. with an intellectually demanding curriculum of a very high quality, critical skills and admirable norms and values needed (Curriculum Framework, 2003). This need to be accomplish by recognising that not all learners can perform on the same intellectual level and that their personal experiences, which is pivotal to their learning, are also not the same. The teacher must take this into consideration when planning the curriculum that still demands intellectual quality.

Chinnappan (2008) contends that the Productive Pedagogies provides a suitable alternative approach for all types of learning in the classroom.

In order for all the learners to rise above their circumstances, they need the skill to think critically. But the question is really, can we stand around and watch formerly disadvantaged communities continue to be dished out a lesser education quality while the advantaged sectors continue to prosper. This issue will continue to stir very emotive debate

The four dimensions of the Productive Pedagogies are interrelated as should not be seen as individual dimensions, but that does not necessarily imply that all four dimensions should receive the same consideration (Zyngier, 2005: 9).

Drawing on the work of Lingard et al (2001), Zyngier (2005) argues that the Productive Pedagogies can be use in the development of teachers' critical perception of teaching, and can also assist them to recognise that the stimulation of these dimensions, as stated above, is vital to improve student outcomes which should be one of the main objectives of any educational institution. The OBE model advocates the "holistic development" of the learners, and this is

clearly what the Productive Pedagogies is all about. This is also evident in the type of learner the NCS foresee. A learner who respects principles, democracy, equality, social justice, confident, educated, numerate, multi-skilled, someone who respects the environment and one who is a critical and active citizen (Msila, 2007:151).

There is an old Chinese Proverb that says," a mistake by a doctor might kill a man, but the mistakes of a teacher will kill a nation".

In these trying times of the educators who are flushed with unnecessary administration, workshops and a questionable curriculum, the Productive Pedagogies, can be of great assistance for teachers in their struggling to come to terms with a national curriculum that is changing so often.

CHAPTER 3: RESEARCH METHODOLOGY

3.1   Introduction

The focus of this dissertation is an investigation into the levels of teaching critical thinking skills in a grade three classroom. Critical thinking is identified in Outcomes Based Education (DOE, 2002) as an integral component in trying to positively pursue the outcomes of the National Curriculum Statement at all levels. A key issue in this study is whether or not critical thinking is encouraged and actively taught at the level of grade three.

This chapter will reflect on the data collection methods, the research approaches, sampling, the ethical consideration that were needed, the recording equipment used, the coding of the instruments and the processes that were followed.

3.2   Data collection methods

One of the most significant aspects of any research study is the data collection techniques that are used. Data collection methods permit researchers to systematically gather information about their objects of the study (people, animals, phenomena) and about the setting in which they occur (Module 10A: Overview of data collection techniques). Accurate data collection can bring transformation about that is pivotal to the growth of the institution under investigation. Inaccurate data collection can have a major impact on the outcome of the study and lead to invalid results. In the process of collecting data, researchers have to be logical as data that are collected "chaotically", will have an effect on answering the research question in an irrefutable way.

This study employed a mixed-method approach to data collection, both quantitative and qualitative. It involved informal interviews with Grade three teachers as well as observations of the learning process (Wilkinson & Birmingham, 2003 :150).

3.3   Research approaches

The research is based on the assumption that external reality can be systematically investigated. This can later be applied to address a social problem through intervention by

policy, communication or behaviour change programmes (Sakeran, 2001). Structured standardised observations were used to obtain quantitative information.

The instruments were two analytical rubrics, one for the classroom observation and one for analysing a set of learners' assessment tasks to date. The rubrics indicated the dimensions of the Productive Pedagogies framework, but modified criteria were used for the rubric used for the assessment tasks of the learner. The same rubrics were used at the different schools. The rubrics were coded according to the coding manual of the Productive Pedagogies. This measurement is vital to the study as it present the primary link between the empirical observations and the mathematical expression of quantitative relationships (Quantitative research, Wikipedia).

The rubrics enable a quantitative analysis of the classroom practices in terms of the elements and dimensions of the Productive Pedagogies. Classroom observations were done. Observation is a method that involves logically studying and recording behaviour and distinctiveness of living beings, objects or phenomena (Module 10A: Overview of data collection techniques). In this study the focus of the observations was on the teacher and the classroom practice. The observations were also non-participatory as the researcher only observed what is happening in the class, but did not participate.

The researcher spent two full days in each teacher's class observing the teaching and normal classroom practice in a Grade 3 class. The reason for deciding to spend two days in each class, is that foundation phase education is the responsibility of one teacher per class and the researcher was able to get a much broader perception of the classroom practice which is the focus of this study. A much deeper and broader picture of the dimensions of the Productive Pedagogies within the classroom were also gained during these two days in the class. The observations were conducted in such a way that the teaching and learning materials used in class, the classroom practices and assessment of the learners could be observed (Cohen, Marion & Morrison, 2000: 187-188).The observations also gave more in depth and contextual information about the classroom practice and on certain vital information that was not mentioned in the interview with the teachers. It also elucidated some aspects the teachers, in the interviews, said is central in their curriculum delivery, but was not evident in the classroom.

An interview schedule for the educators involved introduced a qualitative approach to the research and involved fieldwork. This type of data collection involved oral questioning of the selected respondents (Grade 3 teachers), individually. This is a technique that is mainly used to gain an understanding of the underlying factors (mentioned in the study) for people's behaviours. Interviews can have its advantages and disadvantages. Here are some of the advantages and disadvantages:

Advantages:
- A serious approach by the respondents can result in accurate information;
- A good response rate;
- Completed and immediate;
- Possible in-depth questions;
- The interviewer is in control;
- Can investigate motives and feelings;
- Can use recording equipment;
- The characteristics of the respondents can be assessed – tone of voice, facial expressions, hesitation etc. and this can lead to more probing questions (Primary Data Collection Methods).

Disadvantages:
- Interviewer need to set up interviews;
- It is time consuming;
- There can be geographic and logistical restrictions;
- Need a set of questions ahead of time;
- Respondent can be biased – tendency to satisfy or make an impression, produce false personal image, or end the interview quickly;
- Respondent can be uncomfortable about certain questions;
- Transcription and analysis of interviews can present problems – subjectivity (Module 10A: Overview of data collection techniques).

The type of interviews were semi-structured that were focused on asking definite questions , but the interviewer still had scope to probe for more in-depth answers to certain questions and more room for the respondent to express herself at length. The interviews (face-to-face) with

the educators occurred after school and the instrument used are interested in how familiar the teachers are with the concept of critical thinking, whether it is part of their planning, the support they get from the educational authorities and authorities based at the school, etc. The interviews were conducted in such a comfortable setting in order to win the trust of the teachers and to explain the purpose and the procedure of the study. The questions were posed in a clear positive way and ample time was set aside for the interviews. The interviews were conducted in English and Afrikaans. The answers to the posed questions were recorded, transcribed (immediately after the interview) and analysed for key themes. I noted down "extra" information. These field annotations will assist to add to the instrument of observation, will elucidate some of the data and shed some light on other parts of the investigation (Henning, 2004). This method will also bring further detail, which may have been overlooked and which is significant for the researcher to have when analysing the data and concluding the findings (Henning, 2004).

The success of the interviews relied on a great deal of planning. I followed the planning procedure set out in the manual ((Module 10A: Overview of data collection techniques). Here is the process that I followed:

- Listed all the areas that the study required information about;
- Decided on the type of interview that will be used;
- Transformed the areas that necessitate information into concrete questions;
- Piloted the questions with a fellow grade three teacher;
- Discussed the details concerning the interviews with the principal and the teachers involved;
- Decided on a venue and time when and where you will not be disturbed.
- Arrived on time for the interview;
- Confirmed and assured confidentiality;
- Spoke in a soft, yet firm and audible tone of voice;
- Controlled my body language;
- Recorded all the responses;
- Thanked the respondents at the end for their time, effort and participation (Module 10A: Overview of data collection techniques)

This process of gaining qualitative information is inductive as the researcher draws conclusions, notions and theories from the responses (Merriam, 1988)

These two data sources were brought together to provide a picture of critical thinking practices in the selected classrooms.

The decision to use both quantitative and qualitative approaches for data collection is that both rest on rich and varied traditions that come from multiple disciplines and both have been used to address educational issues (Siegle, The Qualitative – Quantitative Debate, 2001). The qualitative technique allows the researcher to pursue an inquiry with the ultimate goal of understanding a social problem (learners are not critical thinkers) while the quantitative method follows an investigation into an identified problem, based on a theory and measured with numbers (systemic evaluations).

The human behaviour and body language of the teachers were also very important and this can be evaluated more effectively when observed in the natural setting. This involved a process of building a holistic picture of the concerns raised in this study (Marshall & Rossman, 1980).

The relevant information were processed and analysed. This data will also be purposeful as it has a stated objective and the data collection method will address that aim. This good and thorough theoretical base and this type of methodology also brought rigor to the research as these vital factors enabled the researcher to gather the appropriate data to address the research question (Sakeran, 2001). The conclusions drawn were also objectively done as it results from the actual data collected and not derived from my own emotion and subjectivity.

3.4   Sampling

The study has been conducted at three different primary schools in the Kuilsriver area (EMDC East). My focus was on two grade three classes per school. The classes were selected using random sampling. The names of all the primary schools in Kuilsriver were put in a container and thoroughly mixed. The names of three schools were drawn. The principals of the schools were contacted for permission to conduct the research at the school. Three principals agreed. One principal refused permission to conduct the research at the school. The same procedure was then followed with the names of the rest of the schools in Kuilsriver. One name was drawn. The principal was contacted and he agreed that the school can be part of the study. The teachers that were part of the study were not selected randomly. The principal of the selected schools, decided on the teachers that were to be observed and interviewed. The

learners, whose assessment tasks were looked at, were selected using purposeful sampling and more specifically, intensity sampling. These are information rich cases that manifest the phenomena intensely, but not extremely, e.g. good students, poor students, above average etc. I asked the teacher for the names of all the group one learners (learners who are doing very well in class). I then used random sampling to select one name from the group. The assessment tasks of this specific learner were evaluated for evidence of displaying critical thinking skills in their assessment tasks as well as to find out whether the teacher intentionally incorporated critical thinking into the assessment tasks.

The sample size depended on the purpose of the inquiry and what can be done with the available time and resources. The validity and insights generated from the qualitative and quantitative methods used have a lot more to do with the information richness of the sample and the observational and analytical abilities of the researcher than with the sample size (Trochim, 2006).

3.5   Ethical considerations

From the onset of selecting data collection methods, researchers have to reflect on whether the research procedure will have a negative impact on everyone involved. This is a serious consideration as ethical considerations can have an unconstructive impact on any study.

Permission was sought from the selected schools to use their educators and learners as the basis of this study. Due to the sensitivity of this investigation, the study had to be approached with the much needed circumspect. The purpose of this is to dispel the reservations and suspicions of the participants and protect the integrity of the researcher. In order to achieve the above, the study was conducted within in an ethical framework Ethical issues that were addressed were the following:

- The voluntary and confidential nature of the research
- The anonymity of the institution and the various respondents
- The participants and their viewpoints will be treated with respect
- Participants are at liberty to withdraw their participation at any time.
- All information gathered would be used for research purposes only.

The results of all investigations used at the various schools will be confidential. The entire study will be made available to the WCED and its agencies at its completion.

Bias in collecting information for any study, is an alteration in the collected data so that it does not represent reality (Module 10A: Overview of data collection techniques). The teachers selected to take part in this study were very apprehensive at first and therefore I decided to create observation protocol and guidelines that were discussed with the principal and the teachers involved before entering the classrooms. The purpose of the study and the issue regarding confidentiality were explained thoroughly. It was obvious that this approach put them at ease and answered a lot of their questions.

The only bias that must be recognised is that the researcher is an experienced foundation phase teacher and might want to see things from a personal perspective. This was mitigated by using structured instruments systematically, relating research findings to the literature on critical thinking and its theoretical propositions. This approach will give readers a more comprehensive understanding of the topic.

3.6   Recording equipment

A micro-cassette recorder was used to accumulate the data in an unobtrusive manner. The recorder has a built-in microphone which was suitable for the purpose. The microphone as placed behind the respondent and this helped the respondents not to focus on the interview itself, but to focus on their responses.

3.7   Coding of instruments

After the collection of the data, the rubrics on the classroom observations and the learner assessment were coded. I studied the literature on the coding of the Productive Pedagogies, as I used the same methods as this approach that was used in Queensland, Australia. I drew up a coding sheet with the dimensions of the productive Pedagogies and coded the schools according to the observations.

3.8   Data Preparation

Data preparation involves logging the data and checking the data for precision e.g. are all the audio responses clear; are all the important questions answered; is the relevant contextual information included etc. (Trochim, 2006).

In the following chapter, the data will be presented, analysed and recommendations will be made.

CHAPTER 4:   RESEARCH FINDINGS

The following findings emerged from the data collected during the observations, the interviews that were conducted with grade three teachers and the assessment tasks of the learners as explained in the previous chapter.

4.1   QUANTITATIVE FINDINGS

4.1.1   OBSERVATIONS (Appendix A)

Although the three schools are within 3 kilometres of each other, there were distinct and discernable differences.

At school number 1 the status of the principal was unresolved at the time of my visit. This stemmed from apparent unhappiness from the acting principal about how the position was to be filled. This caused some uncertainty among staff with regard to the decision making and strategic planning capacity on the part of the school management team. School number 1 is situated in an area demarcated for the extensive building of low cost housing. It is a new school with very modern architecture. The level of parental involvement at the school was very low at the time with the teacher lamenting about the apparent lack of interest from parents. This school only offered a very limited extra mural programme. In terms of sport there was only track and field athletics that was offered and that was only in the first term. The teacher whose class I visited was very punctual and was prepared for her learners every day. She did her preparations for the next day during her administration time at the end of each day. She also tried to communicate positively with her learners throughout the time of my observation. In terms of discipline, the learners were talkative but she was able to manage it with ease. The teacher was able to do this despite having 45 children in her class. This teacher also made good efforts to introduce learning and teaching support materials into her class. This was evident even before my visit to the school. The class was very colourful and had posters related to the curriculum content displayed on the walls. Her day was also very clearly structured as she followed her class timetable.

At school number 2, the status of the principal was very stable. He was permanently employed for a number of years and as a result was very experienced. The staff seemed very comfortable and confident with the management of the school. School number 2 is situated in a middle class neighbourhood but was built from prefabricated material. In 2012 the school

celebrated its centenary year. Low parental involvement is also cited as a problem here. A very limited extra mural programme is a feature here. Only track and field, netball and soccer were offered. In terms of punctuality, the teacher was on time but, she first did her administrative duties leaving the class idle for nearly an hour. The classroom environment seemed congested as learners were seated uncomfortably close to each other. This was as a result of a small classroom and having 47 learners on her register. Posters and learning and teaching support material were randomly displayed on the walls. It did not seem to be organised in any particular way. The teacher appeared to be prepared for her lessons but she also appeared not be very organised. She clearly knew the curriculum content but was not able to bring it across in a structured manner. She could however positively reinforce the learners with ease and this contributed to a positive relationship with her class. However, the learners were generally disruptive. In terms of the use of learning and teaching support material, she made only very basic use of them. She followed the classroom timetable as presented.

The principal at school number 3 was in an acting position. He was however reasonably experienced and transmitted confidence to the staff. School number 3 is situated on the boundary of the middle class neighbourhood and the apartheid era coloured township. It was mostly children from the township who attended here. Parental apathy was identified as a problem here. This school offered a relatively extensive extra mural programme in relation to the neighbouring schools. The teacher was not punctual at all. She was late for all of the three days of my visit. Typically, for the duration of my visit, she only started teaching about an hour into the day. Due to a lack of space at the school, this class used the computer laboratory as their classroom. The space was very big, even for her 40 learners and they were seated at the computer workstations, making them far removed from the teacher. There were no pictures or posters on the walls. In terms of her lesson preparation, she seemed unprepared and unorganised. With relation to her communication she was sometimes positive with her feedback, but mostly negative. Her communication approach was characterised by shouting and yelling. The class generally seemed poorly disciplined but this was in large part due to the teacher's apparent inability to provide a platform for improved classroom relationships.

The following were observed in the classrooms as discussed in the methodology of this study.

4.1.1.1 Intellectual Quality

Higher – order thinking		
TO WHAT EXTENT DO STUDENTS USE HIGHER ORDER OPERATIONS?		
School # 1	School # 2	School # 3
2	1	1

(*Score 1- Students are engaged in only lower order thinking; i.e. they either receive or recite, or participate in routine practice -and in no activity during the lesson do students go beyond simple reproducti*on.)

(*Score 2 - Students are primarily engaged in lower order thinking, but at some point they perform higher order thinking as a minor diversion within the lesson.*)

The learners at school #2 and school #3 never engaged in higher - order thinking, only lower order thinking. They only received information from directly from the teachers, recited poems and all the tasks were simple factual recalls or reproduction. At no stage did the teachers create an opportunity for the learners to expose them to situations where they could engage in higher- order thinking. At no stage during the two day observations were the learners exposed to higher-order thinking tasks such as designing, hypothesising, problem solving, judging, evaluating, inventing etc. It was evident that there were learners in the class that wanted to engage in higher- order thinking e.g. the learner who wanted to do Mathematics on a grade 4 level. The teacher simply told the learner to wait until she is in grade 4.

There were many opportunities for the educators to involve the learners in displaying and developing critical thinking skills, e.g., learners had to complete a comprehension on The Blue Whale. The questions were posed in such a way that the answers were obvious and in most cases below their grade standard. At school #1 while concentrating on a lesson about pollution, a learner posed the question whether oxygen is as important to animals as it is to humans. The educator answered the question, and explain the significance of oxygen for humans, plants and animals in detail.

Deep Knowledge & Deep understanding TO WHAT EXTENT IS DEEP KNOWLEDGE PRESENTED AND UNDERSTANDING EVIDENT?		
School # 1	School # 2	School # 3
2	1	1

(*Score 1- Almost all of the lesson's content knowledge is very thin because it does not deal with significant topics or ideas.*)

(*Score 2- Knowledge remains superficial, but some key complex concepts and ideas are mentioned or covered by the teacher or students on a superficial or trivialised level*)

The educators at school #2 and #3 did not present any lesson that covered a significant topic in depth. The responses of the learners showed that they did not have an understanding of what was expected from them with regards to the activities that emerged from the lesson that was taught. The tasks assigned to the learners were very basic and in some instances, below their grade level.

Substantive Conversation TO WHAT EXTENT IS CLASSROOM DISCOURSE DEVOTED TO CREATING OR NEGOTIATING UNDERSTANDING OF SUBJECT MATTER?		
School # 1	School # 2	School # 3
3	1	1

(*Score 1- Virtually no features of substantive conversation occur during lessons. Lessons consist principally of either a sustained teacher monologue with little variation, or conversations which is not substantive.*)

(*Score 3- Features only dialogues and or logical extension and synthesis and involves two or more sustained exchanges.*)

The educators at schools #2 and #3 created no opportunities for the learners to share ideas with her or each other on the content they were dealing with. The story about Nelson Mandela (school #3) was fascinating for the learners, but they were not allowed to ask questions or to give their opinion on the topic. This was a clear instruction from the educator. This was a perfect opportunity for the teacher to engage in substantive conversation with the class, to stimulate higher-order thinking, present the learners with deep knowledge and to give them

the opportunity to display whether they have a deep understanding of the topic. The educator deviated very little from delivering the information to the learners and only asked routine questions. This was evident in the responses of the learners as they were not motivated to think about their answers and only gave short single-word responses.

At school #1, some features of substantive conversation occurred in a sustained fashion during dialogues and extended across half of the lessons. The teacher made explicit attempts to engage the learners in conversations and probe the learners for more detailed answers to her questions, e.g. when the class discussed life under the sea, the learners and teacher exchanged information, ideas, likes and dislikes and preferences about fish species and related knowledge.

Knowledge as problematic		
TO WHAT DEGREE IS KNOWLEDGE PRESENTED AS CONSTRUCTED?		
School # 1	School # 2	School # 3
2	1	1

(Score 1- No knowledge as problematic. All knowledge is presented in an uncritical fashion.)
(Score 2 - Some knowledge seen as problematic – but interpretations linked/reducible to given body of facts.)

At schools # 2 and # 3, the educators' instructions and the tasks given to the learners did not require of the learners to question the perspectives by thinking critically and all the knowledge was presented as fact. The answers to a comprehension task were controlled by the teacher when she actually gave them the answers to the questions. She clearly instructed them to what she wants as answers to their questions and did not allow them to interpret the questions or to give their own opinions.

At school # 1, the learners were allowed to critiqued and question certain knowledge and ideas when they were discussing a topic (HIV) in class. The learners questioned the teacher when they were unsure and when they felt that their understanding and the knowledge presented by the teacher were not in line.

Meta-language		
TO WHAT EXTENT DOES THE TEACHER (OR THE STUDENTS) TALK OR DISCUSS EXPLICITLY HOW LANGUAGE WORKS, ASPECTS AND CHARACTERISTICS OF LANGUAGES, TEXTS AND DISCOURSES?		
School # 1	**School # 2**	**School # 3**
3	**1**	**1**

(Score 1- Low meta-language: the teacher proceeds through the lessons, without stopping and commenting on his/her own students' use of language)

(Score 3- Initial or periodic use of meta-language: at the beginning of the lessons, or at some key juncture, the teacher stops and explains or gives a mini-lesson on some aspects of language, e.g. vocabulary, punctuation, grammar, genre.)

The teachers at school #1 stopped during instruction to make valuable judgments or commentary on language. The teacher spoke regularly about the correct pronunciation of certain words, the grammar usage in sentences and the correct vocabulary needed to give meaning to a sentence. Her instructions in class were clear and even in giving praise she created a pleasant atmosphere. This clearly helped the learning process in the class.

At school #2 and #3, the aspects of language did not receive any attention in class. The educators did not engage in high levels of communication and talks about the written and spoken text use in the class. The instructions given to the learners were poor and no corrections were offered when the learners used the language incorrectly. There was also no variation in the questions posed by the educators.

4.1.1.2 Connectedness

Knowledge integration		
TO WHAT EXTENT IS SCHOOL KNOWLEDGE INTEGRATED ACROSS SUBJECT BOUNDARIES?		
School # 1	**School # 2**	**School # 3**
1	**1**	**1**

(Score 1- All knowledge strictly restricted to that explicitly defined within a single learning area. No intrusion of other contents permitted)

Throughout the class observations, the knowledge at all the schools was restricted to only two learning areas and the educators, while busy with instruction, referred to the other learning area, but it was not sustained and the tasks given to the learners showed no integration. The learning areas are seen as separate from each other. During the Life Skills lessons, there were numerous opportunities for the teachers to use the content they were dealing with as reading material in the Literacy period. The learners would then engage with content that is already familiar to them.

Background knowledge TO WHAT EXTENT ARE LINKS WITH STUDENTS' BACKGROUND KNOWLEDGE MADE EXPLICIT?		
School # 1	School # 2	School # 3
3	2	3

(Score 2- Students' background knowledge and experience are mentioned or solicited as a motivational technique, but not connected to the lessons.)

(Score 3- Initial reference or solicitation is made by the teacher to background knowledge and experience. At least some connection to out-of-school background knowledge.)

At school 2, the educator missed ample opportunities to integrate the lessons with the background knowledge and prior knowledge. The story about Nelson Mandela has many moral messages, but the teacher refrained from exploring these messages. She missed a good opportunity to use the conditions these learners live in order to enhance the other learners' comprehension of what is happening in our society.

The other two schools made some connections to the learners' background knowledge and prior knowledge. At school 3, the educator used some of the learners' personal and cultural experiences to add more meaning to her teaching.

| Connectedness to the world |||
| TO WHAT EXTENT ARE THE LESSONS, ACTIVITIES OR TASKS CONNECTED TO COMPETENCIES OR CONCERNS BEYOND THE CLASSROOM? |||
School # 1	School # 2	School # 3
2	2	3

(Score 2- Students' encounter a topic/problem or issue that the teacher tries to connect to their experiences or to contemporary public situations. The connection the teacher makes is weak and there is no evidence that the students' made the connection.)

(Score 3- Students study a topic or problem that the teacher succeeds in connecting to their actual experiences. Students recognise some connection between classroom knowledge and situations outside the classroom, but they do not explore the implications of these connections which remain abstract or hypothetical. There is no effort to actually influence a larger audience.)

At school 1 and 2 the educators tried to connect the learning experiences in class to life beyond the classroom,, but the connection was weak and not sustained, e.g. during a lesson the learners wanted to know what a permit is. The educator gave the definition, but omits to enlighten the learners why permits are issued and why catching of crayfish is such a problematic topic.

| Problem-based curriculum |||
| TO WHAT EXTENT ARE THE LESSONS BASED ON SOLUTIONS OF A SPECIFIC PROBLEM(S)? |||
School # 1	School # 2	School # 3
3	2	2

(Score 2 – Some minor and small problems (no correct solutions) are posed to the students, but they require little knowledge construction by students.)

(Score 3- Some minor or small problems are posed to the students requiring substantial knowledge construction/creativity from students)

At school #2 and school #3 the learners were confronted with small problems that were not challenging for them. Explicit instructions were given to them and they could not go beyond those instructions. The problems were simple and the answers were obvious. At school #1, the

educator tried to confront the learners with specific problems and encouraged them to go beyond her instructions.

4.1.1.3 Supportive Classroom Environment

Student direction TO WHAT DEGREE DO STUDENTS DETERMINE THE CLASSROOM ACTIVITIES?		
School # 1	**School # 2**	**School # 3**
2	**1**	**1**

(Score 1- No student control. All activities for the lessons are explicitly designated by the teacher for the students.)

(Score 2- Teacher makes initial selection of activities, but students exercise some control, through the choice of procedure or manner in which the tasks are completed.)

At school #2 and school #3 the educators did not give the learners any opportunity to accept responsibility for the activities that were assigned to them. Some of the learners asked if they can complete the activities in a certain way, but the educators indicated that they want the activities to be completed in a specific way and the learners should not divert from the instruction. The only time when the learners at school #3 were heard, was when they negotiated for extra time to finish the activity. The educator even gave clear instructions what she wants the answers of the comprehension to be. At school #1, the educator sometimes engaged with the learners e.g. she asked the learners if they want to do the poster individually or as a group. They also had the responsibility of deciding on a topic for their group.

Social support TO WHAT EXTENT IS THE CLASSROOM CHARACTERISED BY AN ATMOSPHERE OF MUTUAL RESPECT AND SUPPORT AMONG TEACHER AND STUDENTS?		
School # 1	**School # 2**	**School # 3**
3	**3**	**3**

(Score 3- Social support is neutral or mildly positive. Evidence may be in the form of verbal approval from the teacher for the students' effort and work. However such support tends to be

given only to those who are already taking initiative in the class, and it tends not to be given to those who are reluctant participants or less articulate or skilled in that learning area, or given in compensation for negative peer social interaction.)

The educators were very encouraging and compassionate especially when they were busy with reading exercises, but the comments they made when the learners asked questions about completing activities that they already did the previous week (school #2) or when they needed help with finding an answer, were not constructive and the disappointment was evident on the learners' faces. The educators also did not do much to encourage and support the struggling learners to perform better.

Academic engagement		
TO WHAT EXTENT ARE STUDENTS ENGAGED IN THE LESSONS?		
School # 1	**School # 2**	**School # 3**
2	**1**	**2**

(Score 1- Disruptive disengagement, students are frequently off-task as evidence by gross inattention or serious disruptions by many, this is the central characteristics during much of the class.)
(Score 2-Passive engagement; most students, most of the time, either appear lethargic or are only occasionally active in carrying out assigned activities and some students are clearly off-task.)

Passive engagement and disruptive disengagement were observed. The learners at school #1 and school #3 appeared to be lazy and only some learners seemed to be interested in what is happening in class. These were also the learners that tried to complete their activities. At school #2, the learners were clearly bored and not interested in the class activities. They became disruptive and at some stages the educator could not control them. Two boys were actually trying to take a nap while they were supposed to be busy with a task. The educator made no attempts to engage the learners in meaningful academic activities.

Explicit quality performance criteria		
TO WHAT DEGREE ARE CRITERIA FOR WHAT COUNTS AS A HIGH QUALITY STUDENT PERFORMANCE MADE EXPLICIT?		
School # 1	**School # 2**	**School # 3**
3	**2**	**2**

(Score 2-Some procedural parameters, advanced organisers and aspects of the general direction of the lessons have been specified but students are working without explicit statement of outcomes.)

(Score 3-Outcomes and criteria for the quality of student performances are specified at least once during the lesson.)

The educator at school #1 made specific statements about what she wants the learners to achieve during an activity, how they should do it and urged them to do their best. She also engaged with them at their tables while they were working and assisted where help was needed. She gave them a research task to do and wrote down the criteria on the black board for the learners to copy. The educators at school #2 and school #3 also gave the learners research tasks but only explain to them what was expected. There was a clear lack of written and enough spoken reference to the criteria of the research task.

Self-regulation		
TO WHAT EXTENT IS CLASSROOM BEHAVIOUR GUIDED BY IMPLICIT (SELF) CONTROL?		
School # 1	**School # 2**	**School # 3**
3	**1**	**2**

(Score 1-Teachers devote over half of their classroom talk issuing orders, commands and injunctions, and punishments to regulate behaviour, movement and bodily disposition. It appears that more time and effort is devoted to control than teaching and learning.)

(Score 2-A substantial amount of the teaching time is taken engaged in disciplinary and regulatory talk. There is substantial interruption to the lesson)

(Score 3 – Teachers must regulate students' behaviour several times during the lessons, perhaps focussing on specific groups or individuals who are out of control; however the lessons proceed coherently)

At school #2, the educator had to reprimand the learners regularly about the continuous disruptions in class. It was evident that the boredom of the learners led to these ill-behaviours in class, as they were given little opportunity to demonstrate initiative or to engage in a high-level of intellectual education. At school # 3, the educator had to reprimand the learners on various occasions and these behaviours made an impact on her lessons. She tried however to find ways to get them interested in the lessons. At school # 1, the educator only had to reprimand individuals, but she could proceed with the lessons.

4.1.4   Recognition of difference

Cultural knowledge		
TO WHAT DEGREE IS NON-DOMINANT CULTURAL KNOWLEDGE VALUED?		
School # 1	School # 2	School # 3
1	1	1

(Score 1- No explicit recognition or valuing of other than the dominant culture in curriculum knowledge transmitted to students)

In all three classes that were observed, there were more than one culture present, but references were only made to one of these cultures. This was evident at school # 2, when a learner enquired about his friend's religion (Islam) and the educator said that he must wait till the fourth term when they will engage briefly in talks about different religions.

Inclusivity		
TO WHAT DEGREE ARE NON-DOMINANT GROUPS REPRESENTED IN CLASSROOM ACTIVITIES?		
School # 1	School # 2	School # 3
2	1	2

(Score 1-No participation of non-dominant social groups.)

(Score 2-One or two instances of non-dominant social group participation)

All three educators treated the learners a homogeneous group e.g. each morning the educators read and discussed the significance of a Bible story. The Muslim learners were not paying attention as the educator posed questions that did not relate to their religion. At school #2 and

school #3 the educators displayed some inclusivity when they discussed the needs of the poor and different family structures.

Narrative
TO WHAT EXTENT IS NARRATIVE USED FOR TEACHINGAND LEARNING PURPOSES IN THE LESSONS?

School # 1	School # 2	School # 3
3	2	2

(Score 2-Narrative is present in either the processes or contents of the lessons, but the use of this narrative may only be on occasion or as a minor deviation from the main portion of the lesson.)

(Score 3-The lesson processes and content are evenly split between narrative and expository forms.)

The learners at school #2 and school # 3 were occasionally asked to tell their own stories e.g. what they did over the week-end, their own Bible stories or what they like about their best friend. There were no attempts made by the educator to include narrative as part of their methodology. At school #1, the educator engaged in narrative style of teaching on numerous occasions, e.g. during the Life Skills lesson on Nelson Mandela, she told them about her personal experience to Robben Island and what it meant to her. The learners were all fascinated and bombarded her with questions.

Group identity
TO WHAT DEGREE IS THE CLASS A SUPPORTIVE ENVIRONMENT FOR THE PRODUCTION AND POSITIVE RECOGNITION OF DIFFERENCE AND GROUP IDENTITIES?

School # 1	School # 2	School # 3
4	2	2

(Score 2-Limited evidence of community exists within the classroom; no positive recognition of difference and group identities; and no support for the development of difference and group identities.)

(Score 4-There is a strong sense of community within the classroom; positive recognition of difference and group identities; and limited support for the development of difference and group identities.)

There was a strong sense of community present at school #1.the group of learners that were affected by the lack of basic needs were not anxious to inform the other learners about their resentment, frustration and thought about not having decent ablution facilities. The other learners were very compassionate towards them or could not comprehend what their classmates were going through.

Active citizenship		
TO WHAT DEGREE IS THE PRACTICE OF ACTIVE CITIZENSHIP EVIDENT?		
School # 1	**School # 2**	**School # 3**
4	**3**	**3**

(Score 3-There is some evidence and some talk about the content of, and possible practice of, active citizenship for teachers and students.)

(Score 4-There is evidence of the practice of active citizenship within the class.)

The educators at school #2 and school #3 made some attempts at instructing the learners about the rights and responsibilities e.g. the class rules and community related issues were discussed in both classes, but none of the educators made any attempts to attribute certain responsibilities in the class to the learners. The educator at school #1assigned different responsibilities in the class to different learners e.g. class monitor, a learner responsible for handing out books, a learner responsible for taking in activities, etc. She also create opportunities where she links the democratic practices in the community to what is happening at the school.

4.2   QUALITATIVE FINDINGS

4.2.1   INTERVIEWS (Appendix B)

The following dominant themes emerged from the interviews conducted.

- Understanding, importance of and the need for critical thinking;
- Curriculum planning and school policies
- The intellectually challenging classroom;
- Parental involvement;
- Teacher development, training and workload;
- Organisational support;
- Feelings regarding OBE and the support given by all role-players.

Following is the findings that emerged from the themes.

4.2.1.1   Understanding the importance of and the need for critical thinking

At the three schools, the teachers realise that critical thinking is probably important in the development of a learner's intellectual capacity, but it is evident that the teachers themselves do not have a concretised understanding of what the concept (critical thinking) actually is. I make this statement because they define critical thinking only as evident within the classroom when a learner performs well, moderately or below expectations. As described in chapter 2, critical thinking is not just confined to the academic outcomes, but also about how the learner develops the processes to attain the academic outcomes. A common response to the question regarding their own understanding of the concept of critical thinking is that of the ability of being able to "think outside of the box".

4.2.1.2   Curriculum planning and school policies

Planning for and designing strategies for lessons do not take into consideration the need for including critical thinking as a conduit that will assist in the pursuit of achieving curriculum outcomes. The schools themselves do not require the teachers to plan for critical thinking to become part of the considerations for planning. Rather, it is evident that teachers are more

concerned with covering the content requirements of the National Curriculum Statement, so that the "job gets done". The resources that are available also do not support the planning for critical thinking as an integral part of daily classroom practice. Teacher #1 expresses a common complaint of a complete lack of support in terms of learning and teaching support material. Blame for this is directed at both WCED and the schools themselves

4.2.1.3 The intellectually challenging classroom

When asked whether or not their classrooms were intellectually challenging, all of the respondents replied emphatically in the negative. Class size were cited as a major contributing factor in preventing the teachers from successfully pursuing the curriculum outcomes, specifically with regard to the development of critical thinking. Having an unreasonably big class restrains the teacher from being effectively able to address the class with intellectual opportunities.

In addition to this, at all three schools, the Language of Learning and Teaching (LoLT) do not match the learners' mother tongue, i.e. their language that is engaged with at home and in their neighbourhoods. The Xhosa and Afrikaans speaking children are taught in |English. The academic intervention is now more because teachers have to intervene at a broader level because of the language entry barrier.

4.2.1.4 Parental involvement

At school #1 the teacher reported good parental involvement with regard to curriculum support. Homework, reading at home, assistance with research projects and acknowledgement of homework tasks are the areas where there was good support from the home.

Schools # 2 and 3 however painted a completely different picture. Homework was mostly not done, extra reading at home was not evident, research projects presented indicated a lack of adult supervision and parent-teacher meetings scheduled for learner progress discussions were mostly poorly attended.

4.2.1.5 Teacher development, training and workload

Teacher #2 indicated that although critical thinking is often referred to in meetings and workshops, it is not clearly defined in terms of the methodology of its use within the

classroom. She also reported that within her experience, there are no resources available to aid her to develop and improve the critical thinking capacity of her learners.

School #'s 1 and 3 were very negative about the idea of developing critical thinking in the classroom. This was not because they did not believe in the merits of the concept, but rather because there was no support or training provided by the WCED or district officials. Another factor that causes this ambivalence toward teaching critical thinking as a skill is the perception that their workload in terms of administering the curriculum is too big. The teachers would rather teach to the minimum requirements as required by the NCS and therefore not leaving room for what they believed to be extra requirements.

4.2.1.6   Organisational support

As referred to earlier, the respondents indicated that in their experience, the WCED officials do not give sufficient support in terms of effective classroom practice. This is also true of the schools' Senior Management Team (SMT) and specifically the head of departments. It is their contention that the senior teachers at the school are more concerned about seeing to it that the administrative demands as laid out by the WCED are met. This has the result that effective classroom practice is compromised. Although during meetings at school, effective classroom practice is discussed, it is not supported by the education department via developmental classroom visits or even regular school visits.

4.2.1.7   Feelings regarding OBE and the support given by all role-players

All of the respondents reported a belief that the current curriculum policy statement is ineffective and is failing the children. They were all in the system prior to the change in curriculum policy and all felt that the downward shift in terms of learner academic achievement coincided with the advent of Outcomes Based Education (OBE). All of the respondents also associate OBE with increased workload, decreased support, increased organisational expectations, increase in performance demands with specific reference to the systemic evaluations and decreased numeric and literate skills.

To counter these so that they are able to cope, the educators adopt a minimalist approach, i.e. they do the minimum that is required to fulfill the curriculum demands. The teaching of critical thinking as an immersed element within the curriculum is therefore disregarded.

CHAPTER 5

RECOMMENDATIONS

5.1   Introduction

The research findings indicate that the teachers do not view the development of critical thinking ability as being a vital component of effective classroom practice. Teachers do however agree that it may be useful in achieving the learning outcomes but it may not be absolutely necessary. This view may largely be due to a misunderstanding that exists about the role of critical thinking within the classroom and how it should be approached.

The teachers who participated in the study believe that teaching critical thinking skills is separate from what is expected from the curriculum. It is viewed merely as a useful augmentation that would support classroom practice.

I therefore would recommend a management plan targeting current teachers that would assist in understanding the importance of critical thinking in the classroom context and then also how it could be woven into the very fabric of everyday classroom practice and across all of the learning areas. This management plan could be implemented at the level of the school and at a broader district level.
The programme that I propose will focus on the following:

5.2   Critical thinking fundamentals

My departure point for this management plan is to define what critical thinking actually is and how it could at least be identifiable within the class environment. In defining this concept I would use Gough (1991) and Beyer (1985) when they describe critical thinking as a crucial tool in being able to establish the relevance between knowledge and reality. Teaching practice must take into account the social, political and economic realities that exist in the child's world outside of the school's gate. This connectedness as proposed by the Productive Pedagogies is vital if the child is to establish meaning for what is presented in class and what is experienced in the real world. Important for the teachers therefore is to understand that in order for teaching and learning for any given lesson to be effective, the child must have been able to relate the classroom experience with the social reality.

5.3   Benefits for classroom diversity

The concept of diversity in relation to the varied intellectual capacities found within a single class unit will be addressed here. The respondents in this study unanimously agree that they are less able to adequately intervene in the classroom when they observe poor academic results. They perceive the following hindering factors:

Decrease in organisational support – curriculum advisors are only seen at pre-progression and promotion interactions	**Increase in workload**
Decrease in numeric skill among learners	**Increase in performance demands (systemic testing)**
Decrease in literate skills among learners	**Increase in ill-discipline**
Decrease in the access to learning and teaching support material	**Increase in classroom size**
Decrease in parental involvement	**Increase in parental involvement**

Table 3

The productive pedagogies hypothesise that intellectual diversity can be successfully and positively addressed if critical thinking is used as a platform for teaching, learning and assessment. Teachers will be led to recognise that the social environment of the learner directly impacts upon sustained learner achievement.

Therefore it must be demonstrated to the teachers that if learners are able to relate gained classroom knowledge with actual realities, diversity within the classroom can be bridged.

5.4   Developing the right opportunities for learning

The access to opportunities is a reality that positions a school on a continuum that describes its success in the pursuit of excellence for its stakeholders. The following figure illustrates what is generally found in terms of schools and opportunities available:

Resources are scarce	Moderate access to resources	Resources are readily available
Poor academic achievement	Moderate academic achievement	Good academic achievement
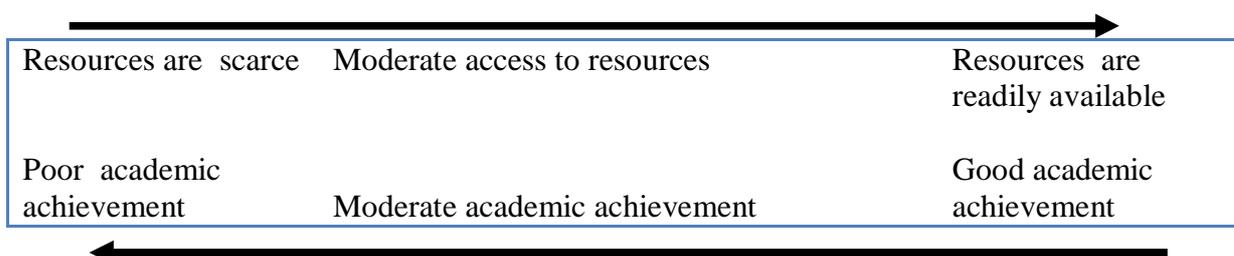
Figure 3

As can be seen above the common relationship that exists between resources and achievement is clearly illustrated. Resources are clearly a vital component in the successful pursuit of a good education. The use of available resources therefore becomes an important component in developing the child's intellectual capacity. Teachers must be challenged to identify opportunities for the learners to construct more meaning to new knowledge gained within the classroom. The teacher must learn how to skilfully merge what is taught in class, with what the child experiences daily. To be able to do this, the teacher must develop a clear understanding of the class's background in terms of its social, political and economic features. Chisholm, Hoodley, Kivula, Brookes, Prinsloo, Kgobe, Mosia, Narsec and Rule (2005) noted that schools with good access to resources performed better in terms of the pursuit of curriculum objectives.

Interestingly, they also found that teachers at better resourced schools spend more time on actual teaching than their counterparts at schools where resources are scarce. Clearly, being able to use available resources effectively will produce increased opportunities for teaching and learning. This must however be tempered by the knowledge that morale at schools with challenging environments often feature at lower level among the teachers (Chisolm et al). This then potentially translates into the apparent manifestation of a lower work ethic among teachers. The provision of increased resources for ordinary schools must be a crucial aim of the education department.

Language also plays an important role in the provisioning of resources. Matching the school language of learning and teaching environment with that of the home is critical. Learning only effectively takes place when the child's language spoken at home matches the language that the child is taught in at school (Cristie et al, 2007). The respondents in this study indicated that an increasing percentage of their learners do not use the LoLT of the school as their language of communication at home. The learners' ability to construct meaning from what is taught in class is immediately disadvantaged. Responsibility for ensuring effective classroom teaching, learning and assessment rests with the teacher. However, the teacher must engage with the school, and specifically the SMT and School Governing Body (SGB), to ensure that the policies that govern teaching and assessment practices, relates to the needs and features of the school community. The teacher must remain in constant dialogue with the governance and management structures so that the policies, practices and community realities are in synergy. Creating the right opportunities for the learners also require it to be done in the language that is most relevant to each individual learner.

5.5   Making the classroom relevant as a school management imperative

The provision of an environment within the classroom that takes into account the learners' individual and community realities is a valuable tool in ensuring the development of a positive, critical disposition in terms of the relevance of curriculum programme. The classroom as a haven for the learner where true learning is experienced must be a critical aim for the teacher. A space where the learner can be freed from the shackles of his/her reality is indispensable, especially if critical thinking skills is to be developed (Smit and Liebenberg, 2003; Machet and Pretorious, 2003.)

 It is therefore vital that the learners are not viewed as mere recipients in the teaching and learning process, but as active participants at multiple levels. Action research becomes important for the teacher. In order to interpret the curriculum for the optimum benefit of the learner, the teacher, and indeed the school, must on a sustained basis strive to gain an intimate understanding of the community realities that prevail. The factors that impact most on learner progress must be identified. Curriculum strategies must then be developed at the organisational level and then adapted for the class arena.

The challenge of large classes and its associated problems will invariably present itself. The respondents in this study all cited the large class sizes as the major obstacle that thwarts their attempts at improving teaching and learning. The development of a school-wide strategy that takes into account the realities of the learners' community becomes an essential curriculum management imperative. The school management must then ensure that opportunities are created that will increase the individual teacher's ability to tailor the classroom practice for the benefit of all learners. The role of the heads of departments becomes one of active participation in the provision of support for the teacher. I propose the following model to facilitate this:

a) *Examine at the staff level what the class based challenges are.*
   This enquiry deals with the learners' environmental realities. The extent of home support, the structure of the family unit and the general economic capacity of the community would be some of the issues covered.

b) *Analyse the commonalities that exist in terms of the general class based observations across the entire school.*

The management team must then study the feedback gained from the teachers and learners and then establish if particular community features are evident. Once these features are established, they must be formally defined, i.e. document exactly what the findings were.

c) *Engage the parent community regarding the observations.*

The parents and other stakeholders should then be informed about what was found with regard to the characteristics of the community. Engage the parents with regard to the potential constraints that these may present to learner performance.

d) *Identify the curriculum aspects where the intervention can take place*

Teachers can then identify areas within the learning area policy statements where community realities can be used to strengthen classroom practice with specific reference to the development of critical thinking.

e) *Allocate the responsibilities and resources appropriately.*

Placing this external learner environment study within the School Improvement Plan will elevate its importance. It will also keep it on the school community's consciousness.

Discussion regarding the identification and allocation of resources on an annual basis could then be assured. At the very least, it would remain a discussion point at SGB and SMT interactions.

f) *Set time frames for progress to be evaluated*

On an ongoing basis, the learners' external environment must be re-evaluated. The potential for changes in the individual learner reality certainly exists. Teachers must monitor this and communicate with the parents or caregivers as soon as change (positive or negative) is observed.

The school community, via the School Governing Body and School Management Team should however decide on how frequently the evaluation could be done. An annual assessment of the programme would be reasonable which would also allow resources to be allocated if needed via the school budgetary and procurement processes.

The suggested model above should not be seen as a singular occurrence, but rather become a feature of the school management process.

5.6   Time management as a tactical tool in the curriculum management plan

Making time for teaching critical thinking skills within the classroom is an absolute necessity. The respondents unanimously agreed that critical thinking and the teaching thereof is critically important, but lamented that time constraints prevented them from doing so effectively. This is largely due to them viewing this as additional to the curriculum demands rather than it being part of general teaching practice.

Linda Chisolm (et al) cited the under use of instructional time as a major factor that contributes to poor learner results. In a Human Sciences Research Council (HSRC) report that studied educator workload, it was learnt that teachers spent less time on teaching than was required in policy. Their research indicated that teachers spent less than 50% of the allocated contact time on actual teaching. The educators' workload, actual and perceived, is forwarded as a key explanation of why this is the case.

The respondents in this study concurred with the findings of the HSRC report. The teachers interviewed at all of the schools complained about the curriculum statement demands and of the associated administration load, as having a negative impact on the time available for teaching.

An increased focus on curriculum/lesson planning and preparation therefore becomes a vital. The better prepared the teachers are, the better equipped they will be to optimise the time spent on actual teaching. Having frequent and regular grade and phase meetings (in the foundation phase) where the successes and shortcomings of lessons and lesson approaches are discussed will provide valuable ammunition for future lessons. It will also inculcate an organisational culture whereby the school, and indeed the individual teachers, will take more responsibility for the success and failures of the curriculum provision.

One way to assist in ensuring that time is used optimally is to develop the lesson plans in such a way as to meet the curriculum content demands while simultaneously addressing the critical thinking needs of the learner.

5.7 The selection of learning and teaching support material

In order for the curriculum objectives to be pursued successfully, the learning and teaching support materials must be selected with these objectives in mind. Procurement cannot just be an activity that is reactive to the events of the day. It must be a process whereby the needs and the requirements of the formal curriculum is evaluated. Hereafter a search must be conducted that identifies the most suitable available classroom resources.

If the correct resources are identified and procured, learners will be more likely to make a connection between the teaching process in the class and with their own social realities. Quinn (1997) writes that the more one learns the more one wants to learn. It is therefore important that the learners are kept appropriately engaged. If this is achieved, it is probable that learners will start to engage critically with their curriculum content and become increasingly able make inferences between classroom content and social reality. The ability to do this will then facilitate "real learning" (Handy, 1989).

For the learner to become, increasingly, an active participant in the learning process, the school and the educator becomes the axis around which this process must orbit. Daniels (2001) writes that it is the educator's role and indeed, responsibility, to unshackle the mind of the learner. In this way the learner's mind is launched onto the journey of self-actualisation. This process clearly needs a critical predisposition to the realities that face us, and the classroom is certainly the best place to provide the bedding for the seed of critical engagement to germinate.

5.8 Conclusion

The teachers interviewed for this study have brought many issues to the fore. It is certainly the realities that they face. They point to varied factors that hinder their pursuit of provisioning an education process of increasing quality for their learners. The constraints of time, the lack of resources, the perceived heavy workload, organisational expectation and the lack of professional support are the more urgent ones that impact upon the curriculum delivery.

The schools that were visited for the purposes of this study were also relatively under resourced and had large classes. While a focus on these problems continues to pervade, it is difficult to envisage a change in the negative attitude towards the teaching of critical thinking.

Thus, it is important that school communities do not just accept their reality. The conditions that the school operates in must be challenged. If this happens successfully, teachers will be more able to challenge their classroom realities. It is important that the organisational support is targeted and sustained to the benefit of the teacher, and in turn for the learners in the class.

Educator initiative however would probably be the most important element in this process. It would ultimately be the teacher who determines the level of success of the classroom implementation of the teaching of critical thinking. Being able to interpret the curriculum for the learners benefit is the goal. When teachers engage the curriculum policy objectives and have the material and knowledge capacity to be able to relate these objectives to the community served, only then will true learning take place.

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APPENDICES

APPENDIX A : Instrument for Lesson observation.

RUBRIC FOR CLASSROOM OBSERVATIONS				
GRADE 3 NO. :	SCHOOL NO.:			TEACHER NO. :
INTELLECTUAL QUALITY				
HIGHER ORDER THINKING				
TO WHAT EXTENT DO STUDENTS USE HIGHER ORDER OPERATIONS?				
1	2	3	4	5
Students are engaged in only lower order thinking; i.e. they either receive or recite, or participate in routine practice and in no activity during the lesson do students go beyond simple reproduction.	Students are primarily engaged in lower order thinking, but at some point they perform higher order thinking as a minor diversion within the lesson.	Students are primarily engaged in routine lower order thinking a good share of the lesson. There is at least one significant question or activity in which some students perform some higher order thinking.	Students are engaged in at least one major activity during the lesson, in which they perform higher order thinking, and this activity occupies a substantial portion of the lesson and many students are engaged in this portion of the lesson.	Almost all students, almost all of the time, are engaged in higher order thinking.

DEPTH OF KNOWLEDGE				
TO WHAT EXTENT IS DEEP KNOWLEDGE PRESENTED?				
1	2	3	4	5
Almost all of the lesson's content knowledge is very thin because it does not deal with significant topics or ideas.	Knowledge remains superficial, but some key complex concepts and ideas are mentioned or covered by the teacher or students on a superficial or trivialised level.	Knowledge is treated unevenly during instruction; i.e. deep knowledge of something is countered by superficial understanding of other knowledge. At least one significant idea may be presented in depth, but in general the focus is not sustained.	Most of the presented knowledge is relatively deep because either the teacher or the students provide information, arguments or reasoning that demonstrates the complexity of an important idea. Sustained focus on central content is occasionally interrupted by the knowledge coverage.	Knowledge is very deep because almost all knowledge presented in the lesson sustains focus on a significant topic, and does so either through a complex structure or by demonstrating the problematic nature of information and/or ideas.

DEPTH OF UNDERSTANDING				
TO WHAT EXTENT IS DEEP UNDERSTANDING EVIDENT?				
1	2	3	4	5
Almost all of the students demonstrated understanding involving the coverage of simple information which they are to remember	While some key concepts and ideas are mentioned or covered by the students, they demonstrate only a superficial acquaintance or trivialised understanding of these complex ideas.	Students' deep understanding is uneven. Deep understanding of something, by some students, is encountered by superficial understanding of other knowledge (by either the same or other students). At least one significant idea may be understood in depth, but in general the focus is not sustained.	Most students' understanding is relatively deep, because the students provide information, arguments or reasoning that demonstrate the complexity of an important idea for a substantial portion of the lesson. In this portion of the lesson, students do at least one of the following: sustain a focus on a significant topic for a period of time; demonstrate their understanding of the problematic nature of information and/or ideas; demonstrate understanding by arriving at a reasoned, supported conclusion; or explain how they solved a relatively complex problem.	Almost all students do at least one of the following: sustain a focus on a significant topic; or demonstrate their understanding of the problematic nature of information and/or ideas; or demonstrate complex understanding by arriving at a reasoned supported conclusion; or explain how they solved a complex problem. In general, students' reasoning, explanations and arguments demonstrate fullness and complexity of understanding.

SUBSTANTIVE CONVERSATION				
TO WHAT EXTENT IS CLASSROOM DISCOURSE DEVOTED TO CREATING OR NEGOTIATING UNDERSTANDING OF SUBJECT MATTER?				
1	2	3	4	5
Virtually no features of substantive conversation occur during lessons. Lessons consist principally of either a sustained teacher monologue with little variation, or conversations which is not substantive.	Features only dialogues and or logical extension and synthesis and involves at least one sustained exchange.	Features only dialogues and or logical extension and synthesis and involves two or more sustained exchanges.	All features of substantive conversation occur in an ongoing and sustained fashion, extending across half of the lessons, with both teacher and students scaffolding the conversation	All features of substantive conversation occur in an ongoing and sustained fashion, extending across almost all of the lessons, with both teacher and students scaffolding the conversation.

KNOWLEDGE AS PROBLEMATIC				
TO WHAT DEGREE IS KNOWLEDGE PRESENTED AS CONSTRUCTED?				
1	2	3	4	5
No knowledge as problematic. All knowledge is presented in an uncritical fashion.	Some knowledge seen as problematic – but interpretations linked/reducible to given body of facts.	Approximately half knowledge seen as problematic. Multiple interpretations recognised as variations on a stable theme.	Explicit valuation of multiple interpretations and constructions of information, presented as having equal status, and being equally accommodated and accepted by others.	All knowledge as problematic. Knowledge is seen as socially constructed, with conflicting implications and social functions producing resolution and/or conflict.

META–LANGUAGE				
TO WHAT EXTENT DOES THE TEACHER (OR THE STUDENTS) TALK OR DISCUSS EXPLICITLY HOW LANGUAGE WORKS, ASPECTS AND CHARACTERISTICS OF LANGUAGES, TEXTS AND DISCOURSES?				
1	2	3	4	5
Low meta-language: the teacher proceeds through the lessons, without stopping and commenting on his/her own students' use of language.	Some meta-language: the teacher proceeds through the lessons, stopping to make value judgements or commentary on language, but without providing any technical terminology, or constructive assistance and clarification.	Initial or periodic use of meta-language: at the beginning of the lessons, or at some key juncture, the teacher stops and explains or gives a mini-lesson on some aspects of language, e.g. vocabulary, punctuation, grammar, genre.	Occasional use of meta-language: the teacher stops when students are having visible difficulty with aspects of language, providing direct assistance in grammar, vocabulary, genre, discourses.	Consistent use of meta-language: the teacher provides ongoing and frequent commentary on how language use, perhaps using jokes, puns, ironic comments on her own students; language, points out how differing sentences, text types, discourses actually works, compares and contrasts them, and shows how language can be used to constitute texts, knowledge and power.

CONNECTEDNESS				
SCHOOL KNOWLEDGE INTEGRATED				
TO WHAT EXTENT IS SCHOOL KNOWLEDGE INTEGRATED ACROSS SUBJECT BOUNDARIES?				
1	**2**	**3**	**4**	**5**
All knowledge strictly restricted to that explicitly defined within a single learning area. No intrusion of other contents permitted.	Knowledge mostly restricted to that of a specific learning area, with minor intrusions limited to connections with one other learning area.	Knowledge from multiple learning areas connected or reacted tighter, but still treated as separate and distinct.	Near complete integration of multiple learning areas, however some minor inclusion of knowledge that is still treated as unique to a learning area.	Complete integration of learning area knowledge to the degree that these learning area boundaries are not recognisable.

LINK TO BACKGROUND KNOWLEDGE				
TO WHAT EXTENT ARE LINKS WITH STUDENTS' BACKGROUND KNOWLEDGE MADE EXPLICIT?				
1	**2**	**3**	**4**	**5**
No reference is made to background knowledge: students' community and cultural knowledge or school knowledge covered in previous studies, other learning areas and lessons.	Students' background knowledge and experience are mentioned or solicited as a motivational technique, but not connected to the lessons.	Initial reference or solicitation is made by the teacher to background knowledge and experience. At least some connection to out-of-school background knowledge.	Periodic reference or solicitation of background knowledge is made by the teacher. At least some connection to out-of-school background knowledge.	Students' background knowledge and experiences are consistently incorporated into the lessons, with the lessons shunting back and forth between known material and new material. At least some connection to out-of-school background knowledge.

CONNECTEDNESS TO THE WORLD BEYOND THE CLASSROOM				
TO WHAT EXTENT ARE THE LESSONS, ACTIVITIES OR TASKS CONNECTED TO COMPETENCIES OR CONCERNS BEYOND THE CLASSROOM?				
1	2	3	4	5
Lesson topics and activities have no clear connection to anything beyond itself; the teacher offers no justification beyond the need to perform well in class.	Students' encounter a topic/problem or issue that the teacher tries to connect to their experiences or to contemporary public situations. The connection the teacher makes is weak and there is no evidence that the students' made the connection.	Students study a topic or problem that the teacher succeeds in connecting to their actual experiences. Students recognise some connection between classroom knowledge and situations outside the classroom, but they do not explore the implications of these connections which remain abstract or hypothetical. There is no effort to actually influence a larger audience.	Students study a topic or problem that the teacher and students see as connected to their personal experiences. Students recognise the connection between classroom knowledge and situations outside the classroom; They explore these connections in ways that create personal meaning and significance for the knowledge. However, there is no effort to use the knowledge in ways that go beyond the classroom to actually influence a larger audience.	Students study a topic or problem that the teacher and students see as connected to their personal experiences. Students recognise the connection between classroom knowledge and situations outside the classroom; They explore these connections in ways that create personal meaning and significance for the knowledge. This meaning and significance is strong enough to lead students to become involved in an effort to affect or influence a larger audience beyond their classroom e.g. by communicating knowledge to others (including within the school), advocating solutions to social problems, providing assistance to people, creating performances or products with utilitarian value.

PROBLEM–BASED CURRICULUM				
TO WHAT EXTENT ARE THE LESSONS BASED ON SOLUTIONS OF A SPECIFIC PROBLEM(S)?				
1	2	3	4	5
No problems are presented during the lessons.	Some minor and small problems (no correct solution) are posed to the student, but they require little knowledge construction by students.	Some minor or small problems are posed to the students requiring substantial knowledge construction/creativity from students.	A large problem is posed requiring engagement by students a lesson.	Large problems have been set requiring engagement by students over a number of lessons.

SUPPORTIVE CLASSROOM ENVIRONMENT				
STUDENTS' DIRECTION				
TO WHAT DEGREE DO STUDENTS DETERMINE THE CLASSROOM ACTIVITIES?				
1	**2**	**3**	**4**	**5**
No student control. All activities for the lessons are explicitly designated by the teacher for the students.	Teacher makes initial selection of activity, but students exercise some control, through a choice of procedure or manner in which the tasks are completed.	Teacher makes initial selection of activity, but students exercise some control, through a choice of alternative activities prescribed by the teacher in addition o procedural choice.	Some deliberation / negotiation between teacher and students over the activities for the lessons, including the range of options and procedures.	Students' determination of their activity, its approaches and context. This may be either independent of, or dependent on, teacher regulation.

SOCIAL SUPPORT FOR STUDENTS ACHIEVEMENT				
TO WHAT EXTENT IS THE CLASSROOM CHARACTERISED BY AN ATMOSPHERE OF MUTUAL RESPECT AND SUPPORT AMONG TEACHER AND STUDENTS?				
1	**2**	**3**	**4**	**5**
Social support is negative; actions/comments by the teacher or students result in "put-downs"; classroom atmosphere is negative.	Social support is mixed. Both negative and positive behaviours and comments are observed.	Social support is neutral or mildly positive. Evidence may be in the form of verbal approval from the teacher for the students' effort and work. However, such support tends to be given only to those who are already taking initiative in the class, and it tend not to be given to those who are reluctant participants or less articulate or skilled in that learning area, or given in compensation for negative peer social interaction.	Social support from the teacher is clearly positive and there is some evidence of social support among students from their peers. Evidence of special efforts by the teacher take the form of direct expressions that convey high expectations for all; mutual respect; a need to try hard and risk initial failure.	Social support is strong; the class is characterised by high expectations, challenging work, strong effort, mutual respect and assistance in achievement for all students. Both teacher and students demonstrate a number of these attitudes by soliciting and welcoming contributions from all students. Broad participation may be an indication that low achieving students receive social support for learning.

ACADEMIC ENGAGEMENT				
TO WHAT EXTENT ARE STUDENTS ENGAGED IN THE LESSONS?				
1	2	3	4	5
Disruptive disengagement, students are frequently off-task as evidence by gross inattention or serious disruptions by many; this is the central characteristics during much of the class.	Passive engagement; most students, most of the time, either appear lethargic or are only occasionally active in carrying out assigned activities and some students are clearly off-task.	Sporadic or episodic engagement; most students either appear indifferent or are only occasionally active in carrying out assigned activities but a very few students are clearly off-task.	Engagement is widespread; most students, most of the time are on-task pursuing the substance of the lesson; most students seem to be taking the work seriously and trying hard.	Serious engagement but not universal; almost all students are deeply involved, almost all of the time, in pursuing the substance of the lessons.

EXPLICIT QUALITY PERFORMANCE CRITERIA				
TO WHAT DEGREE ARE CRITERIA FOR WHAT COUNTS AS A HIGH QUALITY STUDENT PERFORMANCE MADE EXPLICIT?				
1	2	3	4	5
Teachers have not made any explicit statements of the expected learning outcomes, quality of performance required of the students.	Some procedural parameters, advanced organisers and aspects of the general direction of the lessons have been specified but students are working without explicit statement of outcomes.	Outcomes and criteria for the quality of student performances are specifies at least once during the lessons.	Outcomes and criteria for the quality of student performances have been specified more than once in the lessons (but not repeatedly).	Outcomes and criteria for student performances are specified in detailed ad exact ways repeatedly throughout the lesson with a focus on the quality of outcomes being reinforced.

IMPLICIT BEHAVIOURAL AND DISCIPLINARY CONTROL (SELF REGULATION)				
TO WHAT EXTENT IS CLASSROOM BEHAVIOUR GUIDED BY IMPLICIT (SELF) CONTROL?				
1	2	3	4	5
Teachers devote over half of their classroom talk issuing orders, commands and injunctions, and punishments to regulate behaviour, movement and bodily disposition. It appears that more time and effort is devoted to control than teaching and learning.	A substantial amount of the teaching time is taken engaged in disciplinary and regulatory talk. There is substantial interruption to the lessons.	Teachers must regulate students' behaviour several times during the lessons, perhaps focussing on specific groups or individuals who are out of control; however the lessons proceeds coherently.	Once or twice during the lessons, teachers must correct student behaviour or movement. There is minor interruption to the lessons.	There is virtually no teacher talk which focuses on student behaviour or movement. The lessons proceed without interruption.

RECOGNITION OF DIFFERENCE				
KNOWLEDGE VALUES ALL CULTURES				
TO WHAT DEGREE IS NON-DOMINANT CULTURAL KNOWLEDGE VALUED?				
1	**2**	**3**	**4**	**5**
No explicit recognition or valuing of other than the dominant culture in curriculum knowledge transmitted to students.	Some inclusion of others' cultures, with weak valuing, through simple reference to a particular feature(s) of them or their existence.	Stronger valuing in curriculum knowledge, by acknowledgement and recognition of multiple cultural claims to knowledge, and perhaps some activity based on a aspect of this, though still within the framework of a dominant culture.	Others' cultures explicitly valued in the content through equal inclusion and use of the knowledge/perspective of the group, alongside the dominant culture.	Different cultures equally valued in all curriculum knowledge, such that the concept of a dominant culture is excluded in both its content and form.

INCLUSIVITY				
TO WHAT DEGREE ARE NON-DOMINANT GROUPS REPRESENTED IN CLASSROOM ACTIVITIES?				
1	**2**	**3**	**4**	**5**
No participation of non-dominant social groups.	One or two instances of non-dominant social group participation.	Several instances of non-dominant social group participation.	Participation of non-dominant social groups for at least half of the teaching time, but not all (nor nearly all) of the teaching time.	Participation of non-dominant social groups for all, or nearly all, of the teaching time.

NARRATIVE				
TO WHAT EXTENT IS NARRATIVE USED FOR TEACHINGAND LEARNING PURPOSES IN THE LESSONS?				
1	**2**	**3**	**4**	**5**
At no point is narrative used in the lessons, all teaching and content remains expository.	Narrative is present in either the processes or contents of the lesson, but the use of this narrative may only be on occasion or as a minor deviation from the main portion of the lesson.	The lesson processes and content are evenly split between narrative and expository forms.	Lesson processes and content primarily narrative in nature, but exposition is used on occasion or as a minor deviation from the main portion of the lesson.	Almost all of the lesson processes, and almost all of the lesson content is narrative.

GROUP IDENTITIES IN A LEARNING COMMUNITY				
TO WHAT DEGREE IS THE CLASS A SUPPORTIVE ENVIRONMENT FOR THE PRODUCTION AND POISTIVE RECOGNITION OF DIFFERENCE AND GROUP IDENTITIES?				
1	2	3	4	5
No evidence of community exists within the classroom; no positive recognition of difference and group identities; and no support for the development of difference and group identities. Students are all treated as individuals.	Limited evidence of community exists within the classroom; no positive recognition of difference and group identities; and no support for the development of difference and group identities.	Some evidence of community exists within the classroom; some recognition of difference and group identities; and no support for the development of difference and group identities	There is a strong sense of community within the classroom; positive recognition of difference and group identities; and limited support for the development of difference and group identities	There is a strong sense of community within the classroom; positive recognition of difference and group identities; and a supportive environment for the production of difference and group identities

ACTIVE CITIZENSHIP				
TO WHAT DEGREE IS THE PRACTICE OF ACTIVE CITIZENSHIP EVIDENT?				
1	2	3	4	5
The citizenship rights of students and teachers are neither discussed nor practised within the classroom.	There is limited talk about the practice of active citizenship within the classroom.	There is some evidence and some talk about the content of, and possible practice of, active citizenship for teachers and students.	There is evidence of the practice of active citizenship within the class.	The practice of active citizenship is obviously prevalent and evident in practices and in relationships between students and the teacher, and students and students, and in some instances will involve active participation in contemporary issues external to the school.

APPENDIX B: Interview Schedule

1.   What do you understand by the term 'critical thinking' and how do you create opportunities for critical thinking in your class? Please give a few examples

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2.   Is the cultivation of critical thinking skills within learners addressed within the school's and your curriculum planning? Please elaborate.

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3.   Do you believe that your classroom is an intellectually challenging classroom? Please elaborate.

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4. Do you deliberately create opportunities for learners to engage in critical reasoning or argumentation. If so, how do you do it?

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5. Of what importance is language in your class? How do you ensure that all learners are provided with explicit instruction about the correct language use?

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6. Have you ever attended any workshops or received any literature on critical thinking from your school, SMT or educational authorities (EMDC). If yes, how did it aid in your understanding of critical thinking.

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7. How will you rate the quality of support that you get from the local authorities. Please elaborate.

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8. How do you connect the classroom with the community and life outside the school and of what value is the community to your objective of achieving your outcomes in class?

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9. How do you stimulate the learners to be proud South African citizens in class?

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10. What role does inclusivity play at you school?

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11. Do you feel that you are truly implementing the OBE principles in class? Please elaborate.

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12. Do all learners know what are expected of them and do they have a say of how they can meet the set goals?

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13. Do you integrate your content across all three learning areas/ How do you do it?

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