

# **EXPLORING TEACHER BELIEF OF TEACHING AND LEARNING AND ITS INFLUENCE ON LEARNER PERFORMANCE**



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## **ABSTRACT**

Teaching and learning is a prominent component of schooling system with divergent planes, inclusive of belief system of teachers, teacher knowledge, nature of curriculum, school context and teacher self-efficacy. The South African schooling system puts more emphasis on teaching and learning which is directed at producing good quality learner performance, making learner performance the main concern for education departments, parents and other relevant stakeholders in education. However, very little increase in learner performance has been recorded in the education system in spite of many intervention strategies implemented to improve teaching, learning and learner performance. Literature, suggests that teaching and learning in any subject is influenced by teachers' belief systems, knowledge base of teachers, curriculum reforms and availability of resources, to mention but a few.

The focus of this study was to explore teacher belief of teaching and learning and its influence on learner performance in six schools ranked quintiles one to five. The purpose of this study was to explore teacher beliefs as a phenomenon on teaching and learning and the influence on learner performance by exploring beliefs that inform teachers to teach in a particular way. Furthermore, the study explored teachers' beliefs on schooling, teaching, learning and learner performance to ascertain how the said factors are aligned with their teaching practices.

Data was generated from semi-structured interviews, lessons observations and by studying various documents. Eleven teachers were purposively selected for this study on the basis that they were teaching critical or gateway subjects, with varying teaching experience. The data was analysed utilising content analysis within specific themes formulated. This study used Bandura's Self-efficacy theoretical framework as well as Naicker's conceptual framework of inspirited and dispirited teachers as the focus on teacher beliefs on teaching and learning and their influence on learner performance.

The findings in this study revealed that teacher knowledge and teacher belief should always be taken into consideration if schools were to improve learner performance. The results revealed that teachers had different beliefs about schooling and beliefs on how learner performance can be improved. The study further highlighted the influence of teachers' beliefs on teaching and learning

and learner performance as a result thereof. In this study, I argue that there are various factors and beliefs teachers have that influence teaching, learning and teaching practices which should be adhered to in order to improve learner performance. Teacher passion was also a finding that was prominent in this study. The findings revealed that if teachers are passionate then teaching and learning occur with few hitches. Thus, taking into cognisance teachers' beliefs, teachers' knowledge, teachers' self-efficacy, teachers' professionalism and school context are paramount in order to improve teaching and learning and to produce quality results and improved learner performance in schools.

**Supervisor's authorisation**

As the candidate's supervisor, this thesis is submitted with my approval. Signed:

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Professor Labby Ramrathan

Date: \_\_\_\_\_

## **DEDICATION**

I dedicated this piece of writing to my father Mafika ‘Imfikamfikane eyafika kuhlatshiwe’ and my mother Duduzile ‘uMasgiliva’ who gave birth to me. Both of them have been called to eternal life, may their souls rest in peace. This project is also in memory of my younger father Joseph Mhlongo who unbridled my academic potential by funding my first academic degree but did not live to reap the fruits of his effort. May his soul also rest in peace.

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My special appreciation is for my friend Zakes Khuzwayo for his encouragement and support as we used to work until the early hours of the morning.

## DECLARATION

I, **Mbongiseni Phenius Mhlongo**, declare that this thesis is my own work.

1. The research reported in this thesis, except where otherwise indicated, is my original research.
2. This thesis has not been submitted for any degree or examination at any other university.
3. This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
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5. This thesis does not contain text, graphics or tables copied and pasted from the Internet, unless specifically acknowledged, and the source being detailed in the thesis and in the References sections.

M.P. Mhlongo (Student's signature)

Date

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## LIST OF ACRONYMS

ACE	Advance Certificate in Education
ANA	Annual National Assessments
B.ED	Bachelor of Education
B. Sc	Bachelor of Science
BA	Bachelor of Arts
C2005	Curriculum 2005
CAPS	Curriculum and Assessment Policy Statements
CK	Content Knowledge
COLT	Culture of Teaching and Learning
CPI	Consumer Price Index
CPTD	Continuing Professional Teacher Development
DBE	Department of Basic Education
DHE	Department of Higher Education
DHs	Departmental Heads
DOE	Department of Education
EMS	Economic and Management Sciences
FET	Further Education and Training
HDE	Higher Diploma in Education
HOD	Head of Department
JIT	Just In Time
LO	Life Orientation
LOLT	Language of Teaching and Learning
MST	Mathematics, Science and Technology
MUT	Mangosuthu University of Technology
NSE	National Senior Examinations
NCS	National Curriculum Statements

NNSSF	National Norms and Standards for Schools Funding
NRF	National Research Foundation
NSC	National Senior Certificate
OBE	Outcome Based Education
OHP	Overhead Projector
PCK	Pedagogical Content Knowledge
PD	Professional Development
PGCE	Post Graduate Certificate in Education
PHD	Doctor of Philosophy
PIRLS	Progress in International Reading Literacy Study
PPN	Post Provisioning Norm
RNCS	Revised National Curriculum Statements
SA	South Africa
SACMEQ	Southern and Eastern African Consortium for Monitoring Education Quality
SASA	South African Schools Act
SE	Systemic Evaluation
SGB	School Governing Bodies
SMT	School Management Team
STD	Secondary Teachers Diploma
TIMSS	Trends in International Mathematics and Science Study
UDW	University of Durban-Westville
UKZN	University of KwaZulu-Natal
ZA	South Africa

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# **CHAPTER ONE**

## **BACKGROUND OF THE STUDY**

### **1.1 Introduction**

Learner performance in South African schools has been a subject of major debates over the last decade, largely related to conflicting evidence through the increasing matric pass rates on one side and extremely low performances in Annual National Assessment testing and world rankings on the other side. Heightened focus on teaching and learning has thus been the process to address these debates. Teaching and learning as a major component of school education has various facets, including the nature of the curriculum, the expertise of the teachers and the context of schooling. Learner performance in South African schools has been a major concern for Government, parents, institutions of higher learning and other stakeholders in education. These concerns have arisen in spite of many intervention programmes and strategies that have been put in place to overcome poor learner performance and even though the largest slice of South Africa's budget is allocated to education. The interventions include, employing appropriately qualified teachers, workshops and other in-service training activities. The latter have been conducted as part of continuing professional teacher development (CPTD) to improve teaching and learning in schools. Further interventions focused on school infrastructure development like building of new schools as well as upgrading older school structures and renovating dilapidated schools. One other key intervention has been the introduction of the school nutrition programmes. Despite all these interventions, learner performance has not improved significantly. Moreover, learner performance has in recent times, been reported according to the school quintile types.

There is correlation between school learner performance and teacher beliefs across the school quintiles. Spaul's (2013) idea of two school worlds was used to get insight into understanding the said correlation. According to Spaul (2013) schools in South Africa are divided into good performing while others have poor learner performance. Part of my argument is to responds to

the two worlds that have been noted and are emerging in South Africa. In an attempt to advance the two school worlds debate, in this study I explore teacher belief as a lens to contribute to this emerging discourse.

My study is located within the broader National Research Foundation (NRF) funded research project on school categorisations focusing on learner performance. In this study I delimit my focus of teaching and learning to that of teachers' belief and its influence on teaching and learning that accounts for the resultant learner performance. The South African Department of Basic Education (DBE) places great emphasis on teaching and learning that is aimed at yielding good learner performance. In view of the existing challenges that emerge from various school contextual factors, one could argue that indeed teachers are expected to miraculously excel in their teaching. The KZN DBE slogan of (Time on Task and Task on Time) is one example that highlights the expectations that DBE has on teacher performance in order to achieve high student results. However, there are many factors that affect these envisaged endeavours.

The literature I have perused has highlighted that teaching of any subject is influenced by number of factors such as knowledge base, belief systems of teachers, curriculum changes, lack of teaching resources and reluctance of teachers to teach. I have also noticed that literature points out that teachers have different beliefs about teaching and learning. Also, teachers are influenced by beliefs about themselves, subjects taught, about learners and about the school as a whole. It then became necessary to explore teacher beliefs and how teacher beliefs influence teaching and learning. The outcome of this research could contribute to the interventions aimed at improving learner performance in schools. For the purpose of this study I will be looking at the literature that focuses on teachers' beliefs and the influence they have in teaching and learning.

## **1.2 Understanding teacher beliefs as a concept**

Teacher beliefs are defined differently by many authors. Khader (2012) defines teacher beliefs as the perceptions and values teachers have about teaching learners, and the education practice brought to classrooms. Teacher beliefs are understood as the thoughts possessed by the teacher in connection with teaching and learning procedure, which influence their classroom activities. Kagan (1992) delineates teacher beliefs as tacit, frequently instinctively held suppositions about learners, classrooms, and educational material to be imparted. According to Uibu, Salo,

Ugaste, Rasku-Puttonen (2017) and Rubie-Davis, Flint, and McDonald (2012) teacher belief is what molds thoughts and subsequent instructional behaviours which can impact on learner outcomes; it is the belief that teachers hold and influence their thoughts and their instructional pronouncements. Most held beliefs are shaped through experience in a given time (Hart, 2002). Phipps and Borg (2009) assert that teacher beliefs occur as a system by which some beliefs are fundamental and others marginal. For them, fundamental beliefs are constant and employ a more dominant influence on behaviour compared to marginal beliefs.

Tondeur, van Braak, Ertmer, Ottenbreit-Leftwich, (2017) and Pajares (1992) describe teacher pedagogical beliefs as a “broad and encompassing” construct referring to specific understanding or propositions about teaching and learning and those pedagogical beliefs include numerous sub-constructs like epistemological beliefs, one’s own perceptions , and beliefs about precise subjects or courses (e.g., Mathematics Life Sciences, History, etc.). For Calderhead (2006), teacher beliefs, teacher knowledge and as well as teacher thinking, comprise of the wider concept of teacher intellect. Nicholas and Williams, 2009; Griffin & Ohlsson, 2001; Kagan, 1992; Pajares, 1992 have defined the beliefs as further influential compared to knowledge in defining how individuals consolidate and delineate responsibilities and glitches. This, then, causes them to be robust predictors of behaviour. Richardson (2004) explained that teacher’s beliefs emanate from three foundations which include personal experiences of the educator in broad-spectrum and precisely teaching, educator’s experience as a pupil and the educator’s knowledge of the school progressions. Fang (1996) on the other hand concentrates on a cluster of dissimilar factors associated with school in the construction of teachers’ beliefs, which include the administrative provision, attitude of contemporaries, school ethos, learners’ capabilities and backgrounds on top of the procedures and protocols that are pragmatic in a particular school. In contrast, teacher beliefs are more peripheral and more recently formed amongst teachers who are currently teaching, more dynamic and thus more open to current changes ( Tondeur, et al. 2017; Five & Gill, 2015).

My understanding of teacher beliefs is based on Tondeur, et al. (2017); Five and Gill, 2015; Khader (2012), Richardson (2004), Pares (1992) and Kagan’s (1992) notion which defines teacher belief as attitudes, thoughts, values, tacit and unconsciously held assumptions teachers have about teaching students which teachers bring into classrooms and influence their classroom activities. Teacher beliefs originate from own experiences in common and teaching



in particular, teacher's experience as learner and educator's knowledge of learners' abilities and the school ethos. My line of argument is based on the above conception of teacher belief.

### **1.3 The following themes informed my literature review:**

1. Teacher beliefs about teaching, (*pedagogy – teacher knowledge, teacher beliefs*)
2. Teacher beliefs about learning
3. Teacher beliefs about student learning
4. Teacher beliefs about teachers themselves

These themes are briefly engaged with in this chapter and will be expanded in the literature review chapter.

#### **1.3.1 Teacher beliefs about teaching**

Ideas about the nature of knowledge and teaching and learning are moulded through several years of exposure to scholastic practices. Biggs (2012) and Cheng, Chan, Tang, Cheng (2009) argue that the traditional and the constructivist are the dual foremost conceptions of teaching and learning. These two views afford a divergence of conceptions of teaching and learning that could also be perceived as either ends of a range with changing conceptual indulgences in between. Cohorts of the traditional notion trust that the classroom learning background in which the educator plays the paramount role in knowledge transmission supports and harvests the supreme efficient and effective learning process and outcomes (Cheng et al., 2009). Constructivism as it is originated from Piagetian theory regards belief as people enthusiastically hypothesise their perceptions by inferring their experiences (Kegan, 1994). Believers of constructivism advocate that knowledge is generated from the communication between learners and teachers. Admiraal, Louws, Lockhorst, Paas, Buynsters, Cyko and van Der Ven (2017); Orlando (2013); Biggs and Tangs (2011) classified formations of teaching in relation to two angles - 'teacher-centred' which deals with the communication of distinct forms of content knowledge. In contrast, 'student-centred' perceives learners' learning as a progressive methodology towards learners and their formations of knowledge other than concentrating on educators. The traditional origin of teaching is frequently denoted to utilising teacher-centred teaching approaches since knowledge attainment is implicated and transpire utilising one-way transmission procedure from the educator to learners, with inadequate collaborative progressions between learners and educators; student-centred teaching

approaches that accentuate the learner's self-motivation, self-reflection and the fact that learning is a contemplative and collaborative procedure where the teacher takes the role of being the facilitator. Studies (Entwistle & Peterson, 2004; Entwistle et al., 2000) express that if an educator embraces a more student-centred method to teaching, the learners will be further enabled to accept a deep method to learning that pursues profounder meanings and contemplations of what they are learning. The South African school education system has adopted this student-centred slant to teaching and learning. This study hopes to explore what beliefs teachers have of their teaching practices and how these beliefs may influence learner performance in their classes.

### **1.3.2 Teacher beliefs about learning**

Researchers, (Khader, 2012; Faour, 2003) have alluded that the intricacies of classroom life can limit teachers' abilities to enhance their beliefs and afford instruction which is in line with their beliefs. This recommends that contextual elements can have prevailing influences on teachers' beliefs and impact their classroom activities (Khader 2012). Khader further stated that teachers' beliefs and other classroom activities considerably diverge dependent on schools' socio-economic position, class size, and grade level teachers teach in. Teachers' level of broad-spectrum education, remuneration, training, age, and principal's sustenance were also correlated to beliefs and practices of educators. The study conducted by Milner, Sondergeld, Demir, Johnson, & Czerniak (2012) exhibited that there were no substantial differences between the teachers' beliefs and their classroom activities.

In view of the above, one may assert that teachers possess particular beliefs about the schools they teach in and those beliefs affect the way they teach, behave, react and respond within the schooling environment.

### **1.3.3. Teacher beliefs about student learning**

The success of learners in schools is dependent on the social background of the learners. TALIS, (2009) asserts that the social background of the students such as level of education of parents and teachers' approximation of the typical ability of a student equated with a learner of the identical age at school level, impact on learner performance. Thus teachers see relations

between learners and teachers as enhanced when the learners at their schools have greater ability (TALIS, 2009). Teachers in schools with learners from a destitute social background and with learners of low mediocre ability have to manage with a remarkably less favourable working and learning situation which poses challenges and stress to teachers and hinder effective schooling, thereby broadening the gap in students' performance.

#### **1.3.4 Teacher beliefs about teachers themselves**

Teachers have a particular belief about themselves. Scholars (Nicholas and Williams 2009; Pajares 1992) confirm that individuals own belief systems that comprise of all their beliefs about the corporeal world, the social world, and the world where self is recognised. This system has a fundamental purpose in empowering people to define and comprehend the world and themselves. Some teachers perceive themselves as good and effective teachers based on the academic element (content knowledge) of teaching, being compassionate, sympathetic, considerate, amicable, engaging and friendly ( Nicholas and Williams, 2009). According to Kuzborska (2011), teachers' beliefs affect their goals, processes, provisions, classroom interaction arrangements, their roles, their learners, and the schools they teach in.

#### **1.3.5 Teacher beliefs about quintile ranking**

Teachers had particular beliefs about quintile ranking of schools. It is imperative to comprehend what quintile ranking is before I could engage into beliefs about it. Every public school in South Africa has been classified or categorised into five quintiles for the purposes of funding, post provisioning, potential performance accolades for schools and further programmes inclusive of school nutrition and learner transportation (DBE, 2013). Oxford Dictionary defined quintile as any five equivalent groups into which a populace can be separated according to the dissemination of values of a precise variable. This quintile system was part of National Norms and Standards for funding public schools presented in 1998 to advance equity in education (Department of Basic Education, 2013). The quintile, in which the school was based, was on the basis of infra-structure of the school, rates of income of the population around the school, unemployment and illiteracy in school's catchment area. Schools in quintile 1, 2 and 3 have been declared as 'no fee' school whereas quintile 4 and 5 schools are 'fee paying' schools (Media Release, Western Cape Department of Education, 2013). The funding of the schools is based on these quintiles. Learners in quintile 1, 2 and 3 received a

much larger funding from the government as compared with the learners from quintiles 4 and 5. Schools falling in quintiles 4 and five were expected to supplement their allocation with extra school fees that they charged learners (Media Release, Western Cape Department of Education, 2013).

**The following table shows the distribution of funds per learner to schools across all five quintiles.**

**Table 1.1      The table showing the allocation of funds per quintile**

If looking at paragraph 110 of the NNSSF, the National Targets Table published in Government Notice No. 718, Government Gazette No. 40065 of 10 June 2016 is hereby updated to comprise 2019 target amounts. The no fee threshold was R1, 243 in 2017:

	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>NQ1</b>	R1,243	R1,316	R1,394
<b>NQ2</b>	R1,243	R1,316	R1,394
<b>NQ3</b>	R1,243	R1,316	R1,394
<b>NQ4</b>	R628	R660	R699
<b>NQ5</b>	R215	R228	R241
<b>No fee threshold</b>	R1,243	R1,316	R1394
<b>Small schools National          fixed amount</b>	R28,791	R30,490	R32, 289

Illustration of 2018 and 2019 figures of inflation adjusted CPI predictable inflation rate attuned  
Adapted from: Government gazette No 40065, 10 June 2016

It had become pivotal for me to give the above background before looking into the beliefs of teachers with regards to quintile ranking. This section focuses on beliefs teachers had about the quintiles assigned to their school

## **1.4 Learner performance**

Learner performance in South Africa has been viewed as poor according to international rating stands as well as Matric results in the past years. The report by the DBE revealed that learners perform poorly in higher grades than in lower grades. I concur with Sevnarayan (2015) when saying that “South Africa has the worst education system of all middle –income countries that participate in cross-national assessments of educational achievement. What is more, we perform worse than many low-income African countries?” Sevnarayan, 2015, p. 2).

The studies revealed that the gap between the former white schools and former black schools is huge and had an impact on learner performance. For Sevnarayan (2015) studies reveal that 50% of White learners who wrote Matric examinations in South Africa qualified for university entrance requirements as opposed to their Black counterparts where only 10% of Black learners qualified for university admissions. It is a fact that historically Black disadvantaged schools constitute up to 80% of the countries matric population of schools, however only 20% of the learners coming from these schools qualify for university entrance (Sevnarayan, 2015; Pocock, 2012). These findings are in line with my study as they speak of the beliefs people have about learners’ learning and the resultant learner performance.

Research was conducted in South Africa (SA) to interrogate the reciprocal causativeness of poor academic performance of learners in South Africa with regards Literacy and Numeracy and which also include their reading illiteracy as compared to international communities (Moloi & Strauss, 2005; Pretorius & Mampuru, 2007; Sailors, Hoffman & Matthee, 2007; Fleish, 2008; Moloi & Chetty, 2010; Makhathini, 2015, Howie, Combrinck, Roux, Tshele, Mokoena, & Mcleod Palane, 2017). South Africa’s partaking in various international studies such as SACMEQ, PIRLS, and TIMSS, as well as other resident studies, for example, Systemic Evaluation(SE)and the Annual National Assessments (ANA, although ANA is no longer used as an assessment yardstick for learner performance since 2016), National Senior Certificate (NSC) Matric examinations which track learner performance in Literacy and Numeracy Intermediate and Senior Phase bands and FET band in respect of Matric results, have assisted South African education system in yielding data to assist brightening these unbecoming trails.

The research conducted internationally about South African education system showed very little progress as far as learner performance is concerned in Southern and Eastern African

Consortium for Monitoring Education Quality (SACMEQ). SACMEQ is an international quality ranking system which focuses on primary schools' Literacy and Numeracy in 15 countries it researches. The results in SACMEQ II (2000), SACMEQ III (2007), SACMEQ IV (2013) revealed poor performance of SA learners in numeracy and literacy results. The results exposed that South Africa had not recorded any improvements in Grade 6 Literacy and Numeracy over a seven year period. In the SACMEQ III, South Africa was ranked 10<sup>th</sup> out of 14 Education Systems in Grade 6 Mathematics, (and was even behind the much smaller countries such as Swaziland, Kenya and Tanzania) with an average percentage of 36.7%. SACMEQ results also established that learners in SA's Grades 1 to 6 could only read at two levels below their own grade in English and in their Home Language (Makhathini, 2015).

The Trends in International Mathematics and Science Study (TIMSS), which is a system of international benchmarking assessments which are conducted at 4-year intervals to all participating countries, demonstrated that South Africa did not show any significant progress on the assessments in Grade 8 Mathematics and Science as from 1995, 1999, 2002, 2007, 2011 and 2015. Makhathini, (2015, p. 3) alludes that "in the 2007 version of TIMSS the Grade 8 tests had to be given to Grade 9 learners because it was said to be 'too difficult' for the Grade 8 learners." In the 2011 TIMSS, there was little level of improvement recorded in Grade 9 results. However Spaul (2013, p.4) has different view about the improvement as the report alludes:

Part of the reason for the improvement is the fact that South Africa's post improvement level of performance is still the lowest of all participating countries, with the average South African Grade Nine child performing between two and three grade levels lower than the average Grade Eight child from other middle income countries.

Therefore, looking at the concerns raised by Spaul (2013), there is no reason for South Africa to celebrate this achievement given the status of affairs above.

The Progress in International Reading Literacy Study (PIRLS), an international assessment standard that evaluates reading comprehension and monitors trends in reading literacy at five year interludes, assessed Grade 4 and 5 learners in eleven official languages. In 2006, 2011, 2016 PIRLS recorded an underperformance by SA learners with South Africa occupying the bottom last position with a score of 320 out of 1000 for Grade 4 and grade 5 Afrikaans, English and IsiZulu (scoring 406 points out of 1000) in the achievement of PIRLS 2016 out of 50

countries. The top achievement of SA children was far below mean top countries. Only trends in grade 5 PIRLS IsiZulu that has shown significant improvement equivalent of more than two years of schooling from 263 in 2006 to 358 in 2016 (Howie, Combrinck, Roux, Tshele, Mokoena, & Mcleod Palane, 2017).

National Senior Certificate (NSC) Matric examinations also serves as the yardstick to measure learner performance nationally. The overall pass percentage Matric class of 2017 was 75.1 % compared to 72.5% in 2016 and 70.7% in 2015 respectively (DBE, 2017). A slight increase of 2.6 % and 28.4 % of bachelor passes are observed in these results.

Much of the above information and statistics will be dealt with in chapter two of this thesis. It is imperative to highlight the fact that teacher beliefs about teaching and learning are linked to learner performance as they relate and impact on learner performance this section discussed. It is believed that if teachers teach effectively and learners learn successfully and education system is conducive for effective teaching and learning, then the increase in performance of South African learners in the above-mentioned international testing standards will be discerned.

## **1.5 Theoretical framework**

This study was informed by Bandura's (1997) theoretical framework on self-efficacy as I looked at teacher beliefs and the influence they had on teaching and learning. Bandura (1997) defined self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p.3). Experimental and other theoretical work has demonstrated that teachers' beliefs occur as a system (Fives & Buehl, 2012) and self-efficacy beliefs are a significant constituent of this system (Pajares, 1992). Bandura (1997) has identified four sources of efficacy beliefs which are: mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal. Many theorists I have studied agree with Bandura's notion of self-efficacy as they argue that teachers with greater self-efficacy beliefs are more likely to advance challenging lessons in class and teach with a diversity of methods to promote learner learning and they are resistant to challenges and they persevere when faced with obstacles (Miller, Ramirez & Murdock, 2017; Guo, Dynia, Pelatti, Justice, 2014; Holzberger, Philipp, Kunter, 2013; Woolfolk-Hoy & Burke-Spero, 2005; Deemer,

2004). This theory was useful in explaining how teacher beliefs impacted on the self-efficacy of the educators in schools.

Bandura's efficacy theory has its limitations as it does not explain behaviour change of teachers which is also a factor in teacher beliefs. In this study I also made use of Naicker's (2014) conceptual framework of 'spirited' and 'dispirited' in order to understand teacher beliefs about teaching and learning. In trying to understand teacher resilience in her study on critical incidents of teachers, Naicker (2014) had coined the following two concepts inspired and dispirited. The idea of inspired and dispirited came from the notion of spirit which was drawn from Scott (1994) as well as the perspectives on spirituality and spirituality in the workplace were derived from the work of Fry (2003), Giacalone and Jurkiewicz (2003), Karakas (2010), Lips-Wiersma (2002), Mitroff and Denton (1999), Neck and Milliman (1994). Naicker (2014) studied the incidents that demoralized teachers causing them to be dispirited. She further argued that if teachers experience deep connection with colleagues, learners, parents, SMT and school community at large, they felt validated and affirmed and they had sense of belonging thus they were said to be spirited. Drawing on Naicker's concepts of teacher being to levels of 'inspiredness' and 'dispiritedness' that have been developed in the foundations of enablers and dis-enablers; I have explored the issue of teacher belief. If the teacher is inspired, he or she will inspire others. The teachers in Naicker's study were experiencing different critical incidents that were supposed to pull them down but instead the zeal they had, made them to cope and being inspired. Naicker argued that her participants were 'inspired' as she said, "It was these 'enablers' that contributed to teachers being inspired by the critical incident," (Naicker 2014, p.222). The findings of this study therefore include the understanding of the above concepts by Naicker.

## **1.6 Problem statement**

Teachers had limited experience of teaching effectively critical subjects such as Mathematics, Science, Accounting, Life Sciences, to mention but few. Many teachers lacked adequate knowledge for teaching these subjects. Research has shown that teachers' knowledge of the specific subjects and the beliefs they have about teaching and learning influence their teaching approaches (Preethlall, 2015; Hogan, 2000; van Driel, Beijaard, Verloop, 2001) and thus impacting on learner performance. The efforts of previous researchers and this study in particular were dedicated to enhance learner achievement through value-added teacher



practice. According to Borko (2004), the teachers are the ones who play a vital role in terms of entire formal instructional systems in the classroom. Teachers are therefore regarded as the “cornerstone” or “the most prominent factor” in educational changes and improvements (Van Driel, Beijaard, & Verloop, 2001; Fishman & Davis, 2006, Preethlall, 2015). Given the imperative role of the teachers in the execution of the curriculum alterations, the focus of this study was to comprehend the beliefs teachers have about their own teaching and about how learning occurs in such a way that will influence and impact on learner performance if there is any relationship between teacher beliefs about teaching as well as teachers’ knowledge. Teacher knowledge is part of teachers’ belief about teaching as teaching involves teacher knowledge such as content knowledge, knowledge needed to deal with teaching and learning, comprising knowledge of the curriculum, general pedagogical knowledge, as well as pedagogical content knowledge and pedagogical knowledge of context (Preethlall, 2015).

The intentions of this study are to apprehend teachers’ belief about teaching and learning and the influence they have in terms of learner performance. The major concerns were in three aspects which were teacher belief about teaching and learning, quintile rankings of schools and learner performance. Several interventions have been made in terms of addressing the quality of school education from curriculum transformations to putting up the quality of teachers through teacher development programmes and other policies put in place to ensure effective educational leadership and management and so forth, but we are still having difficulties in comprehending why learners are not performing to the expected standards (Spaull, 2013 and Makhathini, 2015). In spite of that, the world benchmarks in most of the rankings are still quite low. This study is focusing on the relationship between school context, teacher beliefs around teaching and learning and how these two influence learner performance.

Teacher belief has been concerned with and has influenced the way in which teachers teach and facilitate learning in schools (Uibu, et al., 2017; Borko, 2004). There has been substantive amount of work done in the field of teaching (Tondeur, et al., 2017), however, we have been looking at on how contextually those beliefs manifest themselves in different school contexts and to understand teacher beliefs in the context in which teachers manifest these beliefs in the teaching process.

In terms of school context, the policies that are in place in terms of teaching and learning and in terms of supporting schools are guided by ‘one size fits all’ policy. However, in South Africa

there are schools that are differentiated in terms of resources, financial capacities, quintile rankings, rural and urban etcetera and what this study is trying to do is to begin to question how these variations influence the way teacher beliefs about teaching and learning occur and ultimately improved learner performance.

### **1.7 The purpose statement**

The reason for exploration of the phenomenon of teacher beliefs on teaching and learning and the impact they have on learner performance was that teachers have beliefs that inform them as to why they teach the way they do and what were the obstacles they experienced when teaching and learning occurred. The units of analysis are teachers who are teaching in Secondary schools from Grade eight to Grade twelve. This study focuses on teacher belief by exploring what belief teachers have of schooling, teaching, learning and learners. More specifically, the purpose of this study was to explore teachers' beliefs on teaching, learning and learners and to establish how these factors linked to their teaching practices. The study also explored teachers' belief across school contexts, which I delimit to school quintile rankings.

### **1.8 Objectives**

In exploring what teacher beliefs about teaching and learning entailed, in Ilembe and Pinetown schools, the objectives of this study were:

1. To explore the beliefs teachers have about teaching.
2. To explore teachers beliefs about learning.
3. To understand the relationship, if any, between belief of teaching and belief of learning.
4. To explore, if any, the relationship between teacher belief and learner performance.

### **1.9 Research Questions**

Bassey (1999) describes a research question and compares it to the engine which propels a train of investigation and should be enunciated in such a way which targets at setting a clear program for the research conducted. It is envisaged that the research questions are framed and replaced as the research proceeds (Preethlal, 2015) and “without them the journey will be slow or chaotic” (Bassey, 1999, p. 67). In trying to explore teacher beliefs about teaching and learning, the research questions this study specifically set out to answer were:

1. What are teachers' beliefs about teaching?
2. What are teachers' beliefs about learning?
3. Is there a relationship between the belief about teaching and the belief about learning?
4. How have teachers come to acquire their beliefs?
5. How do the teacher's beliefs influence the teaching and learning as manifested through the learner performance?

### **1.10 The rationale for the study**

My main interest to pursue this study emerged from my roles as PhD scholar and as a principal of the Secondary school and as post level one teacher who is expected to teach learners and produce good results. The issue of results always remained the 'pain in the neck' because learners were not achieving to the level that is expected by the Department of Education. It became worse when I became a Principal because all the results and improvement in learner performance were expected and demanded from me as an accounting officer at the school. As principal of the school, your school is influenced by the number of factors such as the place where your learners come from and from other contextual realities such as home environments, school environments, prescriptions of CAPS, teachers' issues, etcetera, and ultimately as school principal you need to account for the learner performance in the school. This study gives me an insight into how teacher beliefs about teaching, learning, curriculum and the context such as my school, influence the way in which learners perform at school. So doing this study has enabled me to manage and lead the school in a substantive way and helped me in addressing some of the contextual variations of beliefs so that I can improve the school as a whole.

Secondly, from a kind of a research base scholarship, learner performance has been a major concern in the country since the emergence of democracy and the opening up of the opportunities of learners to be in schools. Also there has been several interventions to try and bring the quality of school education but all in vain. All of those interventions in themselves could not lead to potentially increased learner performance and quality level of education. As stated earlier on above that national reports on international standards and world rankings such as TIMSS, PERLS, SACMEQ (Howie et al. 2017; Makhathini, 2015) studies as well as National Senior Certificate Examinations conducted in South Africa, suggested that South

African learners are still performing badly and there is a lot to be understood in terms of why these interventions are not yielding and manifesting the results they were intended to. So in this study, I have taken a more contextual vantage point in trying to understand learner performance and I have identified teacher beliefs as teachers being the main instrument to facilitate teaching and learning as the way of addressing or looking on learner performance. This study therefore contributed towards the discourse on learner performance through contextually sensitive advantage point that interfaces teaching, learning and context through the lens of teacher and teacher belief.

### **1.11 Significance of the study**

It was found in this study that teachers' beliefs of teaching and learning differ according to their quintile rankings. These beliefs had been influenced by their teaching practices over a period of time in their respective schools. This study contributed towards further understanding of factors that influenced learner performance.

Although teacher belief as a phenomenon has been studied intensively, little has been researched on the impact of teacher belief on teaching and learning on learner performance. This study will contribute to the literature and body on knowledge and endeavors to enlighten a broader professional forum, which include the school principal, the decision-makers in the Department of Education, subjects advisors, supervisors and other relevant stakeholders about the beliefs teachers have on how teaching and learning is affected and learner performance is impacted in the long run. It should offer insight on decisions to be taken by decision makers with regards to issues raised here such as revision of quintile ranking policy, teacher development, resource provisioning and so on. I believe that this study will make a significant contribution to the current debate on teacher beliefs about a number of factors affecting teaching and learning and eventually learner performance which in essence is why schools exist, that is to open up prospects learner attainment across different school categories.

In the literature that has been studied, there is inadequate indication of the connection between teachers' levels of comprehensibility or competency with regards to their knowledge and to their beliefs they possess about teaching and learning. In a nutshell, though research evidence about learners' learning and different formations in knowledge is far-reaching and virtually universally agreed upon, inadequate knowledge exists about the manner teachers' knowledge

and beliefs disturb the manner in which teachers teach and believe in general. Saad and Boujaoude, (2012) postulated that, “Studies about teachers’ knowledge, teacher beliefs and their classroom practices are still few and scattered” (p. 114). Moreover, Fischler (1998) and Preethall, (2015) concede that little evidence of teachers’ belief, teachers’ knowledge regarding their perceived roles, teaching purposes, and their influence on learners’ learning. Moreover, the study shows possible way of studying different affiliations such as, between teachers’ knowledge, their activities and learner achievement; between their beliefs, their practices and learner accomplishment; and between their knowledge and beliefs. The findings of this study elucidate consistencies and inconsistencies that might have existed between what teachers identify, utter, what was really perceived in their practice. Therefore the findings makes available prospects for further research.

### **1.12 The research design and methodology**

It was imperative for me to ensure that the aims and intentions of this study were attained by carefully deciding on the appropriate research design and methodology that suited the study. Being aware of the necessity of consulting different relevant literature such as books, journals and other theses as the initial strategy to critique the position of the subject to be studied (Preethall, 2015, McMillan and Schumacher, 2001), I collected, as a strategy, data in respect of the teacher beliefs about teaching and learning and in the influence they had on learner performance. This study was situated within the multiple case studies methodology. Rule and John (2011) define case study as a systematic and profound investigation of a specific instance in its context in order to produce knowledge. A case study, according to Yin (2003) cited in Rule and John (2011 p 4), “is an empirical inquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident.” Creswell (2009) defines case study as a one occasion of a bounded system, such as a child, a clique, a class, a school and or a community. My aim here was to understand what beliefs teachers have with regard to teaching and learning and to explore any influence these beliefs have on teaching and learning.

The study was a qualitative research methodology, which Marshall, and Rossman (2006) define as being multi-method in emphasis and concerning an interpretive naturalistic approach to its subject matter. Qualitative research approach permitted me to probe the issue highlighted by questioning the respondent to acquire clarity or to challenge the particular expectations in

which their first ideas or rejoinders are made. Marshall, and Rossman (2006) state that qualitative researchers endeavour to comprehend thoughts, feelings and sensations by getting to know people's values, beliefs, and symbols. This is in line with my study because teachers' beliefs, thoughts, feelings and emotions of teaching learners were scrutinised using a variety of qualitative methods.

This study was situated within the interpretive paradigm. The researcher believed that the reality to be studied consisted of the subjects' subjective experiences of the world and adopted an interactional stance towards reality. Cohen, Manion, and Morrison (2011) explain that the interpretive paradigm helps to comprehend the subjective world of human experience. They further elaborate that "interpretive researchers begin with individuals and set to understand their interpretation of the world around them" (Cohen, et al., 2011, p.17). The aim of this approach is to comprehend how individuals in everyday situations construct meaning and elucidate their occasions, actions and proficiencies of their world (Cresswell, 2009). This is true of the study I conducted, the beliefs teachers have on various things including the teaching of particular subject was explained and their experiences of the world were understood.

### **1.13 Data production methods**

I have used more than one data production method to obtain an understanding of teacher beliefs and their influence on teaching and learning. Semi-structured interviews were the main data source whilst lesson observations and document analysis were used as supporting evidence. Audio recorders were used to record interviews and lessons during observations.

In addition to the semi-structured interviews, observation of lessons took place over a week. The lessons were audio recorded. The audio-recordings were used for two purposes. The first was to focus on eliciting notions of teacher belief as noted through the recorded lessons and guided by literature review. The second was to use these identified notions of teacher belief as part of the interview process to delve deeper into teacher belief as it related to their teaching and learning.

The third method of data collection was document analysis. Learner performance records of the selected teachers were reviewed over a period of five years to explore trends and or patterns. Also, lesson plans were analysed to compare what was taught against what was planned. This

data set allowed me to do two things. First it attempted to link teacher beliefs to learner performance and secondly it explored how the teacher explained his/her learners' performance in relation to teaching and learning. The use of three data collection methods which were interviews, observation, and document analysis allowed for methodological mix and data triangulation.

Data was analysed using content and discourse analysis as well as apriori frame analysis. Here data was analysed using themes that were developed before data production. Units of analysis were established to indicate similarities and differences by ascribing codes or key words to identify data (Cohen, et al 2011).

#### **1.14 Location of the Study**

This study took place in Secondary schools situated in rural and urban areas so as to ensure the representativeness of different school contexts. Six schools from Ilembe and Pinetown Districts in KwaZulu-Natal Province were the cases in this study; three from each category. Also different quintile rankings 1-5, rural or urban and religious inclinations of schools were considered in order to explore whether they had any influence on the teacher' beliefs and teaching as well as learner performance in general. The choice of six schools allowed me to include the range of schools as categorized by the school quintile system, in the purposive sampling of research sites. More details on sampling are discussed in chapter four.

#### **1.15 Limitations of the study**

This study had a number of limitations. The first one was that some teachers were unable to articulate what their beliefs were.

The second limitation of my study was that most of the teachers I interviewed did not understand the quintile concept. I had to explain to them what quintile was and further told them the quintile of their own schools because they did not know to which quintile their schools belong to.

The limitation was that this study only focused on only six schools and eleven participants in only two Districts which make the findings very limited in terms of representativeness of the population of teachers in South Africa. Therefore the generalizability of the findings would be

restricted as may be the case with more quantitative approaches. However, some other readers and researchers would accept this investigation that explored case studies that had a strategic relevance to general problems in education (Govender, 2015; Jon & Greene, 2003). The problem in this study was that of poor performance of learners in schools in spite of teaching and learning being done in schools, therefore it was imperative that I explored teacher beliefs about teaching and learning and their manifestation in learner performance.

## **1.16 Sequencing and delineation of chapters**

This section of the thesis signposts the route I have taken to compile this report. The thesis is therefore divided into eight chapters and is delineated as follows:

### **Chapter One: Background of the study**

Chapter one provides a synopsis of the study. It sets the scene and the tone by providing a background to the study and insight into the intentions of the research. Chapter one further describes the focus of the study which is focusing into teacher beliefs and teaching and learning. Subsequent sections deal with the statement of the problem, the rationale, the research questions, and the significance of the study. The chapter then provides a conceptual underpinning of beliefs, teacher beliefs and learner performance as concepts that are in the hub of the study. I conclude this chapter by offering a brief synopsis of the research design and methodology exploited in this study and lastly limitations of the study.

### **Chapter Two: Literature Review**

This chapter begins by unpacking key concepts of belief and teacher belief as they are defined by different researchers who were interested in this area. The above concepts form the net that engulf and synchronise the chapters as so as to comprehend teacher beliefs. It then discusses teacher beliefs about teaching, teacher belief about learning, about student learning as well as teacher beliefs about learner performance. Furthermore, the chapter deliberates on schools context in which teachers find themselves teaching in and their beliefs about such contexts. The chapter concludes by reviewing studies conducted by different researchers in the field of teacher beliefs and the findings that emanated from such studies.

### **Chapter Three: Theoretical and Conceptual Frameworks**

In this chapter I present the review of theoretical framework of this study. Bandura's self-efficacy theory (1997) is unpacked and its relevance to this study is explained. The conceptual



framework of ‘spirited and dispirited’ developed by Naicker (2014) is also discussed as it contributed in adding understanding of teacher beliefs as the study progressed.

#### **Chapter Four: Research Design and Methodology**

Chapter Four explains the research design and methodology of this qualitative study which is situated within the interpretive paradigm. The study was a case study exploring teacher beliefs about teaching and learning in selected schools of KwaZulu-Natal.

I further discussed the data collection procedures that were followed when collecting data as well as data analysis procedures followed when analysing data. I concluded the chapter by explaining the issues of trustworthiness, validity, reliability as well as ethical considerations made when this study was conducted.

#### **Chapter Five: Data Presentation and Analysis (What teachers teach?)**

Data presentation is spread in two Chapters. It starts from this chapter and ends in the next chapter. This chapter pays attention to data analysis dealing with the exploration of teacher beliefs and teaching and learning. I discussed five themes that emerged from the data relating to the above focus area. The data based on five themes are presented and findings that emanated from such process are discussed.

#### **Chapter Six: Data Presentation and Analysis (How learners learn?)**

In chapter six I focused my attention on data presentation that deal with teacher beliefs about context, quintile ranking and learner performance. The data obtained from data collection methods are analysed in this chapter and findings pertaining to the section are discussed.

#### **Chapter Seven: Presentation of Findings and Discussions**

This chapter presents key findings of the study as presented in chapters five and six. Key findings are discussed within sub-themes. It is also in this chapter where I developed my own conceptual framework that I utilised in order to explain and clarify the notion of teacher belief as the phenomenon of this study.

#### **Chapter Eight: Conclusion and Future Trajectories**

Chapter Eight concludes the thesis by reflecting back to the questions which underpin the study and deliberates on them in relation to the beliefs teachers have about teaching and learning and the extent to which these beliefs influence learner performance. The chapter brings the report

to a close with a synopsis of the main findings relative to the research questions posed at the beginning of the study. It includes a critical reflection on the journey pursued and then looked at future trajectories and concedes some limitations that were identified throughout the study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The purpose of this chapter is to peruse relevant literature, both internationally and in South Africa, relating to teacher beliefs about teaching and learning and the influence teacher beliefs have on learner performance. I identified crucial focus areas, which relate to this arena of teacher beliefs on teaching and learning. The literature which is critically reviewed in this chapter primarily affords definitions for the constructs or terms that are used in this study. This is followed by an argument which supports the requisite for exploring these teacher beliefs. In this chapter, I peruse literature that explains teacher beliefs about teaching and learning both general and domain-specific teacher beliefs. Here I will explore beliefs teachers have in general about teaching and learning and thereafter I will look at teacher beliefs on a particular subject (domain-specific), origins of teacher beliefs, teacher belief about learner performance and teacher beliefs about the context in which teachers teach. In the following section, I will concentrate on the delineations of the constructs being utilised in the study.

#### **2.2 Understanding teacher belief as a concept**

##### **2.2.1 Beliefs**

It is integral for us to understand what the concepts of belief is as it is central to the study. Various authors have defined beliefs in different ways. According to Peacock (as cited by Hismanoglu, 2016), beliefs are “psychologically held understandings, premises, or propositions about the world that are felt to be true” (p. 109). Horwitz (2008) refers to “beliefs” by utilizing the terms such as preconceptions, preconceived ideas, and preconceived notions. Hismanoglu (2016) stresses that beliefs are “opinions and ideas that learners (and teachers) have about the task of learning”(p.109) a particular subject. Beliefs are context reliant and are both established and dynamic at the similar time and from a socio-cultural perspective, a person's beliefs are enclosed by the social jurisdiction and are combined into one's own peculiar viewpoint based both on what is meaningful and what is socially pertinent to the individual (Alisaari, & Heikkola, 2017). Horwitz (2008) emphasises that comprehending students' beliefs is also to be aware of their reaction in the classroom learning environment since dealing with learners' beliefs is considering an issue that has been regarded as basic to their academic progress. Beliefs are judgments and valuations that people make about themselves, about

others, and about the world everywhere; they are personal persuasions based on observation or rational reasoning (Jääskelä, Häkkinen, & Rasku-Puttonen, 2017; Abu-Hamdan, Khader, 2014; Khader, 2012) that one is having about a particular thing or concept. Ford (1994) defined beliefs as a group of standards or views which were crafted in the individual through his or her experiences and the intersecting of thoughts during the learning processes. Kaiser, (2014) states that beliefs are ‘understandings, premises or propositions about the world that are felt to be true’ p.131 by those who share same sentiments about a particular thing. Beliefs rely on evaluative and sentimental constituents (Kaiser, 2014). Beliefs are a vital facet of teachers’ discernments of teaching situations and thus influence their choice of teaching approaches as well as classroom practices. Beliefs also influence which part of teachers’ knowledge teachers opt to draw from in class (Alisaari, and. Heikkola, 2017; Kaiser, 2014).

Classroom practices are a set of teaching approaches, styles and procedures of instruction used by teachers in the classroom. They are interactions between the educator and learners in order to develop their cognitive and skillful insights using the plausible classroom management, fortitude to teach and continuous evaluation to accomplish the anticipated teaching outcomes.

### **2.2.2 Defining teacher beliefs**

Many different authors have defined and elaborated teacher beliefs in various ways. Lee and Branch, 2018; Alisaari, and. Heikkola, 2017; Khader, 2012) define teacher beliefs as the attitudes and beliefs about teaching learners, and the education progression those teachers bring to classrooms. They are the feelings held by the educator about the teaching and learning process, which inspire their classroom practices. Teacher beliefs epitomize individual educator’s concepts about what they contemplate is true and imitate their own prior experiences (Ramnarain, Hlatwayo, 2018; Jääskelä, Häkkinen, & Rasku-Puttonen, 2017; Soldat, 2013). Pajares (1992) describes teacher pedagogical beliefs as a “broad and encompassing” construct which comprises numerous sub-constructs like epistemological beliefs, insights of self, and beliefs about specific subjects or disciplines (e.g., Mathematics Life Sciences, History, etc.). The author labels teacher beliefs a “messy construct” as it is not orderly and is subjected to some criticism.

One may share the same sentiment with Soldat (2013) when saying that the discussion of teacher beliefs about teaching and learning is complicated, diverse, widespread, and always

have considerable incongruity. There is no agreement in terms of what constitute teacher beliefs. According to Ramnarain, Hlatwayo, (2018); Jääskelä, Häkkinen, & Rasku-Puttonen, 2017, Hull, Brooker and Naslund-Hadley (2016) several predictor variables such as personality features, education or training, experience as a teacher, and subject content knowledge are theoretically and empirically correlating with teacher self-efficacy. Secondly, they argue that student-centred teaching and learning especially in mathematics tuition intermediation supporting learner inquiry and conveyed to teachers through on going professional development and mentorship has a consequence on teachers' self-efficacy.

For Rahman, Singh and Pandian (2018) teacher belief can be conceptualised and be theorised from three perspectives which are nominative, meta-cognitive and circumstantial. The nominative approach contemplates teachers' belief to be a pointer of teaching and learning performance and pronounces and categorizes the types of beliefs teachers have about a particular aspect. Rahman, Singh and Pandian (2018) further argue that the metacognitive approach delineates belief as the collective knowledge that can be articulated and collected from the teachers' experiences that learners and teachers have about teaching and learning in a school situation. Lastly there is contextual perspective which is used widely to explore the belief teachers have and view them as embedded in context (Rahman, Singh and Pandian, 2018; Farrel and Ive, 2015; Feryok, 2008; Mangubhai Marland & Dashwood, 2004; Barcelos, 2003), view teacher's belief as entrenched in contexts.

According to Calderhead (1996), teacher beliefs, as well as teacher knowledge and teacher thinking, consist of the expansive notion of teacher reasoning. Nespor, 1987, Griffin & Ohlsson, 2001; Kagan, 1992; Pajares, 1992 have defined the beliefs as far more effective than knowledge in determining how individuals organize and delineate tasks and problems. This, then, creates the feeling that they are strong predictors of behaviour.

Many researchers validated that teacher beliefs play critical roles in fruitful teaching and learning processes. One may share the same sentiments with Liu (2010) when saying that each teacher grips a set of beliefs that regulate priorities for pedagogical knowledge and how learners attain knowledge. Ramnarain & Hlatwayo (2018) who explored teacher beliefs about teaching and learning, called these beliefs pedagogical beliefs. A commonly utilised peculiarity in studies is connected with two prototypical ideologies teacher-centred or teaching-oriented belief, and learner-centred or learning oriented belief (Alisaari, & Heikkola, 2017; Meirink,

Meijer, Verloop & Bergan, 2009). The educator-centred belief is grounded on an postulation of knowledge delivery that resembles traditional teaching methods, and accentuates the significance of knowledge reproduction; while the learner-centred belief underscores learner responsibility for learning and is engrossed on knowledge construction and how students are convinced to work together in groups.

Richardson (1996) explained that teacher beliefs derived from three sources which are personal experiences of the teacher in broad-spectrum and teaching in precise, teacher's capability as a learner and the teacher's knowledge of the school developments. Fang (1996) on the other hand contemplates on a group of diverse factors connected to school in the establishment of teachers' beliefs, such as the administrative provision, attitude of associates, school ethos, learners' abilities and backgrounds on highest of the rules and regulations that are pragmatic in a particular school.

The works of Belo, van Veen and Verloop (2014) and Frost (2010) suggest that teacher beliefs are intentionally or unintentionally prejudiced by numerous factors such as schooling or preceding learning experiences, professional project or teacher education, classroom practice (including social and contextual restrictions), and contextual factors. All these factors are ingrained in national cultures showing the repercussion that teachers' beliefs about such matters could diverge across countries.

Recent studies regarding teacher specialists point out that, teachers are vigorous classroom curriculum designers who make instructional verdicts grounded on a multifaceted system of beliefs and knowledge (Alisaari, and. Heikkola, 2017; Soldat, 2009; Bryan & Abell, 1999; Clandinin & Connelly, 1996). Teachers' beliefs inspire their (a) knowledge attainment and elucidation, b) the defining and deciding upon the task at hand, c) interpretation of course content, and d) choice of assessments, which encompass errands regarding curriculum, instruction, and assessment (Jääskelä, Häkkinen, & Rasku-Puttonen, 2017; Soldat, 2009; Nespor, 1987; Pajares, 1992; Richardson 1996).



According to Belo, van Driel, van Veen, Verloop (2014) teacher belief is complicated to research because of the deficiency of consensus about pertinent delineations of the construct of 'belief' and the diverse perceptions on the relationship between knowledge and belief. Overall scholars agree that beliefs are organised into larger belief systems in which beliefs are

allied not only to added beliefs but likewise to cognitive and emotional concepts like self-efficacy, attitudes, epistemology and anticipations (Belo et al., 2014; Jones and Carter, 2013; Pares, 1992). Belo et al. (2014) further state that some beliefs work as priorities whereas others work as marginal. Also the fact that teacher beliefs are often tacit, contributes to the complexity of research on teacher beliefs. The implication of this is that teacher beliefs must be secondary, for example by taking into consideration the congruence of teachers' belief statement, the intentionality to behave in a given manner, and the actual behaviour related to the belief in question.

It has become imperative for me to develop my own conceptual definition of teacher beliefs from various authors as discussed in the above literature. I therefore define teacher beliefs as attitudes, thoughts, values, tacit and unconsciously held assumptions teachers have about teaching students which teachers bring into classrooms and influence their classroom practices. Teacher beliefs come from subjective experiences in general and teaching in exact, teacher's experiences as learner and teacher's knowledge of learners' abilities and the school ethos.

### **2.2.3 Suppositions about teacher beliefs**

In order to broaden up in this study, the comprehension of teachers' beliefs about teaching and learning in the critical or gateway subjects has become imperative. I have made use of the reviews of Belo, et al. 2014; Pajares (1992) and Jones and Carter (2013) in conjunction with Richardson (1996) and Calderhead (1996) to frame certain essential suppositions about teacher beliefs. These assumptions are referred to as the stability, organization, and functionality of teacher beliefs:

-  Beliefs about teaching and learning (in general) are well established by the time (pre-service) teachers enter teacher education and start their educational careers. As a consequence, teacher beliefs tend to be relatively stable and resistant to change. This is particularly true for teachers with many years of teachers' beliefs seem less resistant to change. Moreover, limited pedagogical and content knowledge may hinder a change of teachers' beliefs (stability).
-  Teacher beliefs are part of larger belief systems. These systems contain beliefs about teaching and learning in general (e.g., conceptions of learning and beliefs about a range of topics such as the regulation of students' learning processes, goals

of education, the nature of knowing and knowledge development, assessment, and so on) and domain-specific beliefs (e.g., beliefs about the nature of the subject, curricular goals, instructional strategies for teaching particular content, and so on) (organization).



Teacher beliefs play a key role in knowledge interpretation and cognitive monitoring. The processing of new information is mediated by these beliefs because they function as perceptual filters. Moreover, beliefs serve as mental exemplars for constructing and evaluating teachers' own teaching practices (functionality) (Belo, et al. 2014, p. 90-91).

From the above citation, it is stated that teachers' beliefs are interconnected to both teachers' past experiences as novice and old teachers and their teaching practices in the classrooms. The question one needs to ask is to what extent are differences in teacher beliefs nationwide bound? The literature that was perused does not come with a clear answer to the above question. The study conducted by Borg (2003) and by Frost (2010) points out that teacher beliefs are influenced consciously and unconsciously by different elements such as prior knowledge learning experiences or schooling, professional educator education, classroom activities and other circumstantial factors. These elements are initiated in the nationwide cultures with the insinuation that teachers' beliefs about these issues vary through nations. Klassen et al. (2008) as quoted by Belo et al. (2014), conducted a research where they compared motivation beliefs of teachers in Canada and Singapore where they established that teachers in both countries had same beliefs as to how they were able to influence learner learning, nonetheless the cross cultural variances occurred in these teachers' beliefs on the amount of influence they have on learner learning as a whole. One may share same sentiments with Belo et al. (2014) when saying that the action of teaching may be extra influenced by the international institution of schooling other than nationwide culture. Thus social and cultural factors influence teacher beliefs.

### **2.3 Teacher beliefs about teaching, (pedagogy – teacher knowledge, teacher beliefs)**

Teaching is something that is taught or the idea, values and beliefs that are taught by a person, religion and social institutions. Teaching is a practice that inspires intelligent development in its teachers (Noddings, 2003). The Classical philosopher, Aristotle as cited by Nodding (2003) indicated that teaching is a practice that discovers its outcomes in the learners not in the teacher



per se. In other words the effect of teaching should be evident in the portrayal of understanding and knowledge acquisition of learners not what the teachers think. Prosser (2013) argued that the high quality of teaching should maintain students' awareness and their perceptions and comprehension of the subject matter. Thus the outcomes of quality teaching means "not only does good teaching imply careful preparations and explanations, but also requires continual monitoring and responding to students perceptions and understandings" (Prosser, 2013, p.34). The process of teaching is educator-focused, student activity with the purpose of:

- (a) Transferring knowledge to the learners
- (b) Students acquiring the concepts of the discipline.
- (c) Students developing their conceptions
- (d) Students changing their conceptions (Prosser,2013)

Different teachers possess different beliefs of teaching (pedagogy). One may share the same sentiment with Li (2013) when he says that teacher beliefs heavily influence pedagogical decision-making (Borg 2003, 2006; Farrell and Kun 2008; Jääskelä, Häkkinen, & Rasku-Puttonen, 2017), the acceptance and uptake of new approaches, techniques and activities (Li 2008), choice of subjects and classroom activities and evaluation in the classroom (Borg 2003). Beliefs are seen to be the robust elements through which people can foretell teaching behaviour (Rahman, Singh and Pandian, 2018; Carney, et al. 2016). Some studies adopt a micro perspective of context with an intention to render detailed understandings into teachers' moment-by moment decision-making while teaching in a classroom. The metaphor of teacher-as-decision-maker (Carney, et al. 2016, Nunan 1992) shows how educators conceptualise their effort and the kind of decision-making that informs their teaching activity (Tsang, 2004). Teachers engage various interactive decisions 'in the moment-by moment progression of a lesson and in the context of competing pressures such as time, the attention span of the learners, curricular demands, exam pressures and so on' (Walsh, 2006, p.48). This is done with a belief that it will yield positive results to learners and improve learner performance. Lee and Branch (2018) point out that, teachers differ in their ability to construct learning chances and formulate good communicating decisions. The formulation of good interactive decisions is an imperative consideration of teachers' classroom practice and resultant improved learner performance.

Further to the understanding of teacher beliefs relating to teaching and learning, is that they design and shape teachers' actions in classrooms. (Song & Looi, 2012), for instance, the selection of precedence for teaching engagements and the means in which teachers desire to

expedite learning (Rahman, Singh and Pandian, 2018; Jääskelä, Häkkinen and Rasku-Puttonen, 2017). It is expected that an increase in teaching and learning activities influence learner performance in an expansive way.

## **2.4 Teacher belief about teaching and general learning (curricular and practice Knowledge)**

Different literature has been perused which explains how teacher beliefs impact on teaching and learning in common. Buaraphan (2011) as quoted by Belo et al. (2014) examined establishment of teachers' beliefs about teaching and learning science in the country Thailand. He discovered that the contributors typically utilised the following four metaphors to show their beliefs about teaching and learning in common, which include the following (1) the teacher as a 'nurturer/cultivator', (2) 'knowledge provider', (3) 'superior authoritative figure', and (4) 'cooperative, democratic figure' (Belo, et al 2014, p.91). Belo et al. (2014) explain the four metaphors as follows:

The metaphor of 'nurturer/cultivator' represents the belief that a teacher should nourish students' potential capabilities within a caring environment because the student is a developing organism and learning occurs when students develop at their own pace. The 'knowledge provider' metaphor refers to the opinion that a teacher should transmit knowledge to students because learning occurs when students, as passive recipients of knowledge, accumulate this knowledge. The metaphor of the teacher as a 'superior, authoritative figure' reflects that idea that a teacher should control the learning process because learning occurs when students follow instruction and obey the teacher. Finally, the 'cooperative, democratic figure' metaphor represents the belief that a teacher should coordinate the learning activities in the classroom in such a way that students, as active participants in the community of practice, could learn in a process of collaborative knowledge construction (together with the teacher) (Belo et al., 2014, p.91).

From the above definition of metaphors, the teacher is viewed as someone who is capable of doing variety of activities which are believed to have a major contributing factor towards teaching and learning in common. The four metaphors stated above echo teachers' beliefs about teaching and learning in common, explicitly their beliefs about:

- 1) the goals of education in general (e.g., to provide, transmit and disseminate knowledge to students or to nourish students' capabilities and to stimulate their personal development),

- 2) learning (e.g., passively receiving and accumulating knowledge or actively formulating knowledge),
- 3) the regulation of students' learning processes (e.g., the teacher should control the learning process and the students should obediently follow the instruction or teacher and students collaborate while the teacher coordinates the learning activities in the classroom) (Belo et al, 2014, p. 92).

Teachers' beliefs about educational goals refer to resulting into general development, schooling, teaching and learning. The literature shows that these beliefs are further separated into two 'orientations', which are; an orientation in the direction of:

- 1) qualification and schooling (i.e., a emphasis on learners' qualifications for added education and careers in relations to the essential knowledge and skills) (Belo, et al., 2014).
- 2) personal and ethical innovation of learners in common (i.e., a responsiveness on controlling learners to parenthood and making them for functionality in a democratic society) (Belo et al., 2014, Van Veen et al., 2001).

According to Van Veen et al. (2001), there are basically two distinctive ideologies that elicit these 'orientations heading to instruction'. The first one is that some teachers embrace content-oriented beliefs, which position a superior emphasis on divulging subject substance and on knowledge acquisition by learners. The second one, other teachers possess learning-oriented beliefs, which pays attention on supporting learners' ability to learn; Belo et al. 2014, Meirink, 2007, Van Veen et al. (2001).

With regard to teachers' beliefs about learning, different researchers have shown two profoundly different conceptions of learning (Jääskelä, Häkkinen, & Rasku-Puttonen, 2017; Meirink et al., 2009; Scott, Asoko, & Leach, 2007). The first conception identifies learning as acquisition that comprises the mastery of novel knowledge and skills, resulting into knowledge reproduction, that will stop up 'knowledge-gaps'. The second conception is regarding learning as construction/participation. In this instance, learners are seen as active builders of their own knowledge base; in which they create sense of the world around them and actively participate in the genuine and eloquent learning activities. By so doing learners make use of knowledge acquired during teaching and learning profitably to enhance level of comprehensibility.

Other beliefs about the directive of learners' learning procedures are regularly separated into beliefs supporting either teacher-directed learning or learner-directed learning (Lee and

Branch, 2018; Alisaari, and. Heikkola, 2017; Belo et al., 2014, Meirink et al., 2009; Pintrich, 2004). Teacher-directed learning denotes a situation in which the teacher vigorously regulates and assesses learners' learning progressions, by defining learning products and the kinds of learning undertakings to be set to learners or by rendering structure in the content of the lessons they teach. Furthermore, teachers who prefer teacher-directed learning usually pay attention to instructional approaches that stimulate the conduction of knowledge. In contrast, learner-directed learning discusses the condition whereby learners, to a larger or smaller extent, regulate, supervise, and control certain features of their own learning procedure (for example, learners are expressing their personal learning outcomes) (Lee and Branch, 2018; Alisaari, and. Heikkola, 2017; Azevedo, 2009; Lombaerts et al., 2009; Patrick & Middleton, 2002; Winne, 2010).

## **2.5 Domain specific teacher belief (subject related-PCK)**

Beliefs influence particular aspects of the knowledge teachers decide to draw from when teaching in classroom, (Rahman, Singh and Pandian, 2018; Kaiser, 2014). In this study I have made use of the example of Mathematics as a subject or discipline to indicate and highlight the beliefs teachers have about their individual subjects. Literature on teacher beliefs about teaching of Mathematics shows a variety of information. Golafshani, (2002), p.13, summarised the situation of teaching Mathematics in the following manner:

“One's conception of what Mathematics is affects one's conception of how it should be presented. One's manner of presenting it is an indication of what one believes to be most essential in it ...The issue, then, is not, “What is the best way to teach?” but, “What is mathematics really all about?”

Ernest (1989 as cited by Beswick, 2012) has pronounced three types of teacher beliefs about the nature of Mathematics internationally utilised and broadly implemented. One may share same sentiments with the Instrumentalist when perceiving the first category Mathematics as, “an accumulation of facts, skills and rules to be used in the pursuance of some external end” (Ernest, 1989, p. 250, cited by Beswick, 2012). According to this view of Mathematics the several themes that create the Mathematics discipline are distinct. The second grouping is the Platonist interpretation when they perceive Mathematics as a motionless body of combined, pre-existing knowledge pending its unearthing. In this view the construction of mathematical knowledge and the inter-relatedness amid numerous topics are of paramount significance. The third grouping is the problem solving interpretation where mathematics is viewed as a changing

and imaginative human innovation; a method rather than an invention and the opinion that greatly reflects comparatively current alterations in the manner that mathematicians perceive their subject (Beswick, 2012). Different Mathematics teachers subscribe to some of these categories. In further trying to explain teacher beliefs about teaching Mathematics as a focus area and as school subject, Beswick (2012) has come up with table which presents the refinement of the matrix. The table suggests theoretically realistic insinuations for teaching of all potential grouping of three types of beliefs about the nature of Mathematics with regards to Mathematics as a in a school situation and as a focus area. The explanations of procedures delineated in the matrix cells are anticipated to be perpetual with beliefs about Mathematics teaching and learning. Beswick (2012) has identified the three elements as follows: beliefs about the nature of school Mathematics, beliefs about the nature of the discipline of Mathematics and Mathematics teaching practice.

Table 2.1 below shows the impact of beliefs about the Mathematics teaching in schools

**Table 2** Impacts on practice of combinations of beliefs about the discipline and school mathematics

		Beliefs about the nature of (the discipline of) mathematics		
		Instrumentalist	Platonist	Problem solving
Beliefs about the nature of (school) mathematics	Instrumentalist	School mathematics is about learning basic skills that students will need in everyday life.	School mathematics is about learning basic skills that will allow understanding of higher level more interesting mathematics later.	Mathematics can be creative but you need to have a set of basic skills first. Mathematical creativity is not for school.
	Platonist	School mathematics is a body of hierarchical interconnected knowledge that needs to be learned so that it can be applied to practical situations.	School mathematics is part of a body of hierarchical interconnected knowledge understanding of which forms the basis on which some will learn higher level mathematics.	School mathematics is a body of hierarchical interconnected knowledge understanding of which will enable the gifted few eventually to be mathematically creative.
	Problem solving	Learner/process focus is aimed at motivating students to learn the skills they need in everyday life.	Learner/process focus is aimed at motivating students so that they come to understand more of the body of hierarchical interconnected knowledge that is mathematics.	Learner/process focus is aimed at helping students to appreciate mathematics as a powerful and creative process.

In the table above, Beswick (2012) assumes that, though in the context of their classrooms teachers' beliefs about school mathematics are plausible to be extra influential as compared to their beliefs about the discipline, the last as fundamental rationale for practice. The belief of teachers as school mathematics teachers has greater influence than the belief of teachers looking at maths as a discipline.

The Mathematics teachers do have some beliefs about Mathematics as a subject which include but not limited to the belief outlined by Beswick (2012) that Mathematics is a stunning,

ingenious and useful human effort that is both a technique of knowing and a way of rationalizing things. Some teachers believe that Mathematics self-generating and have coherent content that is “cut and dried”. For them, Mathematics topics are interconnected and plausibly linked within an organizational construction or minimal means. Mathematics is an organised and rational scheme of symbols and processes that clarify concepts appearing in the physical world. Mathematics is an meticulous discipline, inspiring, rigorous free from vagueness and inconsistent elucidations and further affords the chance for a extensive range of high-level mental motion.

Beswick (2012) further highlights what teachers’ beliefs of what Mathematics is not. Teachers believed that Mathematics is not computation, not boring as used to be earlier, something you do in a book, that the content in Mathematics is not cast in stone and prearranged, as it is verbalized by notions existing in the physical world (Beswick, 2012). Thus this chapter looks at the literature that indicate individual teachers beliefs as to how they believe Mathematics is and what they believe Mathematics is not.

## **2.6 Teacher belief and teacher knowledge**

It is imperative that teachers should possess a particular kind of knowledge in order to cascade and share it with learners. This kind of knowledge is called teacher knowledge (Shulman, 1986). Since this study is about the teacher beliefs, in this section I therefore explore literature that speaks to the beliefs teachers have about the amount and kind of knowledge they possess. In the study conducted by Lui and Bonner, (2016), they tried to bridge the gaps which existed in Mathematics teaching which are: 1. How belief influence practice in Maths instruction and 2. How knowledge and beliefs impact on planning amid both pre-service and in-service teachers.

According to Lui and Bonner (2016), a case study conducted by Buhagiar and Murphy (2008) that observed 12 grade six Mathematics teachers' knowledge of their learners' comprehensibility of Mathematics ideas, and discovered that even though teachers claimed to possess good amount of knowledge, the understanding they have is depth deficient. Challenging elucidations of scholar comprehensibility were perceived to impede instructional preparation that in line with what learners actually envisaged. Ramnarain, Hlatswayo (2018); Morris, Hiebert, and Spitzer (2009) believed that although teacher aspirants had the capability of identifying Mathematical sub-concepts of learning objectives for learners, they inevitably

utilised this data to enlighten their instructional procedures. Correspondingly, Heritage, Kim, Vendlinski, and Herman (2009) established that in terms of instructions, teachers were competent to detect learners' faults but had teething troubles utilising information to move to the subsequent instructional strides.

According to Lee and Branch, 2018; Alisaari, and. Heikkola, 2017; Bello, et al, 2014; Van Driel et al. (2008), teachers regularly have a specific tenacity in teaching subject content; as they do “not want their students to learn only specific subject matter, but also aim at more general science learning goals that lie beyond the subject itself” (p. 92-93). These additional broad-spectrum objectives are called curriculum accents that provide responses to learner question as for the reason to acquire a specific knowledge. Educators teaching Physical science believe that when teaching chemistry in schools, they require to take account the ultimate chemistry (i.e. the notion that theoretical concepts ought to be taught prior as these concepts are required by learners’ for imminent schooling and could render the foundation for comprehending the natural domain. Also the understanding that chemistry, technology and the general public (concentrating on link amongst uses of chemical and technical knowledge and learners’ peculiar lives or the resolutions they create), and ultimately that knowledge enhancement in chemistry (including the improvement of scientific abilities and of an indulgent of the sense of chemical understanding and its progressive practice) (Bello et al. 2014) are completely crucial when one has to effectively teach science; De Putter-Smits, Taconis, Jochems, and Van Driel (2011) conducted the study where they wanted to measure, educators’ curriculum accents in teaching science subject. They established that on mediocre Dutch physics educators (95% of them) concurred to a greater degree with the essential science program of study emphasis than as compared to science, technology and the general public.

Chiu and Churchill (2016) conducted a study on teacher beliefs and the use of mobile devices in teaching science, humanities and languages. Teachers’ beliefs normally alternate in the course of and subsequently experiencing, comprehending and utilising innovative technologies and relevant teaching skills (Chiu & Churchill, 2016; Ertmer & Ottenbreitt-Leftwich, 2010; Lee, 2004). The vicissitudes in the teacher beliefs seem to trail expectable designs (Rahman, Singh and Pandian, 2018; Lee, 2004). Understanding design of vicissitudes has tendency to enhance schools to design their professional growth accomplishments and provision of workshops and philosophies to upsurge sustainability of innovative technologies in teaching and learning approaches (Gibbons, Villafane, Stains, Murphy & Raker (2018); Chiu and

Churchill, 2016; Lim and Khine, 2006). In the study directed by Ertmer, Ottenbreit-Leftwich, Sadik and Sendurur (2012), they deliberate the arrangement amongst the beliefs and practices of prizewinning technology-using educators and their perceptions of the barriers impacting their practices. Their findings suggested that teachers were able to enact technology integration practices that closely aligned with their beliefs. Teachers who believed that technology was best used for collaboration purposes described very interesting activities which students collaborated with local and distant peers (Ertmer, et al., 2012). They further argued that teachers who believed that technology provided more opportunities for student choices, described examples in which students chose to demonstrate their learning using different technological tools.

In general, constructivism puts emphasis on the ways that people create meaning of the world through a series of individual constructs (Dhumjay, 2013). The constructivist teaching and learning models require learning that is hands-on, whereby students are actively involved in the learning process allowing them to build a better understanding; minds-on, allowing for learners to develop their cognitive processes, and encourage them to question the validity of the situation; and authentic, presenting learners with real-life problems that they may be faced with, in order to develop them to take a critical look in order to obtain the best possible solution (Ramnarain, Hlatwayo, 2018; Dhumjay, 2013, Christensen 1995).

In many public schools in South Africa, there is a lack of proper laboratory facilities; thus learning of Physical Sciences can become very difficult for learners. As a result Physical Science remains at a very theoretical level without any experiments to advance the comprehension and application of knowledge (Lee & Branch, 2018; Alisaari, & Heikkola, 2017; Makgato & Mli 2006). Thus teachers of Physical Sciences believe that theory and experiments are essential elements of teaching and learning. The knowledge base of teachers is pivotal for effective teaching and learning.

## **2.7 Teacher beliefs about student learning**

Teachers have their particular beliefs about their learners on how they learn and how they should acquire knowledge. Some teachers believed that their learners cannot not achieve what is expected of them while other teachers believed very strongly on the capabilities of their



learners. In this section I perused the literature that speaks to beliefs teachers have about how their learners learn. Prosser (2013) has identified criteria for ensuring effective student learning. The focus of this criterion is on practices and activities that are recognised to enhance student learning, experiences and learning outcomes. So among the practices listed to inform and support staff are:

- Set clear goals and learning outcomes and supports students in understanding the outcomes.
- Uses a variety of teaching methods to enhance learning for understanding and not just learning for reproduction.
- Uses a variety of assessment methods to monitor students' learning processes and to promote learning.
- Reflect on own knowledge of students and their learning and on how to improve teaching to support students and their learning.
- Goes beyond Student Evaluation of Teaching and Learning scores to improve teaching and draws on a wide variety of evidence regarding success in helping students learn (Prosser, 2013, p.34).

According to the funnel of learning principles, active learning will take place when the learner is directly and actively involved in his or her learning process (Dhurumjay, 2013). During this process of active learning the learner not only takes in the information, but also actively engages with the learning material in some way that is positive. According to Ramnarain, Hlatwayo, 2018; Vhurumuku, 2010), active teaching is teaching characterised by high levels of teacher explanation, together with demonstrations and student interaction.

One may share same sentiments with Dhurumjay (2013) when saying that the advantages of active learning are that a larger quantity of information is integrated by learners at one time, interaction amongst learners is improved, learners' academic performance expands, it allows for stimulation of higher order thought as well as developing respect for the views and opinions of others (Unisa Study Guide for Physical Science SDPSO-8 2007). Active learning requires not only a hands-on approach but it also needs for learners to have an inquiring mind and engage in the process of inquiry learning (Ramnarain, Hlatwayo, 2018; Dhurumjay, 2013). Inquiry learning is defined as an approach in which the educator presents the learner with a rather puzzling situation and the learner then attempts to solve the problem by collecting data

and then testing his or her conclusion (Vhurumuku, 2010). In other words it is paramount for learners to have an inquiring mind and to be actively involved in problem solving activities.

## **2.8 Teacher beliefs about teachers themselves**

Most the teachers believe that their different subjects require them to have a good understanding of the subject content and to be able to display foundation competence, practical competence and reflexive competence in the subject. Research shows that although educators can sometimes master the theory of their subjects but putting the theory into practice is a major challenge (Lee and Branch, 2018; Dhurumjay, 2013). The pedagogical knowledge that teachers gain through their qualifications must be applied to their teaching, thereby narrowing the gap between theory and practice (Rahman, Singh and Pandean, 2018; Dhurumjay, 2013, Appleton 2003).

## **2.9 Teacher beliefs about learner performance**

### **2.9.1 Understanding learner performance**

Teachers have a particular belief about learner performance and factor that impact on it. Before I delve into the beliefs of teachers about learner performance, let me define what learner performance is? Learner performance refers to the learners' ability to show comprehension and demonstrate that learning has taken place through a task or an activity (Lee and Branch, 2018; Dhurumjay, 2013, Tschannen-Moran and Woolfolk, 2007). Poor learner performance refers to learners obtaining marks below 30% in the National Senior Certificate Examinations and regarded as failed in that particular subject (Department of Education, 2003). Multiple and interrelated variables that affect learner performance include learners' ability, perception and attitude, socio-economic factors, school related variables and parental involvement. The slow cognitive development of learners is a contributory factor to poor learner performance as shown in different subjects. Giannakopoulos and Buckley (2009), argue tat cognitive skills (include critical thinking, creativity and problem solving) of learners are pivotal for learners to succeed as they are used in the acquisition and application of knowledge in the real life scenarios.

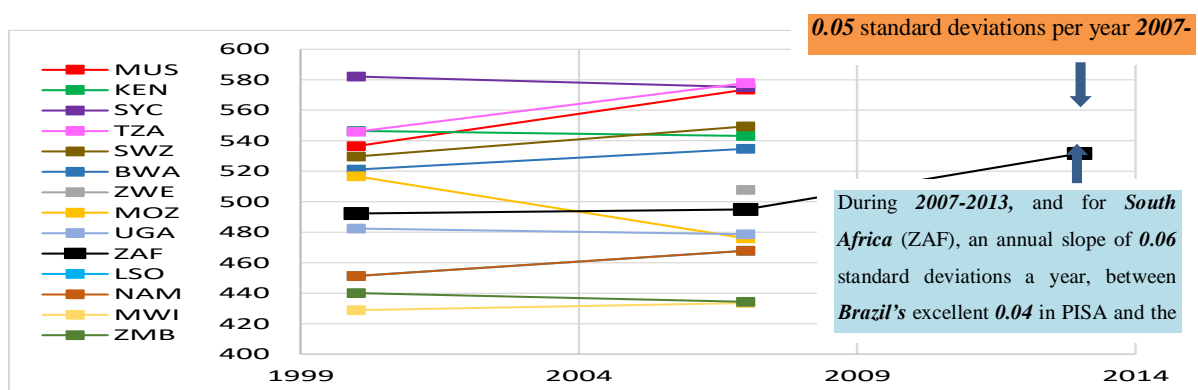
## **2.9.2 Constructing sense of learner performance in South African context compared to world rankings**

This section is dealt with comprehensively in Chapter 1 (see section 1.4 on learner performance). Here, I just present tables and graphical comparisons to illuminate the understanding and influence of learner performance. Learner performance has been a major concern in South Africa. Research has shown that majority (75%) of S.A. learners perform extremely poorly on national tests (such as PIRLS, SACMEQ and TIMSS). Even quintile 4 and 5 schools which are better performing part of the S.A system are not achieving at a comparable level with developing countries (Spaull, 2013). In addition, Sevnarayan (2015) confessed that “South Africa has the worst education system of all middle –income countries that participate in cross-national assessments of educational achievement. What is more, we perform worse than many low-income African countries?” (Sevnarayan, 2015, p. 2). The implication of the statement above is that South Africa is not doing well in terms of learner performance as compared to other third world countries.

According to Kriek and Grayson (2009) the national pass rate in science learning (particularly Mathematics and Physical Sciences) has declined since 2003. Some of the variables that have contributed to the decrease in the pass rate include the educators’ poor understanding of the syllabus, a negative attitude and arriving late to class. However, the recent studies conducted by the Trends in International Mathematics and Science Study (TIMSS), which is a system of international benchmarking assessments which are conducted at 4-year intervals to all participating countries, demonstrated that South Africa did not show any significant progress on the assessments in Grade 8 Mathematics and Science as from 1995, 1999, 2002, 2007, 2011 and 2015 (Makhathini, 2015) have shown a gradual increase in the performance of learners. South Africa’s achievement scores for Maths and Science in Grade 9 from TIMSS from period 2003 to 2015 showed a gradual increase as per following table. TIMSS found that those factors contributed to improved learner performance in Grade 9 and Science was the improvement in teacher collaboration to teaching which included teachers sharing their teaching experiences, work in groups, discussed how to teach a particular topic and so on. TIMSS identified challenges schools and teachers were having including less time for individual learners, too many learners in classes, learners lacking prerequisite knowledge skills, uninterested and disruptive learners, learner absence and shortages of textbooks (Reddy et al., 2016).

The Study conducted by Southern and Eastern African Consortium for Monitoring Education Quality (SACMEQ) which is an international quality ranking system which focuses on primary schools' Literacy and Numeracy in 15 countries it researches has revealed that in 2013, teachers with a particular level of knowledge (in terms of their test scores) were producing better SACMEQ learner results than similarly knowledgeable teachers in 2007. This was most evident in schools with weaker teachers. This says a lot about how learner results improved. The improvement is attributed to the availability of books in schools and classes, better management of teachers and their work and school accountability. The argument forwarded in this section is the belief that some teachers in primary schools lack content knowledge of Literacy and Numeracy. The graph below shows the performance of South African Grade 6 Mathematics and Literacy learners during 2007 up to 2013 tests compared with SACMEQ countries listed below in the x-axis of the graph.

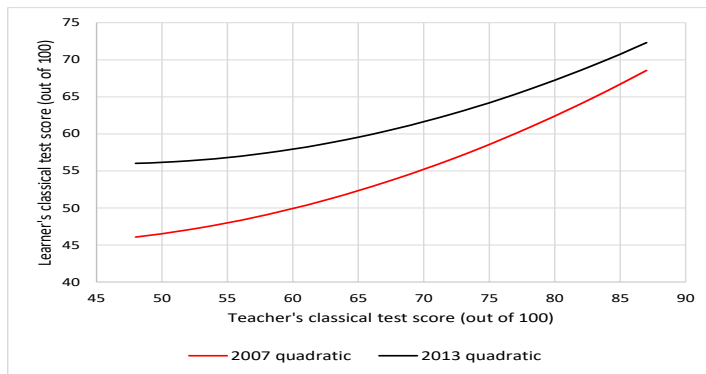
Figure 2.1 Graph showing SACMEQ primary level improvements in Mathematics/ Numeracy and reading/ Literacy for Grade 6



Improvements must of course continue. In 2013, *South Africa* still *performed* worse, in *mathematics and reading*, than five other SACMEQ countries, namely *Swaziland, Tanzania, Kenya* and the island states of *Mauritius and Seychelles*.

In the above graph, South Africa (ZAF) has registered a slight annual improvement of 0.6 on standard deviation as compared to previous years when poor performance was recorded. However, this slight improvement is less significant as more improvement is expected in the years to come.

In 2007 and 2013, teachers and learners were tested on their understanding of quadratic section of Mathematics. Their scores are presented in the graph below.



In 2013, teachers with a particular level of knowledge were producing **better SACMEQ learner results** than similarly **knowledgeable** teachers in 2007. This was most evident in schools with weaker teachers.

Figure: 2.2. The graph comparing tests scores of teachers and learners in quadratic section of Numeracy in 2007 and 2013. Adapted from February 2017 National Senior Certificate DBE Report.

All the above say a lot about how learner results showed slight improvement in SACMEQ scores as a result of teachers' improved knowledge in 2007 and 2013. It is the availability of books, better management of teachers, school increased teacher belief and teacher knowledge that have contributed to an improvement in learner performance as recorded in the graphs and notes provided above.

Analyses of teacher scores, with respect to common items, in SACMEQ 2013, reveal small improvements (not statistically significant) in both reading and Mathematics. SACMEQ found the following as:

- Mathematics and Science achievement scores improved from 'very low' to a 'low' national average. Change is possible, we must continue to strive for higher scores, but we must accelerate the pace of change.
- Achievement continues to remain highly unequal. Learners' home and school environments differ, contributing to intergenerational inequality. The conditions and climate for learning in homes and schools is improving, but the pace of change is slow.
- Socio-economic factors and early educational environments influence later achievement. The educational inequalities apparent early on, persist through education and life.

- Good quality pre-school settings should offer a boost for learners. Learners in independent and fee-paying schools benefit the most but learners in no-fee schools do not seem to benefit. Quality pre-school education is crucial for those most in need.
- Teaching and learning interventions must focus sharply on what happens inside schools and classrooms. Classroom teaching must emphasise a strong knowledge base.
- Both the tangible assets (books, calculators, labs) and non-tangible assets (attitudes, expectations, safety, caring) matter.

In addition, the performance of South African learners is not only measured in terms of test scores but also in terms of other factors. The graph below shows the impact of school and home contexts in each school type in South African schools.

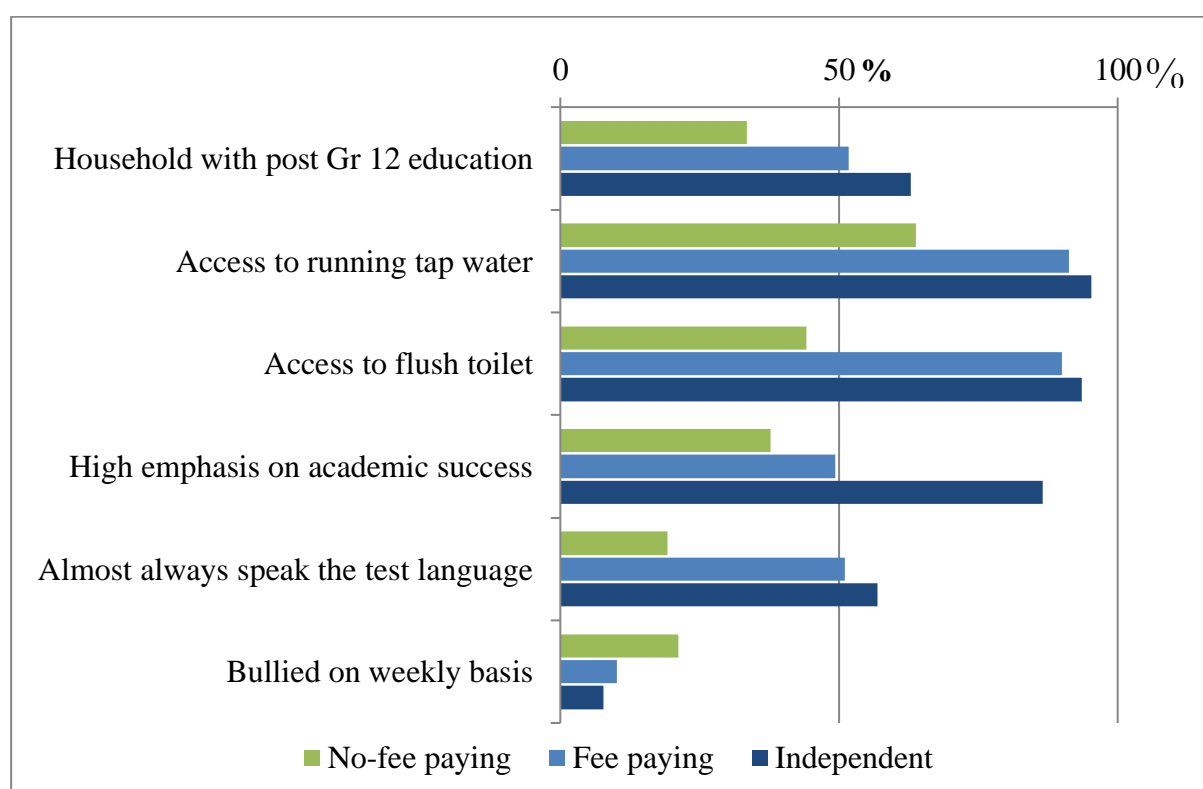


Figure 2.3 The graph showing school and home contexts, by school type in 2015. Adapted from Howie et al. (2017), PIRLS Literacy 2016: South African Highlights Report, p. 12

The graph above shows the percentage of schools from school types; fee paying, no- fee paying and Independent school which are having running water.

The Progress in International Reading Literacy Study (PIRLS), an international assessment standard that assesses reading comprehension and monitors trends in reading literacy at five

year intervals, assessed Grade 4 and 5 learners in eleven official languages. In 2006, 2011, 2016 PIRLS recorded an underperformance by SA learners with South Africa occupying the last position from the bottom with a score of 320 out of 1000 for Grade 4 and grade 5. The graph below demonstrates that in 2016 South Africa has achieved 320 points which are far below the mean of 500 compared to Finland, Ireland, Hong Kong and Singapore above 566 points and with Russia Fed leading with 581 points. These statistics demonstrate that South African learners are performing badly as compared to other countries.

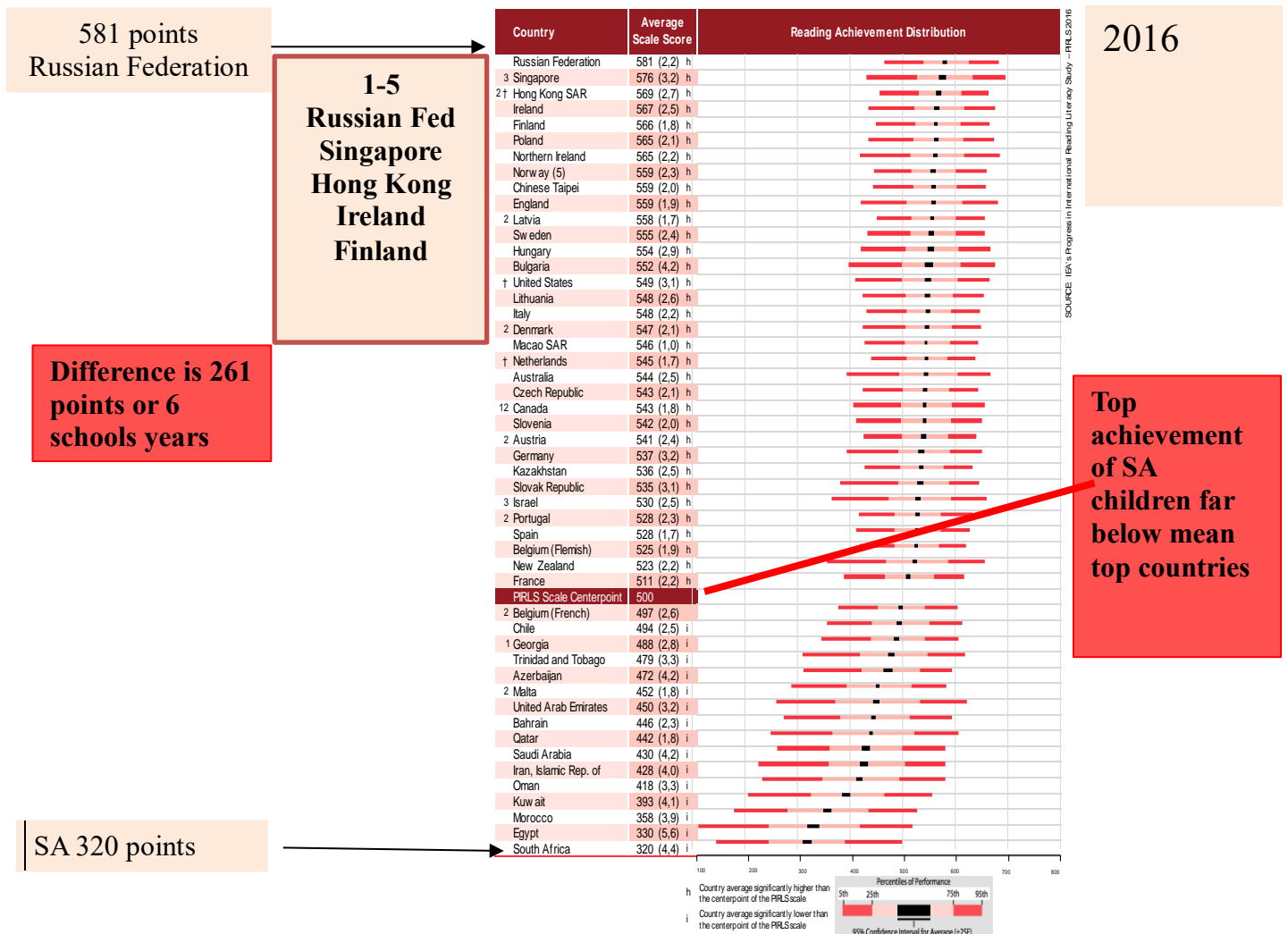


Figure 2.4 Graph shows position and performance of South African learners compared with other countries. Adapted from Howie et al. (2017), PIRLS Literacy 2016: South African Highlights Report, p. 12

### 2.9.3 South Africa's Grade 12 NSC learner performance

The learner performance in South African education system is also measured in terms of Grade 12 National Senior Certificate (NSC) results. The NSC and NCE (National Certificate Examinations) results are paramount as they give learners access to institutions of higher learning and some learners into the market sphere. The Department of Basic Education released 2017 matric results and were analysed in different categories. For the interest of this study I have looked at the results impacting on learner performance based on quintile ranking. The graph below shows that more learners achieved Bachelor passes in quintile five schools as they were 48 030 as compared to passes in quintile one as they were 23039. There were fewer learners achieving Higher Certificates (7875) compared to learners in quintile 1 (21706). The trends shown in this graph indicate impact posed by factors such as availability of resources as well as teacher qualifications as this study has pointed out in its findings.

#### TYPE OF PASSES PER QUINTILE 2017

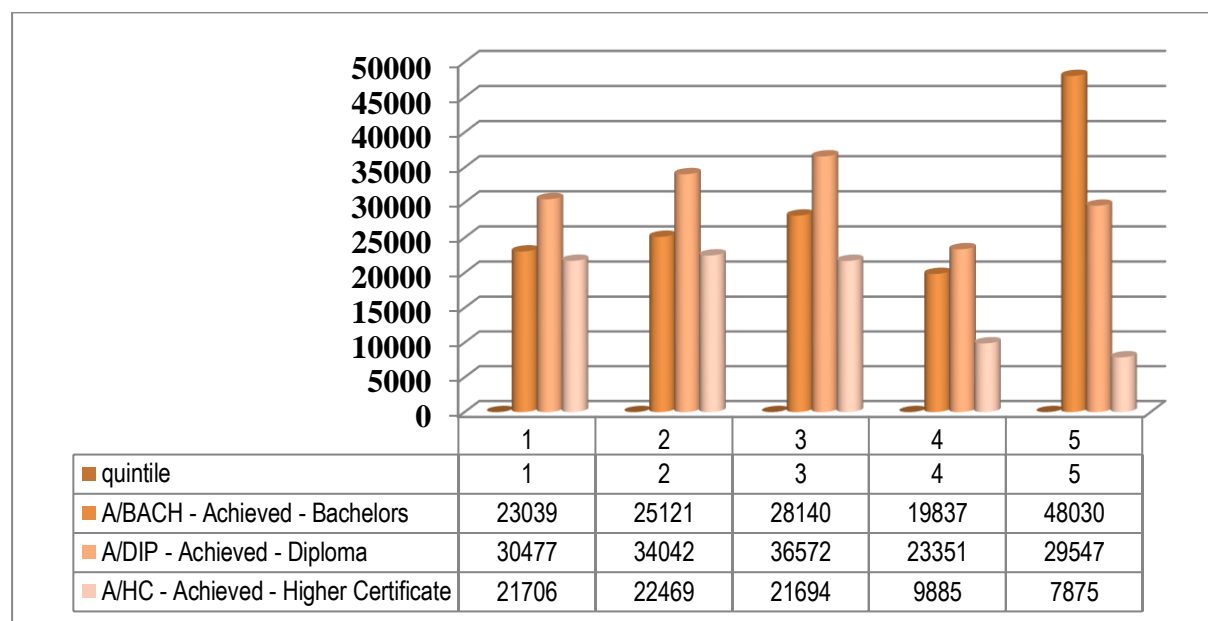


Figure 2.5 The graph showing Grade 12 learner performance during 2017 NSC results in terms of quintiles and number of Bachelor, Diploma and Higher Certificate passes. Adapted from Director General's Road show NSC results and PIRLS reports (DBE, 2017).

The report by DBE showed that there were still more Grade 12 learners who achieved bachelor passes in quintile four and five schools as compared to quintile one to three schools which again shows that the supply of resources impacts on learner performance as shown in the table below.



	2016		2017	
Quintile	Q1-3	Q4-5	Q1-3	Q4-5
No of Bachelors	78 886 (52%)	73 810 (48%)	76 300 (53%)	67 867 (47%)

Figure2.6 Table comparing 2016 and 2017 number of Bachelor passes national. Adapted from Director General's Road show NSC results and PIRLS reports (DBE, 2017).

The performance of schools in the NSC results is still posing a challenge in terms of learner performance. According to DBE report there were few schools who obtained 100 % in NSC results with the number being even lesser for schools in the category of quintiles 1-3. If one looks at the table below, only 63 schools in quintile 1 achieved 100% in 2017 NSC as compared to 129 schools in quintile 5 achieving 100%. The trend showed in the table below is congruent with the notion that lack of resources impact negatively on learner performance.

#### **SCHOOL PERFORMANCE BY QUINTILE – 2017 (NATIONAL)**

Quintiles	Exactly 0%	0 - 19.9%	20 - 39.9%	40 - 59.9%	60 - 79.9%	80 - 100%	Exactly 100%
Quintile 1	3	53	207	412	568	570	63
Quintile 2	3	34	144	356	602	579	57
Quintile 3	0	16	109	286	517	476	33
Quintile 4	1	1	5	55	207	327	32
Quintile 5	0	0	2	18	107	595	129
Total	7	104	467	1 127	2 001	2 547	314

Figure 2.7 The table showing the performance of schools during 2017 NSC results in terms of quintiles. Adapted from Director General's Road show NSC results and PIRLS reports (DBE 2017).

#### **2.9.4 Teacher beliefs about factors influencing learner performance**

There are other factors that influence learner performance. These factors include bad attitudes of teachers about the subjects they teach. Some teachers have negative attitude about their

subjects which make them to be demotivated. Learner performance can also be linked to a poor understanding of the policy documents that the teacher is required to implement; in this case the National Curriculum Statement (NCS) and Curriculum Assessment Policy Statements (CAPS) it is imperative for the teacher to have curricular knowledge as articulated by Shulman (1986). Another factor is that many teachers use out-dated teaching methods and lack basic content knowledge (Lee & Branch, 2018; Alisaari, & Heikkola, 2017; Dhurumjay, 2013, Makgato & Mli, 2006). The fact that teachers are not familiar with the content of the subjects they teach is also a contributor to poor learner performance. If teachers do not know the content of what they are teaching, it is likely that learners will not perform well. Research conducted in many schools including primary schools in Australia has shown that despite a lack of resources, many school teachers did not teach subjects such as Physical Sciences because of a poor understanding and thus lacked confidence to teach the subject (Dhurumjay, 2013). It is clear from the literature above that learner performance in schools is influenced by the number of factors that should always be considered.

**Limited resources** in many schools are also a contributing factor for poor learner performance. In the study conducted in Australia, resource limitations are a significant constraint on the quality of teaching and learning (Rahman, Singh & Pandian, 2018; Dhurumjay, 2013). Learner performance is not solely dependent on the availability of resources but also on the effective use of the available resources by the educators. According to Dhurumjay (2013), South Africa has implemented many post-apartheid policies to address the issues surrounding science education; the focus of these policies have been on “increasing investment in science education through educating more science teachers, providing more access to students to study science at schools, and supplying more science equipment to schools” (Dhurumjay, 2013, p.13). One may further share the same sentiments with Dhurumjay (2013) when saying that lack of school-based or home-based resources is also another factor that can affect poor performance at school level and that in many public schools in South Africa, are lacking facilities such as laboratories; computers, thus learning of Physical Sciences and any other science subjects can become very difficult for learners. Thus science subjects especially Physics remain at a very theoretical level without any experiments to augment the understanding and application of knowledge (Lee and Branch, 2018; Alisaari & Heikkola, 2017; Makgato & Mli 2006). Not all public schools in KwaZulu-Natal are equipped with sufficient resources (e.g. textbooks); as a result in some schools, learners are not given a textbook to take home Dhurumjay (2013). The issue of resources therefore becomes the ‘survival of the fittest’, meaning those learners who are

coming from a higher socio-economic status are more able to buy textbooks for themselves as compared to those who are coming from poor backgrounds. The TIMSS (1999) research report stated that learners who come from homes that are rich and having educational resources have a tendency of performing well as compared to those that are coming from disadvantaged backgrounds. These learners have access to home resources such as books in the home, educational study aids in the home, study desk, dictionary and a computer (TIMSS, 1999).

**Teaching strategies** can also be regarded as the contributing factor towards poor learner performance. Demonstration of lessons and chemical reactions should be an important component of the teaching and learning process in a Physical Sciences classroom in particular. Testing of ideas is not confined to pen and paper, but rather active involvement of learners in investigative lessons (Heeralal & Dhurumjay, 2016; Vhurumuku, 2010) as well as active participation of learners can enhance learner attitude thus improve learner performance.

**Parental involvement** also plays a cardinal role in the schooling process and learner performance. Communities, should support schools continuously. Schwartz (2001) reiterates the fact that school communities and families should continually give support to the performance and achievement of their children. Schwartz (2001) further explains that the role of the family is to develop a home environment conducive to learning; participate in homework completion; and meet performance standards or anything related to contributing to educational success. One may share same sentiments with Dhurumjay (2013) when saying that learners tend to get frustrated and lose hope when their parents do not help them with school work at home and as a result their performance levels begin to drop which eventually leads to poor performance. The fact is that most of the parents (particularly Africans) who are parenting learners now are victims of apartheid regime which did not equip them with skills they needed to learn as there were segregated schools and few African schools were offering critical subjects like Maths, Physics and Accounting. Therefore parents have inadequate knowledge to assist their learners with regards to subject matter.

The study conducted by Trends in Mathematics and Science Study (TIMSS) conducted in 2015 showed that learners' attitudes towards science subjects impact on learner performance as TIMSS of 2015 reported that the formulation of a positive attitude towards subjects such as science, is an important and integral goal of education (Howie, Combrinck, Roux, Tshele, Mokoena, & Mcleod Palane, 2017). Many learners tend to avoid certain subjects because of

their fear of the subjects and a lack of self-confidence. This negative attitude can result in poor learner underperformance and as a result being unable to get the required results for university entrance (Ramnarain, Hlatswayo, 2018; Mullins, 2005).

Spaull (2013) argued that many South African children are acquiring unbearable learning deficits early on in their schooling careers which then become the reason for underperformance in later years. They do not comprehend the elementary numeracy and literacy during foundation phase stage.

**Socio-economic status** is also another contributing factor that impacts on learner performance. According to Baker and Jones (2005), there is an association between low socio-economic status and poor performance in science in school. However, Dhurumraj (2013) argues that it is not the socio-economic status per se but factors associated with home resources and background experiences that affect the learners' performance. According to Saiduddin (2003), factors such as unsteady homes, drug abuse and juvenile pregnancy contribute to poor performance among learners in South Africa. Teenage pregnancy in South African schools is escalating; subsequently, the learners tend to drop out of school in their numbers. This results in an on-going cycle of poverty in the homes, community, province and nation as a whole.

**Language barriers** can also be cited as a factor affecting learner performance in schools. The fact that most subjects are taught in a language that is not mother tongue makes learning to be difficult for most learners who do not use English as home language. They struggle to comprehend the content (which includes both practical and theoretical aspects of a subject) as they struggle with the language (Jääskelä, Häkkinen & Rasku-Puttonen, 2017; Van der Poll & Van der Poll, 2007). The Trends in Mathematics and Science Study (TIMSS) indicates a connection between lower achievement levels in science and home language which is different to school language (Howie, Combrinck, Roux, Tshele, Mokoena, & Mcleod Palane, 2017) which is English in a South African context. Therefore, language plays an imperative role in the understanding of technical terms in a subject (Ramnarain & Hlatswayo, 2018; Van der Poll & Van der Poll 2007). The learners who are taught in their mother tongue, the practical aspects of any other subject are in an advantageous position than those taught in non-mother tongue. I concur with Dhurumraj (2013) when saying that with the availability of the right resources educators are able to demonstrate experiments which can help these learners who use non-

mother tongue as well as those who are being taught in their mother tongue to gain a visual experience of the events that are taking place, and thus improve their understanding.

**Lack of learner discipline** and commitment to schooling process has a direct link to learner performance. Heeralal & Dhurumjay (2016) and Van der Westhuizen, Mosoge, Nieuwoudt, & Steyn (2002) argue that learners with poor behaviour (such as ignoring all instructions by the teachers, failing to do and or complete work given, showing disrespect to teachers) tend to spend more time being reprimanded or outside the classroom. As a consequence the contact time of actual teaching and learning is reduced. Teachers believe that lack of discipline and lack of learners' commitment to their school work are the causes for low learner attainment. In other words, teachers believe that if schools were to improve learner performance, they needed to ensure that learner discipline is maintained at all respect.

## **2.10 Teacher beliefs about the context in which they teach (school situation and quintile ranking)**

### **2.10.1 Understanding the environment or context of the schools**

One may share same sentiment with Langa (2013) when saying that learners' success, positive change and progress are not influenced by the school they attend but by also by their parents, wider family members, peer groups and community at large. It is therefore cardinal for schools to understand the communities they are serving and to ensure that the vision of the school is shared by all stakeholders including learners, parents, teachers and community as a whole. The involvement of stakeholders in the processes of the school will ensure that school communities take ownership of the schools their learners attend and as a consequence schools will function well. When communities are not directly involved in setting up, supporting or overseeing schools, the school is seen as 'foreign' institution within the community which it serves (Langa, 2013; Gershberg, Meade & Anderson, 2009). Thus the lack of the above can be detrimental to the schools.

The research has indicated that it imperative to understand the context if we want to understand how schools function (Langa, 2013). Available research suggests that contextual (environmental) factors play an integral role in learner performance and subsequently school performance (Jääskelä, Häkkinen, & Rasku-Puttonen, 2017; Beck & Shoffstall, 2005; Petty & Green, 2007; Chance & Segura, 2009; Langa, 2013).

### 2.10.2 Understanding quintile ranking system

All public schools in South Africa have been classified or categorised into five quintiles for the purposes of funding, post provisioning, possible performance awards for schools and other programmes such as school nutrition and transport (Department of Basic Education, 2013)). Oxford Dictionary defines quintile as any five equal groups into which a population can be divided according to the distribution of values of a particular variable. According to Investopedia Dictionary, a quintile is an equal-size of a population. The quintile system was part of National Norms and Standards for funding public schools introduced in 1998 to improve equity in education (DBE, 2014). For the past 18 years, all public schools in South Africa have been funded according to category they have been allocated by the National Education Department. Different quintiles were based on many different criteria from the type of sanitation a school had to whether the school had library or not, whether parents pay or not. The quintile, in which the school was based, was on the basis of rates of income, unemployment and illiteracy within the schools catchment area. Schools in quintile 1, 2 and 3 have been declared as 'no fee' schools whereas quintile 4 and 5 schools are 'fee paying' schools (Media Release, Western Cape Department of Education, 2013). The funding of schools is based on these quintiles. Learners in quintile 1, 2 and 3 got a much bigger subsidy from the government as compared with the learners from quintiles 4 and 5. Schools falling in quintiles 4 and 5 were expected to supplement their allocation with extra school fees that they charged learners (Department of Basic Education, 2014). The following table shows the distribution of funds per learner to schools across all five quintiles.

Table 2.2 The table below showing the allocation of funds per quintile

In terms of Paragraph 110 of the NNSSF, the National Targets Table published in Government Notice No. 718, Government Gazette No. 40065 of 10 June 2016 is hereby updated to include 2019 target amounts. The no fee threshold will be R1, 243 in 2017:

	2017	2018	2019
NQ1	R1,243	R1,316	R1,394
NQ2	R1,243	R1,316	R1,394
NQ3	R1,243	R1,316	R1,394
NQ4	R628	R660	R699

NQ5	R215	R228	R241
No fee threshold	R1,243	R1,316	R1394
Small schools National fixed amount	R28,791	R30,490	R32, 289

\* 2018 and 2019 figures inflation adjusted CPI projected inflation rate adjusted

Adapted from: Government Gazette No 40065, 10 June 2016

It is imperative to mention that the government has found the quintile system too complicated and difficult to manage. As a result in September 2013 the DBE Minister of Education, Angie Motshekga proposed that two category systems of classifying schools would be either as no-fee school or a fee-paying school (DBE, 2014).

### **2.10.3 The relationship between belief about teaching and belief about learning**

One would share same sentiment with Ramnarain, Hlatswayo, (2018) and Prosser (2013) when saying that high quality teaching affords or facilitates high quality student learning. In other words, high quality learning comes as a result of high quality teaching. Teaching is not the end in itself; teaching is part of the on-going process that will result into effective and high quality student learning. The issue of teacher belief about teaching involves teaching experience, teacher knowledge, teacher motivation and teacher confidence. Jenkins (2018) verifies that one of the main obstructions to executing classroom inquiry practices is teachers' beliefs about teaching and learning as well as classroom management to some extent as teachers have rooted beliefs in the value of the style.

In contrast, issues of teacher belief about learning involve the manner in which learners learn in classrooms as well as the context in which the schools operate. Student learning needs to be at heart of all conversations and activities dealing with quality learning. For example, (Ramnarain & Hlatshwayo, 2018; Herrington & Scott, 2011) found that teachers who believed that science learning was associated with inquiry-based scientific practices, infused their teaching with inquiry activities.

It has been a general observation in most studies that teaching and learning and teachers' classroom practices were consistently aligned with their belief systems (.Jenkins 2018; Ramnarain & Hlatshwayo, 2018; Jääskelä, Häkkinen, & Rasku-Puttonen, 2017; Soldat, 2013) Also studies demonstrate the fundamental links between teacher beliefs, classroom practice, student beliefs, and ultimately student learning. The literature has pointed out that there is the relationship between teachers' belief about teaching and teachers' belief about learning as most teachers believe in teaching that impacts on learners and avail themselves in schools to learn. However, in some instances learners do not want to learn.

## **2.11 Conclusion**

In this chapter comprehensive definitions of beliefs and teacher beliefs were given. The whole concept of teacher belief was explored with the implications for teaching and learning as the study is about such. While great deal of literature has dealt with teacher beliefs, very little literature that discusses beliefs in relation to teaching and learning and that looked specifically at the influence the teacher beliefs had on learner performance.

The next chapter deals with the theoretical framework underpinning this study.



## **CHAPTER THREE**

### **THEORETICAL FRAMEWORK**

#### **3.1 Introduction**

I would like to open this chapter by quoting the words of a powerful leader, Mahatma Gandhi who said: “If I have the belief that I can do it, I shall surely acquire the capacity to do it even if I may not have it at the beginning.” In the previous chapter, I reviewed literature on teacher beliefs and learner performance. I started by defining what beliefs and teacher beliefs are. The literature on teacher beliefs and studies conducted on teacher beliefs were perused. In Chapter three, I review literature that focuses on the theoretical framework that underpins the study, and demonstrates how this framework has informed the data management process with a view to illuminate the findings of the study. In this respect, Bandura’s self-efficacy theory and a conceptual framework called ‘inspired and dispirited’ developed by Naicker (2014) is engaged with as theoretical and conceptual frameworks that informed my study.

#### **3.2 Theoretical framework**

A theoretical framework is a depiction of a particular set of observed phenomenon in terms of a system of hypotheses and laws that relate these hypotheses to one another (Mngomezulu, 2014; Phakisi 2008). A theoretical framework permits unequivocal hypotheses to be made about interrelatedness in the world (Mngomezulu, 2014 and Henning et al., 2004). In the case of this study, where the understanding of teacher beliefs about teaching and learning and the implication thereof on learner performance are being explored, theory derived from educational psychology (Bandura’s self-efficacy) in the social context are noteworthy in establishing the framework for the complexity of contributing factors to the said phenomenon. Dorothy (2014) highlights that a theoretical framework affords an underpinning outline which permits me to frame the research problems and scrutinise suitable research questions and also assisting me in guiding the section of research design as well as clearly demarcating boundaries for the study. This chapter therefore presents these boundaries that are influenced by certain theories and conceptual framework chosen in order to channel the study towards a particular direction rather than being vague and verbose.

### **3.3 The origin of self-efficacy**

#### **3.3.1 Conceptualising self-efficacy belief**

The concept of self-efficacy was first developed by Rotter (1966) and focused on ‘Locus of control’. Efficacy is defined by Rangraje (2002) as the individual's perceived expectancy of obtaining valued outcomes through personal effort. Efficacy pertains to personal effectiveness, a feeling that one can control events and produce outcomes. Rotter (1966) proposed that people believe either they personally influence results that affect them (internal locus control) or that external environmental elements are responsible (external locus of control) for the influence they have (McKinnon, & Lamberts, 2014). In 1977, Bandura took the external locus of control strand of self-efficacy which was then grounded in social learning theory as a key concept. According to McKinnon and Lamberts (2014), Bandura (1977) came up with two elements of self-efficacy: ‘efficacy expectancy’ (belief in one’s ability to achieve a desired outcome or behaviour); ‘outcome expectancy’ (belief that the achievement of the desired behaviour will have a desired outcome). Zimmerman (2000) argues that although people develop a strong outcome expectancy based on their phobia (like fear to touch snake or frog) and that proper techniques (e.g. for handling a snake or frog) would protect them from adverse results (such as biting), people still differed in their professed capabilities to use the methods outside the healing setting. Zimmerman (2000) further argues that even though self-efficacy and outcome expectations were both hypothesised to affect motivation but Bandura suggested that self-efficacy would play a much greater role because “the types of outcomes people anticipate depend largely on their judgements of how well they will be able to perform in a given situations’ (Bandura, 1986, p. 392). Self-efficacy provides teachers with confidence to effectively advance curriculum and respond to the social and emotional well-being of their students (Bandura, 2007). In recent years, teacher self-efficacy has emerged as a discernable area of study (Klassen, Tze, Betts, & Gordon, 2011).

Self-efficacy is a multi-dimensional construct that is essential to the social-cognitive approach and hypothesises individuals as being agentic, purposeful, proactive, self-evaluative, and self-regulatory (Bandura, 1989; Zimmerman, 2000; Komarraju and Nadler, 2013) in whatever they are doing. Bandura (1995) pronounces teaching self-efficacy as a teacher’s belief about their ability to teach and produce desirable results for learners. Bandura (1997) defined self-efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p.3). Self-efficacy is the belief in one’s own ability to successfully

accomplish something (Brown, Malouff & Schutte, 2013). They further allude that people generally will only attempt things they believe they can achieve and do not do things they believe they will fail in doing them. Bandura (1997) asserts that many actions are performed in the belief that they will bring about a desired outcome, but they actually produce outcomes that were neither intended nor wanted by those people. Belief of personal efficacy constitutes the key factor of human agency. If people believe they can have no power to produce certain results, they will not attempt to make things happen (Bandura, 1997). Social cognitive theory postulates that self-efficacy is an agentic motivational positioning that fuels tenacity in the face of difficulties, amplifies intentionality and long term planning, and stimulates self-regulation and self-correcting actions (Bandura, 2001). Self-efficacy beliefs refer to judgement people hold about their capabilities to organize and affect courses of action to attain given goals (Caprara, Vecchione, Alessandri, Gerbino & Barbaranelli, 2011). For Aalleren-Smeets, Van Der Molen and Asma (2011) self-efficacy refers to the perceived level of capability or confidence that an individual has for performing a particular behaviour that may contain difficult and stressful elements. Yusuf (2011) further defines self-efficacy as referring to the personal beliefs or to an individual's confidence in his or her own ability to accomplish effectively specified tasks. Perceived self-efficacy is a belief in one's capabilities to organize and execute the courses of action required to produce given attainments. Self-efficacy is a future oriented belief about the level of competence a person expects he or she will display in a given situation.

According to Zimmerman and Cleary (2006) self-efficacy is a belief about what a person can do and how well an action can be done by that person. Within this perspective, self-efficacy is seen as a multidimensional construct and as the most central mechanism of human agency (Skaalvik, & Skaalvik, 2016). It is the capability to sway intentionally one's functioning and life situations (Bandura, 2006). Self-efficacy regulates how environmental opportunities and impairments are professed and therefore influences peoples' goals, values, and behaviour (Bandura, 2006; Schunk & Meece, 2006). Bandura accentuates that people with low self-efficacy tend to amplify possible problems and threats and inhabit with their limitations. Same sentiments could be shared with theorists who argue that strong academic performance is associated with increased confidence and likely inspires individuals to take greater responsibility for successful task accomplishment (Zimmerman & Kitsantas, 2005;). By the same token, students with higher ability who have better performance and obtain more positive appraisals report higher self-efficacy and less anxiety (Pajares & Johnson, 1996; Komarraju

and Nadler, 2013). In other words individuals with higher self-efficacy levels, will also perform better and have less stress or anxiety because they can cope more effectively with cognitive demands, pursue a mastery of goal orientation (Hsieh, Sullivan, & Guerra, 2007), perceive their learning tasks to be interesting and treasured, and employ meaningful learning strategies. It can also be argued that people with strong efficacy believe that they can succeed in doing difficult activities as they see those tasks as challenges that are there to be mastered other than threats to be evaded (Brown et al., 2013; Bandura, 1994). Contrary to the above, people who doubt their ability and strength to achieve a particular activity will perceive the task as threats thus avoiding it instead of taking it head on.

Self-efficacy beliefs are made up of two concepts: efficacy expectations and outcome expectations that are to inspire all behaviours. Efficacy expectations can be defined as one's belief in being able to manage a behaviour required for achieving certain results in a successful manner whereas outcome expectations are defined as predicting that a particular behaviour will end in certain consequences (Guidetti, Viotti, Bruno, & Converso, 2018; Arslan, 2012; Bandura, 1977). Self-efficacy belief influences the motivation of how teachers teach and how learners learn. Students and teachers who are having a weak self-efficacy belief are less willing to teach and learn, cannot concentrate on instructional tasks appropriately, do not want to challenge difficulties or are not willing to make efforts to overcome these difficulties they are faced with (Arslan, 2012; Bandura, 1993). One can also agree with Arslan (2012) when saying that self-efficacy can be improved on learners specially in primary schools because that is where most of the learning occurs and on teachers as well, at all levels as long as they are provided with the opportunity and training to have high self-efficacy beliefs. They can be empowered to grow up to be self-efficient persons that can overcome the challenges they face in an efficacious way at the other educational stages of their future life. One needs to concur with Rangraje (2002) when he says that self-efficacy refers to a teacher's overall judgement of his perceived capacity for performing a given task. Self-efficacy assists teachers to set goals in relation to the effort and the time requisite to perform specific activities. The extent to which a teacher continues in his/her efforts will depend largely on how powerfully he/she believes in his/her capabilities. It is a natural phenomenon that teachers prefer tasks which they feel are within their capability and avoid those tasks which falls beyond their capability. According to Hoy and Miskel (1996, p.113-114), "people who have the same skills but different levels of personal efficacy may perform at different levels because of the way they use, combine and sequence their skills in a changing context".

Self-efficacy beliefs influence the way teachers feel, behave, think and motivate themselves (Bandura, 1993). Self-efficacy judgements are cognitive processes. The way in which people contemplate is a cause of much human distress. Teachers, who consider themselves inefficacious, often dwell on their inadequacies (Rangraje, 2002). They perceive activities which they cannot cope with, as menacing. The more they dwell on their insufficiencies, the more threatened they feel. They may even go to an extent of mentally exaggerating the strength of these threats. This leads them to experience a high level of cognitively generated distress (Bandura, 1986). It can be argued that those experiences teachers had will result in teachers having a strong sense of coping inefficacy.

### **3.3.2 Self-efficacy theory**

Self-efficacy theory emphasised that human action and triumph depend upon how profound the interactions between one's personal thoughts and a given task (Bandura, 1986, 1997, Yusuf, 2011). Some researchers (Yusuf, 2011, Aid Suraya & Wan Ali, 2009; Bandura, 1994) say that individuals with low sense of self efficacy will have negative thoughts and perceive the task's demands given to them as threatening, not as challenging and thus set very low objectives for themselves as compared to those with high level of self-efficacy. Consequently, extensive evidence from empirical studies has shown the effects of self-efficacy on students' academic success (Bandura, 1997; Chemens et al, 2001, Maimunah Ismail et al. 2005; Yusuf, 2011). The causality effect of self-efficacy on academic achievement has become the central focal point for most researchers as it has become interesting to note whether one's self confidence is a primary cause of academic success or whether the success is engrained largely in the learners' incredible efforts and skills (Yusuf, 2011). Previous studies have indicated that when self-efficacy is included in a psychological model, the effects of other constructs on learner academic achievement will be reduced and self-efficacy influence increased (Guidetti, et al. 2018; Pajares and Johnson, 1996; Young and Choi, 2000; Yusuf, 2011).

People do not live in isolation but are a part of a larger group and work together in order to produce desired results. This is called collective agency. "People's shared belief in their capabilities to produce effects collectively is a crucial ingredient of collective agency. Collective efficacy belief "is an emergent group-level attribute that is the product of coordinative and interactive dynamics" (Bandura, 1997, p.7). According to Enochs, Smith & Huinker (2000) people develop a universal expectancy concerning action and outcome

possibilities based upon life experiences. In addition, they develop specific beliefs with regards to their abilities to manage change within themselves. Behaviour is sanctioned when people not only expect specific behaviour to change into a desirable outcomes (outcome expectancy), but they also believe in their own capability to accomplish the desired behaviours (self-efficacy).

### **3.4 Teacher self-efficacy**

Teacher efficacy refers to teachers' belief that they can produce an outcome by successfully performing necessary behaviours. Teacher efficacy is a type of self-efficacy, a cognitive process in which people (teachers) construct beliefs about their capacity to perform at a given level of attainment (Bandura, 1993). In other words, it refers to the cognitive process teachers constructed beliefs about their ability to do work of teaching learners and attaining results. Teacher self-efficacy is a concept used in contemporary educational studies and has been developed by Social Cognitive Theory of Bandura (1977, 1997, and 2006). Social cognitive theory theorists Tschannen-Moran & Woolfolk Hoy (2001: p. 783) defined teacher self-efficacy as a teacher's "judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated." Skaalvik (2007, p. 612) provided a similar delineation as "individual teachers' beliefs in their own ability to plan, organize, and carry out activities that are required to attain given educational goals."

The construct of teachers' sense of efficacy refers to the situation specific expectation that teachers have of helping learners learn. Teachers' sense of efficacy is also defined as "... the extent to which the teacher believed he had the capacity to affect student performance" (Ashton & Webb, 1986, p. 8). Efficacy involves the cognitive, social and behavioural sub-skills, which when put into action, serve various purposes. Simply possessing the different sub-skills are insufficient (Rangraje, 2002). According to Hoy and Miskel (1996) efficacy is not alarmed with the skills that one possesses but rather with the judgements of what one can do using one's skills. Rangraje (2002) further argues that a teacher should be able to judge the extent of his ability to accomplish a particular level of performance. Of great apprehension, is the ability of the teacher to utilise these sub-skills correctly and adequately under different circumstances. Teacher efficacy is the extent to which teachers believe that they can affect student learning. Rangraje (2002) alludes that teacher self-efficacy is the magnitude to which teachers believe

that they have the capability to impact student performance. He believes that teacher self-efficacy is a more explicit construct than self-concept or self-esteem, because it pronounces the teacher's estimates of personal effectiveness. Self-efficacy beliefs show teachers' evaluation of their abilities to effect positive change to learners at his or her disposal.

In their extensive work on teacher efficacy: its meaning and measure, Tschannen Moran *et al.* (1998) mention that teacher efficacy is the extent to which the teacher believes he or she has the capacity to affect student performance. It is also about the degree to which teachers believe that they can control the reinforcement of their actions that is whether control of reinforcement lies within them or in the environment. Teacher efficacy can be conceptualized as teachers' beliefs that factors under their control ultimately have greater impact on the results of teaching than do factors in the environment or in the student factors beyond the influence of teachers (teacher locus of control, or: responsibility for student achievement definition, used by researchers that followed the Rotter definition). The teachers' beliefs or convictions that they can influence how well students learn, even those who may be difficult or unmotivated. Teacher efficacy is the variable that accounts for individual differences in teaching effectiveness. Teacher efficacy is the teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context.

According to Rangrage, Merve, & Urbani (2005), the first three definitions in the second group are based on whether teachers believe that the control of teaching and learning situation depends on them or in the environment they are at. The fourth definition is based on teachers' self-belief about their own capacity and willingness to teach. The fifth and subsequent definitions perceive efficacy using a psychological lens. Teacher's sense of efficacy is defined as a teacher's judgement of his or her capability to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated (Guidetti, et al. 2018; Ngidi, 2012, Tschannen-Moran, Woolfolk Hoy, and Hoy 1998). It is one of the few teacher characteristics related to student achievement (Ashton and Webb, 1986; Ross, 1998; Woolfolk Hoy, Davis, and Pape, 2006).

According to Rubie-Davies, Flint and McDonald (2012), teacher efficacy is also linked to a teacher's belief in his or her ability to influence learner outcomes. So, for them, teacher efficacy relates to a context-specific assessment of one's ability to instruct learners in a particular

subject area or in any situation existing in a classroom situation. Woolfolk Hoy, Hoy, and Davis perceive teacher efficacy as a ‘future oriented, task-specific judgement’ (Woolfolk Hoy *et al.*, 2009, p. 628). For Aalleren-Smeets, Van Der Molen and Asma (2011) self-efficacy contributes towards teachers ‘attitudes towards teaching a particular subject. However these attitudes do not fit into one of the overall cognitive, affective or behavioural dimensions. In theoretical terms self-efficacy is different from the purely cognitive and affective components; it results from a combination of feelings and beliefs about internal factors (abilities, knowledge and experience) that influence the feeling of being in control with regards to the execution of a particular behaviour (Aalleren-Smeets *et al.*, 2011).

One may share the same sentiments with (Black, 2015; Bangs & Frost, 2012; Scheerens, 2010; OECD, 2011) when arguing that the development of the learners in terms of social, emotional, academic needs are essential elements of learner improved performance. Teachers’ self-confidence and competence are fundamental to improving learners’ academic performance. According to Skaalvik, and Skaalvik, (2016), self-efficacy is a situation specific construct and fluctuates depending on for example the apparent difficulty of the task, the availability of resources, the perception of impediments, and the time allocated for the task. Therefore, a teachers’ self-efficacy may be influenced by his or her perception of stressors (obstacles) in the environment which may lead to the task being perceived as more challenging to conduct. I share the same sentiments with Skaalvik and Skaalvik (2016) when they say the example that a Maths teacher who based on previous experiences expect the students to be active and motivated for working with mathematics problems will likely have higher self-efficacy for teaching mathematics than a teacher who expects the students to be unmotivated and to pay less attention to the instruction. Supporting this expectation recent research has shown that teacher self-efficacy is negatively related to teachers’ perception of impediments in the school environment, such as discipline problems (Collie *et al.*, 2012; Fernet, Guay, Senécal, & Austin, 2012; Gilbert *et al.*, 2014; Klassen & Chiu, 2010, 2011; Klassen *et al.*, 2013; Skaalvik & Skaalvik, 2010; Yoon, 2014). A number of international studies show that teacher self-efficacy predicts higher teacher engagement and job satisfaction.

One may share same sentiments with Rangraje (2002) who states that “in terms of causal structure, initially, teachers rely heavily on their past performance in judging their efficacy and setting their aspirations. Once they gain sufficient experience, their performance attainments become stronger because of their personal efficacy beliefs.” The above sections were presented



in order to give a broad understanding of teacher self- efficacy and other related concepts. The understanding of the concept of self-efficacy guided me in making sense of data produced as well as when I was developing my model in chapter 7. The following section present the actual constructs of efficacy beliefs and how they assisted me in analyzing data in chapters 5 and 6 of this thesis.

### **3.5 Constructs of efficacy belief**

The construct of self-efficacy has its theoretical foundations in Bandura's (1977, 1997) Social Cognitive Theory. According to Bandura (1997), self-efficacy beliefs are constituted from four principal sources of information which are:

“enactive mastery experiences that serve as indicators of capability; vicarious experiences that alter efficacy belief through transmission of competencies and comparison with the attainments of others; verbal persuasion and allied types of social influences that possesses certain capabilities; and physiological and affective states from which people partly judge their capableness, strength, and vulnerability to dysfunction.”(p.79)

#### **3.5.1 Enactive mastery experiences or Performance complements**

Mastery experiences occur when a person attempts to do something and is successful in doing so; the person has mastered that thing. They are defined as past successes or failures. People are more likely to believe they can do something new if it is similar to something they have already done well before (Brown et al. 2005, Bandura, 1994, 1997). Strong efficacy expectations are developed through repeated success of behaviour and reduced efficacy expectations can be as a result of failure (Brown et al., 2013). Performance accomplishments refer to the consequences of individuals' performances in a given tasks whether teaching is for teachers or learning for learners. Individuals' successful experiences enable them to have positive self-efficacy beliefs while their unsuccessful experiences, not surprisingly, cause them to have negative self-efficacy beliefs (Arslan, 2012). The development of belief in one's personal efficacy will change in response to experience and cognition (Gibbs and Powell, 2012, Bandura, 1997). Mastery of experiences refer to the actual experiences which an individual undergoes, and are regarded as the most influential sources of efficacy information (Rangraje, 2002). According to Moloi, Grobler and Gravett (2002) teachers who endeavour towards mastery are usually those who are committed in doing their work. The way in which teachers perceive organisational efficacy ascends from their authentic experience of the social influence of that particular organisation (Rangraje, 2002).

According to Black (2015), mastery experience is the perception the teacher is having for extraordinary teaching performance, which contributes to the anticipation of aptitude in future teaching. For Black (2015), efficacy is reinforced when the success is accomplished early without too many impediments or when success is realized with little support on a difficult task. Contrariwise, efficacy is weakened if triumph is achieved through extensive external assistance or if the task is insignificant or too easy. Efficacy is lowered if the performance is professed as a failure, which adds to the expectation of failure for future performances (Black, 2015).

Personal mastery behaviour (Gibbs & Powell, 2012) can be increased through participant modelling, performance exposure, self-instructed performances, and performance desensitisation (the process where bad behaviour is paired with a pleasant or good behaviour). A teacher who has taught a subject and has attained 100% pass rate in Matric, becomes more confident in teaching and strives to attain more. The confidence is boosted because of mastery experience. In other words, mastery experience is prior success at having achieved something similar to the new behaviour. Mastery experience has been found to be the most salient contributor to efficacy beliefs amongst both novice and experienced teachers (Gibbs & Powell, 2012). In order to develop a strong sense of efficacy, difficult tasks also need to be attempted, and obstacles be worked through (Brown et al., 2013, Bandura 1994). People tend to avoid difficult tasks which lead to efficacy not developing. Mastering something new is not easy; one has to do lots of practices and sometimes opportunities are not always there for one to practice. The most effective source of teacher self-efficacy is previous mastery experiences. The previous experiences are coupled with succeeding or failing on actions which are analogous to the present activity (Skaalvik, & Skaalvik, 2016).

It is imperative that there should be an improvement in learners' performance. In order to improve, Margolis and McCabe (2006) suggested that learners should be provided with moderately challenging tasks with contemplation into their interests and inclinations, that they should be taught how to utilise learning approaches so as to cope with these tasks, that peer models should be implemented, and that they should be reinvigorated to try new innovative things. I found this line of argument relevant in my study in a sense that my study looked at teacher beliefs and influence teacher beliefs have on learner performance. Learner performance formed an integral part of this study. It is imperative for teachers to master their subjects so as

to ensure that learners perform better in schools in which they teach hence mastery experience is an important construct of my study. Therefore, this construct helped me a lot when I analysed data in Chapter 5 and 6 and in developing my conceptual framework in chapter 7 of this study. I was able to comprehend data presented by teachers as I categorized it variety of ways.

### **3.5.2 Vicarious experiences/ Social Modelling**

Vicarious experiences (also known as observation of successes and failures of others or models who are similar to oneself) is where one observes other people performing threatening activities without adverse consequences (Brown et al., 2013; Rangraje, 2002)). Vicarious experiences are when one is observing other teachers mastering similar challenges. Teachers get inspiration from different sources ranging from “images during teacher education, professional literature, conversations in the staffroom, media images, and directly observing teachers teach.” (Black, 2015, p.80) According to Arslan (2012) vicarious experiences refer to the knowledge teachers and learners gain by comparing their performances with those of their friends or colleagues. When a teacher or learner discerns that his/her performance is better than those of his/her friends or colleague, his/her self-efficacy beliefs will improve. He/ she could have a negative self-efficacy belief if he/she notice that his/her performance is lower than those of his/her friends.

Personal self-efficacy can also be enhanced by showing that the activity is do-able with little effort and persistence. Vicarious experience can be enhanced through live modelling or symbolic modelling (Bandura, 1977). The act of watching someone including yourself succeeding in completing something expected of you would increase self-efficacy. However, watching someone like you failing in doing something would deter or threaten self-efficacy. One is persuaded that if others can do it, one too have the capability to raise their performance (Bandura, 1997). Individuals convince themselves that if others can do something, they can at least achieve some improvement in their performance (Rangraje, 2002; Hoy & Miskel, 1996). Watching skilled teachers, especially if they are admired and trustworthy, affects the observer’s confidence because they assess their ability by comparing themselves with others in similar plights (Black, 2015; Poulou, 2007).

People who observe models are anticipated to acquire their emotions and in that way, their friends’ low or high self-efficacy beliefs affect their own self-efficacy beliefs as well (Arslan, 2013). According to researchers (e.g. Black, 2015 and Rangraje 2002) if novice teachers

observe master teachers, believing that they are capable of success in a similar situation will boost their efficacy; similarly observing a teacher fail erodes confidence in the capability to teach in a similar context, unless the person feels they are more skilled than the person they observed.

Brown (2013) argues that vicarious experiences is also increased by workshops and training sessions. For Brown (2013) watching others in training, a class or playing during games can provide observational experiences and enhance self-efficacy particularly if the person performing or learning a specific behaviour is similar to the one who is observing that behaviour. In other words, the more one associates one's self with the person being watched, the more the influence on the belief one has to copy the behaviour that is observed. One may share sentiment with Rangraje et al. (2005) when they advocate that teachers with strong sense of efficacy are open to new ideas and willing to experiment and experience new methods to be better meet the needs of the learners.

There are numerous factors which have an impact on one's self-efficacy. One such factor is being unclear of one's capabilities. According to Bandura (1986), "perceived self-efficacy can be readily changed by relevant modelling influences when people have had little prior experience on which to base evaluations of their personal competence" (Bandura, 1986, p.399). Another factor which influences one's self-efficacy concerns the criteria by which ability is evaluated. Activities that produce clear external information about the level of performance provide a factual basis for judging one's capabilities (Rangraje, 2002). Rangraje (2002) further argues that although modelling experiences are weaker than direct experiences, they can yield substantial vicissitudes on one's self-efficacy if they are well executed. Social modelling is in line with my study as it helped me comprehend the activities of teachers as some of the teachers emulated their teaching strategies and techniques based on what they personally observed from other teachers in the workplace. I was able to interpret and made sense of what teachers believed in during analysis stage when it comes to teaching and learning in the classrooms.

### **3.5.3 Verbal persuasion/ Social Persuasion**

Verbal persuasion also known as social persuasion occurs when people are persuaded verbally that they can accomplish or master the task given to them (Brown et al., 2013). Verbal persuasion is the situation whereby the teachers or learners are convinced of success by the people in their social environments (Arslan, 2012). When their managers of teachers, or

teachers of learners, parents and classmates tell them that they have the competence to carry out a task, they will be stimulated to make efforts to perform that task better. *Verbal persuasion* is response in the form of praise or strategies to increase teaching and learning (Black, 2015; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Relational support from colleagues significantly contributes to novice teachers' discernment of self-efficacy (Black, 2015; Tschannen- Moran & Woolfolk Hoy, 2007). Encouraging words alone are inadequate in strengthening self-reliance in teaching and learning. The power of the persuasive words is reliant on the reliability of the persuader (Black, 2015). However, the persuader needs to be vigilant against endeavouring to raise idealistic beliefs of personal competence in an individual (Rangraje, 2002). Black (2015) argues that the feedback can be general or specific and that the comprehensive feedback on teaching performance affords specific information on whether the achievement is superior, satisfactory, or mediocre comparative to others teaching and learning activities in similar situations. . It can also be argued that there is a great possibility that self-efficacy can be lowered if the feedback is too severe and unclear. Productive and focused feedback is likely to increase self-efficacy (Fives, Hamman, & Olivarez, 2007; Knoblauch & Hoy, 2008). For Guidetti, et al. 2018; Skaalvik and Skaalvik (2016), Black (2015), a high level of guidance from school management teams (SMTs) positively compares with teacher candidates' or learners' self-efficacy because of the social support from colleagues and the school administration.

People are led to believe that they can successfully finish task or behaviour through the use of suggestion, encouragement or self-instruction. For Bandura (1997), "social persuasion serves as a means of strengthening people's beliefs that they possess the capabilities to achieve what they seek. It is easier to sustain sense of efficacy, especially when struggling with difficulties, if significant others express faith in one's capabilities than if they convey doubt" (Bandura, p.101). Bandura (1977) argued that because verbal persuasion is not stranded in personal experience, it is a weaker inducer of efficacy and may be extinguished by histories of past failures. It is true that to say that when teachers and learners in a school get verbal encouragement from others such as SMT, it helps them to overcome self-doubt and instead focus their best to the given task.

It is highly possible that in some instances, teachers may possess limited knowledge about something and therefore relies on the opinion of other teachers. It is therefore imperative to screen the opinions of others to check whether they are reliable, valid or competent before they

are implemented. "Mixed experiences with persuasory efficacy appraisals are common because they are used for flattery, encouragement or manipulative reasons, as well as for realistic assessments of how well recipients can manage prospective situations" (Bandura, 1986, p. 406). For this reason, it is imperative for persuaders to have the necessary knowledge skills and acceptable level of credibility so that their influence on the self-efficacy of others is not twisted (Rangraje, 2002). In any instance, teachers can only be persuaded by others, if they have confidence in the view of the others. The above assertions are relevant to this study as the study explores teacher beliefs about teaching and learning and teachers believe that they can persuade and can be persuaded to teach in a particular ways. This construct helped me a lot in gaining meaning and understanding of teacher beliefs as I analysed and presented data in subsequent chapters.

### **3.5.4 Physiological and affective state**

According, to Bandura (1997, p. 106) "in judging their capabilities, people rely partly on somatic information conveyed by physiological and emotional state. Somatic indicators of personal efficacy are especially relevant in domains that involve physical accomplishments, health functioning and coping with stressors". According to Brown et al. (2013) the physical and emotional states that occur when someone contemplates doing something provide clues as to the likelihood of failure or success. Stress, anxiety, worry, general health, mood, personality and fear all negatively affect self-efficacy and can lead to a self-fulfilling prophecy of failure or ability to perform the feared tasks (Brown et al, 2013, Bandura, 1997, Pajares, 2002; Rangraje, 2002). Arslan (2012) defines *Psychological state* as referring to teachers or learners' mental state and the effects of classroom ethos on their self-efficacy. Encouraging and threatening classroom situations have their own impacts on their self-efficacy beliefs of those individuals. Teachers and learners are empowered to develop positive self-efficacy beliefs in encouraging, motivating, challenging classroom environments in which they felt contented and free to express themselves in an easy way (Arslan, 2012). Contrary, they tend to have negative self-efficacy beliefs in threatening and embarrassing classroom environments in which they do not feel comfortable or could not express themselves freely as they would like.

According to Black (2015, p. 80), "physiological arousal is the level of emotional arousal in teaching situations and either adds or diminishes teaching competence." Tschannen-Moran et al., (1998) explain that teachers who feel composed when teaching perceive the sensation as an indication of aptitude and anticipate future success. High levels of physiological arousal

may encumber teaching and inhibit one's knowledge and skills; however, "some individuals who experience arousal, such as increased heart and respiratory rate may perceive the arousal as positive or negative energy depending on the individual and circumstances" (Black, 2015, p.80). The above assertion indicates that attention and vigour for teaching may be improved with moderate levels of arousal.

Perceived self-efficacy can be enhanced by lessening emotional stimulations such as fear, stress and physical anxiety since they are allied with decreased performance which reduced triumph and other avoidance behaviours (Bandura, 1977, 1997). Bandura further stated that emotional arousals can be alleviated with repetitive symbolic exposure that permits people to practice how they will deal with stress, relaxation methods and symbolic desensitisation. According to Caprara et al. (2011) perceived academic self-efficacy, which include the perceived capability to both master school subjects and self-regulate one's own teaching and learning activities, predicted junior high-school performance of the learners. It is therefore justified that the general well-being of a teacher must be improved to evade aversive arousal of self-efficacy. According to Rangraje, (2002), fear reactions can arouse further fear and teachers who are fearful of their incompetence, can provoke in themselves, feelings of anguish, which have an impact on their performance.

Physiological and emotional states are caused by thinking about the act of undertaking new behaviour (Brown et al, 2013). It occurred when one is thinking of doing something with the intention of succeeding but not sure whether the person will thrive or fail. Physiological arousal for example occurs when a teacher is noticing a heartbeat when facing a challenge. Therefore one needs to concur with Rangraje (2002) when saying that information which is acquired through physiological arousal affects the cognitive process through the formation of judgements. Physiological arousal affects people differently; high achievers view arousal as a facilitator whereas low achievers regard it as a debilitator (Bandura, 1986). The state of the mind of the teacher or of the learner can also affect perceived self-efficacy judgements through physiological arousal. If the arousal is in tune with the mood that the teacher or the learner is having, it would have a positive outcome towards teaching and learning. In other words, the more intense the mood, the stronger will be the effect on the teacher or the learner in a given plight.

Environmental factors exert strong influence on how an internal condition is interpreted and thus the efficacy impact of physiological arousal on self-efficacy will differ depending on the situational factors singled out and the meaning given to them (Bandura, 1997). The emotional arousal affects self-efficacy and self-efficacy affects the decisions people make. The improvement in emotional state as a result of reduction in stress or emotional arousal will lead to change in self-efficacy (Brown, 2013, Bandura and Adams, 1977). Our own responses and emotional reactions to situations are also playing vital role in self-efficacy.

Physical reactions, emotional conditions, stress, anxiety, moods and so on can contribute on how a person feels about their capabilities to a particular situation as Bandura (1997) noted that it is not the sheer intensity of emotional and physical reactions that is important but rather how they are perceived and interpreted. People need to learn to minimise stress and to elevate mood when facing difficult or challenging circumstances, in that way they can improve their self-efficacy coping levels.

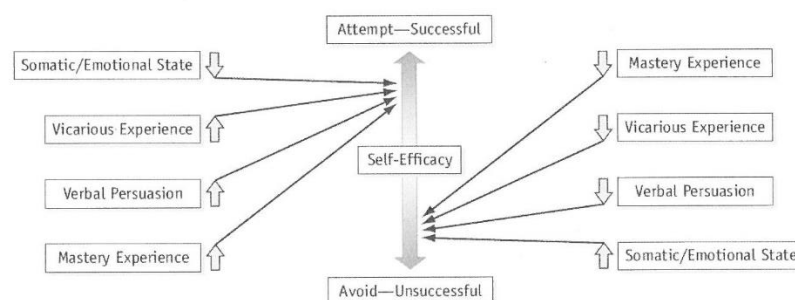


FIGURE 2-5 Self-Efficacy Theory

**Figure 3.1:** Diagram showing the influence of self- efficacy theory constructs on teacher activities. (Adapted from Brown et al. 2013)

### 3.6 General teaching efficacy

General TE refers to “teachers’ general belief that good teaching practice can overcome external factors in promoting positive outcomes for children,” (Sharma & Sokal, p.11, 2015) There are certain conditions that bring about constraints in the performance of a teacher. One such condition is the lack of incentives. Teachers who see themselves as being efficacious, as well as those who possess the necessary sub-skills to perform a task, may decide not to do so



because of the lack of incentives (Rangraje, 2002). Another factor is the lack of adequate resources to carry out a particular activity. The lack of resources limits the performance of a teacher (Bandura, 1986).

One may share same sentiments with Rangraje (2002) when arguing that teachers' sense of efficacy is affected by direct and indirect influences. Direct influences comprise the learners in the classroom, and the principal and SMT. Indirect influences include learners' families, the community, the school organisation and the school culture. The indirect effects of the home, community, and culture play a significant role in school ethos. These influences affect learners and teachers in different ways. When the interests of two organisational actors differ, it could lead to organisational instability (Rangraje, 2002, Ashton & Webb, 1986). For instance, if parents come to school and begin to tell teachers how they must teach, this could result in a conflict situation, and can create threat to the teacher's performance efficacy.

Teachers' sense of efficacy is reciprocal in nature as it, "affects teachers' behaviour and is, in turn, influenced by the teachers' perceptions of the consequences of that behaviour" (Ashton & Webb, 1986, p.13). Teachers' sense of efficacy has a prospect of affecting learner achievement, and, in turn, learner achievement is likely to inspire teachers' sense of efficacy (Rangraje, 2002). Teachers with a high sense of efficacy have high expectations of learner achievement and work harder with their learners. In this regard, their learners perform better in their work, and this positively affects the teachers' sense of efficacy. Teachers' perceived efficacy influences student attainment and, in turn, learner performance has an influence on teachers' sense of efficacy.

Teacher's self-efficacy beliefs may impact a learners' success in different ways if they are exposed to favourable teaching environment. According to Caprara, Barbaranelli, Steca & Malone (2006) teachers with high self-efficacy beliefs are having much possibility of implementing educational innovations in the classroom and to utilise classroom management technics and certain teaching strategies to inspire students' self-sufficiency and thus reducing safekeeping control, taking accountability for learners with special learning needs, managing classroom challenges (Chacon, 2005), and keeping learners on task. Conversely, teachers with a very low sense of self-efficacy will barely perform the above practices. Thus it is cardinal for the teachers to have high level of efficacy in order for them to elevate their teaching capabilities. Moreover, teacher's professed self-efficacy is also concomitant with improved

learner's motivation, increased self-esteem, resilient self-direction, affluence in managing school changes, and more optimistic attitudes toward school (Caprara et al, 2006).

Teacher's self-efficacy may also contribute to encourage learners' sense of efficacy, endorsing their participation in class activities and their efforts in facing challenges (Caprara, et al., 2006 & Ross, Hogaboam-Gray & Hannay, 2001). Other findings propose a collective effect between a teacher's declared self-efficacy and a learner's achievement, demonstrating that teacher's seeming self-efficacy is viewed as high in schools with high-achieving and well-behaved learners (Caprara, et al, 2006; Ross, 1998). Teachers of talented and disciplined learners are more likely to be efficacious in their activities and tasks than teachers of learners who present learning or disciplinary hiccups, the repetitive experiences of accomplishment with learners may complement their experience and contribute to their forceful sense of efficacy. A robust sense of teacher's self-efficacy inspires a strong commitment to the profession and collegial relationships with colleagues and parents (Coladarci, 1992; Imants&Van Zoelen, 1995 & Caprara et al, 2006), contributing profitably to the advancement of a rich and exciting learning atmosphere. Teachers who are full of self-efficacy attitude incline to increase in value of other school stakeholders' influence to the actions of the school, to view the principal, colleagues, staff, students and parents as acting in congruence with their responsibilities, and to view the whole school as a system capable of following its mission (Caprara, Barbaranelli, Borgogni, Petitta, & Rubinacci, 2003; Caprara, Barbaranelli, Borgogni, & Steca, 2003). The research conducted in many studies showed connection between teacher efficacy and teacher satisfaction which is in line with positive learner performance in different environments including schools (Bandura 1997 & Caprara et al, 2006). Understanding of self efficacy gained from this setion helped me in analyzing and making sense of data produced and in formulation of the findings of the study.

### **3.7 Personal teaching efficacy**

According to Sharma and Sokal (2015) Personal TE refers to that specific teacher's belief in himself or herself as an agent of change in a particular school or context. Teacher teaching efficacy is also made up of teacher characteristics. "Teachers' characteristics comprise their expertise, gender, personality and ideology" (Rangraje, 2002, p.75). The knowledge and expertise which teachers possess have a direct impact on their sense of personal teaching efficacy. Possessing appropriate knowledge and expertise is most prospective to augment teachers' sense of personal teaching efficacy (Rangraje, 2002). On the contrary, those teachers

who do not possess the knowledge or skills to deal with the plights they face, develop feelings of meagre. So, in order to be the good teacher, one has to develop the confidence in teaching and improve the knowledge the teacher possesses.

### **3.8 Comparative studies on self-efficacy**

In this section of the chapter I concentrated on comparing the studies conducted by different authors and theorists. Different findings were found to have an impact on self-efficacy and teaching and learning in different environments.

Yusuf (2011) conducted a study on the impact of self-efficacy, achievement motivation and learning strategies on students' academic achievement. It was found in this study that there is a direct and indirect effect of self-efficacy and indirect influence of achievement motivation and self-learning strategies on participants academic performance which indicated the meditational role of self-efficacy on achievement motivation and learning strategies (Yusuf, 2011). According to Yusuf (2011), the above findings were consistent with existing literature such as (Young and Choi, 2000; Habibah Ellias, 2009, Mahmud Bin Hj Abd Wahab, 2009) on self-efficacy, achievement motivation, learning strategies and academic success.

The study conducted by Skaalvik and Skaalvik (2016) on teacher efficacy and potential stressors, it looked at the dimensions of self-efficacy for: instruction, adapting education to individual students' needs, motivating students, keeping discipline, cooperating with colleagues and parents, and coping with changes and challenges. Three of the potential stressors which are low student motivation, and lack of supervisory support and lack of discipline were negatively related to teacher self-efficacy. It was found that the lack of supervisory support predicted teacher self-efficacy negatively. This is in accordance with social cognitive theory in which verbal persuasion is viewed as one source of self-efficacy (Bandura, 1997). Low student motivation also predicted teacher self-efficacy negatively. A possible interpretation for Skaalvik and Skaalvik (2016) is that motivating the learners is viewed as a significant part of the instructional process. Therefore, experiencing students to be unmotivated may be construed as a personal failure to inspire students for schoolwork, which may lead to a lack of self-efficacy for teaching. On the potential stressor of discipline, the finding that discipline problems were unrelated to the result variables were mainly surprising because previous research has shown that disruptive student behaviour is predictive of overall job stress

and emotional exhaustion as well as lower levels of commitment and teacher self-efficacy (Skaalvik and Skaalvik, 2016, 2011a; Collie et al., 2012; Fernet et al., 2012; Klassen & Chiu, 2010, 2011)

In another research lead by McKinnon and Lamberts (2014) aimed to determine if short professional development (PD) workshops in science centres positively influenced the science teaching efficacy of school teachers. The findings of this study indicated the increase in self-efficacy of all but two pre-service teachers. The hands-on nature of the workshop activities was cited positive interests to teachers as opposed to boring, demotivating and unrealistic university lecturers and courses as they alleged. This result according to McKinnon and Lamberts (2014) was consistent with the idea of mastery experiences being a powerful provider of efficacy beliefs as also observed by Perera (2010) in his examination of hands –on activities. These outcomes highlight the significance of science centre programmes to teacher PD. Both in-service and experienced cohort of teachers reported increased science teaching efficacy but further blamed their respective schools that they are not supportive in terms of implementation of increased influenced teaching and ultimately the effectiveness of the PD. The study further revealed that school environment is a major determinant of whether self-efficacy increases influence teaching practice. In other words, those teachers who worked in schools where they experienced barriers to effective teaching through behavioural problems, tended to demonstrate less positive self-efficacy.

In the study conducted by Klassen et al. (2013) it was found that elementary teachers who participated in a long-term, intense (over 100 contact hours annually) science professional development program displayed significant gains in their science teaching self-efficacy. Context beliefs decreased slightly after participation. Several background variables were found to be predictive of teacher beliefs including how often teachers spend teaching science. Males tended to display more positive beliefs than their female counterparts. Teacher beliefs and the number of hours participating in the research-based professional development program were significantly predictive of students' science achievement. As found in earlier studies, teaching self-efficacy is positively related to student achievement (Goddard et al., 2004; Ross et al., 2001). That relationship was further supported by the study conducted by Lumpe (2012). In his observational study of teachers' classrooms, he found that teachers' classroom practices were consistently aligned with their belief systems. Also studies demonstrated the fundamental links between teacher beliefs, classroom practice, student beliefs, and ultimately student learning.

Understanding the links in concepts above made me to make sense of teachers' responses.

### **3.9 Inspired and dispirited teachers: The effect on teacher belief**

In order to get a broader understanding of teacher beliefs about teaching and learning as well as resultant learner performance, it became imperative for me to further explore the literature on teachers' beliefs. In this study I have used conceptual framework constructed by Naicker (2014) which is called 'inspired and dispirited'. In trying to understand teacher resilience in her study on critical incidents of teachers, Naicker (2014) had coined the following four concepts: 'enablers' and 'dis-enablers'; 'inspired' and 'dispirited'. Naicker's study concluded that there were 'enablers' that promoted teacher resilience and 'dis-enablers' that eroded teacher resilience when faced with critical issues or plights.

#### **3.9.1 Understanding 'enablers' that boost teacher resilience**

Naicker (2014) defined enablers as components that "enhance teacher resilience such as social support, teachers' moral duty, teacher agency, positive emotions and positive school cultures that enable teachers ability to remain resilient in spite of different challenges and setbacks they faced"( Naicker, 2014, p. 222). If teachers are inspired, Naicker argues that they are 'inspired'. For the purpose of this study, I only concentrated on the following three components which were relevant to my study.

#### **3.9.2 Engaging in social support**

In terms of social support, Hawdon, Räsänen, Oksanen and Ryan (2012) proclaim that social solidarity is an indispensable form of support during a person's everyday life as it plays a vital role in increasing a person's well-being while experiencing challenges in their practices. Social support promotes self-concept and self-esteem for teachers which result in them being able to cope with adverse conditions (Day and Gu, 2010). The social support that teachers received came from various sources such as the situation in which they live and work as well as from the other structures within school environments (Naicker, 2014). Naicker (2014) further argued that the teachers in her study received support from learners, colleagues, school leadership, parents, family, friends, the teacher union and the Department of Education. Walsh (2007) opposes that strong connections and social support counteract feelings of helplessness and insecurity experienced by victims and encourages resilience. It inspires hope, affords a platform for the exchange of information and instigates efforts for reclamation. The teachers in Naicker's study pointed out that the social support they received made them feel validated,

affirmed, accepted and evoked a sense of fitting when their self-confidence was weakened by the critical incident. Therefore the understanding of the above information was paramount in elucidating the responses of teachers when asked about their beliefs about teaching and learning.

### **3.9.3 Moral duty and a sense of vocation**

Bullough and Hall-Kenyon (2012) strongly believe that it is the teachers' call to teach that keeps pushing teachers to attain their goals even if they face extensive pressures from learners, other teachers, parents and school management team (SMT). They thus conclude that this is likely to be a source of teacher resilience. The teachers in Naicker's study pointed out that it was a sense of vocation their moral duty to teach learners that served as driving force behind their persistence to assist learners though conditions in their schools were unfavourable. Day, Sammons, Stobark, Kington, & Gu (2007) indicated that teachers' internal values of a need to serve the learners are what propelled teachers' abilities to gain emotional strength and resilience to address the challenges existing in their work places. It rendered them with resources where they were able to draw strength to accomplish the stressful work. According to Naicker (2014), the teachers in her study further indicated that their moral duty and moral obligation to their learners were what motivated them to wake up each morning and literally 'drag' themselves to work against all odds. This is in line with what Day and Gu (2007) argue when saying that it is when teachers act as moral agents that they are able to persist in the facing challenges and that teachers' sense of vocation is a vital source of professionalism and resilience as they are made to cope with the pressure of strong opposing forces that are against them.

### **3.9.4 Exercising agency through self-efficacy beliefs**

Bandura (2009) believed that "among the mechanisms of self-influence, none is more focal or pervading than belief of personal efficacy" (Bandura, 2009, p. 179). He further states that it is self-efficacy that supports human agency. For Naicker (2014), the teachers in her study who conquered in spite of unbearable challenges acted in line with Bandura's (2009) view that if people do not have the belief that they can yield the required results and limit the undesired ones by their actions, they will have minute inducement to act or to persevere in the difficult situations. The teachers' actions were inspired by their robust belief that they could overcome the hindrances and delays and did not give up their efforts to furnace ahead to realise their aspirations. This strong belief in their competencies (according to Naicker 2014) was the

driving force that empowered them to overcome their physical shortcomings and inhibitions as robust sense of self-efficacy promotes teacher resilience (Day and Gu, 2007).

### **3.9.5 Positive emotions and positive school culture**

According to Naicker (2014), positive emotions such as happiness, joy and hope experienced by the teachers in her study improved the level of resilience amongst the teachers. Positive emotions play an integral role in provision of personal resources like intellectual, social, psychological and physical resources thus enabling the teachers to transform their lives, build creativity and health (Naicker, 2014; Fredrickson, 2004).

Naicker (2014) argues that positive school culture tells how people should work cooperatively to face challenges and overcome obstacles faced with. It is a set of norms, values and expectations that mould people's actions, thinking and feelings. Participants in Naicker's study assert that there were shared ethos of care and concern which they experienced from the entire school community, teachers, learners, SMT and parents. These participants felt embraced with care by their colleagues when they were in need of such support. A robust collegiality amongst the staff members, SMT and the rituals to celebrate achievements and accomplishments (Naicker, 2014) were evident from the participants in Naicker's study. Day and Gu (2010) noticed that positive school cultures, together with supportive SMT, staff collegiality and good teacher-pupil relationships contributed towards the teachers' ability to gain emotional and intellectual power to face challenges, and through this teachers were able to sustain their sense of dedication and continue teaching passionately.

### **3.9.6 'Dis-enablers' that eroded teacher resilience**

'Dis-enablers' were defined by Naicker (2014) as things that eroded teacher resilience. The inability to fulfill personal goals and ideals such as poor performance, unsupportive school management teams (SMT) and others, caused teachers to become vulnerable and eroded their ability to be resilient. According to the findings of Naicker's study, when teachers failed to live up to their own 'personal goals, ideals, values and beliefs they experienced negative emotions and became stressed. Teachers experienced sadness, guilt and shame when they could not translate their beliefs and ideals into reality', (Naicker, 2014, p. 226-227). The above is regarded as one of the 'dis-enablers' that hindered teachers from achieving desired outcome. When the above happens, teachers become 'dispirited'. The following sections focused on only two components of 'dis-enablers' as they were relevant to my study.

### **3.9.7 The inability of teachers to fulfill their personal goals and ideals**

One of the findings of the study conducted by Naicker (2014) was that when teachers fail to live up to their own personal goals, values beliefs and ideals they experience negative emotions and come stressed; they experienced guilt, sadness and shame as they could not be able to change their beliefs and ideals into reality. Nias (2006) asserts that teachers' personal and professional selves are indistinguishably connected and that teachers devote their personal sense of identity in their teaching lives. Teaching is an area where teachers endorse and disseminate their values and beliefs. When they are teaching, it is their teaching that they find chances to transform into action their own values and beliefs in respect to what they see as significant and worthy. When this is susceptible, teachers responded with sturdy negative emotions (Naicker, 2014; Nias, 2006).

Three teachers in Naicker's study experienced a number of violations of their beliefs, ideals and values by the situations that existed in their schools. One of them wanted to be a role model for her learners but could not become one due to personal circumstances. She felt deeply affected by her failure which led to emotional breakdown. Another teacher wanted to make difference in the lives of disadvantaged learners and could not achieve her belief because of absence of democratic school management team of which she viewed it as obstacles that led her to abandon her beliefs. She suffered a big sense of sadness because of her loss of personal belief and goal. It was clear from Naicker's participants that their emotions were adversely affected when they were unable to translate their goals, beliefs and values into actions. According to Naicker (2014) teachers became vulnerable and their resilience was eroded and thus made them to see no need to continue teaching at schools as their personal beliefs and goals were disenchanted. Kelchtermans (2011) pointed out that moral conflict results to threats to being a 'good teacher' when taking decisions during teaching and provokes stout emotional responses that contributes to teachers' feeling a sense of helplessness.

### **3.9.8 Ineffective school leadership**

Teachers become vulnerable and less resilient if they feel that they are not supported or hindered from attaining their goals by SMT. According to Naicker (2014) teachers regard this as incongruent which resulted in teachers developing negative emotions as they felt being powerless in pursuing their goals. The lack of cooperation and support from SMT aroused negative feelings in teachers especially if they notice that their own effectiveness is being compromised by leadership who has failed to do their work (Naicker, 2014; Kelchtermans



(2011; Nais, 2006). Kelchtermans (2011) further states that micro-politics involves following the interests that are thought in terms of suitability of the workplace plights. When principals were applying power over teachers, they posed threats and affect the workplace environment which resulted from teachers not attending meetings, professional development workshops and executing the duty like being the Departmental Head (HoD). These things made teachers to feel devalued, demeaned excluded and isolated in their workplace

### **3.10 The inspirited or dispirited teachers**

The idea of inspirited and dispirited came from the notion of spirit which was drawn from Scott (1994) as well as the perspectives on spirituality and spirituality in the workplace were derived from the work of Fry (2003), Giacalone and Jurkiewicz (2003), Karakas (2010), Lips-Wiersma (2002), Mitroff and Denton (1999), Neck and Milliman (1994) and Pfeffer (2003). It was through engagement in the academic scholarship around spirit, spirituality and spirituality in the workplace that the notion of teachers' feeling inspirited or dispirited developed. Karakas (2010) defined spirituality as an "idiosyncratic, multifaceted, elusive concept" (p. 7). For Scott (1994) spirit is the "vital principle or animating force within living beings, that which constitutes one's unseen intangible being, the real sense or significance of something" (p. 64). Spirituality is the "basic feeling of being connected with one's self, others and the entire universe" (Mitroff and Denton, 1999, p. 83) with the interconnectedness as a key feature of it. Neck and Milliman (1994) proclaimed that spirituality is about living meaningful life in line with this meaning and one's intensely held beliefs. Spirituality encompasses a relationship with a higher power or being that impacts how one behave on earth. According to Naicker (2014) from spirituality, people get meaning in life and feel a sense of interconnectedness with others. Spirituality in the workplace is regarded as an example of a sense of calling, making a difference in the lives of others that brings purpose and meaning in a person's life (Fry, 2003; Lips-Wiersma, 2002).

Spirit on the other hand refers to the power or force within a person (Scott, 1994) that has a requisite to feel connected with itself, others and everything around them (Mitroff & Denton, 1999). Harmonious relationships with those in the work community were regarded as a vital aspect of inspiring the spirit in the workplace (Pleffer, 2003). For Naicker (2014) when teachers felt belittled, harassed, victimized and ridiculed by either other teachers, learners or the school leadership, it affected their spirit leaving them feeling depressed, humiliated, anxious, ashamed

and stressed. When ‘teachers through the appraisal process experienced mostly goal incongruence, it evoked negative emotions leaving them feeling dispirited’ (Naicker, 2014, p.239).

On the contrary, when teachers felt deeply connected to their colleagues, learners, parents and school management through the social support they received from the school community when they suffered personal impediments. They felt validated, affirmed and experienced a sense of belonging. As a result they experienced mostly positive emotions of hope, joy and happiness. They felt motivated and enriched and gained inner strength to continue (Naicker, 2014). The above contributes a lot towards making teachers to be spirited. According to study conducted by Naicker (2014) critical incidents in teachers’ lives affected the teacher’s spirit. When teachers appraised the events as mostly goal matching, they felt positive emotions leaving them feeling inspired. This feeling of being dispirited or inspired may not be a permanent state but changes over time.

### **3.11 Conclusion**

There is a dire requisite to comprehend what motivates/ propels and what demotivates/ dispirits teachers when teaching in schools. The model offered at this juncture as the theoretical and conceptual frameworks paved the ways towards the understanding of teacher beliefs about teaching and learning especially in comprehending how teachers act and respond in different teaching and learning situations. The utilisation of the afore-mentioned theoretical and conceptual frameworks yielded an understanding into the refinements and interaction between teacher beliefs, teacher knowledge and teaching and learning in general and an insight into how these were deciphered into classroom practices by making use of self-efficacy theory and its constructs as a background in understanding teacher beliefs and their influence in learner performance. The responses of teachers, whether verbal or written, were triangulated with their actions to get more insight into teacher belief as a phenomenon. Furthermore, the concept of self-efficacy is relevant in this study as each teacher in the study is influenced either positively or negatively (self-efficacy) by his or her beliefs and that influence impacts on learner performance since schooling is about producing results.

The following Chapter Four reviews methodology ,research design, data generation processes and data analysis which helped a lot in terms of understanding beliefs teachers have about teaching and learning and the extent to which the beliefs influence learner performance.

## **CHAPTER FOUR**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **4.1 Introduction**

The preceding chapter deliberated on the theoretical or conceptual framework utilising the self-efficacy constructs to comprehend teachers beliefs about teaching and learning and how those beliefs influence learner performance. This chapter transfers the attention to research design, arguing for the best suitable methodological ranges that I have used in constructing the data for the study. In this regard the chapter describes the epistemological orientation that framed the presentation of data in this study and the justification thereof. The chapter is therefore differentiated into four sections. The first section pays attention to the research design and illuminates the interpretive research paradigm and the rationale for the qualitative research in which this study positions itself. The second section deliberates on the research questions underpinning the study, data collection and production techniques used to produce data, sampling of participants and research sites. The third section reports on data analysis utilised in this study and how I mitigated the limitations. Lastly, the fourth section includes issues of validity, ethical issues and trustworthiness of the study.

#### **4.2. SECTION ONE: The Research Design**

A research design is a guideline structure and plan that the researcher follows to investigate a phenomenon so as to gain evidence to be utilised in answering the research questions (McMillan & Schumacher, 1997; Khuzwayo, 2015). Thomas (2010) confirms that research design is a master-plan that guides and directs the study thus having potential of paving the way on how the study can be done. Research design consists of samples or groups to be researched, instruments for research that can be utilised to collect data, processes to be followed in analysing data. It is a vehicle designed to move from one place (here) to another (to there) where here is regarded as an initial stage of responding to questions and there as a link to achieve research assumptions (Thomas, 2010). Having understood the above definitions, I therefore define research design as a wider plan of action that is having numerous research purposes such as creating a podium to respond to research questions as well as demonstrating processes and means, fundamental choices, utilisation of certain methods and the research variety for depicting study inferences. Since I have discussed the research design, I then move to the discussion of qualitative approach.

#### **4.2.1 Qualitative approach to the study on teacher beliefs**

In this study I have adopted qualitative research methodology. Qualitative approach refers to the approach that is used to study people in their natural setting, by observing their actions and by paying attention to the meaning they state and the way in which they interpret actions that they experience (Cohen, Manion & Morrison, 2011; Meeran, 2017). It is therefore conceivable to get vivid perspective of their intentions if you study them in their natural environment. Qualitative research entails studying an event or a case one wishes to attain in-depth comprehension of a given situation and get meanings and actions of those involved in the situation (Khuzwayo, 2015; Lichtman, 2006). Qualitative researchers “study things in their natural settings, attempting to make sense of or to interpret phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 2000, p.3).

The crux of understanding qualitative research lies in the acceptance that individuals create reality when that individual interacts with the real world of society (Merriam, 2017). According to Merriam (2009) and Preethlal (2015), the world or reality is not an ever fixed mark, is not measurable experience and cannot be agreed upon about it. However, in the world of research there are many meanings and interpretations of reality constantly shaking and transforming over a period of time (Merriam, 2002). This research approach was selected due to its realistic way of understanding the real world which in this study is teacher belief about teaching and learning. The qualitative approach was also expected to afford the holistic and deeper understanding of the beliefs teachers have about teaching and learning and the influence thereof on learner performance in South African secondary schools.

Qualitative research approach is used to make sense of the world by making use of interviews, document analysis and observations which, when interpreted in its natural environment as a final written report done by researcher and which includes the participants voices, multidimensional account of the phenomenon, the reflection of the researcher and finally the comprehensibility of the problem (Creswell, 2007; 2012). Therefore, in this study I intended to explore the beliefs that teachers have about teaching and learning by analysing their actions and their beliefs and by questioning their comprehension and perception of the belief about teaching and learning and the influence the beliefs have on learner performance. This approach allowed the insightfulness into the phenomenon which is teacher beliefs about teaching and learning and the influence they had on learner performance.

Qualitative research was suitable because it enabled the researcher to present findings in a narrative form rather than in numbers (statistics) as I was able to truly present their feelings emotions, excitement and sadness. The holistic nature of qualitative research made it plausible for me as a researcher to pronounce and comprehend the occasions within real natural setting in which they occurred, for instance in this study I interviewed teachers in their own schools and attempted to make sense of what they were experiencing in their respective schools. In this study I selected a small sample of twelve teachers as qualitative approach allowed me to be conversant with the phenomenon under study, in this case teacher beliefs. The qualitative research approach was also opted for because it provided full and deepened portrayal of phenomenon which is teacher beliefs in this study as well as attitudes teachers had about teaching and learning. It had also given descriptions and elucidations which had a lot of information generated from numerous data collection approaches including interviews, observations, questionnaires and other documents. In the next section I discussed research paradigm.

#### **4.2.2 Research paradigm**

A research paradigm is defined as a worldview, a complete structure of values, beliefs and the manner in which the study emerges (Sefotho, 2015). It is a researcher's action plan that guides and provide trends throughout the research, demonstrating who or what is engaged, and where and when the study occurs (du Plooy, 2009). A paradigm impacts on how one understands the world; shapes one's understanding of different situations and defines one's perspective (Cohen, Manion & Morrison, 2007). Research design is explained as "all-encompassing systems interrelated practice and thinking that define for researchers the nature of their enquiry along three dimensions: ontology, epistemology and methodology" (Terre Blanche & Durrheim, 1996, p. 6).

As the participants in my study were coming from different school contexts, beliefs, backgrounds, experiences as well as understandings, it is likely that their beliefs about teaching and learning were also different. Therefore, in order to interpret and comprehend beliefs of teachers about teaching and learning, it was imperative for me as a researcher to know thoroughly interpretive theorists. In the following section I discuss the reasons why I opted for interpretivist paradigm to guide my study.

### **4.2.3 Interpretive Research Paradigm**

According to Terre Blanche and Kelly (2004), interpretive paradigm tries to designate and construe people's feelings and capabilities in human expressions other than quantity dimensions. The interpretivist paradigm pursues "to understand the subjective world of human experience"(Cohen, Manion & Morrison 2007, p.21) and thus channel the comprehension of human experiences as having a multiplicity of truths as each person sees each situation differently (Ponterotto, 2005).

As for Leedy and Ormond (2010), an interpretive methodology enabled me as the researcher to access new intuitions about teacher belief as a phenomenon; advance new notions or theoretical perceptions about the phenomenon of teacher beliefs; and realize the difficulties that exist of which teachers believe they are impacting on teaching and learning as well as learner performance.

The interpretative paradigm was applicable for my study for two broad motives:

1. It is endeavouring to apprehend the phenomenon of teacher's belief about teaching and learning through an exploration of meaningful social and educational act from the perspective of teachers who are teaching in Secondary schools in Province of KwaZulu-Natal.
2. The nature of reality is idiosyncratic and constructed by the teachers themselves and their actions as they were observed teaching in classes (see section 4.2.6.2 on ontology).

An interpretative paradigm was suitable for my study because it abled me to comprehend and seized the lived experiences of the teachers I interviewed by examining the social world of the teachers and their attempts to construct meaning from their beliefs on teaching and learning as well as their construction of the effect of learner performance. Furthermore, an interpretative study provides the researcher a chance to probe intensely into the data and I was afforded deep discernment and indulgence of the participants' opinions about their beliefs about teaching and learning and in what way they utilised their knowledge and milieu to create meaning of what they believed are the factors that influence teaching and learning by teachers themselves as well as the influence they believed teacher beliefs has on learner performance.

### **4.2.4 Using the case study approach**

The case study method was carefully chosen for this study because it permitted me into cases of Secondary school teachers in order to explore their beliefs about teaching and learning as well as the impact those beliefs have on learner performance. Preethlall (2015) defines case

study as a universal term assigned for the exploration of a single person, group or a particular phenomenon that utilises the qualitative approach. The case study according to Meeran, 2017; Denzin and Lincoln, 2011) permits the investigator to access in-depth comprehensibility of the case without generalising findings. The boundedness of the case study approach helped to my research focused on an aspect which is teacher beliefs about teaching and learning. Stake (1994) contends that the case is a 'bounded system' and also articulates that the, 'the more the object of the study is a specific, unique and bounded system, the greater the usefulness of the epistemological rationale" (p.236).

As far as Yin (2009, p.18) is concerned, case study is an "empirical inquiry that investigates a contemporary phenomenon in-depth and within real life context especially when the boundaries between the phenomenon and the context are not clearly evident." It is empirical in a sense that those researchers focus their studies on the observations from the field where data collection is done (Yazan, 2015). In case of this study, I have collected data from eleven teachers who are teaching in six secondary schools (case studies) which are offering critical subjects and the information they provided and what I have observed as a researcher helped me a lot in terms of evidence provided. Therefore, the study was a multiple case study of six schools in Ilembe and Pinetown Districts in the Province of KwaZulu-Natal and series of six case studies in different situations. I have done that in order to avoid 'radical particularism' of the old-fashioned distinct in-depth case study, a concept developed by (Firestone & Herriott, 1984).

The intention of case study is to acquire in-depth indulgence concerning the subject under study (Creswell & Poth, 2017). According to (Merriam, 1998; Cohen et al., 2011; Stake, 2005; Khuzwayo, 2015) a case study is an thorough description of one unit comprising of an individual person, social activity, programme, group, community, event , organisation or an institution whereby the description of the case is equal to an in depth commitment with activities involving the case under study. A case study, as for Bless, Higson-Smith and Kagee, (2006) permits an emphasis on the elucidation of the participants' engagements and or behaviour so that momentous features can be revealed and then afford a rich and thick account of a precise phenomenon. In a nutshell, case study renders the chance to review and reflect on the description of situation in question. At the end , is a thick description of a case like in this study was teacher beliefs about teaching and learning; I gained thick descriptions by interviewing eleven teachers, observing some of them teaching in classes, analysing some of

the documents in order to acquire more data which I analysed in chapters five and six of this thesis.

The case study has the following exclusive distinguishing attributes: Particularistic (it concentrates on specific situation, program, event, or phenomenon); Descriptive (it produces a description of the phenomenon that is thick and rich in the study); Heuristic (it brightens the reader's comprehension of phenomenon under study) (Yazan, 2015). Cohen et al. (2011) allude that a case study affords an exclusive example in real circumstances, permitting readers to apprehend thoughts more evidently than merely by presenting the readers with intangible theories. One of the strengths of case studies is that it permits the researcher to discern a life phenomenon in real context, distinguishing context as a dominant constituent of both the effects of foundations and that in-depth indulgence is pre-requisite to be honesty to the case (Cohen et al., 2011; Mhlono, 2013). Therefore, I decided to make use of the case study in order to know what beliefs teachers have about teaching and learning in a distinguished context which is the school and therefore the schools became good platforms for the generation of thick data.

The use of eleven qualitative case studies was decided upon because of their flexibility, versatility and manageability (Mhlono, 2013). By utilising case study approach, the researcher was able to research deeply and offered teachers of critical subjects an opportunity to articulate their beliefs as far as teaching and learning is concerned. Case study was also a plausible advantage because it is applicable to human plights, to real life, contemporary, and public ease of access through written reports (Mhlono, 2013).

#### **4.2.5 Advantages of using multiple case study approach**

There are numerous advantages of using the case study in this study. One of the advantages is that case study allowed me to access insights into the feelings, beliefs and discernments teachers had about teaching and learning in their schools and to know their expectations. Suter (2011) illuminates that a case study deals with the descriptions of experiences rather than explanations or an analysis of the experience. This has sufficed in my study as I was able to describe what teachers believed and felt through their experiences and their voices about teaching and learning (real meanings attached) that are taking place within schools (which are real context). Multiple case studies provided a natural environment to collect data as I was able to observe teachers teaching and I was able to interview teachers and to probe teachers, then



clarity was given in some instances rather than depending on the information from secondary sources, a use of primary sources was effective. A case study permits the usage of many data gathering techniques which proceeds to fuller comprehension of phenomenon and thus the use of different data collecting strategies lends into credible, trustworthy, valid and reliable study. In this study about teacher beliefs, the bounded system that moulded the case was critical subject teachers' beliefs about teaching and learning at the six research sites. Furthermore, case study allowed us to make use of multiple data collection techniques to explore teachers' beliefs, teacher knowledge and teachers' classroom activities (Bless et al., 2006).

There is nothing without shortcomings; case study research method is criticised that no one can make a sweeping statement on the basis of an distinct case, and as a consequence, the case study cannot sponsor into the scientific advancement, the worth of the case study in its construction of tangible, context-related knowledge; over and above, "the force of example" is misjudged (Flyvberg, 2001, p. 228). The interpretive paradigm plays a significant role to stimulate knowledge from participants (Cohen et al, 2007). In trying to understand and broaden knowledge, it is imperative to highlight that epistemology, ontology and methodology as philosophies play a crucial role in paradigm research to determine data collection methods and data generation in general (Cohen, et al, 2007). In the following section I discuss how the three philosophical concepts impacted in my study.

#### **4.2.6. Epistemology, ontology and methodology as philosophies of interpretive paradigm**

##### **4.2.6.1 Epistemological beliefs about belief of teachers on teaching and learning knowledge**

Epistemological beliefs refer to individual's basic thoughts about the nature of knowledge and the means in which individuals utilise to generate knowledge for their own and expansion of others knowledge (Preethlall, 2015; Mngomezulu, 2014; Hofer & Pintrich, 2002). The beliefs on the nature of knowledge influence in moulding one's characteristics which in turn impacts on teaching, learning and other professional undertakings (Preethlal, 2015; Hartteis, Gruber and Hertramph, 2010). The possibility exists where teachers identify and construe the conditions of the schools in which they teach at and the curriculum they ought to accomplish as their individual beliefs. For Meeran (2017), epistemology is about the interactions between participants and researcher in an attempt to produce data and knowledge production that is subjective to that particular interaction. Richie and Lewis (2003) argue that epistemology is

about knowing and learning more about the social world as the relationship between the researcher and social phenomena is collaborative thus researchers cannot be subjective at all. The above statement is relevant in my study because the data provided by participants were analysed by the researcher who is subjective in his analysis and come up with conclusions which were not intended by original participant.

#### **4.2.6.2 Ontology**

Ontology is a study of reality or truth. Qualitative approach researchers regard reality or truth as multiple, subjective and negotiated (Meeran, 2017) which are contrary to quantitative researchers who view reality or truth as objective, accurate and impartial (Meeran, 2017). The broader understanding of reality as a concept emanated from philosophical underpinning of Foucault (1972) who perceives reality or truth as diverse and having three types of truth which are: trans-subjective truth (objective truth – researcher remained neutral); uni-subjective truth (concerns itself with person and is numerous and personal); inter-subjective truth (requires shared positionality of subjects where truth is conveyed (Meeran, 2017; Posel and Simpson 2002; Winter, 2000). According to Scotland (2012) the research paradigms are characterised through ontology which is trying to find reality. It was this reality I intended to establish from teachers I interviewed about what were their beliefs about teaching and learning and impact on learner performance.

Qualitative research is subjected to a notion that people experience multiple realities. Brown (2008) advances that, “there are multiple realities through which one can make sense of the world as reality is constructed from one’s own experiences,” (Brown,2008,p.1). The above citation indicates that each person has his / her own experiences which constitute reality. In this research I illuminate the different realities teachers have as they come from their beliefs about teaching and learning and how they influence learner performance.

#### **4.2.6.3 Methodology as a philosophy**

Methodology is defined by Guba (1990) as a procedure people use to acquire knowledge of something. It refers to ways of accessing, organising and analysing data available from participants. Mouton (1996) further assumes that methodology as methods and means of doing something successfully. It is a comprehensible group of methods working congruently to allow the researcher to access data and formulate findings reflecting the research questions and being appropriate to the research’s prior objectives.

The procedure that I utilised in acquiring knowledge and reality about teachers' beliefs about teaching and learning and how they believe learner performance is influenced in a long run was to conduct individual interviews and to observe teachers teaching in classes and observe their behaviour in general around the school. Teachers who were my participants shared with me their beliefs and experiences and I interpreted them in order to have insight of them. The next section of the chapter discusses the methodology in abundant details.

## **4.3 SECTION TWO: Data Generation**

### **4.3.1 Research Methodology**

#### **Sampling and sampling methods/ Selection of the Research Sites**

Maree (2007) describes sampling as a procedure utilised to choose a quota of a particular population to be utilised in the study. According to Mhlongo (2013) and Isaac, Chetty, Naidoo, Manganye, Mdhuli, Mpondwana and White (2011), a population is defined in terms of biological connotation as a group of living organism of the same species who live together within the same habitat. It refers to a explicit element being sampled according to its geographical setting and the time-based frontiers of the populace (Preethlall, 2015). Therefore population concept in this study was used to denote a cluster of teachers who were teaching in high schools within Ilembe and Pinetown Districts in rural, semi-urban and urban areas with Grades 8 to 12 classes. Schools in urban areas are better resourced in both human and physical resources and are nearer to numerous facilities and features inclusive of libraries, shops, transport, to mention but a few (Preethlall, 2015). Rural schools are found far away from urban areas. Rural schools are characterised by being poorly resourced both in terms of human resources (as qualified teachers do not want to teach there) and physical resources. Furthermore, those schools were divided into five quintiles from quintile 1 to quintile 5. Those teachers had particular beliefs about teaching and learning in their respective schools and had particular belief about the impact of quintiles in their respective schools.

#### **4.3.2 The description of the research sites**

In this section I present the profiles of schools that granted me permission to conduct the interviews. Those schools were: Ngosa, Siminza, Qoqa, Hlonga, Shakeville and Seaview Secondary Schools (all these names are pseudonyms). The short description of each school presented here was collated from the information received from the schools principals themselves and from anecdotal evidence such as conversations, walkabouts, colleagues' cluster

meetings as well as documentary analysis (including newsletters, newspaper articles and magazines) where available. Below is a transitory description of each school.

**Table 4.1: Table below illustrates total sample utilised to gather data from research locations.**

<b>Name of school</b>	<b>Geographical Location</b>	<b>Circuit/District</b>	<b>Quintile</b>	<b>Subjects being taught</b>	<b>Name Of teacher</b>
<b>Ngosa</b>	Rural	Ndwedwe/Ilembe	1	Maths	Zwan
				Economics	Tre
<b>Siminza</b>	Rural	Ndwedwe/Ilembe	1	Accounting	Ntu
<b>Qoqa</b>	Rural	Ndwedwe/Ilembe	2	Business Studies	Mag
				Maths	Mze
<b>Hlonga</b>	Semi Urban	Ghandi/Pinetown	3	Physics & Life Sc	Oshun
				Life Sc	Thado
<b>Shakeville</b>	Urban	Umhlali/Ilembe	4	Maths	Ndwa
				Physics	Naid
<b>Seaview</b>	Urban	Ghandi/Pinetown	5	Geography	Gug
				Life Sc	Moh

In the subsequent segment of this chapter, I present the schools profiles to ensure that the criterion for location was satisfied. In these profiles, more information is presented in order to understand each school as a case study and to be aware of the dynamics of each school.

#### **4.3.2.1 Ngosa Secondary School**

Ngosa (pseudonym) Secondary school has a population of 397 learners with an average of 35 learners per class. The school is situated in the Ngcongcongcong area of Ndwedwe within the Ilembe District Municipality. Learners who are attending at this school come from Mbholombe, Bhamshela, Mahlabathini, Noodsberg and KwaThayela. Most of the learners walk to school as the areas mentioned above is in close proximity to the school. There are very few learners who travel by public transport.

The school is in a deep rural area with a socio-economic status which is below average in terms of South African standards and poverty indexes. Most of the parents of learners in the school are very poor since they are unemployed. Many learners depend on social grants to satisfy their school needs. Some learners come from single-parent homes and others from child-headed households because of urbanisation and HIV/AIDS prevalence which has eliminated some parents. There is high occurrence of teenage pregnancy in school. About 89% of learners come from disadvantaged environments. The school is ranked as a quintile 1 school and receives substantial amount of funding. This school is a no-fee school and parental involvement is poor. Parents rarely attend meetings when they are called; however, the SGB fully supports the school in all activities that the school undertakes.

In terms of grade 12 performances, the school has not performed well in the last five years. It fluctuates from 35% to 65%. The school engages itself with extra tuition in a form of morning classes, afternoon classes and Saturday and holiday classes. These interventions assist a lot in improving learner performance although no substantial amount of change has been observed. The school has 12 permanent teachers. I succeeded in interviewing two teachers from this school who were Tre and Zwa (pseudonyms). In the next section I examine the profile of each teacher.

#### **4.3.2.2 Seaview (pseudonym) Combined School**

The school is situated at Tongaat area in Mahatma Gandhi which is under Pinetown District in eThekweni Metro. It has a learner population of 800. It is a combined school starting from grade R to grade 12. The learner population consist of 70% of Indians, 20% of Africans, 5% Whites and 5% Coloureds. The above information was triangulated using class registration records. The learners attending the school come from Tongaat and surrounding areas. Most learners travel by buses and taxis since it is located in a remote area of Seatides.

This school is situated in an urban setting with urban characteristics such as tar road to school, library inside the school and eThekweni Municipality Library outside across the fencing. There are learners who come from disadvantaged background but they are very few. Most of the learners come from above average working class families. The school is a quintile 5 which means, it receives very little allocation from the state as it is able to collect its own fees. The school fees are R1850 per learner per annum. The school also has fundraising initiatives to supplement its financial resources to acquire the needed teaching and learning resources and this makes it easier for teachers to teach and achieve good quality results. According to the principal, all systems in his school are working for the good of the school, system such as financial management, security system and curriculum monitoring system. The security person ensures that no learners loiter around the school during teaching and learning. The school culture is very positive.

In terms of results, the matric pass rate for the last five years has been 100% where the previous year they obtained 76 distinctions and 85 bachelor passes. The school is number one in the District, in terms of 100% and quality results. It is on the basis of the above that I have purposefully chosen this school as a research site. When asked for an explanation as to what makes the school to get 100% consistently and continuously, the principal alluded that high level of learners discipline, work ethics of teachers, strong link between school and homes as well as the fact that they have school counsellor employed by S.G.B which helps a lot in dealing with learners with problems. Also a very strong communication lines exists in school. Subject meetings are called regular where teachers discuss learner performance with their Departmental Heads (DHs). There are 34 state-paid teachers and six S.G.B paid teachers. There is only one African teacher and the rest Indians. The teachers who participated in the study were Gug and Moh (all pseudonyms).

#### **4.3.2.3 Siminza (Pseudonym) Secondary School**

Siminza School is located at Bhamshela area Ozwathini (Ndwedwe) which is within Ilembe District Municipality. The school enrolls 276 learners all of which are Africans learners who are attending this school come from Bhamshela, Dalibo, Noordsberg and Insuze. Most learners walk to school as the school is in close proximity of these areas; very few learners travel to school. This is a rural school with all qualities of rurality. Most learners in this school come from disadvantaged background as most parents are not working. Learners rely much on social grant for their day-to-day requisites. It is a quintile one school in terms of quintile ranking

which means that larger slice of funds from state allocation is provided for the school to purchase necessities. The school is no fee-paying thus the only income the school gets from the state. Parents do get involved and support school activities when requested to do so like attending parents meeting, disciplinary hearings and special functions. When looking at matric results, the school was underperforming in the previous years except in 2014 where they obtained 100% and 2015 which was 97%. Extra tuitions are conducted to improve learner performance. These tuitions are in a form of morning and afternoon classes, Saturday classes and holiday classes.

The school has a Post provisioning norm (PPN) of nine (9), meaning that only nine educators have been allocated to this school and this allocation includes the leadership of the school. The teacher who participated in this study was Ntu (pseudonyms).

#### **4.3.2.4 Shakeville Secondary School**

Shakeville (pseudonym) school is situated in the Shakaskraal area which is part of Ilembe District municipality. The school is 30 years old and has population of 1100 learners with an average of 34 learners per class. The population of learners consist of mainly of Africans, Indians, Coloured and few whites. The school caters for the learners from disadvantaged communities such as Nkobongo, Shayamoya, Groutville and Ntshawini. Others are from Shakashead and from their own township Shakaskraal village as well as from rural areas. The economic index ranges from disadvantage to lower middle income earners. A school is a quintile four school and is a fee-paying school. A school fee is R950 per learner per annum.

The school had a problem of dagga previously, however major interventions were put in place to curb that underlining habit. S.G.B was very active in dealing with the issue of dagga and other disciplinary issues. Discipline was given a special day on Monday afternoon at 6 o'clock till 10 at night where learners and parents with disciplinary problems will come to school to attend disciplinary hearings, parents do attend parents meetings and also attend special school functions. In terms of learner performance, the pass rate for matric ranges from 70 percent to 85 percent each year. Extra classes during lunch breaks and afternoon are conducted to assist grade 12 learners to achieve more.

There are 36 state paid teachers and two S.G.B paid teachers who teach in the school. Out of 38 teachers, only seven are Africans, the rest are Indians. There were two teachers that were interviewed, Miss Ndwa and Mrs. Naid [pseudonyms].

#### **4.3.2.5 Qoqa (pseudonym) Secondary School**

This school is located in Esidimbini area under Ndwedwe Local Municipality which forms part of Ilembe District Municipality. The school caters for 881 learners with Africans only as learner population. The school serves learners from area such as Mazibuko, Esidumbini, Mary Grey, Ntabamhlophe, Matholampevu and Mgetane. There are also learners from far areas who travel by taxis and buses to school as the school gets its popularity. Qoqa is a rural area school and has households of the learner's families who are below average in terms of South African standards financially about 85 percent of learners come from disadvantage communities. That is why the school is ranked as quintile 2 and receives a larger portion of state funding which makes the school able to pay for some of its necessities. The school is a no fee paying school; as a result the only source of income is based on the norms and standards as declared by the state.

Grade 12 results fluctuate from year to year ranking from 40 to 70 percent. Extra tuitions are conducted in the morning, afternoon, Saturdays and during holidays. The extra tuitions aid learners improve performance. The school has PPN of 28 and all teachers are state paid. I interviewed two teachers at Qoqa and names of the teachers are Mag and Mze [pseudonyms]. Details are given in section 4.3.4. on the reasons for the selection of them.

#### **4.3.2.6 Hlonga (pseudonym) Secondary School**

The school is located at Mona area in the outskirts of Tongaat. It had 751 learners with an average of 21 learners per class. The learner population is purely Africans, and the learners who attend come from places such as Mona, Ndwedwe, Tongaat, Sonkombo, Sinembe, Bhamshela and Verulam. Other learners travel by taxis and buses to school as they are distant from school. Hlonga is a semi-urban-rural as it has got a mixture of both urban and rural character. Geographically, the school is near Tongaat, however in terms of municipality it belongs to Ndwedwe under Ilembe District Municipality. Most of the learners stay with their grandparents as their parents are working in towns such as Tongaat, Verulam and Durban.

The school performs fundraising project to boost its financial resources as 70 percent of their learners come from disadvantaged homes. It is a non-fee paying school, thus the bulk of funds come from state allocation. In terms of quintile ranking, it is ranked as a quintile 3 school. There is a library at school although library books are insufficient and there is no teacher librarian. Parents are involved in school activities such as attending parents meeting, school functions, disciplinary hearings and so on.



There are 24 teachers who are state paid. The teachers I interviewed at the school were Thando and Oshun (see section 4.3.4). In terms of matric performance, the school ranges from 60 to 90 percent pass rate which is usually good according to the principal (when interviewed). They conduct extra tuition with the intention of assisting learners to improve their results. They conduct morning, afternoon, Saturday and holiday classes. Learners benefit a lot from those extra tuition classes.

Six schools were purposively chosen as the case study schools. Purposeful sampling, encompasses choosing a sample based on the researcher's experience or knowledge of the group to be experimented (Lunenburg & Irby, 2008). The intention of the researcher is to choose information-rich cases for in-depth study which involves deliberately selecting the informants for the particular perspectives they offer. Since the investigator sets out to discover, understand, and gain insight about a specific phenomenon, he or she must therefore select an example from which the maximum amount of data can be learned (Cope, 2014, Merriam, 1998). Two were from an urban context, three from a rural context and one from semi-rural/urban context. These six schools included school types according to quintile ranking 1 to 5 as categorized by the Department of Basic Education system of categorising schools. These quintile rankings (geographic placement of schools) allowed me to explore relationships, if any, between school contexts and teacher beliefs. The choice of six schools allowed me to include the range of schools as categorised by the school system, in the purposive sampling of research sites.

### **4.3.3 Selection of participants**

Leedy and Ormond (2010) assert that purposive sampling is when people are selected for a specific reason or purpose. Purposive sampling is a thoughtful choice employed by the researcher to select participants who will partake in the study (Cohen, Manion & Morrison, 2007). Twelve teachers, two from each school (one teacher teaching Senior Phase and one teaching in FET phase), were purposively chosen as participants for this study. The selection was informed by teaching experience in the respective schools, qualification, race, religion (including atheists) and of gender variance so as to bring diversity to the study about teacher beliefs. Teacher beliefs are also influenced by a range of factors, including biographical factors, their experiences, their home background exposure influence, the way they are and the communities they come from.

Furthermore, the participants were purposively chosen on the basis of the following criteria:

1. They were teaching critical subjects in their respective schools. Critical subjects included: Mathematics, Physical Sciences, Life Sciences, Accounting, Economics, Business Studies and Geography.
2. They were different in terms of experience that there was novice, moderate and well as experienced teachers.
3. They were teaching in Senior Phase (grade 8 and 9) or FET Phase Grade 10-12)
4. They were from different schools with different quintile rankings.
5. They were coming from schools which are diverse in terms of geographical composition, including rural, semi-rural/urban and urban, thus ensuring validity of results.
6. They were racially mixed including Africans and Indians.
7. They were multigendered.
8. They have different age ranges to ensure different experiences

Critical or gateway subjects refer to subjects that are troublesome to most of South Africa's Grade 12 learners as they tend to fail these subjects when doing matric (DBE 2011). These subjects are Mathematics/Mathematical Literacy, English First Additional Language, Physical Sciences, Life Sciences, Accounting, Economics, Business Studies and Geography. I decided to select critical subjects because they are a cause for concern because of their high failure rate in the Grade 12 National Senior Examinations (NSC) results. Merriam (2009) seems to concur with the researcher when he says that in a case study system, a researcher may select a group of subjects (that is bounded system) on the basis of similarity (Preethlall, 2015). I wanted to explore what beliefs teachers have about these subjects, what do they believe are contributory factors towards the learner performance and how do they believe should be done to improve the performance in these subjects or what is being done differently by those teachers who achieve good results in these subjects. All the above selection criteria is in line with (Meeran, 2017; Mngomezulu, 2014; Patton, 2002) who assert that the researcher should expose a world of rich, in-depth and palpable depiction of people and places for the purpose of understanding the phenomenon under study. It is against this background that the purposive selection of teachers was considered.

#### 4.3.4 Teachers' biographical information

In this section, I analysed and presented the biographical information of teachers who were the participants in my study. I have used both table forms as well as narrative forms to present this biographical information.

The table below shows the biographical information of participants in this study about teacher beliefs

Name of teacher	Race	Gender	Subjects taught	Teaching experience	Qualifications	Name of school	Designation
Zwan	A	M	Maths	6	B.Ed	Ngosa	PL1
Tre	A	F	Economics	11	Dipl. in Ed	Ngosa	PL1
Ntu	A	M	Accounting	5	Dipl. In Acc, Pgce	Siminza	DH
Mag	A	F	Business Studies	15	Std, Ace (Acc.& Tourim	Qoqa	DH
Mze	A	M	Maths	6	Dipl. in Acc, Pgce Acc.	Qoqa	PL1
Oshun	A	F	Physics & Life Sc	7	Microbiology Dg, Pgce	Hlonga	PL1
Thado	A	F	Life Sc	17	Std	Hlonga	PL1
Ndwa	A	F	Maths	1	B.Sc. Maths & Stats	Shakeville	PL1
Naid	I	F	Physics	10	B.Sc. Physics, Pgce In Sc. Ed	Shakeville	PL1
Gug	I	M	Geography	25	Ba., Hde	Seaview	DH
Moh	I	F	Life Sc	6	B. Ed	Seaview	PL1

**Table 4.2 Participants' biographical information**

The biographical data in the table above illustrate that this study about teacher beliefs consisted of 11 participants (as one teacher did not participate – refer to limitations on section 4.8 for the reasons) from six schools selected purposefully to meet particular criteria. Four of the

participants were males while seven were females. Only two racial groups were represented, Africans and Indians. Below I discuss each of the participants profile with the aim of expanding comprehensibility.

Miss Ndwa (Pseudonym) is an African teacher from Shakeville Secondary school. She is in possession of Bachelor of Science majoring in Mathematics and Statistics. She was still doing PGCE when the research was conducted. She believes that learners have negative attitude about Maths but teachers need to wear a smile and greet them every time. Miss Ndwa was selected because she was the youngest and inexperienced which made her to represent novice teachers and less experienced, only one year of teaching. Furthermore, she was selected because she was teaching Maths in Senior Phase level, so she represented Senior Phase teachers as they also form an integral part of a Secondary school.

Mag is an African teacher who teaches at Qoqa Secondary School. Her qualifications include Secondary Teachers Diploma (STD), Advance Certificate in Education (ACE) in Accounting and Tourism. She is working as a Departmental Head (DH) commerce stream. She teaches Business Studies. She regarded herself as confident, able to express herself and love her work and learners a lot. I decided to interview her because she represented the experienced, multi-qualified and the DH.

Moh is an Indian teacher from Seaview Secondary School. She completed B.Ed degree at UKZN and has taught for 6 years. She is a Life Science teacher, her beliefs about teaching and learning learners must be brought into context of everyday life. I decided to interview her because she represented the less experienced teacher with one basic qualification. Zwan is a qualified Maths teacher in Ngosa Secondary School. He has been trained and achieved B.Ed degree from Indumiso. He enjoys teaching Maths and believes that learners need to be taught Maths in context. Zwan was purposefully selected to represent underperforming quintile one school. She has taught for eleven years teaching Economics and EMS. Her beliefs are with regards to learners that are not serious and motivated about their school works. She was selected to represent underachieving schools with substantial amount of experience.

Ntu teaches at Siminza Secondary School. He studied at Mangosuthu University of Technology (MUT) and achieved Diploma in Accounting. He further studied P.G.CE to become a qualified teacher. He has taught for five years teaching Accounting. He believes that learners have potential to work on their own as long as they are guided. He was interviewed because he is

from the school that achieved 100% in Accounting for three years in succession. He is also youngest DH. Mze comes from Qoqa Secondary School. He has taught Maths for six years but had no qualification in Maths pedagogy. He was trained in Accounting as he possesses Diploma in Accounting. Thereafter he did PGCE also in Accounting. He believes that teaching Maths and Accounting require same methodology plus logic behind numbers. He represents a quintile two school and moderate achieving school.

Oshun did a degree in Microbiology in Nigeria. She also did PGCE which qualified her to be a teacher. She is now teaching at Hlonga Secondary School. She has seven years of teaching experience. She believes that passion is essential for effective teaching and learning. Thado teaches at Hlonga Secondary School. She was trained during initial teacher training and received the STD. She has taught Life Science for 17 years. She believes that in-service workshops are very much effective in improving teaching and learning. She was selected to represent experienced teachers of Life Science. Naid is an Indian, Physics teacher at Shakeville Secondary School. She has taught for 10 years. She has qualified with B.Sc. and further did PGCE to qualify as a teacher. She believes that Physics curriculum is too compact and is more knowledge driven than skills driven. She was selected to represent Physics teachers with moderate experience.

Gug is an Indian Geography teacher and DH. His first degree was Bachelor of Arts (BA) and thereafter acquired Higher Diploma in Education (HDE) from University of Durban-Westville (UDW). He is the most experienced teacher as he has 25 years of experience. He has produced 100% pass and distinctions in his subject in previous years. He believes that in order for teaching and learning to be effective, teachers need to love and respect their pupils; also love ones subject. Gug was selected to represent highly experienced teachers and lastly D.Hs. From the table of participant's biographical information and the description of profile of each of the teachers who were participants in this study, the intention and purpose of selecting teachers were outlined. The knowledge of the above helped to enhance comprehensibility of this study.

#### **4.4 Data production methods**

Data production techniques are crucial in accessing rich information for obtaining an in-depth explanation and comprehending human interaction, human phenomena or human discourse

(Lichtman, 2006). Human phenomenon is about lived experiences of individuals partaking in the research field like in the case of my study teachers teaching in the Secondary schools in a South African context.

According to Khuzwayo (2015) data production methods are means of collecting, finding the data and thinking about the meaning attached to particular data outcomes. In relation to this study, I used more than one data production method to obtain an indulgent of teacher beliefs about teaching and learning and their influence on learner performance. Semi-structured interviews were utilised as the core data source whilst lesson observations and document analysis were used as subsidiary collection methods. Audio digital tape recorders were used to record these interviews and lessons during observations

#### **4.4.1 The semi-structured interviews as data production method**

Different authors define interviews in a variety of ways with the common definition that interviews emphasis is on a two way discussion between the interviewer and the interviewee (Khuzwayo, 2015; Maree, 2007; Ingleby and Oliver, 2008). It is a logical way of talking and listening to the participants and thus collecting data from participants in conversations (Mngomezulu, 2014). Open-ended questions are usually used by the researcher or the interviewer to collect the primary data from the participant using his or her own words, voice and language (Litchman, 2006). To demonstrate the above in this study, the interview questions that I set allowed the participants to freely respond and freely produce massive and rich data about what they believe are factors that affect teaching and learning in schools and how learner performance is influenced as well. Mngomezulu (2014) expresses that interviewing is a technique of collecting data and means of acquiring knowledge from individuals being interviewed. According to Maree (2007) the idea behind choosing interviews is to gather data relevant to the study and to learn more about the beliefs, views, ideas, behaviours and opinions of the participants. Interviews ensure that participants are more involved as they express their opinions, feelings, concerns and aspirations freely and openly. Interviews allow the participants to air their subjective views on the educational issue (able to discuss their perception and interpretation) in the case of this study their subjective beliefs about teaching and learning in schools. Neuman (2006) trusts that the interview permits the researcher to have natural conversation with the participant.

Patton (2002) indicates that there are three types of interviews which include structured interviews, unstructured interviews and semi-structured interviews. In the semi-structured interviews the participant is allowed to talk the most.

In the light of the above arguments, I have decided to make use of semi-structured interviews in order to permit flexibility, expansion, re-ordering, delving deeply and probing further of the participants (Meeran, 2017; Yin, 2009; Cohen and Manion, 2000) in trying to understand and explore the beliefs of teachers about teaching and learning taking place in schools and how they believe the beliefs impact on learner performance. As teachers were the main source of information, semi-structured interviews were the dominant form of data collection. Teachers were interviewed over a number of sessions (multiple interviews) to get depth and clarity of information on their beliefs. To support the interview process, artifacts within the teachers' environment were also used as points of entry into the semi-structured interview process. These artifacts ranged from objects in the teachers environment, lesson plans, activities that teachers were engaged in and learner performance trends and were appropriate to elicit teachers' beliefs.

Audio digital recorders were used to record the interviews in this study. This was in line with what Creswell (2008) and Whiting (2008) suggest saying that audio-taping the interview affords an added contented conversational position since the researcher can have time to listen attentively to the participant rather than concentrating on writing down the responses. Furthermore, audio-recording in this provided validity checks, ensured comprehensiveness of verbal interaction and offered permanent record that stored verbal conversations in a language, with the tone, voice volume, emphasis, nuances and pause of the speaker.

When conducting an interview, a special care was taken into cognisance to ensure that the interview was interpersonal, social encounter and not just only data collection practice. Therefore a researcher's affectionate professional connection friendly and warm bond existed and alleviated teachers' tensions and anxieties. Moreover, the researcher created an environment which was conducive, open and full of trust when he was explaining that the intention was not to evaluate them but to understand their beliefs about teaching and learning and how do they believe influence learner performance in schools.

The interviews were conducted during the places, times and date convenient to both the researcher and the participant teacher. Most of the interviews were conducted at school during the day but in a quiet place when level of noise was minimal to avoid interference of noise to the audio-recorders that could have affected the quality of the recordings. Only three interviews were conducted in the afternoon at homes of the participants which was convenient to them to do so.

#### **4.4.2 Lesson Observations as data production method**

According to Nieuwenhuis (2007) as one of the qualitative research data production methods assists the researcher to access deeper discernment and comprehensibility of the phenomenon under study, in this case this is teacher belief about teaching and learning. Observation is a pivotal data production method utilised to listening or to seeing someone and beginning to observe what participants experience to come up with the sound assessment of the phenomenon (Khuzwayo, 2015; Maree, 2007; Dale, 2004). The intention of using lesson observation as data production method in this study was to collect data that was relevant in answering research question number two namely, what are teachers' beliefs about teaching? As well as question three which said, what are teachers' beliefs about learning? Through lesson observations, I was able to collect accumulated, complex and rich data and be able to establish connections about teacher knowledge, teacher beliefs and teacher practices in their classroom. Lesson observation further complemented data collected during semi-structured interviews. In addition, lesson observation added in multiplicity of the sources of data which improved triangulation.

Also as a characteristic of a data production process, lesson observation provided the researcher a chance to accumulate live data from natural setting and social settings by observing teachers teaching their subjects in the classroom rather than depending on other person as source of information as to what is happening in the classroom (Preethlall, 2015; Cohen et al, 2007). This study explored the teacher beliefs about teaching (which also involved teacher knowledge) and learning in the classroom of a high school as well as their influence on learner performance through the use of various data collection methods. It therefore became imperative for me as the researcher to delve deeper and have close contact with teaching and learning activities taking place in classrooms and observe learners and teachers' engagement. Therefore, observation in this study is understood as data production method technique that was used to gather non-judgemental and detailed evidence of issues without speaking to anyone in a natural



place. It is against this background that the lesson observation was selected as a plausible strategy to assess maximum information.

#### **4.4.3 The observation process**

Moyles (2007) argues that non-participant observers to come to school as a research natural field with pre-existing knowledge of what they intend to record and the rationale for the observation. Observation of lessons took place over a week. Only one lesson per a participant was observed in teacher's classroom. During lesson observation, the researcher was a non-participant observer and I ensured that my presence in the classroom did not interfere or affect the lesson. I was also mindful that the main concern of observing lessons was triangulation. I had to be strategic by video-recording the lessons ensuring that I did not miss out any activities and interactions between a teacher and learners and that I did not interfere with teaching and learning practice that was taking place. The videos were used for two purposes. The first was to focus on eliciting notions of teacher belief as noted through the recorded lessons and guided by literature review. The second purpose was to permit the researcher a chance to view videos many a times, being able to move back and forth in order to comprehend the identified notions of teacher belief as part of the interview process to delve deeper into teacher beliefs as it related to their teaching and learning. As a result it was easy to complete observation schedule and to review or reflect on the lessons.

The post-lesson interview was held at the end of the lesson to establish and get clarities from teachers on the issues identified by the researcher during the lesson and to complete the observation schedule (see Appendix F) using notes I wrote when I was busy with classroom observation.

#### **4.4.4 Document analysis as data production method**

Document analysis refers to data review that is secondary and complementing other data production methods which intend to provide information on a phenomenon in question (Khuzwayo, 2015; Bowen, 2009; Maree, 2007). It is a logical technique of reviewing and evaluating documents, both printing and electronic, in order to elicit meaning, access comprehension and develop empirical knowledge (Corbin and Straus, 2008). Documents have words (text) and sometimes pictures and images recorded without the intention of the researcher (Preethlall, 2015). The understanding is that document analysis is another secondary data chain of evidence that can be used in compiling the research report (Khuzwayo, 2015).

Documents provide data on the context where a participant is found and documents provide circumstantial evidence as well as historical awareness. In addition, documents provide a means of tracking change and development by accessing different drafts of a specific manuscript comparing them in order to identify the changes envisaged (Mngomezulu, 2014; Bowen, 2009; Creswell, 2008; McMillan and Schumacher, 2006). To add on, document analysis produces data-excerpts, quotations, or complete passages that are prearranged into main themes, groupings and case specimens, explicitly through content analysis (Mngomezulu, 2014; Labuschagne, 2003). In this study, I made use of documents such as teachers' lesson plans, worksheets and learners' marks records as means to provide circumstantial evidence and historical awareness about the teachers' activities (see Appendix G1 and G2).

It is in the light of the above understanding that the selection of the third method of data collection which is on document analysis was regarded as plausible for this study on teacher beliefs. Learner performance records (for Grade 12 results) of the selected teachers were reviewed over a period of five years to explore trends and or patterns. This data set allowed me to do two things. First I was able to link teacher belief to learner performance and secondly I was able to explore how the teacher explains his/her learners' performance in relation to their teaching and learning. Also tasks completed by teachers as well as teacher and learners artefacts such as worksheets were utilised to compile and generate data for further analysis.

## **4.5 Data analysis**

### **4.5.1 Defining data analysis**

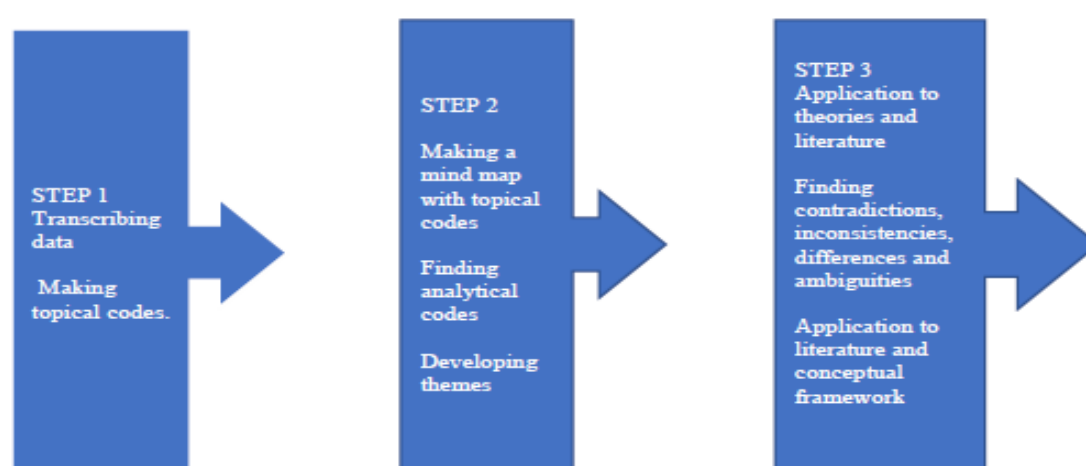
According to De Vos (2005, p. 334) qualitative data enquiry is "a search for general statements about relationships among categories of data." It is where the researcher attempts to make sense of data, construes and discerns patterns in the data generation process (Babbie, 2007). Data analysis is about gathering of rich and descriptive exclusive complications of data presented in the form of themes. Data analysis involves converting the data by decreasing the aggregate of raw data, sieving out relevant information, pinpointing imperative configurations and emerging a framework for transmitting the core of what is exposed in the data (Alavi, Archibald, McMaster, Lopez and Cleary, 2018; Creswell, 2003). In the same light, Bogdan and Biklen (2003) define qualitative data analysis as dealing with data by organising the said data, catalysing it into trivial quantities, coding them, synthesising them and identifying patterns that emerge.

Data was analysed using content and discourse analysis as well as a-priori frame analysis. Content analysis includes the process of organising the information into groups that are in line with the research questions for the study (Preethlal, 2015). Cohen, et al. (2011) elaborate that content analysis permits the researcher to analyse large amount of data using codes and themes, to institute patterns, specific emphasis and distinct units in the data. I utilised content analysis to scrutinise documents such as teachers' lesson plans, worksheets, learners' marks and school's Grade 12 pass rate records. Qualitative research accepts that documents are created or read in a different context, and therefore necessitates different subjective opinions (Turner, 2010). This difference in subjective opinions are characterised by context of production, definite audience, purpose anticipated, and researcher's motives for selecting, analysing and interpreting the text. After I had validated the documents, I then scrutinised for evolving issues, constructs and theories that were applicable to teachers' beliefs about teaching and learning as well as theories dealing with learner performance.

Discourse analysis was utilised to scrutinise communication flow during the interviews process. This technique focuses on the speech patterns, which include the manner on how people talk about a certain subject and how they alternate in their conversations. Thematic analysis was utilised and ideas appeared from individual interviews and observations relevant to teacher beliefs about teaching and learning in secondary schools. Here data was analysed using themes that were developed before data production. Units of analysis was established to indicate similarities and differences by ascribing codes or key words to identify data (Cohen, et al 2011) Discourse analysis assisted in understanding the views of the participants with regards to the beliefs teachers hold about teaching and learning. This analysis method emphasises on the emerging themes and patterns of behaviour or experiences of the teachers I interviewed. Marshall and Rossman (2006) highlighted that data analysis benefits to bring order, structure and meaning to the mass of data that a researcher handles.

Leedy & Ormond (2010) further mention the steps typically involved in analysing data in case studies, which are organising, categorising, interpretation and identification of patterns, synthesising and generalisation of data. In this study, the data was transcribed and read thoroughly to ensure that the data was understood and that nothing was left out when data was formulated. Each response of the participant was checked against the research questions and were categorised into meaningful codes, patterns and themes to encapsulate together jiffies of ideas, themes and patterns that could have been meaningless if they were analysed in isolation.

Chilisa and Preece (2005) called it an open coding process. At times I had to go back to the participants to confirm details given during data collection process and to verify the accuracy of what was transcribed was representing the viewpoint of the participant. As I was transcribing, I looked for the likely codes and wrote them in the margins of the transcription documents. The next diagrammatic representations details the analysis conducted on the semi-structured interviews, observations and documents that were captured during data collection process. It is adopted from Meeran (2017, p.91).



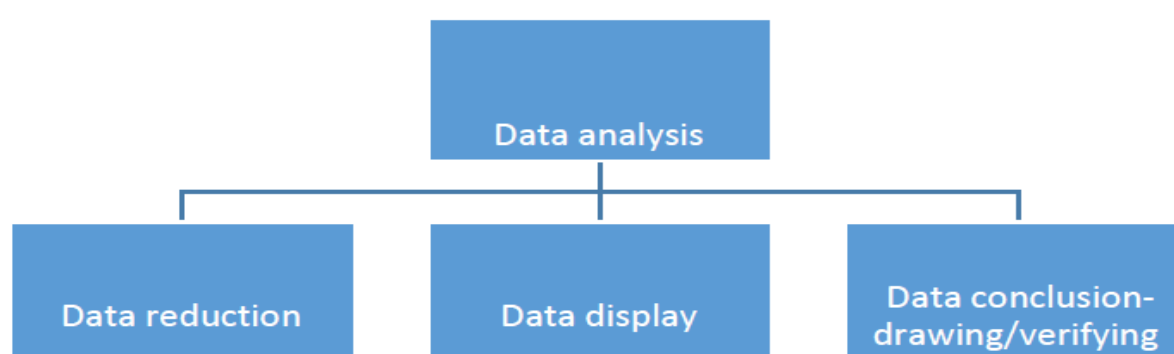
*Figure : 4.1 Semi-structured Interview analysis model adapted from Meeran (2017)*

The first level of data analysis was coding which according to Khuzwayo, (2015) and Punch (2005) is putting names, tags or labels against pieces of data in order to reduce amount of data, organisation of data and finding meaning of data findings. Scutt (2006) further defines coding as creation chunks of data with symbols, descriptive words or category names. In this section, I labelled participants using pseudonyms starting with the first letter of their actual names in formulating pseudonyms for instance Zwan, Thado, Naid to mention but a few. Participants' schools were also given pseudonyms starting with the first two letters of their actual names, such as Ngosa Secondary, Qoqa Secondary, Siminza Secondary, Hlonga Secondary, Shakeville Secondary and lastly Seaview Secondary. I primarily kept an un-orderly list of participants' responses from interviews and what I have observed from my personal observation and on what I have read from documents I analysed. I then categorised and classified data results according to similarities and differences where applicable in trying to establish core meaning attached to each data source.

The second level of data analysis deals precisely with description and implied meaning of responses of participants. This method of data analysis is defined by Spencer, Ritchie and

O'Connor (2003) and Miles & Huberman (1994) as data display stage which is about condensing and presenting the research findings into minor words or sentences that assist the researcher in distinguishing or purifying all what they captured from the data during data collection process.

In a nutshell, the above-mentioned coding and qualitative data elaborations, data presentation in Chapters five and six of this thesis, include the Miles and Huberman (1994) and Punch (2005) model of data analysis which are data decreasing, data display and validating of data. Below is the illustration of Data analysis model as improved from Miles and Huberman (1994) and Punch, (2005)



*Figure : 4.2 Data analysis model adapted from Miles and Huberman (1994) and Punch (2005)*

It can therefore be argued that data analysis process is time consuming as coding, transcribing, thematic presentation; categorising, organising, interpreting and making sense of the data presented by the participants require an exorbitant amount of time.

## **4.6 Maintaining quality in qualitative research**

### **4.6.1 Trustworthiness**

According to Thomas (2010) trustworthiness in qualitative research study refers to the extent to measure the quality of research. It is seen as reliability and validity in the qualitative research approach (Preethlall, 2015). Trustworthiness is the determination of the accuracy of the findings from the point of view of the researcher, the participant or the readers of the report or issue (Meeran, 2017; Creswell, 2003). For Maree (2007) trustworthiness is the capacity of the study to demonstrate that the findings are as a result of reliability and validity.

Reliability in qualitative research refers to consistency of data or findings whether they can be replicated and dependable and make sense (Merriam, 2009). A number of strategies that can

be used to promote consistency are triangulation, investigator's position, peer examination and audit track (Merriam, 2009). This study made use of multiple data collection methods such as semi-structured interview, observations and document analysis to ensure triangulation.

Merriam (2002) defines validity as the ability of a tool to afford data which is true to the purpose of the research; it focuses on how valid and how reliable the data is by its generalizability or replicability to a greater population (Meeran, 2017). However, since this study is a qualitative study the depth is considered instead of generalizability (of which validity and reliability is mostly used in the quantitative research) in place of generalisation transferability is used. Healy and Perry (2000) recommend four measures that should be considered by qualitative researchers in quest for a study that is trustworthy: confirmability (in preference to objectivity), dependability (in preference to reliability), transferability (in preference to external validity and generalisability) and credibility (in preference to validity). Mngomezulu, (2014) and Strauss & Myburgh (2001) summarise the four strategies or procedures that ensure trustworthiness in qualitative study as follows: credibility, transferability, dependability and confirmability. Each of these strategies will be discussed in the sub-sections that follow.

According to Cohen et al. (2011) trustworthiness, validity and reliability are based on the notion that there is some sense of uniformity or standardisation in what is being measured, and those methods need to consistently capture what is being explored. Fogg (2003) defines trustworthiness in terms of well-intentioned and unbiased, and expertise in the terms of perceived knowledge, skills and experience. The use of tape and video recorders and semi-structured interviews in this study ensured that teachers gave their own explanations and gave them their own voices, so the omniscient voice of the researcher is obviated. The transcripts were taken back to participants for verification, clarification and rectification of data before it was analysed. This ensured trustworthiness of the data produced.

#### **4.6.2 Credibility**

According to Thomas (2010) credibility refers to the magnitude in which data and data analysis process are trustworthy and believable to the researcher, participants and the reader. Credibility is primarily established by the receiver of the message, incorporating emotional sentiment and situational context, thus if the source is believable, it is considered credible (Jessen and Jorgensen, 2012). When there is convergence of information from different sources, readers of the research report usually have greater confidence in the trustworthiness (credibility) of the

research findings (Birt, Scott, Cavers, Campbell and Waters, 2016). Mngomezulu (2014) asserts that credibility is the assurance the researcher has in the reality of the findings which was formulated using various methods of data collection. The researcher in qualitative research generates meaning if the findings meet the created realities; such data is regarded as credible. Smith and Raga (2005) believed that credibility is reinforced by prospects of multiple realities of which Thomas (2010) is of the opinion that it depends largely to the individual who creates personal reality. This means that findings in qualitative research are valid and credible only to individual based rather than others because of multiple realities. I inspected the degree of credible research outcomes based on understanding the participants' responses and the interpretation of actions on the belief of teachers with regards to teaching and learning. I made use of various data generation and analysis techniques which were semi-structured interviews, observation and document analysis for triangulation purposes. I recorded data, permission to make use of audio –recorder was gained to ensure the accuracy of data collected during interviews. I further went back to the participants to verify that what was captured to attain credibility. Furthermore, participants were requested to proofread the transcripts where their responses were recorded before results were interpreted. Purposeful sampling of a variety of diversity groups in terms of race, gender, qualifications, experience of teaching and quintile rankings were applied to increase credibility.

### **4.6.3 Transferability**

According to Birt, et al. (2016), Trochim (2006), transferability signifies a situation in which the outcomes of qualitative research can be generalised or transmitted to other milieus or scenarios involving different participants. Transferability also refers to findings and assumptions applicable to other analogous case studies (Meeran, 2017; Houghton, Casey & Murphy, 2013; Polit & Beck, 2012). Cope (2014) contend that the qualitative study can be applicable in other conclusions if the reader can associate the outcomes with his or her experiences. Crawford, Leybourne & Arnott (2000) postulate that transferability and generalizability of data results depends much on the level of significant situations connection but if cases are small, findings cannot be generalised. In this study the sample of six schools and eleven teachers cannot be generalised representation of all schools in South Africa, however, some features of research outcomes can be transferable to another identical milieu that has analogous conditions.

#### **4.6.4 Dependability**

Dependability is defined as the firmness of the findings over period of time and application of corresponding methods of data collection (Alavi, et al. 2018; Mngomezulu, 2014). It is equal to ensuring of results over time and consistency of observing similar results cropping up under same conditions (Merriam, 1998). According to Rossouw (2003), and Strauss and Myburgh (2001) dependability symbolises the point that the findings remain dependable, and the identical assumptions are made during triangulation, even if other researchers were to repeat the raw data from the findings of the study.

In this study, I have made use of overlapping methods such as semi-structured interviews, document analysis and observations. In order to enhance dependability and consistency my study looked at the documents with the similar information I received during interviews; the document findings seemed to be in line with interviews even though I have changed the teacher participants. Furthermore, in order to build up dependability in this study, I audio-recorded data as I indicated in the section on credibility.

#### **4.6.5 Confirmability**

According to Sinkovics, Penz and Ghauri (2008) confirmability is an extent to which research results are verified by other people to maintain objectivity. Strauss and Myburgh (2001) endorse that confirmability provides a classification of proof supporting the logic of the researcher's line of argument. Therefore, researchers should write down the procedures preceded by scrutinising and rechecking the data throughout the study. Although objectivity is not part of interpretive paradigm, I adopted nonetheless the aforementioned method by checking the data from documents, semi-structured interviews and observations. Also in order to formulate corroboration of data outcomes and increase confirmability of research outcome, participants were offered a chance review of preliminary data analysis

### **4.7 Ethical Considerations**

Using case studies to explore teachers' beliefs about teaching and learning (current phenomena) in real life context require working with humans as subjects (Yin 2009). Therefore, sensitivity and care had to be taken into consideration when conducting this study. Ethical considerations are ways adopted by researchers to safeguard participants' values, rights and to derail superfluous information disclosure that has capacity to deprecate the character of



other people (Cohen, et al 2011). It remained my responsibility to maintain confidentiality, protecting the rights and welfare of the participants as I invaded the private spaces of the participants (Khuzwayo, 2015). I protected my eleven participants' ethical strategies before, during and after the interviews I conducted. Ethical strategies include but not limited to the following: gaining access, ensuring confidentiality, getting informed consent, maintaining anonymity, disclosing voluntary participation and informing about the benefits to the participants (Meeran, 2017; Khuzwayo, 2015; Thomas, 2010; Kvale and Brinkmann, 2009). Regarding ethics and ethical research procedures, I had to get access from all the gate keepers. I received the ethical clearance certificate from the University of KwaZulu-Natal (See Appendix A) where the study was located, which permitted the commencement of the data collection process; they perused the proposal for the study and issued an ethical clearance certificate which permitted the commencement of the study. As the schools were selected as research sites, permission was received from the Head of Department within KwaZulu-Natal Department of Education (see appendix B). I approached the principals of six schools selected as research sites to grant me permission to use their schools for the purposes of this study. After fostering good rapport with principals and after explaining the aims and objectives of the study, consent from principals was granted in writing (See Appendix C). Teacher participants signed consent letters (see Appendix D) after I have explained thoroughly the role and the reason for the study.

Participants were assured of confidentiality and anonymity during the research process as pseudonyms were used to conceal actual names. I was in line with Whiting (2009) when saying that true anonymity can only be guaranteed if the identity of the participant is not linked by the data even by the researcher. The use of pseudonym ensured that there was no link of participants to the data but were devised by the researcher with permission from the participants (Meeran, 2017).

Informed consent is where the researcher explains to the participants the information and knowledge of what is involved in the research (Khuzwayo, 2015; Thomas, 2010). Informed consent was obtained prior to any data collection. Here, the nature of the study, the purpose, the data generation method, the rights and responsibilities of the participants and the researcher and the intentions to utilise audio recorders were explained to the participants who were teachers teaching gateway subjects in secondary schools.

Voluntary participation is explained by Orb, Eisenhauer and Wynader (2000) as meaning that participants are not forced to participate in the study; instead they are at liberty to accept or refuse to partake without prejudice. In case of this study, I explained clearly that they are free to participate and have right to withdraw themselves from the study at any time if they feel they should. Moreover, the record of the interviews on cassettes would be destroyed. This would occur after five years of possession of the data in the School of Education and Development in a safe room under the care of my supervisor in case of a need to validate some of the data contained.

#### **4.8 Limitations in the Qualitative Research Design**

In this section of the thesis I discuss the limitations of this study and acknowledges that the following limitations empower those reading the reports to "appreciate what constraints were imposed on the study, and to understand the context in which the research claims were made" (Vithal & Jansen, 2012, p. 35). One of the limitations of my study was that most of the teachers I interviewed did not understand the quintile concept. I had to explain to them what quintile was and further told them the quintile of their own schools because they did not know to which quintile their schools belonged.

Some of my participants did not want to be recorded and opted to answer questions from interview schedule on their own. That hindered me from asking follow up questions and probing to get more clarity as it was the case with face to face interviews. It also resulted in production of thin description of the phenomena in question as I did not get thorough details as the participants were limited by writing.

Although I had initially planned to have twelve teachers, I ended up having eleven because one teacher from quintile 1 school could not be found. He was purposely selected because he was doing PhD in Education of which he was going to add a particular variation in the sample.

Although they agreed to participate in the project, some participants refused classroom observation. I was unable to have observation information for those teachers as I did not observe their lessons. That compromised and limited triangulation which ensured trustworthiness, credibility and reliability. The study made use of semi-structured interviews as the main data collection tool and this was supplemented by observation and document analysis. The future research should make use of other data gathering techniques in bringing

improved comprehension of the issue under study. Much greater scope of data collection techniques would have broadened trustworthiness and reliability.

#### **4.9 Conclusion**

This chapter provided a detailed description and rationale for the research design and methodology utilised in this study. The chapter also emphasised and vindicated the selection of the participants, research sites, the research design, the research methodology, the data collection, processing and analysis approaches that were applied in this study. As a final point, trustworthiness or validity and reliability, ethical considerations and limitations were discussed.

The following chapter presents first level of data analysis and findings of the study that is based on emerging themes from the research questions.

## **CHAPTER FIVE**

### **DATA PRESENTATION AND ANALYSIS TEACHER BELIEFS ABOUT TEACHING AND LEARNING**

#### **5.1 Introduction**

The purpose of this study was to explore the perspective of teachers with regards to their beliefs about teaching and learning and the influence these beliefs have had on learner performance. In the previous chapter I focused my attention on the research design and methodology utilised when conducting this study. In chapter Five and Six, guided by the analytical processes followed, I present my analysis using data assimilated from interviews as well as observations conducted on the teachers on their beliefs of teaching and learning and the influence teacher beliefs have on learner performance. I also kept a reflective journal and observation notes in which I recorded my observations and insights after each interview and during my transcription of these interviews. The reflective journal and observation notes formed part of the data used in this study.

In this chapter I focused my analysis on five themes that emerged from the semi-structured interviews I conducted. These themes are: Origins of teacher beliefs, teacher beliefs about teaching, teacher beliefs about learning, teacher beliefs about curriculum and assessment and teacher beliefs on the basis of their qualification levels, personal beliefs and experience in school. In commencing with this chapter, I explore the origins of the participants' belief system that informs them.

#### **5.2 The origins of teacher belief**

Teacher beliefs originated from a variety of sources. Some beliefs originated from indoctrinations, primary socialisation, early childhood development, religious institutions, culturally based and from family values. Values are being defined as products of a people's culture and ways of life: their philosophy, religion, law, language, literature, art and technology; their natural and social environment; the significant events in their history; and their unique character and personality (Bajinath, 2008). Teachers I interviewed had also shown

diversity in terms of acquisition of their beliefs. There is also evidence that the understanding of beliefs teachers have, impact largely in the way in which they teach in class as well as general teaching practices. These findings are consistent with literature, as Haney, Lumpe, Czerniak, and Egan (2002) found that teachers' classroom practices were consistently aligned with their belief systems and that there is the fundamental links between teacher beliefs, classroom practice, student beliefs, and ultimately student learning. According to Belo, van Veen and Verloop (2014) and Frost (2010), teacher beliefs are consciously or unconsciously influenced by various factors such as schooling or prior learning experiences, professional coursework or teacher education, classroom practice (including social and contextual constraints), and contextual factors. This was true when one considers what teachers I interviewed had to say. Moh believed that a belief is what you feel about something and that belief is a personal opinion and stems from one's character. She also believed that belief originates from general conversations with other people. Moh had this to say as evidence:

*“For me basically belief is what I feel about something and how it should be, it's a personal opinion. ... In general conversation about beliefs people generally give you not a general characterized statement but they give you what they think and we generally regard belief as a personal opinion.... Belief has personal opinion and personal feelings that go in with regard to something or whatever it is like a belief about the end of the world, different people have different beliefs that stem from our character and so many different sources.”*

Thado believed that belief is something that one learns as a child and grows with it. Belief helps one to decide on what is right and what is wrong. Thado also believed that beliefs are like guiding principles in the life that propel one into achieving anything one wishes to achieve. This is what she had to say about beliefs:

*“Belief is something that you learn when you growing up as a child cause you will know that if you do one thing or something that is not right it is not going to lead you in a right direction ...if you are an individual or you a human being there are certain beliefs that you live by like principles you know that you have that will guard you towards achieving whatever you want because you know if belief, I believe that I can achieve this then you can do it but if you do not have those principles you won't reach your goal also your destination.”*

Thado further believed that belief emanates from other people's teachings during school. She had believed and practiced what her Life Sciences Subject Advisor taught them about managing a level of noise in the classroom. She had learnt from advisor that lowering a voice

will cause the learners to listen to you when they are making noise in the classroom. This belief originated from her subject advisor as part of schooling process. Thado alluded that:

*“I remember at one stage we asked how to handle the big classes and then one subject advisor told us that while he was still teaching he used to lower his voice (because learners do not keep quiet and they won’t listen to him) so when he lowers his voice the learners in front will listen and the ones at the back will stop talking cause they will know that the learning is going on in the front. So I used that other than shouting at them ...you just lower your voice and then speak to those learners even if you ask them easy questions they will raise the hands and then they will answer, then you praise them for answering then they will notice haa... teaching is going on there, then they will keep quiet. That I learnt from subject advisor.”*

Some of the teachers I interviewed showed that beliefs originate from their own thinking and frame of reference. Mze perceived belief as an attitude of the learner towards learning. For him belief is innate. Mze pointed out that:

*“For me belief is about an attitude of learners towards learning. ...is about attitude of learners what do they believe learning is and what should it take and how you learn. Belief is inside you and directs your attitude towards a particular subject.”*

Ndwa regarded belief as a way of thinking and defining what is around us in an environment. Belief emanates from general everyday life. She articulated that:

*“Belief is your way of thinking, your way of defining what’s around you the environment around you. I think that is belief. I think it’s just general everyday life that is how I see belief, as I speak the word what I understand from my general everyday living.”*

From the above citation, it is clear that teachers got certain beliefs from their everyday encounters, be it at school, in the churches, communities and so on.

Zwa on the other hand believed that belief was what you trust will bring about a change. For example; knowing Mathematics basics (in Grade 8 and 9) will make learners pass Mathematics in the FET phase. This belief he had originated from the way he was taught Mathematics, in other words, belief comes from initial teacher training he has undergone. He asserted that:

*“I believe that Mathematics can be passed. I believe that anyone can pass Mathematics by knowing the basics of Mathematics I think learners are lacking the basics; is that they should deal with at grade 8 and grade 9. If you go to grades 10, 11 and 12 without*

*the basic Maths skills, you won't pass mathematics, so I believe that they should know the basics.... I believe that pass goes with focusing."*

Naid viewed belief as how one perceives something to be. Her belief emanated from her own experiences as a teacher.

Ntu and Oshun perceived belief as a trust that one is having on something especially if there is no evidentiary proof of it.

*"I think belief is a trust on something or to have confidence that something exists especially one without proof of it." (Ntu)*

*"Belief is trusting in something. ... I would say I grew up with that to believe from the environment from my parents and when I was growing, so I grew up knowing about belief. (Oshun).*

From the above citations it is evident that certain beliefs came from primary socialisation where parents play a major role in nurturing their kids with belief systems that will impact, to some extent, on their day to day encounters.

The other two teachers I interviewed looked at religious connotation of belief. Their source of belief was religiously based. For both Mag and Tre, belief is culturally and religiously based like believing in the existence of God. Ancestors are part of belief system that people associated themselves with. Mag alluded to the fact that:

*"If you believe that if something is going to work in a particular way. I think that is a belief. If you believe that Jesus died for us and maybe you do not have things to say, we have to ask Jesus to give us things we believe that this will happen honestly."*

Tre had this to say:

*"We come from different cultures. Some believe in the existence of God, others believe in ancestors. There are different religions. Here more people believe in ancestors others belong to the Nazareth Church."*

Their belief about belief originated from Christian indoctrinations. Tre is a Christian but also believe in other traditional things. Her beliefs and values originated from her Church which was not skeptical of other religious attachments as she said:

*"My belief, I belong to Christianity. I believe in Jesus Christ but we do other things at home. My church does not interfere with my beliefs."*

Mag got the beliefs she had from school, church and community at large as she said:

*“My beliefs are from School, church, community and like us Africans we have a belief that there are ancestors. Some say that when they die just born like Christians and some believe that when you are up to them because they are on that side, they are near God and easy for them to communicate with God for us.”*

Some teachers believed that their belief systems they possessed emanated from their childhood and from their families. Families played an important role in moulding certain beliefs that they grow up with. Ndwa supported the claim when she said:

*“I think as from home... maybe when I was young. I viewed it that way. It has been working for me and it still does work for me. Let us just view a recipe that I have had and I have seen it succeeding.”*

The understanding one was getting from the above citations was the one which looked at the fact that beliefs teachers had about any particular thing emanated or originated from a variety of sources. Primarily their belief systems originated as they were growing up and are influenced by several things including exposure to religious beliefs, education, being in particular places, personal experiences and family traditions. Each teacher had a particular point of view to state as source of reference for his or her origins of beliefs. Hence the various perspectives on the origins of belief, therefore, makes belief a complex concept intersected by place, time, experiences and influential discourses exposed to. Furthermore, articulating what belief is and where it emanates from is difficult as participants relied on reference points (including the church, family and education) to explain what they understand by belief and where their belief comes from. This means that concept belief and its emergence is a tacit knowledge understood and acknowledged more by senses rather than by words expressed.

### **5.3 Teacher beliefs about teaching**

Teacher belief has been explored around its influence on teachers work and professionalism suggesting a link between what teachers believe and what they do in class or with learners (Belo et al, 2014; Soldat, 2013; Khader, 2012). This exploration paid attention to the beliefs teachers have about teaching, about learning, about curriculum, about themselves as well as the origins of teacher beliefs and the way in which these beliefs influence their teaching practices. The different literature that has been perused looks at teacher beliefs in various spheres. The literature argues that teacher beliefs are part of larger belief systems. These systems contain:



“beliefs about teaching and learning in general (e.g. conceptions of learning and beliefs about a range of topics such as the regulation of students’ learning processes, goals of education, the nature of knowing and knowledge development, assessment, and so on) and domain-specific beliefs (e.g. beliefs about the nature of the subject, curricular goals, instructional strategies for teaching particular content, and so on),” (Belo, et al, 2014, p.91)

There is a relationship between what literature says and what data reveals in as far as it is concerned with beliefs about teaching and learning in general and in domain specific areas. Drawing from the data it seems that these beliefs about teaching are consistent with the literature but go beyond to include connections between what the teachers believe about their learners and what they say they do to support their learners. Delving deeper into the responses of teachers about their beliefs reveals that these beliefs are strongly linked to the assumptions about and experiences of the backgrounds that learners come from. There seems to be generic understanding of the ills of apartheid that brings a level of sympathy and feelings (identity and/or the need to go the extra mile in compensation for the ills of apartheid) for these learners that necessitate a constant review of their learning in relation to the backgrounds that they come from.

### **5.3.1 The teachers understanding of teaching as a process**

Teachers I interviewed demonstrated a divergent belief of what teaching as a concept is. Literature has defined teaching as a practice that encourages intellectual growth in its practitioners (Noddings, 2003). Classical philosopher, Aristotle as cited by Nodding (2003) pointed out that teaching is an activity that finds its results in the learners and not in the teacher. In other words, the effect of teaching should be evident in the portrayal of understanding and knowledge acquisition of learners and not what the teachers think. Prosser (2013) added that the high quality of teaching should maintain students’ awareness and their perceptions and comprehension of the subject matter. Thus the outcomes of quality teaching means ‘not only does good teaching imply careful preparations and explanations, but also requires continual monitoring and responding to students’ perceptions and understandings’ (Prosser, 2013, p.34). It is against this background that one had to look at what teachers believe teaching is and what they believe is their role in the process of teaching.

To begin with, most teachers believed and regarded teaching as: (i) the process of imparting knowledge from one person to another and being able to assist or guide who is being taught.

Teachers also believed that (ii) passion has a role to play in teaching. Some believed that teaching also deals with the (iii) ability to pass the information which we call pedagogical content knowledge or knowledge of practice. For Shulman, (as cited by Mhlongo (2013) pedagogical content knowledge goes beyond knowledge of subject matter per se to the dimensions of subject matter knowledge for teaching. This shows that one needs to have a necessary skill of passing knowledge in order for teaching to be effective. The belief that teaching is about passing information from one person to another, to the person who is not knowledgeable is also evident in this study. The transfer of knowledge includes subject knowledge, values and life skills that they (teachers) believe the learners need.

(i) Imparting knowledge to learners

Oshun, one of the participants, had this to say:

*“Teaching is being able to pass the knowledge from one person to the other, being able to assist or guide one that is teaching. Teaching does not just know the content but the ability, that is my belief, to be able to pass my knowledge or information from one source to the another...Is to teach, is to pass the information from one to the other who is not knowledgeable, so the teacher is teaching, facilitating, guiding the one that needs to know more.”*

The central idea above is the belief that teacher teaches, facilitates and guides learners who do not know. Ntu concurred with Oshun when saying:

*“I think teaching is to impart knowledge or instruct a learner how to do something or to cause someone to learn or understand something.”*

Naid also shared the same sentiments with the two above when saying:

*“Teaching is about imparting knowledge, values, and life skills to learners.”*

I happened to observe Ntu teaching Accounting in his Grade 11 class. I observed that he was indeed imparting knowledge of Accounting equations to learners. The kinds of learners' activities that he prepared ensured that new knowledge system was cascaded. There was a correlation between what he said and what he was teaching in class.

I also observed Naid teaching her Grade 12 Physics class. She was well prepared for her class and imparted knowledge to learners in such a way that learners were impressed by the way in which she explained Physical Science concepts. This showed that teachers did not say things for the sake of saying them but they practiced what they were saying to me as a researcher. Teachers believed in their own capabilities.

Zwan believed that knowing the content of the subject one was teaching was going to make learners to understand as a result, learners will pass. In other words, content knowledge was vital if learners were to pass. He argued:

*“...knowing the content as a teacher will make someone to understand and pass. If you are teaching, someone has to understand you, once he/she understands you, and then he/she can pass the subject. There is content in Mathematics as well. Teaching is based on this content which will lead to learners understanding what you are teaching them. That will lead to learners passing the subject.”*

This belief of teachers on passing knowledge onto learner reflects back onto the teachers as they account for what they do as teachers.

In supporting this assertion, teachers further believed that it was their duty to prepare learners for the future and letting learners know and fall in love with their subjects ensuring that learners are motivated to aspire for more in life. Two teachers stated that as confirmation:

*“Teaching is about preparing the future of the learner.”* (Tre)

*“It is to teach in such a way that my pupils fall in love with the subject and it must be a way that they come asking for more, they must be waiting for my subject because of the way I teach.”* (Gug)

The imparting of knowledge is, therefore, seen by teachers as having a long term impact, implying that there is value and importance to the knowledge transfer onto learners.

(ii) Passion for teaching

Teachers also believed that they needed to be passionate about teaching. Passion was an element of teacher belief. This was evident when Tre was saying:

*“We need to be passionate about teaching. Every time we need to think about knowledge we will teach our learners. If I am at home, I think of Economics and Economic Management Sciences (EMS) I think of mind map and concepts to teach.”*

Gug added that:

*“Teaching was one of my passions, so I believe when you’re doing a job, you have to be in love with that job so that you do it in a precise way.”*

From the above quotations it is clear that both Tre and Gug think about their subjects beyond the school, suggesting a link between their passion for teaching and their belief in teaching. Tre’s passion to teach went beyond school parameters in such a way that she was thinking about her subjects even at home.

Moh shared the same sentiments with Tre and Gug as she believed that her role as a teacher is to teach beyond the call of duty. She argued that teaching is for only those who can go an extra mile and impart knowledge to learners resulting into factual knowledge coming out from the learners. A factual knowledge being the belief in what one is teaching. These were her own words:

*“Basically, my belief about teaching is that teaching is not for everyone. It is for people who are willing to take that extra mile to show that the future generation is going to be someone worth of imparting all knowledge to do the best of his or her ability. Factual knowledge is that if I teach Life Sciences, my belief about sciences should go out, it should be strictly sciences and kids should be allowed to make their choices in what they believe in.”*

The above citations were in line with most of the literature about teacher efficacy. According to Bandura (1997) mastery experiences as part of teacher efficacy construct occur when a person attempts to do something and is successful in doing so; the person has mastered that thing. Mastery experiences are defined as past successes or failures. People are more likely to believe they can do something new if it is similar to something they have already done well before (Brown et al. 2005, Bandura, 1994, 1997). Strong efficacy expectations are developed through repeated success of behaviour and reduced efficacy expectations can be as a result of failure (Brown et al, 2013). This was evident when one was looking at the passion the teachers had about teaching and imparting knowledge to learners. These were evidence of mastery experiences as teachers believed that they can do well in their subjects if they are passionate about their teaching.

(iii) Teaching pedagogy: their ability to pass on the knowledge they have onto learners.

Having the knowledge and wanting to pass this knowledge onto the learners can be possible if the teacher knows how to pass on this knowledge. Shulman (1986) calls this pedagogical content knowledge. The teachers’ believe that teaching also included the fact that they need to make someone understand the knowledge they are imparting. The belief is that when teachers understand the content it will make learners to understand the subject and thus pass at the end of the year. Zwan affirmed this when saying:

*“If you are teaching you have to make someone to understand, to know these things. So my idea of teaching is just that you are teaching someone to know what you are teaching*

*and knowing the content of your subject; by knowing the content that someone will understand and pass.”*

Thado believed that her role as a teacher is to develop learners holistically beyond the level of content or curriculum but also to touch on the life skills that will help learners to cope with life in an open world. These were her words:

*“Teaching is all about developing learners; helping them to grow mentally, physically and spiritually. Teaching is not about the curriculum only, it is also about teaching them life skills because learners will come with different problems at school and then you cannot say because I teach Life Sciences, I cannot attend to that problem and tell the learner to go and ask his or her mother because some learners tend to trust educators and feel free to talk to educators instead of their parents. So teaching is all about teaching the learner in totality. It is all about the development of the child.”*

For Thado, the pedagogical content knowledge includes knowledge about the learner and the circumstances that the learner is located in. His belief in the ability to teach goes beyond that content knowledge of the subject. Rather, he takes a holistic approach within a learner centred philosophy to his teaching, suggesting that the ability to impart knowledge to learners goes beyond the classroom and considers who the learner is.

Mze adds to this notion of pedagogy. Firstly he believed that teaching is an art of developing the mind of the learner based on the subject content and learners’ background. Secondly, the teacher, he believed, should be able to relate subject content to the real life situations and being able to solve problems in the near future. The whole idea of relating subject content knowledge with the problem solving skills is paramount in Mze’s perception of teacher belief. He stated that:

*“For me teaching is the art of developing the mind of a learner. You have to know your subject content very well and understand the learners’ background where they are coming from and what do they need to grow from, where they are now, that is basically a nature of teaching. ...Need to be able to channel them in a right direction, on what do they do with the content that they have acquired, how it relates to the real life and how should they use it to solve problems. If you look at my subject Mathematics sometimes you find Xs and Ys. No value to any individual, but for me it’s an important thing, is learning Mathematics. They teach you how to solve problems ... you’ve got a problem in front of you which you need to solve. ... the*

*idea behind is what do you do if another situation like this comes, how can you be able to use that logic you gained when solving that particular problem. So, it is all about relating the logic and the concept of Mathematics to solve real life problems.”*

Contrary to his earlier belief about teaching, Mze believed that teaching is an art of confusing learners and Mathematics will always come with solutions to solve problems which led to confusion in real life. In other words, Mze argued that when we teach learners we confuse them because they hardly relate learning into real life situations. He believed also that Mathematics confuses learners as well but the logic that is taught in Maths make it easier for learners to cope with confusions brought by life challenges. His argument was that:

*“...teaching is an art of confusing you, sometimes you get confused but the idea is not that like if you’ve been confused you should die or should cry. It’s not that what do you do when you are confused because the real life situations will confuse you but how do you get out of that confusion, that is important. So, for me Mathematics is about that - is about how you get solutions when you are faced with challenges. When you are doing Maths, you are given problems you are being challenged plus confusion in Maths so that you will know what to do when you are confused in life.”*

Their want to transfer knowledge, their passion for teaching and how they teach links the teacher as the knower of knowledge and the learner as wanting to learn. Hence teachers’ belief of teaching seems to portray a liner relationship between the knower and the learner. This portrait of a teacher based on their belief influences their teaching practices which seem largely transmission in nature.

### **5.3.2 Teachers as support providers**

Teachers believe that learners are vulnerable and this vulnerability has arisen out of the nature, and history of the learners’ background and their interest in education and their future. Teachers that I interviewed believed that they need to be very supportive to their learners because of the nature of learners and their background that they come from which is not conducive to supporting learning. Teachers believe that their learners do not have passion and vision of where they are going to with their studies. They just learn because they are in school. This is evident when one looks at the statement by Zwan when saying that:

*“The learners from this area, you have to know that they are not aware where they are going at the end of matric they just learn to finish the school. That affects you a lot*

*because they do not want to excel. If you are teaching someone to excel you've got the challenge to teach more and do more because you know that someone is going to university but here they just learn to pass. They are not aware of their future. They don't have the eagerness to learn and the eager to go to do something with their lives."*

Ndwa had this to say:

*"I believe that the main problem with the learners is the mentality of just don't care which makes it difficult for us to teach ... learners do not have that zeal for learning. If we can as teachers get to the learners' system especially in the lower Grades 8 and 9, it will be better."*

The teachers believed that learners did not have zeal and that teachers have responsibility to change learners' mindsets; create eagerness and support to learners to learn.

Mze, reflecting on his teaching of Mathematics, stated that:

*"Learners' backgrounds and beliefs influence the way I teach. You know sometimes you find they know that they have to switch it off so for me something I have to correct - the attitude, not punish but correct."*

From this citation one can see that the teacher believes that learners switch off when it comes to Maths because they don't understand it and have little background of it. Mze is also very much supportive of his learners and encourages his learners to have positive attitude towards Maths.as he says,

*"One of the methods of making my learners feel that Maths is doable is to give learners the easy task that they can do and get confidence."*

The teacher further believes that going an extra mile with learners will improve positive attitude of learners and improve learner performance. This is evident when he states,

*"So I can make them to go extra mile. Their beliefs make me go an extra mile so that they can understand the difficult concepts and the challenging concepts."*

Oshun responded by saying,

*"The learners are demotivating to a larger extent and motivating to a lesser extent. Learners have their different cultures and beliefs. Learners in Grades 8 and 9 still don't understand English and I am an English only speaking teacher. I teach only in English. I am struggling when I am trying to teach a little thing but it takes me so long to teach that little thing. It is like I am unable to pass the knowledge to learners so language is affecting me... So I get demotivated because learners are not communicating with me, they are not talking back to me, and only few will raise hands."*

From the citation above one can see that Oshun believes that English as a language is a barrier to teaching as learners don't know English and the teacher cannot code switch as others do as she does not understand IsiZulu as she said,

*"If I had an advantage of using IsiZulu I would have code-switched and say okay this is what I am trying to say."*

Teachers will always want to support their learners to learn.

Ntu says,

*"My school is a rural school, it is difficult to teach learners because some of them don't know even know source documents such as receipts, cheques, invoices, look like. So I must bring them so that it would be easier to understand...use few local businesses to relate some things they are doing practically with what we are learning."*

This showed how supportive a teacher is in terms of bridging the gap caused by their contextual deprivation. .

Naid believe that learners' backgrounds have a negative impact on her teaching as learners lack concentration and are ill-disciplined. She believes that her subject (Physics) requires learners who are good in terms of discipline.

Moh argued, saying that

*"Our subject is taught in such a way that we encourage learners' beliefs and background knowledge. We always take into consideration the background of their knowledge. We consider their belief systems, we listen to their indigenous knowledge system and we discuss in scientific terms, the myths and the truth so that it's interesting to deal with beliefs."*

Thado said:

*"Sometimes I come across learners who have a negative attitude towards the subject as such there are learners who, like, before attempting the answer in the test, they will tell you that, no mam, Life Sciences is hard. So that attitude, it does affect them and it also affect me being effective, because I'm teaching people who are already negative about the subject and yet I need to try and make it more interesting to them in order to change their attitude towards the subject."*

This shows how supportive Thado is in trying to get learners attitude towards Life Sciences right.

The above citations are indicative of the beliefs teachers are having about support they need to give to learners irrespective of how demotivated learners are. Teachers believe that they have the responsibility to change their learners' perceptions and beliefs about their subjects and their



learning. This is in line with what has been argued in the literature that teacher beliefs are attitudes, thoughts and values, tacitly and unconsciously held assumptions teachers have about teaching learners which teachers bring into classrooms and influence their classroom practices (Rahman, Singh and Pandian, 2018; Alisaari, and. Heikkola, 2017; Belo, van Veen and Verloop, 2014; Frost, 2010; Soldat, 2013; Khader, 2012; Liu 2010; Frost, 2010; Ertmer, 2005; Pajares, 1992). Teacher beliefs come from personal experiences in general and teaching in particular, teacher's experience as student and teacher's knowledge of learners' abilities and the school ethos (Ramnarain & Hlatwayo, 2018; Soldat, 2013, Belo, van Veen and Verloop, 2014; Khader, 2012, Liu 2010, Pajares, 1992). Teachers here showed that they have knowledge of their learners' abilities.

### **5.3.3 Teachers views about learners and hard work**

Teachers believed that they had to work hard at school because learners come from different families and do not have good knowledge foundation. Most of the learners came from families with poor socio-economic backgrounds and indicate that their home background influences the learners' ability to do homework. Teacher Zwan stated:

*“Some of the learners come to school not even write the homework. If you ask them, why? They tell you that they don't have a table or desk to write at home, they don't have an electricity to do homework, they just go and sleep.”*

The data revealed that family circumstances impacted largely in terms of learners' readiness for schooling. Some learners had to be involved in household chores. Learners took on home responsibilities when they arrived at homes. The following extract from one respondent who stated that:

*” Some learners are supposed to go and fetch water, catch the cattle and cook, look after other siblings and all that stuff like that. They don't have time to read their books and to do their homeworks” (Zwan).*

Zwan believed that learners did not have time to read their books and to do their homework because of the household chores he mentioned. The fact that learners were responsible for other chores at homes meant that they did not have time to study at home as expected of them by the schools.

While some of the teachers believed that the impoverished backgrounds that learners come from prevents them from doing homework, which ultimately impacts on their learning, others believe that learners are not being serious about their school work. For these teachers, they believed that learners were not committed to study whilst at homes. They also complained that learners were not completing their homework or projects that they had to do outside the school hours. Teachers believed that learners were lacking commitment to school work. For example Oshun stated:

*“Learners do not bother themselves with studying at home even if work is given to them. They only study here at school. You will find them dogging classes doing their homework in the morning of the following day.”*

Impoverished backgrounds of learners have influenced teachers in schools located in such areas by way of assuming the impact of these backgrounds on learners’ ability to do additional school work whilst at home. In contrast, Moh, the teacher from quintile five schools, stated that in her school they had learners who were coming from poor and underprivileged families but she had never experienced a situation where learners were coming to school having not done their homework for whatever reason except for the reason of electricity load shedding. This is what Moh had to say:

*“We do have learners from poor backgrounds and underprivileged communities...I haven’t experienced learners coming to school having not done their homework except during load shedding times, other than that no such”*

These contrasting views about impoverished backgrounds on learners suggests that teachers’ belief about learners’ home environment and their interest in doing school work at home depends upon the nature of the school environments (e.g. the demands of attending a quintile 5 school) and assumptions about the impact of impoverishment on learners (e.g. household chores prevent learners from doing their homework).

### **5.3.4 Resource provisioning and large classes on teaching**

Teachers believed that their teaching was affected because of the shortage or lack of resources. They believed that if schools can be better resourced, they could teach better and attained much positive result. Mze indicated that

*“When teaching you need resources but they are not available in my school. Resources such as OHP, computers or tablets. Sometimes you would like to let your learners watch*

*some videos but then you can't because some classes, in fact, most classes don't even have electricity."*

Zwan shared the same sentiments when saying:

*"Learners don't have some of resources they need at school... Most of the learners don't have calculator so if you're teaching Mathematics learners have to know how to use calculators."*

Thado believed that:

*"I would say unavailability of resources affects me as a teacher."*

Teachers also believed that large number of learners in class resulted in disturbances. Thado articulated that:

*"The large number of learners in classes cause in grade 10 they have like 65 or 66 learners in one class and they are crowded so it is not easy for me to control all of them you know... so you find that while I am teaching sometimes at the back the boys will be making noise, disturbing others, fighting, you know. So it is really a challenge with large number of learners in a class."*

Moh believed that her school was better resourced so it was helping her to teach better as well. She further believed that equipment and science apparatus used when doing experiments made teaching much better and the use of smart boards worked well to improve teaching. She asserted:

*"The equipment and apparatus would always be making teaching a lot better. Things like that in Biology we have to bring technology like smart boards and the likes, they work well. Kids tend to understand, grasp concepts easily if it is made visual. You know they will be able to see what is happening. For instance if you are showing them a video of how you dissect a kidney, the best way is to actually dissect it or show them a video of dissecting it so that they are able to see it as compared to just showing them on paper. I found that it actually works for better, so my teaching is far much better because I have better resources."*

These extracts suggest that teachers believe that their teaching practices are influenced by teaching and learning resources and class size. Adequacy of resources and smaller class size positively influences teachers' teaching practices, while inadequate teaching and learning resources and large class sizes negatively influences teachers' teaching practices.

### 5.3.5 Learners lack of basics that influences teaching

Teachers believe that learners are lacking the basics in terms of content knowledge. Liu (2010) argued that each teacher holds a set of beliefs that determine priorities for pedagogical knowledge and how students acquire knowledge. Ertmer (2005), who investigated teacher beliefs about teaching and learning, called these beliefs pedagogical teacher beliefs. The data presented hereunder suggests that one of the pedagogical teacher beliefs relates to the political changes in South Africa from apartheid to a constitutional democracy and its concomitant curriculum changes whereby teachers believe that the learners lack basic school knowledge. The belief that learners lack basic school knowledge was due to the changes in the education system in South Africa. Within the newfound democracy that South Africa had obtained, the school curriculum policy adopted an outcomes based education (OBE) philosophy and within this philosophical perspective, several curriculum policies have come to influence school education within South Africa, commencing with Curriculum 2005 (C2005) with several policy changes over the years. C2005 did not concentrate on content knowledge but on outcomes of student learning. The next curriculum policy known as the Revised National Curriculum statements (RNCS) also paid less attention to content knowledge and this policy translated into the National Curriculum Statements (NCS). The current Curriculum Assessment Policy Statements (CAPS) shift the balance between learning outcomes and content to be taught and assessed with a slant more to the programme of teaching and learning that is guided by structure, process and time and which requires a sustained focus on content knowledge. The previous curriculum policies (C2005 and NCS) left learners without specific content knowledge which then resulted into lack of basics of the subject knowledge learners need to possess. It is against this background that the teachers believe that learners lack basic content knowledge. Zwan confirmed this when saying

*“Some learners don’t know how to use calculators.”*

Mze asserted that:

*“Learners are lacking basic Mathematical skills and believe that Maths is difficult.”*

Mze further asserted that the books provided in schools do not give necessary content support that will give learners basic skills that they need. This is what he said,

*“In terms of content support, something must be done because I believe that textbooks that we use are not sufficient to explain in terms of giving learners basic knowledge and types of problems that they may encounter in the examinations.”*

Oshun believed that learners especially in rural schools where she is teaching, lack basic English skills which are very much important as most of the books learners read are written in English and the medium of instructions in schools is also English. She said:

*“I tell my learners that all subjects examined in English except IsiZulu as a language, so they cannot do away with English. I used to tell them that I have my personal language, I am not English person but I learnt English at school, I was simply told to speak English. If the learners have that foundation and better English skills, they perform better.”*

Gug believed that teachers need to go down to the level of learners to make them understand especially those learners who struggle to understand English as they lack basic English skills. He argued:

*“You have to go according to their levels, especially those who find it difficult to understand English, we have to go down to their level and make sure they understand what is going on.”*

Naid also believed that the lack of basics English skills contribute a lot in terms of learners understanding Physical Science she is teaching. She had this to say:

*“Many of my learners don’t understand English so I realise the importance and need to analyse the question and teach the Physics English (Language).”*

These extracts suggest that teachers do have pedagogical belief that influences their teaching. The common pedagogical belief relates to notions of basic knowledge, and when excavated, refers to English literacy skills and numeracy skills.

### **5.3.6 Concluding comments on teachers’ belief about teaching**

Drawing from the presentation of data and an engagement with the data, teachers’ belief about teaching requires the teacher to have good content knowledge and that if content knowledge lacks, teaching will be ineffective. Teachers further believed that they needed to have passion for teaching. Teachers believed that they needed to provide support to their learners because of the nature of learners and the background they were coming from which was not conducive for learning. Finally, teachers also believed that due to the changes in the school curriculum policies, the learners’ basic knowledge, referring largely to subject content knowledge, is not in place to facilitate further learning.

## **5.4 Teacher beliefs about learning**

In this theme I present data and findings related to three sub-themes. These sub-themes have been derived from the organisation of the data into groups that speak about teacher belief about the supportive aspects of learning, teachers' belief based on the activities leading to learning and teachers' belief of the constraining factors on learning. Learning is defined as an activity or 'process of bringing change into behaviour (effect of experience on behaviour), gaining knowledge or skill by studying, practicing, being taught, or experiencing something' (De Houwer, Moors and Barnes-Holmes, 2013, p.3). It is an activity of someone who learned, acquired, informed or developed a particular ability or made to be aware of something by information or by observation (Qvortrup, Wiberg, Christensen and Hansbol, 2016). During learning process new knowledge and skill are acquired. According to Prosser (2013), learning results in the modification of a behavioural tendency by experience; learning focuses on practices and activities that are recognised to enhance student learning, experiences and learning outcomes.

#### **5.4.1 Teachers belief on the supportive and interest aspects of learning**

There are various aspects to interest elements that teachers believe would promote or enhance learning. The two main strands in this sub-theme are related to (i) the home environment and (ii) learners' distractions to learning, and are largely in respect of interests and motivations.

##### **(i) The home environment**

One may share same sentiments with Langa (2013) and Van Wyk & Lemmer (2009) when saying families are known to have played most powerful and lasting influence upon the attitudes, behaviour and academic performance of learners and that much of the knowledge and skills that children eventually receive are determined in homes. Primary socialisation play a major role as stated above. As such, effective learning is guaranteed when families and schools work together in this mutual venture and effective parental involvement is a necessity if this relationship had to be forged.

The findings of this study suggest that teachers believed that the poor parental involvement resulted in poor or lack of communication between the schools and homes. The communication between school and parents were considered an important element of learning support. Parents were seen as not supportive to their children; they just stood aloof from their children's learning. Parents were not coming to school and participating in activities pertaining to their children. The lack of communication also resulted in the parents not understanding fully the

activities done in schools and therefore parents did not comply with what schools requires of them. Teachers also believed that parents did not attend school meetings. They did not know what was happening with the learning of their children. They only came to school when there were problems which were largely related to misbehaviour. The teacher participants believed that parents needed to be involved in the learning of their children. Mag had this to say in support of the above:

*“Maybe we as teachers need to involve parents to encourage their learners to learn. Our parents are not that supportive. It’s not like in other races where when they are called to a meeting at 5 o’clock or 7 in the evening, they will show up but if you call parents here they can come just even during the day you will find that out of 700 learners only less than 20 parents will show up. The parent when he/she did not show up, the principal sends the child away it’s when the parent now will show up. They need to involve themselves with the learning of their kids or in their learners’ work. A parent has to be worried about his/her child. Parents don’t know what their children’s reports look like because they do not come to collect reports from school.”*

Mag comes from a school located in rural area and is a quintile two school. While reference is made to race and its association with parental involvement, this must be considered in relation to the location of the school and the interest of parents in such location. Studies on rural education (Khuzwayo, 2015; Langa 2013 & Moletsane, 2013) suggests that parents in rural contexts are seldom responsive to parental involvement in school education and this lack of parental involvement in school education affects learning.

## (ii) Learners’ distractions to learning

The data suggests that teachers believed that learners in their schools did not have good culture of learning. Learners spent too much time socialising at the expense of learning. Tre stated that:

*“Our learners do not have culture of learning. We find a learner talking to friends about boyfriends and girlfriends, it is so difficult for us but we are trying our level best to create conducive learning environment which focuses on the better future for our learners because we know that these are the things that are affecting them a lot.”*

Mag believed that learning is disrupted in class because learners’ attentions are diverted to things other than learning. She stated:

*“Some learners are busy texting and whatsapping in the classroom during lessons.”*

Tre shared the same sentiment with Mag when saying that their learners do not want to learn as they were busy attending to other things during learning time. This is what she had to say:

*“Learners don’t want to learn. They go to play and sit on stones and don’t come to classes and if they do, they come and sleep in the classroom.”*

My observation in the school supports these concerns and belief that teacher have on learners learning. Learners were loitering on a large scale around the school despite being class time. This was also evident by the high level of noise in and around classrooms with some learners in class with their teachers and others outside the classroom oblivious of what is happening inside the classroom.

Teachers also believed that learner learning was affected by other learners who they believe are demotivated to learn and who consistently loiter in and around the school. Being outside of the classroom seems more attractive to learners than being in class focusing on learning.

Thado alluded to this by saying:

*“There are learners who are co-operative so who get disturbed and are not able to focus on you as a teacher because much time will be spent like trying to control those learners. So it is affecting the time that I have to spend teaching in class.”*

Mag said that:

*“Our learners both in schools and outside schools are demotivated. They don’t want to learn.”*

Tre said that:

*“Our learners need to be motivated about the importance of their future and that the future is in their hands. We need to involve younger motivational speakers because when you speak to them as an adult they don’t pay attention because they think you are just doing your work but if someone younger talk to them, they begin to listen and relate themselves to that youth.”*

Teachers believe that these distractions that they have noted do have an impact on learning and despite their attempts and motivation to learn, these distraction seem overwhelming and beyond their control.

#### **5.4.2 Teachers’ belief based on the activities leading to learning**

Beyond distractions to learners on learning, teachers believe that what happens in the classroom affects learning. How teaching and learning is enacted and what support materials are provided



or available during the learning engagement influences learners' learning. In addition, perceptions about the nature of the subjects also affect learning.

The study revealed that Maths teachers believed that learning was affected because learners did not pay attention to Mathematics which was regarded as a killer subject because of its high failure rate when compared to other subjects. Mze expressed this sentiment:

*"Nothing behind them is pushing them to pay attention to the subject as important as it is. They should be paying very much attention to the subject considering the failure of the subject in the country as a whole"*

Ndwa echoed the same sentiments when believing that learners did not care about their learning and believed that they have already failed Mathematics. She had this to say:

*"I believe, the main problem with learners is their mentality and which makes it difficult for effective learning to occur actually because some learners have this bad mentality of that they just don't care. I have a couple of learners or I have a whole class filled up with learners who tell me straight up that they will not pass at the end of the year. They won't bother. Some of them spend half the time causing chaos in the class. So that means your teaching does not go smoothly as you have planned."*

Participants also believed that learners had an ability to achieve if they were taught the basics. Maths teachers in particular believed that any learner can pass Mathematics by knowing the basics of Mathematics; learners lack these basic skills which should be dealt with in lower grades in preparation for FET Phase. If the above could be solved student learning would be possible. Zwan says:

*"I believe that anyone can pass Mathematics by knowing the basics of Mathematics I think learners are lacking the basics and that is what teachers should deal with at Grade 9 and grade 8 in support of learner learning. If you go to Grades 10, 11 and 12 without basic Maths skills, you won't pass Mathematics, so I believe that they should know the basics."*

However, teaching methods do matter in learners learning. Some participant teachers believed that learners can improve if they were allowed to learn in a particular way. For example, Moh believed that learners understand or grasp concepts easy if they are made visual like showing them a video of dissecting the kidney. She stated:

*"Kids tend to understand and grasp concepts easily if they are made visual. They will be able to see what is happening. For instance if you are showing them a video of how*

*you dissect a kidney, the best way is to actually dissect it or show them a video of dissecting it so that they are able to see it as compared to just showing them on paper. I found that it actually works for better, so my teaching will be far much better.”*

Thado argued that giving your learners regular testing and other activities supported learner learning. She said:

*“Give them forth nighty tasks and class tests like two weeks tests then so that will make them learn all the time. I think in a way it supports them to keep on learning because they know that there is a test that is coming up.”*

Thado also believed that learners learnt better if they were encouraged to study and perform better if classroom competition is encouraged amongst the learners.

*“I encourage my learners to do better. There is this thing that used to work previously were you will have learners write a test and then when the learners write these tests, what normally happens is that I will call out the top 5 and then in each time I call out the top 5, some of the learners that are not in the top 5 they will study even harder because in a way it is motivating them cause it happens that they are learners that you know they are bright in class but only to find that on another test there is one learner who comes up who wasn't noticed as a brilliant learner. So it is in a way helping them, its motivating them. I think it improves their learning”*

Zwan believed that if learners were supported with necessary teaching material such as copies and text books, they will succeed in their studies. These were his words:

*“The school is having photocopying machines so they help me to make copies to give to the learners because they don't have textbooks. So I make copies and give learners to support and supplement their material.”*

Also teachers further believed that if teachers came to class fully prepared, learners will learn effectively and being able to come up with answers. Tre alluded:

*“You need to understand your learners. If thorough preparation is done learners will come with answers or more information. Explain terms to learners.”*

Preparation for classroom teaching, classroom activities and the nature of the subject being taught has been found to influence teachers' belief about learning. These beliefs resonate with literature that show a direct relationship between classroom engagement and learning within a learner centred philosophy (Ramnarain & Hlatwayo, 2018).

### **5.4.3 Constraining factors that teachers believe impacts on learning**

Teachers do have some thoughts on factors that negatively influences learning which they believe are outside of their control. These factors relate to time available for teaching and content overload for learning.

Moh and Naid believed that content load matters in the learning process. These were Moh's comments:

*"Time constrains with regards to content overload, there is so much of content learners have to cover within a short space of time, that is a problem for them eem, ja. Basically I see that as an issue at hand is that there is a lot to take in, in a short space of time."*

Naid added:

*"The syllabus is too compact. Learners don't have time to forge their own understandings of topics"*

The teachers' beliefs that the learners' capacity to take in content covered in lessons are low and therefore speak about content overload that minimises learning potential. Content overload relates to issues of learner attention span, especially in classes disrupted by discipline and other issues that the teacher has to deal with in class.

### **5.4.4 Concluding comments on teacher belief about learning**

The elements constituting teachers' belief about learning cuts across learners' interests in learning, what happens in the classroom, and constraining factors beyond their influence. While these elements of belief are not uncommon to the scholarship on learning, how teachers respond to these beliefs are important as it determines the way they teach for learning, their attitudes towards learners and their responsibilities as a professional teacher. Expansion of these issues will be taken forward in sections to follow.

## **5.5 Teacher belief about the school curriculum**

School curriculum has changed substantially since democracy in South Africa, initially with the introduction of a new outcomes based education (OBE) philosophy through Curriculum 2005 (C2005), a curriculum policy that was so named to gradually introduce OBE into all grades of schooling by the year 2005. Since C2005, there have been several new curriculum policies, viz. the Revised National Curriculum Statement, the National Curriculum Statement and now the Curriculum and Assessment Policy Statement (CAPS). Teachers' experiences of

these curriculum policies have instilled some beliefs about the curriculum and which are articulated hereunder. There are two aspects identified that frames teachers' belief of the curriculum. The first aspect relates to beliefs about particular subjects and the second about the nature of the curriculum in respect to their work as teachers.

(i) Teachers' beliefs about particular school subjects

Perceptions about particular subjects are quite common, especially amongst learners and parents. Teachers too have perceptions about certain school subjects. For example, Life Orientation is seen as a counselling subject. Tre believed that learners were interested in things outside of the school. They lacked concentration by being playful and talkative. She believed that Life Orientation as a subject is very much useful in motivating learners who deviate from learning and those who are demotivated about learning. She stated that:

*"our learners don't concentrate, they are playing, talking to their friends, they are interested in things outside of the school but we are trying to talk with them, counsel them, use Life Orientation to assist them and we motivate them to focus on their future."*

Ndwa shared the same sentiments with Tre with regards to the role of Life Orientation subject for learners. Ndwa stated that:

*"...at school that is where learners tend to be opened because our curriculum has now included the life skills (studied in LO) that the learners should know in order to be able to handle the life situation, the real situation."*

Some subjects like Mathematics and Sciences are seen as compact, demanding and difficult school subjects. Naid believed that physical Science syllabus is so compact for teachers to teach and Physics is more knowledge driven as opposed to skills driven. She said that:

*"The syllabus is too compact for the teachers. Physical science is more knowledge driven than skill driven."*

The response made by Mze when interviewed showed that he believed that Mathematics content relates to real life and it helps to develop solutions to solve problems learners would encounter in the real world. Mathematics for him provided learners with skills to become logical in their thinking and thus be able to solve real situation problems or challenges. He believed that Mathematics as a subject was there to confuse learners and through the process of confusion, learning occurs and learners are then able to solve problems that they will encounter. He articulated that:

*"My subject basically is developing a solution and how to relate the solution to the real life problem and how do you use the logic you learnt to solve other problems. My total*

*belief is that Mathematics... is about how you get solutions when you faced with challenges. When you are doing Mathematics you are given problems you are being challenged plus confused in Mathematics so that you will know what to do when you are confused in real life."*

How these beliefs about particular subject influence teachers and school education is an area for further exploration. The data produced for this study did not delve into this aspect and therefore no assertions could be made.

ii. The nature of the school curriculum in respect of teachers' work

Teachers believed that, both, curriculum changes and the introduction of new curriculum policies impacted on teachers' work. The major impacts were increased administrative and paper work and on learning new content and teaching methods. While they acknowledged the workshop trainings that they received, this nevertheless impacted on their work as teachers. Thado had this to say,

*"the curriculum changes, so when the curriculum that changes then we got workshops and we get trained as to how to tackle different topics."*

Moh believed that curriculum delivery and content knowledge are affected by time constraints. She believed that more contact time should be allowed to effect change in the teaching methods of different subjects. Also she believed that much teaching time is wasted by doing paper work and administrative work; for her minimising paper work and administrative work will improve their teaching. She stated that:

*"Time constrains with regards to syllabus coverage, there is so much of content we have to cover within a short space of time, ... helping us educators to make their work lighter so that we can spend more time in class and spend less time doing administrative and paperwork. Minimize paperwork so that we can spend adequate time with regards to getting more effective methods of effective teaching. Also by allowing us to have more contact time with learners will enable us to change our methods and use different methods and see what works and what doesn't work."*

Changes to content knowledge as a result of curriculum changes require additional development of teachers and additional resources. Some textbooks are insufficient to provide learners with enough subject content knowledge and sufficient examples. They, thus, have to find and make use of different textbooks as well as internet searches to support learners. Mze says that:

*“in terms of content support something should be done cause I believe that text books that we are using are not sufficient to explain but in terms of giving learners different types of problems that they may encounter in the examination.... It’s either I bring those problems or they don’t see them at all. I have to develop a pool of questions where they can take a dig at them. Try them and then look for help when they are struggling you see. For learners what they have basically is a text book and myself - nothing else. So if I don’t bring those problems, then they don’t see them.”*

Mze further believed that new content knowledge is received through workshops organised by the Department of Basic Education. The workshops supplemented the content knowledge they were having in the subjects they are teaching. He said that:

*“...from the Department outside we are getting help because of workshops that we are attending. The current workshop that we started recently, in fact, three workshops were organised one is called 1+9. It’s Grade 8 and 9 Mathematics and then there is the other one for Grades 10, 11 and 12 Mathematics as well that is MST focus schools, (Maths, Science, Technology schools). The third one is Just in Time (JIT) workshop. So basically they took us somewhere then we undergone some trainings. It is an on-going thing we went there during first term, so I think next time will be in September.”*

Oshun further stated that:

*“... Just in Time workshops are helping us a lot as well as more content is learnt there. We also get a chance to ask our tutors if we don’t understand certain concepts. New teaching strategies are taught during these workshops. Since I’m teaching both Life Sciences and Physical sciences, I attend both workshops.”*

## **5.6 Teacher belief about themselves**

The data at my disposal indicated that teachers believed in themselves that certain factors were influential in changing their teaching practices.

Workshops conducted by Department of Basic Education helped teachers with content knowledge. Content knowledge the teachers had acquired boosted the teachers ‘self-confidence’ in teaching their specific subjects and thus their self-esteem is all boosted which then resulted into teachers being able to change the attitudes they had about the subjects they

taught. Teachers believed that their teaching was strengthened by the new methods of teaching that they acquired from those workshops. To confirm this Mze had said that:

*“These workshops strengthen my teaching because you get new methodologies of teaching we also got support in terms of how you should go about explaining particular topics. Also it turns the attitude of a teacher towards a change because positive attitude is there as teacher is having confidence of teacher he or she did not have before attending workshop.”*

Some teachers regarded passion as the motivating factor that made them to work tirelessly. Gug believed that he had passion of teaching as a job and that one needed to have love of teaching in order to excel. He argued:

*“Teaching was one of my passions, so I think when you’re doing a job, you have to be in love with that job so that you do it in a precise way.”*

Tre shared the same sentiment with Gug when she said:

*“We need to be passionate about teaching. Every time we need to think about knowledge we will teach our learners. If I am at home I think of Economics and EMS I think of mind map and concepts to teach.”*

### **5.7 Teachers’ beliefs about being qualified teachers and about their experience of being teachers**

Teachers believed that their teaching skills improved with qualifications, workshops, further in-service training as well as number of years in the teaching profession (experience). This is also consistent with what authors on self-efficacy, which is the theoretical framework of this study, are saying when arguing that the development of belief in one’s personal efficacy will change in response to experience and cognition (Gibbs and Powell, 2012, Bandura, 1997). Experiences and qualifications of teachers boost the self-efficacy of the teachers as they become more confident when they are teaching their subjects.

Mze has been a teacher for six years. He has never been trained to teach Mathematics but trained to teach Accounting. He believes that Mathematics and Accounting are closely related when it comes to methods of teaching. Mze believed that workshops organised by the Department helped them in developing some skills of teaching Maths. He articulated that:

*“From the Department, we are getting help because of workshops. The current workshop that we started recently 2 workshops which are called 1+9, it’s Grade 9 Mathematics and*

*then the other one is for grade 8 Mathematics, then there is the other one for grade 10, 11 and 12 Mathematics as well that is MST focus schools, (Maths, Science, Technology schools). So basically they take us somewhere then we undergo some training and is an on-going thing. We go there once per a term, I think next time will be in September so that for me, it strengthens my teaching because you get new methods of teaching. We also get support in terms of how you should go about explaining particular topics to learners. Also it turns the attitude of a teacher towards a change in the community”*

From the above it is evident that Mze appreciated workshops and training sessions organised as they have improved his teaching skills and is being supported to explain particular concepts in Maths and being able to change attitude of other teachers towards Mathematics.

Naid had alluded that she had been teaching for ten years and possess Post Graduate Certificate in Science Education. She believed that she had a very good background of Physics as she said,

*“I was mentored by Physics ‘guru’ Mr A. Maharaj.”*

Ntu is an Accounting teacher who obtained his Diploma in Accounting and studied PGCE as education qualification. He has been teaching for five and half years. He believes that he is effective in his teaching. He said:

*“With the kind of training I acquired, I consider myself as effective to teach my subject.”*

Oshun is having a degree in Microbiology and furthered with PGCE. She has taught for seven years. When doing Microbiology, they were taught intensive content knowledge and also guided on how to teach and impart knowledge. She believed that strong content knowledge is paramount for the teacher in order to teach effectively. The above is confirmed as she was saying,

*“In Microbiology we were taught content but also we were guided on how to teach and impart knowledge to the learners. We were assisted as we were not experts to know the concepts. We also needed to know how to impart content to the learners; PGCE has given me guidelines on to impart content accurately.”*

Tre has taught EMS and Economics for eleven years. She possessed Diploma in Education. She believed that she had been trained thoroughly to teach these subjects. She said,

*“Lecturers give themselves time to teach us. They give you enough time and teach you all methods you can use. They give individual attention when they develop you where you are lacking.”*

Ndwa was on her first year of teaching. She has done her B.Sc in Mathematics and Statistics but she did not do teaching qualification straight away. She is currently doing PGCE final year.



*I understand the content. I did well in Maths while I was at school. I love Mathematics so much. I have challenges I believe or I don't know maybe it's because of my low self-esteem as I am new in the field, but I do find challenge when it comes to disciplining learners, I can't maintain silence in class... I'm still new in the field I still haven't found certain other terms may be to rephrase certain things because you get children who find it difficult to understand a certain topic in a certain way. So I 'm still developing myself in that where I need to learn other ways of explaining certain things and concepts so that all learners in the class can grasp the concept well."*

From the above quotation, it is evident Ndwa believed that being new in the field of teaching made her to have low self-esteem, made her to have difficulty in disciplining learners, her small voice impact on her teaching as it doesn't give that conviction, made her to be unable to explain some concepts and finally believed that learners do not understand her when teaching. The self-confidence of the teacher is imparted.

Moh have been teaching for six years. She obtained B. Ed Degree. Her training was adequate since she was both theoretically and practically trained to teach during teaching practice. She believed that University training did not equip them with skills to handle issues outside of the classroom such as learner behaviour and paper work. She alluded that,

*"Basically the content has helped a lot in terms of day to day in the classroom. The situation that is a problem now is that at university level, we are really trained to deal with the classroom situation...not the kind of behaviour to expect from learners and how to deal with things that will lead to enthusiasm and staff like that. With regards to the university training, I would like to say that there was a shortfall, we were not told about paperwork at university level we have not dealt with it or to do so much administrative work at school. There is a lot more to do in school than class preparations for teaching and these additional administrative stuff like that have major impact."*

Thado has taught for seventeen years. She had undergone training of teaching Life Sciences during initial teacher training. She believed that teaching skills improved with in-service training received through continued teaching workshops. The training teachers receive from workshops help teachers to improve their teaching. She said,

*"I was trained before I started teaching at the tertiary institution and I continued attending workshops for a subject to improve how the learners understand it better..."*

*in workshops we get trained as to how to tackle different topics. Workshops sometimes also give us strategies to teach.”*

For Thado, her teaching skills and strategies have improved as he went to different workshops. Zwan has been teaching Mathematics for six years. He had done Bachelor of Education and majored in Maths. He regarded himself as knowledgeable when comes to Maths but also willing to learn from other teachers.

*“I am effective because if I’ve got the problem I ask from other teachers who know the subject so I’m effective because I connect with others.”*

Gug was the most experienced teacher I interviewed. He had been teaching for 25 years and is currently the HOD for Humanities in his school. He obtained BA and HDE at University. He believed that his qualification and experience made him to have strong subject matter. He alluded that:

*“I have strong grounding, strong subject matter and I am strong in my subject... I’m accepted by pupils and parents. I’m regarded as one of the best teachers on the school staff.”*

The experience Mr Gug had in teaching had helped him to attain hundred percent in his subject. Thus the results below helped to boost Gug’s personal efficacy as alluded by Gibbs and Powell, (2012) that personal mastery behaviour can be increased through participant modelling, performance exposure, self-instructed performances, and performance desensitisation (the process where bad behaviour is paired with a pleasant or good behaviour). Gug’s personal mastery experience had been increased though performance exposure.

It had been said in the literature chapter that a teacher who had taught a subject and had attained 100% pass rate in Matric, becomes more confident in teaching and strive to attain more. The confidence is boosted because of mastery experience. In other words, mastery experience is prior success at having achieved something similar to the new behaviour. Mastery experience has been found to be the most salient contributor to efficacy beliefs amongst both novice and experienced teachers (Gibbs & Powell, 2012). Gug had demonstrated what literature is saying and the following citation confirms the point:

*“Well, my pass rate has been 100% for the last 15 years. I’ve produced A’s, like, the minimum number of A’s that I’ve produced in the last 10 years is 10 in grade 12 ....What I can say is that it comes from the heart. If you love and respect your learners they will start to love your subject, you don’t push something down their throat”*

## 5.8 Conclusion

This chapter presented the perspectives of teachers with regards to their beliefs about teaching and learning and the role teachers believed they are playing in teaching and learning. Firstly, the chapter explained that teacher beliefs originated from variety of sources including culture, values, indoctrinations, primary socialisation, religion, early childhood development, teacher training and general day-to-day encounters. Secondly, the chapter focused on the teachers' understanding of what teaching is? Then I focused on what teachers believed their role in the entire process of teaching. It was found that the role of the teacher was to teach, facilitate, guide and impart knowledge to learners who do not know. In so doing teachers saw themselves as needed to provide support to learners because of the nature of learners and their background which is not supportive to learners. It was also found that teachers believed that changes in the curriculum and assessment policies impacted on their teaching. Teachers believed that knowing the content helped them to teach effectively and that going an extra mile can improve their teaching thus learner performance. Teachers further believed that poor parental involvement resulted into poor communication between the schools and homes. This lack of interconnectedness between schools and homes impacted negatively on parental participation in schooling issues which resulted into being loath to partake into school matters. Thirdly, this chapter focused on what teachers believed learning is. Various findings emanated from the concept of learning. It was found that if learners are assessed well and timeously they will pass and produce good results. Furthermore, it was found that teachers believed that learners did not have good culture of learning and that they were not committed to their school work as they come to school having not done their homeworks. Finally, this chapter looked at the role of qualifications and experiences. The finding was that teaching skills of teachers improve with qualifications, workshops, in service training and experience. Thus, informed by the evidence from the data presented in this chapter, this thesis argues that teacher beliefs about teaching as well as learning impact both positively and negatively to the teaching and learning practices.

In the next chapter I explore the beliefs of teachers with regards to quintile ranking, learner performance and the relationship between teaching and learning beliefs.

## CHAPTER 6

### DATA PRESENTATION

#### TEACHER BELIEF ABOUT CONTEXT, QUINTILE RANKING AND LEARNER PERFORMANCE

##### 6.1 Introduction

In the previous chapter I focused my attention on teacher beliefs about teaching and learning as well as origins and role of qualifications in teaching and learning. In that chapter I presented the data and analysis on teaching contexts that influences their teaching, learners learning and learner performance. In this chapter I continue to illustrate the influence of context as well as quintile ranking on teaching and learning. I also focus my attention on teacher beliefs about learner performance. Finally, I look at what teachers believed to be the ways of improving learner performance in their respective schools.

In order to understand this chapter, it has become imperative to re-look at the profiles of teachers I interviewed and of the schools where the participants teach. The following table shows names of teachers, names of schools, subjects teachers taught, quintile ranking, geographical area and teaching experience. This information will be paramount in comprehending the chapter, nuanced by the contextual realities of the schools and on the biographies of the teacher participants.

**Table 6.1: Table below illustrates total sample used to gather information from research sites.**

Name of teacher	Subjects taught	Experience( years)	Name of school	Geographical area	Quintile
Zwan	Maths	6	Ngosa	Rural	1
Tre	Economics	11	Ngosa	Rural	1
Ntu	Accounting	5	Siminza	Rural	1
Mag	Business Studies	15	Qoqa	Rural	2
Mze	Maths	6	Qoqa	Rural	2

Oshun	Physics & Life Sc	7	Hlonga	Semi Urban	3
Thado	Life Sc	17	Hlonga	Semi Urban	3
Ndwa	Maths	1	Shakeville	Urban	4
Naid	Physics	10	Shakeville	Urban	4
Gug	Geography	25	Seaview	Urban	5
Moh	Life Sc	6	Seaview	Urban	5

## 6.2 Teacher beliefs about context in which they teach

The contexts in which teachers teach vary according to different factors. I use the concept ‘context’ in this study to refer to the specific circumstances, conditions, factors and incidents that define the schools under study (as discussed in Chapter Four). It is imperative to understand the context if we want to understand how schools function (Langa, 2013) and to comprehend teacher beliefs and learner performance. Available research has also suggested that contextual (environmental) factors play an integral role in learner performance and subsequently school performance (Beck & Shoffstall, 2005; Petty & Green, 2007; Chance & Segura, 2009; Langa, 2013). The identification of school environmental factors (contextual factors) was paramount in this study as school environmental factors play a cardinal role in how teachers believe schooling should be and how learning can be enhanced.

### 6.2.1 Discipline as a contributory factor in learner performance

Discipline is one of the factors that affect schooling, teaching and learning as well as learner performance. The literature that I have perused pointed out that the lack of learner discipline and commitment to schooling process has a direct impact on learner performance. Van der Westhuizen, Mosoge, Nieuwoudt & Steyn (2002) argue that learners with poor behaviour (such as ignoring all instructions by the teachers, failing to do and or complete work given, showing disrespect to teachers) tend to spend more time being reprimanded or are outside the classroom. As a consequence the contact time of actual teaching and learning is reduced. The argument by Van der Westhuizen, et al. (2002) is evident in this study. Some teachers I interviewed complained about poor discipline in their school and how poor discipline affected them when they were teaching. Ndwa from Shakeville School had this to say:

*“The cause of poor learner performance in school is that learners are taking drugs which add to the disciplinary problems the school is having”*

Naid who was teaching at Shakeville School added that:

*“Poor and badly disciplined learners and drugs are the reason for our learners to perform badly. Learners are ill-discipline and my subject requires good discipline.”*

Oshun, the teacher from Hlonga School, felt that she is disturbed by the fact that learners are not disciplined. She confessed:

*“Sometimes you are called out from the classroom because of the learners disciplinary actions that need to be dealt with which takes your time, it affects teaching and learning.”*

Mag who was the teacher from Qoqa Secondary school, voiced out that they had the problem of discipline at school. She believed that less is done to solve this problem. For her, social factors at home aggravated learner ill-discipline at school as some of the learners came from child-headed families. There was no one at home to discipline those learners at home. She believed that their hands were tied when it came to disciplining the learners and that impacted negatively on learner performance. These were her words:

*“The environment we are teaching in is demotivating. You can’t discipline a learner because he/she is a parent at home he/she is used in disciplining other siblings at home. It is difficult to discipline such a learner because of the attitude he/she has. Some learners are busy texting, whatsapping in the classroom. You cannot use corporal punishment now. You can’t chase them away outside. Our hands are tied when comes to discipline.”*

During my visit to the schools I observed what was happening in the schools mentioned above. The level of discipline was not as bad as what they were saying. However, I was there at the school for only 55 minutes. I could not disagree with those teachers since they were saying what they experienced in their respective schools.

However some of the teachers I interviewed believed that discipline improved learner performance. Teachers believed that effective teaching and learning will occur if learners are disciplined. Highest level of discipline amongst learners yielded positive results both in terms of teaching as well as in terms learning. Teachers believed that disciplining learners lead to positive behavioural change. Also teachers believed that School Management Teams (SMT) played a major role in disciplining learners. In the interview, Tre asserted:

*“The SMT is very much supportive. If I have problematic learners I take them to the HOD and SMT will talk with those learners about their behaviour. Learners change after having spoken to SMT, they come back to me to apologise.”*

Gug concurred with Tre when saying:

*“Our management is very strong, we don’t have drug problems. We don’t run around students when it comes to doing their work, they are very much disciplined.”*

Moh confirmed that in her school discipline is not a factor as SMT keeps the level of discipline to minimal. Moh asserted:

*“I can say discipline strengthen my teaching. At school we do have disciplinary problems but very minor not that it disrupts teaching, I would say that SMT makes it easier for us. Discipline is not bad in our school.”*

Gug believed that his school is one of the best because of good results they produce which are maintained through good discipline. This was his response:

*“Our school is considered as one of the best schools in the North Coast in terms of results.”*

Moh concurred with Gug when saying:

*“Discipline is the major cause of poor learner performance. However my school does not have disciplinary problems.”*

Gug and Moh belonged to the same school. What Gug and Moh were saying was confirmed through my personal observation in the school. I came at 9:50 for a 10:00 appointment. The school was silent; no learner was outside the school and outside the classrooms. Even if learners were changing classes after the period, it was swift and orderly.

Ntu pointed out that they had discipline problem at school; however, they are able to control it as their learners respect the school and few learners who misbehaved were disciplined. He stated:

*“Our learners respect the school even one or two who misbehave, we solve them.”*

However my observation in the school revealed something opposite of what Ntu was saying. I came at the school at 12:20 as my appointment was at 12:20. Learners were loitering outside, wearing colourful jerseys, playing music with their cellphones and so on. It took twenty minutes for the teacher to organise learners for my observation.

Mze believed that his school is having discipline as a challenge but his principal is very good in terms of maintaining discipline as he does not teach any subject, so he had time to discipline learners which help the school to improve learner performance. Mze stated:

*“our principal is very good in terms of discipline, in fact he doesn’t teach in a class, he doesn’t have a class but for me that is a good thing because he got enough time to deal with those issues. You know he always tells us if we got issue with the learner bring him or her to me. If you want me to call a parent I’ll do that and he does that as well sometimes he pulls out his phone and then phone parent now and then he does it all the time so then that neutralises the problem”*

It is interesting to note that although most schools sampled quoted discipline as a factor that affected their teaching. There were, however, some teachers that argued that learner behaviour changed after they were called to the office and reprimanded. Tre concurred with Gug when saying that performance of learners improved after disciplinary measures have been taken. As she said:

*“Learners change after having spoken to SMT, they come back to me to apologise. Their performance also increases.”*

It is evident from citations above that discipline goes a long way. The schools that were able to maintain the highest level of discipline reported higher learner performance. Those schools which had discipline problems were reported to yield low levels of learner performance. There was a relationship between good discipline and increased learner performance. Teachers’ therefore believe that learner discipline is related to learner performance and that where there is higher levels of discipline problems, learner performances are lower amongst learners, while in schools where discipline is maintained, learners generally performed well. These beliefs are related to the teachers’ experience of schooling, levels of learner discipline and learner performances.

Also to note that different school contexts (quintile ranking as used in this study) did influence teachers’ belief about the links between learner discipline and learner performance. Schools that reported high levels of discipline problems were lower quintile ranking schools, with learners from lower socio-economic households who are dealing with severe socio-economic issues. Hence, one can deduce that school education for these learners are just an activity within their daily lives as they manage the demands placed on them, and therefore, discipline



problems at school is, perhaps, a vehicle through which they bare the challenges that they are faced with. Good learner performance is, therefore, not a major concern for them. In such schools, teachers report that their teaching is hampered through high levels of ill-discipline and this further accounts for the lower levels of learner performances. In higher quintile ranking schools learner discipline problems seem to be lesser and these schools usually record higher performing learners. Being in these varying school contexts for extended periods reinforce teachers' belief about the relationship between learner discipline levels and learner performances.

### **6.2.2 School environment as a contributory factor in learner performance**

As I have mentioned earlier on, that contextual (environmental) factors play an integral role in learner performance and subsequently school performance (Beck & Shoffstall, 2005; Petty & Green, 2007; Chance & Segura, 2009 and Langa, 2013). The identification of school environmental factors was imperative in this study to understand the influence on teacher beliefs and schooling. One of the environmental factors relate to the state of the teaching and learning environments. By teaching and learning environments, I refer to those conditions such as conditions of classrooms, incidents, school ethos, role of school management team (SMT), learners and other teachers who are there in schools that teachers believed impacted positively or negatively to teaching and learning and how they influenced learner performance. Some of the above factors, I believe, can lead to apathy of the teachers, learners and SMT or they can motivate them to do more.

The teachers I have interviewed had varying beliefs about the effects of school environment on teaching and learning as well as on learner performance. Some teachers believed that school environment is conducive to effect teaching and learning and thus lead to improved learner performance; whilst other teachers believed that school environment is not conducive as learners are demotivated which results in teachers being apathetic about schooling and their work.

Most of the teachers I interviewed believed that the environment in their respective schools was conducive for effective teaching and learning. They believed that all the stakeholders are playing their role in ensuring that schools had comfortable teaching and learning environments.

Moh stated that:

*“Environment is fairly conducive to teaching and learning. We don’t have major external problems.”*

Gug believed that the environment in his school is conducive for teaching and learning. There are no problems as management ensured that order was maintained all the times. These were his words:

*“In our school, the environment is good, no discipline problem as you can see now that there is no learner walking outside and the principal and management walk around as well to make sure that there are no problems and you can see that it is quiet....We have register time where we take register and every teacher fills the register. That register goes to the office. So they can’t bunk a lesson.”*

Mze believed that the context in his school was very supportive for effective teaching and learning as teachers do not deal with issues outside of teaching and that the principal was the one who was dealing with such issues. The principal even went to an extent of teaching Mathematics for Mze and encouraged Mze to study Mathematics further. He confessed:

*“The principal is very good in terms of support, in fact he doesn’t teach in a class which gives him time to deal with disruptive things. He is also a mathematician as well so I got him if I want to ask something and he even teaches for me in class. He still loves the subject so we relate very well and on subject matter as well. I got support very much in fact he recommended to me to go and study Mathematics further.”*

When I came to Mze’s school, I found the principal standing in front of the school monitoring learners as they went into different classes. This confirmed what Mze said when saying that his principal gave himself time to deal with disruptive behaviour at school.

Thado argued that her school is in the rural area. Most of learners think that they needed to move to urban areas and wear suit and tie if they want to be successful. The environment was supportive as the school was having gardening and surrounded by homesteads which practiced agriculture. Thus Thado believed that teaching Life Sciences in that context would enable them to make use of agricultural practices or farming to generate wealth and ensuring sustainable development. She articulated:

*“Teaching LS in such an area that is rural enables them to broaden their minds in terms of acknowledging the fact that they can be farmers and be rich, make money and earn a living out of using the soil that they have. It also helps the learners who are not gifted because not all of us who will be billionaires sitting in an office. So it also help them to*

*understand that with little that I know and have in my surrounding I can make money I can earn a living. I can support my family and you can be your own employer.”*

The above views about the schools’ teaching and learning environments contrast with literature that claims that teaching and learning is negatively affected by poor infrastructure and rural context. In this case, the teachers had strong beliefs on the possibilities that these conditions present in order to provide relevant and useful education.

There are, however, some teachers who do believe that poor school environments are not conducive for effective teaching and learning. Oshun believed that school environment is not conducive for her to teach Physics and Life Sciences. This is largely in the context of rurality where English as a language of communication is seldom used and this compromises her teaching. She complained:

*“The communication barriers sometimes learners ask why are you teaching only in English. They are concerned why I am the only one speaking English, the learners would say oh... what is she telling us look at the others who are teaching us? That also affects you especially when you know you are not classified as Zulu person or you are not South African so you are not going to tell us what to do. So these things affect your subject because if the child is hearing English in Business Studies, English in Economics if he or she comes to me, English will not be a new thing but if I am the only one person speaking English, so they begin to struggle to hear English from me. ... Sometimes the principal takes the whole period in the assembly motivateing learners and it happens it is my first period then I lose out. So, we will need to look for how to get time lost in the assembly.”*

There are three elements that suffice in the above quotation. Firstly, it is the issue of English as language of teaching and learning (LOLT), secondly, it is the issue of perception that learners have about foreign nationals, and thirdly, it is the issue of contact time. To start with, Oshun believed that other teachers at her school were not using English as LOLT. She argued that she was the only teacher at school who did not speak IsiZulu as she was a foreigner. If learners didn’t understand her when speaking English, there was no way in which she would have explained in IsiZulu as other teachers were doing. Thus the environment was not conducive for her to teach effectively. She believed that other teachers contributed to her frustrations as they did not teach their subjects in English despite English being the language of teaching and learning in that school. I was also so fortunate that I observed Oshun teaching

Physical Sciences Grade 12 class. I observed that she was speaking English only unlike other classes in some other schools where they were code-switching to IsiZulu. I did not observe a difficulty of learners in trying to understand what she was teaching. Maybe it was because Grade 12 class was conversant with English as LOLT and had been with her for a few years as she was teaching them from Grade 10. The second element is the issue of learners' and teachers' perceptions about foreign nationals. Difference in perception between South African educators and educators of foreign nationals existed, where the local South Africans had an advantage of using mother tongue language during teaching of which foreign nationals did not have. As a result she believed that learners looked down upon foreign national teachers. Further discussions showed that there were misunderstandings in terms of preference as to which language to be used to the benefit of the learners. The third element is the issue of contact time. Oshun believed that the principal did not protect contact time as the principal used to speak in the morning assembly sometimes for the whole period motivating learners but using times for individual subjects. When her periods were used up by the principal she would be forced to look for alternate periods to cover the work for the day and sometimes she lost the time completely. That incidence added up to her frustrations.

Zwan believed that his school should support Mathematics teachers by supplying them with calculators especially Grades 8 and 9. He further complained that he was overloaded for the past few years as he was teaching Maths from Grade 9-12. So that affected his performance as a teacher as well as learner performance as he did not get time to concentrate on learners with challenges. Thus for him the environment was not conducive for teaching and learning Mathematics. He pleaded:

*"The school should support us with the calculators in the lower grades so that we can use them to help learners to understand. Another thing that was affecting learner performance was that I was the only one who was teaching mathematics from grade 9 up until grade 12. During last few years I was overloaded because I was doing 5 classes that means I was doing 25 periods per week that a lot of work, I didn't have time to do the marking."*

The conditions of school buildings such as classrooms and toilets were very bad. Some of the schools that I visited especially quintile 1 and 2 schools were unacceptable. I visited one of the schools where I was told that the school was storm damaged in February 2015 which resulted in multiple structural damages. All classes and administration block were damaged. There were several holes in each and every piece of asbestos that roofed the classes, administration block

as well as toilets. These leaking roofs damaged the ceiling boards and electrical wiring. Windows and doors were broken in most classes. At the time of collecting data for the study the Department of Basic Education did not come to fix the school. The condition of the school was impacting on teachers and learners. Oshun confirmed that when saying:

*“Our school was damaged by storm in 2015. No class is without a leak, when raining no teaching is taking place because classes are leaking. When it is winter learners are frozen because of cold as doors and windows are broken as a result of storm. The conditions in this school are bad. At times you feel like discouraged to come to school or feel like changing the school and go to another school.”*

The discussions above showed that the learning environment is complex and is constituted by, amongst others, infrastructure, interactions and inter-relationships, language issues, levels of surveillance by managers, resources and weather related issues. Teachers believe that these elements of the school context do influence their teaching and its resultant learner performance, some positively whilst other negatively. Despite these contextual challenges, teaching and learning still continues. The experiences of teaching in such contexts influence teachers' beliefs differently. Some see these contexts as opportunities while others see these as barriers to possibilities. Hence the complexity of teacher belief related to teaching and learning environments.

### **6.3 Resources implications**

Resources are important factor that influence teaching and learning and have particular bearing in terms of learner performance. In the study conducted in Austria, resource limitations are a significant constraint on the quality of teaching and learning (Dhurumjay, 2013). The same can be said with reference to South Africa. According to Dhurumjay (2013), South Africa has implemented many post-apartheid policies to address the resource issues. One may further share same sentiments with Dhurumjay (2013) when saying that lack of school-based or home-based resources is also another factor that can affect learner performance at school level and that many public schools in South Africa are lacking facilities such as laboratories, computers and libraries. It is against this background that I had to look at resources and teachers belief on resources within the context of teaching and learning.

From the data produced for this study teachers believe that school resources do influence their teaching and ultimately the learning in learners. This finding is across teachers from different

quintile ranking schools. Teachers in higher quintile ranking schools believe that the resources available in their schools have improved their teaching practices.

Ndwa, a quintile 4 ranked school teacher teaching in an urban area, believed that her school was better off when it comes to issue of resources which made her to be fortunate as she did not need to write notes on the board as she used to do when she was teaching in rural schools. She stated:

*“Fortunately I have been in both, rural schools and urban schools. The difference here is that they have resources. ...it becomes easier to complete syllabus compared to rural schools. ...with this school there are machines, you just run out of worksheets that you have extra notes your just photocopy, and you give to all the learners. It is so good to teach here as I don’t have to write on the board.”*

Naid, a teacher in a quintile 4 ranked school believed that her school as quintile four school had improved her teaching because of provisions offered by her school. She commented:

*“It has equipped me to improve my teaching. I now have to find ways of making Physics easier and relatable. I use household detergents to do practicals. Many of my learners don’t understand English so I realise the importance and need to analyse the question and teach the Physics in English language.”*

Teachers in schools that have lower quintile rankings believe that the lack of adequate resources imposes further challenges to their teaching, requiring some to make adjustments or improvisations, some to not teach some sections and others to look for alternates. These further challenges lead to what Naicker (2014) calls “dispirited” teachers because they cannot translate their ideals of being a teacher into reality due to the resource challenges.

Thado, a teacher from a quintile 3 school believed that her school lacked resources needed to conduct practicals and that practicals were essential elements of the paper for examinations. She believed that her subject required work and that her learners found it difficult to identify apparatus when asked. She alluded:

*“...yeah! It challenges to be in this quintile school because our school doesn’t have enough facilities like laboratory. When teaching Life Sciences you also need to conduct practicals. So, there is no equipment we only have few chemicals that we use in class to do experiments but most of the practicals are done theoretically. So it is a challenge*

*because when learners are accessed in practicals they are sometimes having problems in terms of identifying the apparatus that is on the paper because they haven't seen it before."*

Mag, the quintile 2 teacher believed that in her school resources are very scarce as they did not have even OHP projector. The resource supply was not according to quintile two ranking. She articulated:

*"...not enough resources, maybe you want to do something you have to bring your own computer from home. You need something like OHP because learners cannot see everything in your computer because we've big classes. The resources are scare although we have some textbooks we are little bit getting there. All in all the resources are not according to the quintile as you have explained what quintile 2 is that it is supposed to be better and is not like that according to my experience."*

Ntu, a teacher in a quintile one school felt that shortage of resources has led to learners relying on theory rather than practice and this mode of teaching compromises the performance of learners in her school. Ntu had this to say:

*"I think the school I am at has a bit of challenge like lack of resources so it is pulling us down. Because some of the things we do are not demonstrative to learners, they only do theory. They can't find for themselves how things are done."*

Oshun, a teacher in a quintile 3 school also shares Ntu's belief that the lack of adequate resources negatively influences their teaching practices and the subsequent learner performances.

Oshun stated:

*"It is not easy to be a teacher in a quintile three school because there are a lot of things that are holding you behind for example resources such as textbooks, practical practice tools, you lack charts, in order for you to pass knowledge is still challenging your way or challenging teaching itself for that reason we are not teaching, in fact it's really challenging"*

Drawing from the above presented data, it seems that teachers do believe that school resources do influence their teaching and the learning requirement of learners. In well-resourced schools teachers believe that their teaching practices are enhanced, while in poorly resourced schools teachers believe that their teaching practices are compromised. Teachers also believe that well-

resourced schools engender positive outcomes both in terms of teachers' capabilities and learners' performance while schools with poor resources tend to deprive learners' opportunities for quality learning engagements. This finding is not inconsistent with what we know about teaching resources, learner engagements and learning outcomes (DBE, 2015). As such, the quintile ranking system of the school education in South Africa was put in place to address the inconsistency relating to school resources and quality teaching and learning experiences. Of note in this study is that teachers have ingrained these beliefs about the influence of school resources in their teaching practices and in the learners' school academic performances.

#### **6.4 Quintile ranking of schools and its influence on teacher belief**

In this section I look at both the strengths and limitations of quintile ranking as a system of schools categorisation. The literature has shown that the government has found the quintile system to be complicated and difficult to manage. As a result in September 2013 the Minister of Basic Education, Angie Motshekga, proposed a two-category system of classifying schools: either as 'no-fee school' or 'a fee-paying school' (DBE, 2015). The quintile system was part of National Norms and Standards for funding public schools introduced in 1998 to improve equity in education (Corruption Watch, 2014) but has failed to do so. In 2018 this funding framework had turned 20 years but the poorest of the poor schools still remains as such. These schools are still struggling to access resources, infrastructure and other provisions. It therefore became imperative for me to look at how the quintile rankings of schools influence teacher beliefs.

Most of the quintile 1 to 3 school teachers were glad that they did not have to collect school fees as the Department is funding their schools 100%. According to the table below (Government Notice No. 718, Government Gazette No. 40065 of 10 June 2016), each of quintile 1, 2 and 3 schools received funding equivalent to R1316 per learner in 2018 and in 2019 they received R1394 per learner. These funding allocations were much greater than the allocations per capita for quintile 5 schools. Quintile five schools received funding equivalent to R228 per learner in 2018 and R241 per learner in 2019. The following table shows the distribution of funds per learner to schools across all five quintiles.



Table 6.2 The table showing the allocation of funds per quintile

	2017	2018	2019
<b>NQ1</b>	R1,243	R1,316	R1,394
<b>NQ2</b>	R1,243	R1,316	R1,394
<b>NQ3</b>	R1,243	R1,316	R1,394
<b>NQ4</b>	R628	R660	R699
<b>NQ5</b>	R215	R228	R241
<b>No fee threshold</b>	R1,243	R1,316	R1394
<b>Small schools National fixed amount</b>	R28,791	R30,490	R32, 289

Adapted from: Government Gazette No 40065, 10 June 2016

Tre had this to say which concurred with most of the teachers:

*“Our school is a no-fee school. We do not have the burden of collecting school fees, we only concentrate on teaching. But we do collect some little monies from learners if we are fundraising for grade 12 farewell functions. We also collect donations if a learner or an educator has passed away... most of the things are paid from government allocation.”*

Another thing that transpired during the interviews I conducted was the issue of rural incentives. The Department of Basic Education has incentivised the post of teachers who are teaching in rural schools. Only quintile one schools are benefiting from these incentives. The intention of the state was to motivate those teachers who are teaching in the deep remote rural schools. There is a very thin line that separates quintile 1 schools from quintiles 2 and 3 schools. As a result most of the teachers felt that they deserved to get this incentive even though they were in quintiles 2 and 3 schools. Mag, the teacher from quintile 2 school complained:

*“This school is in a rural area.... There are even benefits such as rural incentives, maybe you heard about them. We are supposed to get that rural incentive because this is a rural school area as well but we are not getting rural incentives. They say because our school is near tar road. Are we supposed to be near town or tar road? That is wrong if they are doing like that. They are supposed to give us, if we are in rural area even though there is tar road; rural is rural.”*

Zwan, Tre and Ntu, quintile one teachers confirmed that in their respective schools they were receiving rural incentives and appreciated that the money was helping them a lot when it comes to transport as they were travelling from far away. Zwan appreciated:

*“In our school we get rural allowance, I think it’s third year now since we started getting it. This money helps us a lot with travel expenses as we are not staying around this area. We are staying far away and we need transport to come to school everyday. So it is helping us.”*

Moh (a quintile five teacher), for example, believed that her quintile five ranked school had strengthened her teaching as a teacher. She had to learn to deal with learners who were coming from different racial groups as well as different cultures. The school had taught her diversity and exposed her to different challenges and plights. She expressed herself:

*“I have actually grown as an educator as I have learnt to deal with different situations at hand because we have learners from different cultures with completely different cultures and as a result I have been able to grow and learn to adjust and to include all of the learners with regards to whatever learning that may occur. So it taught me to deal with challenges out there and overcome those challenges.”*

One of the participants who has worked in both quintile 1 and quintile 4 schools indicated that in her present school she also needed to collect school fees from learners as she was a class teacher. Each class teacher was expected to come up with fundraising programmes for the class which will eventually lead to the contribution for the entire school fundraising programme. She argued that she found that awkward as she was coming from a no fee school where the state paid for everything. Ndwa stated:

*“When I arrived here at school, I was made class teacher for Grade 9. As a class teacher, I am collecting school fees and also responsible for fundraising activities of my class because our school is a fee paying school. I found this practice awkward because where I was teaching we were not collecting monies from learners. At times much time is wasted trying to beg learners to pay as some are very adamant to pay.”*

This was seen as limitation because the teacher did not only concentrate on teaching and learning. She was also given the responsibility of collecting school fees and engages in programmes for fund-raising. This added responsibility of collection of moneys from learners not only emotionally affected her, but also distracted her teaching responsibilities.

Ntu believed that his school was poor and the Department should not expect more from them: He argued:

*“It does affect me a lot to teach in this quintile school because of learners who come to school not even having done their homework. It is discouraging to here. Officials know that our schools are poor so they should not expect wonders from us when it comes to results.”*

Ntu’s argument is about teacher expectations and curriculum expectations, both of which were compromised in lower quintile ranked schools, largely because of impoverished living conditions of the learners.

Zwan concurred with Tre (both were from Ngosa Secondary, a quintile one school) as Tre had this to say:

*“It is hard to teach in a quintile one school because this school doesn’t motivate us to teach. There is nothing that motivates you to come to school because you know that your school is bad and learners don’t want to learn. So there is nothing we can do”*

The above citations relate to teacher expectations based on the belief that lower quintile ranked schools draw learners from communities that have little or no interest in schooling. They take a fatalistic approach to teaching based on their belief that little learning is possible because learners from such communities do not want to learn. My personal observation at Ngosa and Siminza schools seemed to confirm what teachers were saying. The culture of teaching and learning was not there. Learners were loitering around and teachers and learners dragged their feet when bell was ringing. There was no insignia of urgency on the side of the teachers.

The data exploring quintile ranking of schools and its influence on teacher belief suggests that teachers have ingrained beliefs about the nature of teaching and learning within each of these quintile rankings. Such beliefs have both positive and negative influences of teachers in their teaching practices. In higher quintile ranked schools teachers do believe that teaching and learning is possible and that they do benefit as professionals, except for some emotions relating to collection of funds to sustain their schools. In lower quintile ranked schools, teachers have fatalistic expectations suggesting a doom and gloom situation.

## **6.5. Understanding the relationship between teacher beliefs, the context, quintile ranking and their influence on learner performance**

Learner performance refers to the learners' ability to show comprehension and demonstrate that learning has taken place through a task or an activity (Dhurumjay, 2013, Woolfolk, 2007). Poor learner performance refers to learners obtaining marks below 30% in the National Senior Certificate Examinations and regarded as fail in that particular subject (Department of Education, 2003). Multiple and interrelated variables that affect learner performance include learners' ability, perception and attitude, socio-economic factors, school related variables and parental involvement. The slow cognitive development of learners is contributory factors to poor learner performance as shown in different subjects. According to Spaull (2013, 2011) majority (75%) of South African learners perform extremely poor on national tests such as National Senior Certificate (NSC), former National Annual Assessment (ANA) National Certificate Examinations (NCE) and so on. Even quintile 4 and 5 schools which are better performing part of the South Africa schooling system are not achieving at a comparable level with developing countries (Spaull, 2013). However, the recent studies conducted by SACMEQ and TIMSS have shown a gradual increase in the performance of learners. The study has revealed that in 2013 achievement in Mathematics grade 6 was 0.05 of standard deviation and that in 2013, teachers with a particular level of knowledge (in terms of their test scores) were producing better SACMEQ learner results than similarly knowledgeable teachers in 2007. This says a lot about how learner results improved. The improvement is attributed to the availability of books in schools and classes, better management of teachers and their work and school accountability.

Figure 6.1: The graph below shows the improvement of Grade 6 Mathematics and reading in SA compared to other SACMEQ countries.

## PRIMARY LEVEL IMPROVEMENTS

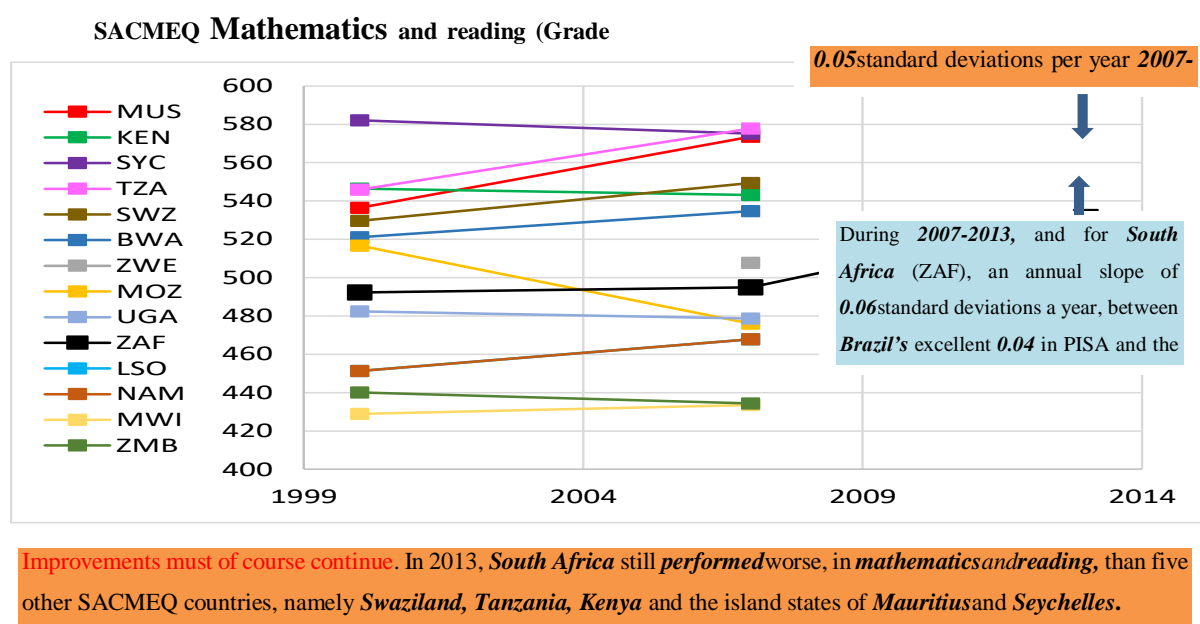
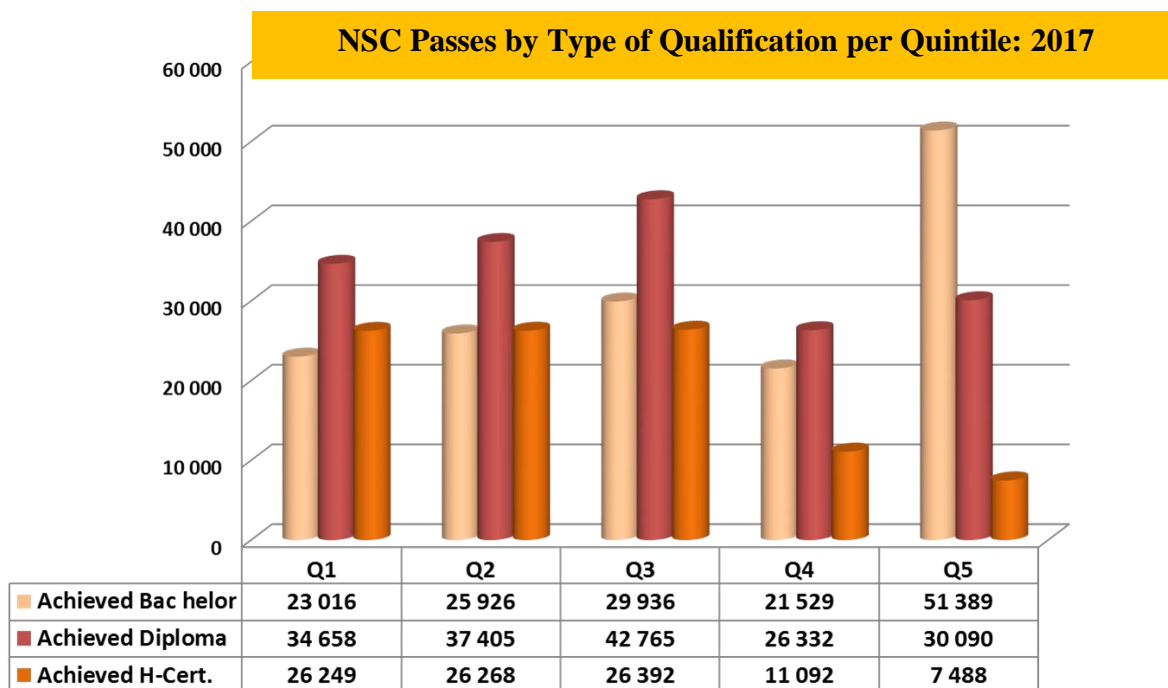


Figure: 6.1. The graph comparing tests scores of teachers and learners in quadratic section of Numeracy in 2007 and 2013. Adapted from February 2017 National Senior Certificate DBE Report.

The graph revealed that SA has improved from other countries involved in SACMEQ by standard deviation of 0.5 per annum. Analyses of teacher scores, with respect to common items, in SACMEQ 2013, reveal some improvements in both reading and mathematics. TIMSS identified challenges schools and teachers were having including less time for individual learners, too many learners in classes, learners lacking prerequisite knowledge skills, uninterested and disruptive learners, learner absence and shortages of textbooks (Reddy et al., 2016).

The Department of Basic Education released 2017 matric results and these were analysed in different categories. For the interest of this study I have looked at the results impacting on learner performance based on quintile ranking. The report by DBE showed that there were still more learners who achieved bachelor passes in quintile four and five schools as compared to quintile one to three schools. The trend still exists and that more learners attained Higher Certificates in quintiles one to three.

Figure 6.2: The graph below shows the performance of schools in matric in SA in 2017 according to quintiles. Adapted from Director General's Road show NSC results and PIRLS reports (DBE, 2017).



The Figure 6.3 Table comparing 2016 and 2017 number of Bachelors passes national with quintile 1, 2 and 3 combined and 4 and 5 combined. Adapted from Director General's Road show NSC results and PIRLS reports (DBE, 2017).

	2016		2017	
Quintile	Q 1-3	Q 4-5	Q 1-3	Q 4-5
No. of Bachelors	78 886	73 810	76 300	72918

Other factors such as bad attitudes of teachers about these subjects can also be linked to a poor understanding of the policy documents that the teacher is required to implement; in this case the National Curriculum Statement (NCS) and Curriculum Assessment Policy Statements (CAPS). The fact that teachers are not familiar with the content of the subjects they teach was also a contributor factor to poor learner performance. In the following section I looked at what teachers believed account for learner performance in their respective schools.

## 6.6. Teachers' belief and rationality for learner performance

Teachers I interviewed believed that different contributory factors led to improved or poor learner performance. In this section I will begin with factors that helped improve learner performance. Some of the teachers I interviewed argued that the performance of their subjects had improved due to a number of reasons they cited. Ntu, quintile one teacher from Siminza High school stated:

*“For the last five years, in 2010, I obtained 100%; 2011 it was 90%; 2012 it was 100% again; in 2013 I obtained 97% and last year which was 2014, I dropped to 53%.”*

When asked about the drop in 2014 results to 53% Ntu responded that learners they enrolled in Grade 11 are coming from other schools because their school had a record of high pass rates. So those learners did not have background for Accounting that they were supposed to get from Grade 10. He justified by saying:

*“Most of the learners now come to our school at Grade 11, now we receive a large number of learners coming to our school seeing that even the pass rate of the school is going up. So we had a bit of challenge to teach them from Grade 11 to Grade 12 unlike the ones that we go up with from Grade 8 to 12. I think that was a bit of a challenge but we are working out how we can improve again. As I have said earlier on that Accounting equation is done in Grade 10, so if you miss it there, you will have a challenge if you don't have background.”*

In this case the teacher believed that migration of learners into their school was the reason for achieving lower pass rate. He believed that higher pass rates in grade 12 is based on having prior knowledge that is developed over the grades and that learners who migrate to their schools do not have this developmental knowledge required to sustain pass requirements.

Oshun, a quintile three teacher, from Hlonga High, is a Physical Science teacher.

*“In 2011 it was my first year of teaching. I got 40% then I moved to 65% in the following year then I came into Hlonga I got 46% because I came late in June. In 2014 I did very well because I got 70% which motivated me. Last year in 2015, I dropped to 0%”*

When asked about the drop in Physical Science to zero per cent result, she defended:

*“I was on maternity leave, I was pregnant and sometimes I was not at school, I was sick. Then I went for four months on maternity leave. It affected my performance; I was*

*not there as a Physical Science educator. Teaching is something that requires drilling not just teaching. So it affected them, it really affected them.”*

The Geography results for Gug, a quintile five teachers had consistently been 100% for the last five years. Gug believed that acknowledging individual learning abilities of learners is important if one had to pass learners. He further believed that hard work pays and that he gave his learners lots of worksheets and notes to do. He elaborated:

*“Working with them on your own, you don’t teach the class as a whole. You have to consider that there are people that are high and there are people that are medium and there are people that are low. So you have to teach according to that level to be able to reach out to every individual. It’s hard work but I’m making sure that I use text books, but someday I make my own worksheet and my own notes and it goes according to the level my pupils understand.”*

Mze, a quintile 2 teacher from Qoqa High, his results for Mathematics in Grade 12 ranged from 34% to 70%. He believed that planning is important if one had to improve results. He planned his lesson well up to the final details. He elaborated:

*“Now the pass rate ranges from 34% – 70% but the bulk of learners they get 30s and 40s most of them. Very few obtained the first class pass but there are learners in 2012 one learner obtain symbol B. In 2013 there was one guy who obtained symbol A in Mathematics. He is studying medicine at UKZN now....I think it has something to do with the planning because I know what it take to pass a particular topic. I plan around how do I make them pass geometry. Then I spend a few weeks in geometry than to cover another topic. I plan very well how do I make them pass trigonometry because you have to look at it in terms of the topic, because once they pass geometry and pass trigonometry automatically they pass Mathematics. So for me it’s about planning to the finer details how do they pass this particular topic and once I’ve done that I ask myself how will I deal with a learner who got 10% in Grade 8 in Mathematics. There is something that I’ve introduced in 2011; it helped me a lot because what I’ve done is I took learners who were doing well in Mathematics. I groomed them to be peer educators. So the way it worked is I teach them in the morning or during break I gave them problems. I let them to solve problems. If they finish all problems then I help them to solve other problems. Then later on whatever revisions I do, I let them help the rest*



*of the class. One learner will be helping 5 learners in group environment, sort of tutorial to solve the same problems that they solved when they were alone.”*

Thado, a quintile 3 teacher who was teaching Life Sciences asserted that her matric results had been standing at 75% for the last five years. What contributed to those results was the fact that the teacher worked hard, taught during holidays and weekends, speaks to parents at night to check on learners' progress at home. She pointed out:

*“Well in the past 5 years I range above 75% all times with last year's 86%. I put a lot of time, I don't have holidays, weekends, and I make time even after school sometimes I stay with them. Even during break times I help them I don't mind. I encourage them to come and ask me at any time. When it is exams times normally have a list of my learners with their numbers, I call them at night asking what they are studying because I don't want them to sleep early. Sometimes I speak to their parents to what their kids are doing at that time. I answer questions on the phone. “*

The above quotations reveal that teacher take a personal responsibility for learner performance, based on the belief that their efforts will make a difference in the learners performances. Teachers also believe that while they do put on extra efforts to support the learners, the learners' attitudes and ill-discipline are factors that mitigate against their efforts.

Ndwa, a quintile four teacher was teaching Mathematics not in matric but in Grade 8 and 9. So did not have pass percentage rate. However she pointed out that learner performance in her school is affected by the lack of motivation from learners. Ndwa had this say:

*“The cause of poor learner performance is that learners are taking drugs, also the fact that learners are not motivated. The fact that learners come to school knowing well that they won't pass at the end of the year, that is, the main cause of poor learner performance.”*

One of the teachers who were teaching in Shakeville School, a quintile four school described her subjects and whole school results as poor. She attributed the poor results to a number of factors including badly disciplined learners, illiteracy, broken homes, lack of understanding of Language of Teaching and learning to mention but a few. Naid believed:

*“Badly disciplined learners, broken homes, poor economic background, poorly equipped school, lack of understanding of language of teaching and learning (LOLT), illiteracy, drug abuse, bad attitude, poor attendance and absconding are some of the factors that affect learner to perform well in this school.”*

The teacher from Ngosa High (quintile 1), Zwan, described his school's percentage of results as poor as he said that his percentage ranged from 9% to 25% in the last five years. The reason for poor learner performance was that learners were scared of Mathematics and did not prepare themselves thoroughly before they write although he was teaching them after hours weekends and holidays. Zwan had this to say:

*“Last five years the pass rate in grade 12 has been poor. Last year it was 14% and the year before it was 9% it means all these years the percentage has been low never been above 25 %. I think what makes learners fail more is that they are fearful of Mathematics and don't read instructions. They just go with their minds ask how is mathematics is going to be? They go to exam room not well prepared because we do the extra classes here at school. I teach them up until 5pm but still they don't know what is happening.”*

The matric results records from schools were perused as means of validating the information provided by teachers interviewed. Only teachers who were teaching Grade 12 subjects were recorded using their subjects NSC performance. The table below shows the distribution of marks from 2011 to 2016 for some of the teachers I interviewed. It should be noted that the percentages for 2015 and 2016 were received from Department of Education report on 2016 NSC examinations as those examinations were not yet written when interviews were conducted in 2015; they were not given by the teachers themselves or by their schools.

Table 6.3.: Percentage distribution of teachers' marks Grade 12 only (2011 – 2016)

Name	School	Quintile	Subject						
				2011	2012	2013	2014	2015	2016
<b>Ntu</b>	Siminza	1	Accounting	90	100	97	53	15	16
<b>Oshun</b>	Hlonga	3	Physics	40	65	46	70	0	67
<b>Gug</b>	Seaview	5	Geography	100	100	100	100	100	100
<b>Mze</b>	Qoqa	2	Maths	70	57	40	34	18	22
<b>Thado</b>	Hlonga	3	Life Sciences	78	81	75	86	72	70
<b>Zwan</b>	Ngosa	1	Maths	11	25	9	14	18	14
<b>Tre</b>	Siminza	1	Economics	60	70	40	47	43	67

From the table above, it is evident that some teachers' class pass rates fluctuated, some decreased and some remained consistent. The information in this table does confirm what some

teachers reported on their class performance, while others are not consistent with the percentages in this table. While the intention is not to search for the truth, how teachers account for their class performances and the associated belief that teachers have of the reasons for such performance is of interest. These beliefs range from personal accountability of planning, engaging with learners and personal issues (e.g. health) to learner issues that includes learner migrations, learner interests and perceptions about learners.

Most teachers I interviewed also blamed the system of education itself for the poor results that the South African schooling system is achieving. They argued that the Department had lowered passing promotion and progression requirements, the lack of textbooks and other resources in most schools, wrong quintile categorisation of schools and shortage of Subject Advisors are among some of the things teachers perceived as having a larger impact on learner performance.

Mag blamed the system of education for lowering the passing standards which she believed had grossly affected learner performance. She argued:

*“I would like to blame the system. The government is trying by all means to help these learners but I think instead of helping them it is destroying them. When we were at school, our minimum pass requirement was 50, we were supposed to get 50 and did very well during those days but now they can’t even get minimum of 30. The whole Department I don’t think it is working properly.”*

Tre, Oshun and Mze concurred with each other as they argued:

*“The Department of Education contributes a lot in terms of poor results through their promotion and progression requirements. Learners progress to the next class even if the learner did not pass just because he or she repeated a class within a school phase twice or because of age cohort. Also the issue of moderating learners’ marks is the factor that affect results. In that way wrong learners go to the next classes without passing.”*

Moh, a quintile 5 teacher, believed her school is performing well when it comes to results. The reasons for the good results were the fact that school is disciplined and teachers work hard including school management team (SMT). Teachers in her school did not teach extra classes. They taught during contact time. She explained:

*“Our school is doing well when comes to results. Our learners are disciplined. Discipline and hard work of teaching themselves and an entire school including*

*learners, educators, management etc. ensure good results. We do not do extra classes during holidays and weekends.”*

Ntu, a quintile one teacher believed that he had done well in his subject because he dedicated himself to work. He conducted extra classes even during weekends. In their school they increased learner discipline and parental involvement; that is why his school was achieving good results. He said:

*“My first years as a teacher, I dedicated myself to teaching. I worked hard I was able to go to an extra mile for the learners. I conducted extra classes and go to an extent of coming even on weekends. That’s how I contributed. The discipline from learners the co-operation from parents, the involvement of stakeholders, that is why we were performing well as a school because we started to involve parents to check how the school is doing. It did help us a lot.”*

Thado, a quintile 3 teacher, believed that their school had done well in terms of results as they did not get less than 75% overall for the last five years. She attributed these results on the dedication of other teachers and hard work they displayed. She stated:

*“I think with the performance of the school it is the fact that in our school we have educators that are very dedicated cause we will fight for Grade 12; we fight for extra classes. When we want them on standby they say mam Mr so and Ms so is taking us for Physics, Accounting, and Mathematics. My God where do I feature myself for Life Sciences? So our teachers are very dedicated and they are hard workers. I think that is what contributing to us to get good results.”*

The wrong quintile categorisation of schools was also highlighted as a contributory factor that affected learner performance in schools. Some teachers from quintile 2 and 3 schools believed that their schools were wrongly categorised to be the quintiles they were because they lacked resources like quintile one schools. Mag supported that as she said:

*“My school is not developing I am categorising my school as under developed as you can see the buildings as you can see the administration block, look at this office can you say this is a quintile 2 school? It belongs to a quintile one because it’s not developed. It’s about maybe it is 80 years old and is not being developed. So it’s not supportive in terms of teaching and learning as quintile 2 schools are supposed to be like providing lots of resources.”*

This data set suggests that teachers' belief that structures and processes outside of the control also influence learner performance. Policies put in place by the Department of Basic Education are believed to have both positive and negative consequences. For example grade progression, a Departmental policy of throughput, is believed to compromise learner competence and is the cause for poor learner performances. A well organized and managed school is believed to discipline learners and teachers and this discipline sustains a higher learner performance.

### **6.7. Teachers' belief about the means to improve learner performance**

Learner performance can be improved by applying different strategies as well as different practices in teaching and learning. The teachers in the sample of schools I visited highlighted number of things that could improve learner performance of its learners.

Oshun believed that learner performance will improve if teachers let learners speak English as language of teaching and learning because most teachers taught in IsiZulu in classes. The teacher felt that those teachers were disadvantaging learners and limited their potential to learn. She believed:

*"If the learners have English foundation they are performing. We as teachers in the rural areas tend to be disadvantaging them because we think they cannot understand English whereas we as the teachers are supposed to develop them and bring out the best in them. What do we do? We end up disadvantaging them by speaking the language that they use at home which we have every day, it tells that those learners are not learning because if you say you are learning it means you are getting something that you do not have initially now you say he/she is learning IsiZulu. If I were in top as decision maker, I would emphasise that all schools should use English as a medium of instruction especially in rural areas and no other language will be used."*

Oshun further believed that her school concentrated on sports and cultural activities and she and other teachers at school believed that Grade 11 and 12 should be excluded from sports and cultural activities as most of the time was wasted by such. She believed that instead of the above, Grade 11 and 12 learners should be encouraged to do debates which were content based to promote teaching and learning thus improve performance. She argued:

*"I have seen grade 12 going for sports, going for cultural activity, I see that as abnormal. Grade 12 must be taught how to study. There must be library time for Grade 12 there must know how to use a library more times when you are going to the grade*

*12 class they are playing, always talking , gossiping, busy saying things that will not contribute 20% of exams rather forming groups. Learners should be grouped and encouraged to argue, debate and talk about their subjects no other things. In order for us to pass we must reduce extra-curricular activities and focus on content work.”*

Learners needed to be pushed a little bit in order to pass as they had abilities to do so. Motivation would help learners a lot to improve their performance particularly if someone younger like them motivate them because they associate themselves with that young motivational speaker. Tre had this to say:

*“If we can push them they will pass and improve the percentage because they believe in us as teachers. We need to force them to sit down and work hard, do activities with them. Our learners need to be motivated about the importance of their future and that the future is in their hands. Involve younger motivational speakers because when you speak to them as an adult they don’t pay attention because they think you are just doing your work but if someone young they talk to them and they begin to listen and relate themselves to that youth.”*

Some of the teachers I interviewed believed that if learners performed well, that led to teacher satisfaction as teachers see their learners graduating and being able to change the conditions in their home to better as they become intellectuals. Thado felt:

*“As an educator you get satisfaction by having your learners passing and progressing into higher level graduating and become better people than yourself. So it is really helping for their families since they come from poor background so if they do well at school that they will change their families.”*

Thado further argued that her subject was affected because of streaming which is a problem. Learners who were doing History were also doing Life Sciences and they were struggling because Life Sciences is a science subject and it should be paired with other science subjects of which the principal could not apply for it from the Department because of post provisioning norm (PPN) which did not allow them an extra teacher. She stated:

*“learners who are doing L.S and History are the weakest ones that is where the problem lies cause those learners they feel if there was another subject they will drop Life Sciences because it is challenging for them. ...we did like ask the principal to apply for another subject and then he said it is not easy because the enrolment doesn’t allow for*

*another subject. It is challenging because learners who are doing History, they are so used in writing notes and reading essays, memorizing things. When it comes to science subjects an application is a problem.”*

Gug and Ndwa concurred with the fact that learner performance would increase performance as long as they as teachers were giving them the best and also continuously testing them. If Majority of learners failed a test they revised the test and gave learners another test to write. Gug said:

*“By continuously making sure that I’m giving them the best. Also continuous testing will improve results. If the majority of them had done badly, I take the same test and I teach them the lesson, give them a revision activity and then give them another test.”*

Moh, felt that for her subject to improve further, she needed resources although her school is quintile 5.

For Zwan, a quintile one teacher, his school needed to organise camps where learners will be placed in one venue and allowed to work in groups. Also extra time will be needed for Mathematics more than other subjects. He stated:

*“Maybe the school should organise the camps and learners should learn more, maybe they will learn if they are in groups in the camp at school at night. They really do need extra time to do maths, the school is doing extra classes but I think they should give mathematics more time.”*

Naid believed that her school needed to improve discipline and involve parents in the education of their children. The belief of Naid seemed to agree with findings of TIMSS as they said their report that learners are uninterested, disruptive and absent from school (Reddy, 2016). This is what Naid said:

*“Stricter disciplinary measures, motivation, more parental involvement will lead to improved results.”*

Siminza high was the school where Ntu was teaching. For Ntu although his school was doing well in terms of results but he believed that there was a need to produce quality results. There is a need to good culture of teaching learning. He alluded:

*“We need to be to produce the quality results we want. We do have good pass rate but we do need to have quality results. So in order to improve them, we need to encourage learners to be the ones who seek for information. We must bring the culture of learning to them.”*

The teacher I interviewed from Qoqa High school Mze believed that learners' attitudes needed to be changed when it comes to Mathematics as they thought it was difficult and not doable. Another thing was to encourage teachers to hold subject meetings especially Mathematics as teachers would help each other with challenging topics within the school and across all Grades not Grade 12 only. This seemed to be in line with what TIMSS found that the factor that contributed to improved learner performance in Grade 9 and Science was the improvement in teacher collaboration to teaching which included teachers sharing their teaching experiences, work in groups, discussed how to teach a particular topic and so on. Mze argued:

*"I think the important thing is to try to change the attitude of learners so that they can see Mathematics as a doable subject. The second thing is that teachers need to assist each other; they need to be holding regular meetings with Grade 12 and 11 teachers. ... Teachers need to give each other feedback as to how do each topic is understood by learners. In our school we are trying to do it even though the time is challenging."*

Different views, suggestions and opinions emerged from the above citations on how teachers believe that learner performance can be improved. Some relate to being a professional and taking responsibilities for their teachers work, including collaborative professional development. Some relate to curriculum and assessment issues, including subject combinations and continuous assessments for optimal learning. Some relate to learner issues including learners' and parents' interest in learning and some relate to contextual issues of resources and opportunities for learning. It is also evident from the data that teachers' belief of what might improve learner performance are based on their reflexive experiences in theirs and in other teaching contexts as well as on some stereotypical ideas of what can improve learner performances.

The data that was presented in this chapter concludes that teachers are fully aware of the importance and significance of promoting good quality education in schools, and believe that they can produce good results from learners. Their role in producing good results in learners range from taking personal responsibilities to attempting to motivate and promote self-interest in learners. They also lay blame for learner poor performance at the systems level, of which they have little control over.

South Africa had been into democracy for more than twenty years now but South African schools and teachers have been very gradually incorporated into the many essential tools for



transformation, such as school funding norm that is intending to address the imbalances of the past. The data revealed that the quintile system that was introduced to address the above, is failing as it is further disadvantaging some of the schools they were supposed to advantage. I therefore share the same sentiments with Baijnath (2008) when saying that the education in South Africa seems to be stuck in a time-warp and therefore is failing our present learners and our society. These sentiments are echoed in the following words by Mahatma Gandhi as cited by Baijnath (2008, p.174):

The real difficulty is that people have no idea of what education truly is. We assess the value of education in the same manner as we assess the value of land or of shares in the stock-exchange market. We want to provide only such education as would enable the learner to earn more. We hardly give any thought to the improvement of character of the educated. As long as such ideas persist there is no hope of our ever knowing the true value of education.¶

## **6.8 Conclusion**

In this chapter I presented the belief of teachers about the context in which they were teaching which included the level of discipline in school as well as school environment, as a first line of argument. The findings suggested that discipline as a contextual factor impacted a lot in terms of learner behaviour and learner performance as a whole. There is relationship between good discipline and increased learner performance. Likewise, ill-disciplined learners would lead to poor learner performance. Learners who were coming from the disciplined school environment tended to perform better as compared to those who were coming from ill-disciplined and haphazard environment. Secondly, it was found that poor environmental conditions of schools resulted in apathy by teachers as well as lack of sense of urgency on the side of the teachers which amounted to poor learner performance. This chapter thirdly focused on the belief of teachers about quintile ranking, including the impact the quintile ranking had on teaching and learning. Teachers who were coming from quintile two to five schools complained and showed dissatisfaction about the fact they were not receiving rural incentives which were given to quintile one schools. Fourthly, the chapter paid attention to the implications of resources provision of schools differentiated in terms of quintiles. The findings indicated that schools that were ranked as quintile four and five were better resourced and performed better as compared to schools in quintiles 1, 2 and 3 which were under resourced and performed poorly in terms of results. Finally this chapter looked at the relationship between teacher beliefs and rationality for learner performance as well as teachers' beliefs about the means to improve

learner performance. The findings revealed that dedication, hard work, full commitment and going an extra mile were things cited by teachers that helped them to improve learner performance. It was also found that learner performance increased as teachers gave the best to their learners and continuously testing them; bringing the culture of teaching and learning and the involvement of all stakeholders to support teachers and learners.

In the next chapter I summarise the findings of this study based on the interviews conducted on teachers as well as on the observations, notes and documents analysed in trying to establish teachers' beliefs about teaching and learning as well as their belief about learner performance and how teacher beliefs impact on learner performance. I will also propose the theoretical framework that will try to explain the trends and understand the findings.

## CHAPTER SEVEN

### KEY FINDINGS AND DISCUSSION

#### 7.1 INTRODUCTION

The purpose of this study was to explore teacher beliefs of teaching and learning and its influence on learner performance within the context of South Africa. In chapters, five and six I presented a descriptive analysis of teachers' beliefs about various aspects of teaching and learning and about learner performance within themes that were informed by the data as well as by literature. I also interpreted and discussed some of the findings that emerged from the data analysis. In this chapter, I present the synthesis of the study paying particular attention to the purpose, the rationale, and the key findings that arose from the previous chapters and a discussion of those findings informed by literature and the theoretical frameworks that underpinned this study. When discussing the findings, I used both, the sub-themes and research questions as the bases for my discussion or argument. The key issues emerged from the data are illuminated using my conceptual and theoretical framework.

#### 7.2. Understanding the origins of teacher beliefs

In trying to respond to the research question, 'how have teachers come to acquire their beliefs?' it was necessary for me to begin with what were my participants' definitions of belief as a concept. It was found that all the participants responded using their personal experience and background in explaining what they understood to be the belief. The manner in which teachers understood beliefs varied from school to school based on geographic location, type of school, experience and so on. Varying definitions of beliefs emanated from the respondents. One of the findings in this study emanated from the understanding of teachers on what belief was. The general understanding of the teachers on the concept of 'belief' was that belief is a personal opinion that one is having and stems from one's character. It is tacitly knowing what is right and wrong, a guiding principle in the life that propels one into achieving something, a way of thinking; it is what one trusts will bring about change, trust in something especially without a proof, own thinking and frame of reference. Thado, one of the participants even stated: *"if you believe that you can achieve something then you can do it but if you do not have those principles you won't reach your goal and destination."* Zwan also one of the participants shared similar sentiment with Thado as she said, *"I believe that everyone can pass Mathematics by knowing*

*the basics of Mathematics which they lack from Grades 8 and 9.*” The statement by Zwan is in line with Hismanoglu (2016) when stressing that beliefs are opinions and ideas that teachers and learners have about the task of teaching and learning a particular subject.

All the above were some of the things said by teachers as they were defining the concept belief. The above notion of belief as understood by teachers is in line with the literature I perused. According to Peacock (as cited by Hismanoglu, 2016), beliefs are “psychologically held understandings, premises, or propositions about the world that are felt to be true” (p. 109). Horwitz (2008) refers to “beliefs” as preconceptions, preconceived ideas, and preconceived notions that people are having. Beliefs are judgments and evaluations that people make about them, about others, and about the world around them; they are personal convictions based on observation or logical reasoning (Kaiser, 2014; Khader, 2012; Ford 1994) that one is having about a particular thing or concept. Hismanoglu (2016) stresses that beliefs are “opinions and ideas that learners (and teachers) have about the task of learning” (p.109) a particular subject. I concur with Kaiser’s (2014) argument that beliefs are a crucial aspect of teachers’ perceptions of teaching situations and thus influence their choice of teaching methods as well as classroom practices. Beliefs also influence which part of teachers’ knowledge teachers choose to draw from in class.

During the analysis process I used the keywords and expressions that came from teachers. These keywords highlighted the notion of beliefs such as innate, insight, from every day’s life encounters and so on. When attempting to comprehend the origins of beliefs, it surfaced from the respondents’ definitions of belief that belief originated from different and varying sources. The other resultant finding is the one that states that belief stems from one’s character; one learns as a child and grow with it. Beliefs are innate and emanate from primary socialisation, schooling, initial teacher training, own experience, every day’s life encounter. Each teacher stated the different source of reference for the origins of beliefs. It resonated with the literature I have perused which seemed to concur with what teachers I interviewed had said. For instance Flynn, Nyhan and Refler (2017) stated that beliefs may come from the individual internally (for example comes because of cognitive biases or mistaken inferences) or beliefs may originate from external sources (such as being told by other people like schooling process). The biases and previous experiences, according to Preethlall (2015), control the individual’s expectations, feelings and interpretations of teachers. The above findings is supported by Belo et al. (2014) and Frost (2010) when they argue that teacher beliefs are consciously or

unconsciously influenced by various factors such as schooling or prior learning experiences, professional coursework or teacher education, classroom practice (including social and contextual constraints), and contextual factors. Based on this analysis, I can draw a conclusion that belief was understood to be the important component of individual teachers. I therefore argue in this thesis that each teacher has a particular belief that emanated from variety of sources, internalized and sustained over a period of time, often reinforced through aligned outcomes. These beliefs shape the way teachers perceive their world.

One of the crucial findings of this study on the concept belief was that teachers had the same understanding that belief largely affected the way in which they teach in the class as well as in general teaching practices. I refer to this common understanding of belief and its relevance to general teaching practices as teacher belief. Most of the teachers I interviewed confirmed that their beliefs influenced their teaching practices. Thado for instance stated that she believed that lowering her voice when learners were making noise in the classroom caused her learners to be quite as she argued that her Life Sciences Subject Advisor told her and it was the part of her teaching practice. This is in line with what Soldat (2013) argues when saying that teacher beliefs are the thoughts held by the teacher about the teaching and learning process, which influence their classroom practices and represent individual teacher's ideas about what they think is true and reflect their own prior experiences. It is evident from the finding that Thado had changed her teaching practices through her belief as was influenced by her Subject Advisor.

The above finding is in line with self-efficacy theory developed by Bandura (1997), which I have used as a theoretical lens to analyse and interpret the findings in this study. As I have discussed in Chapter 3, self-efficacy is defined as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p.3) and as the belief in one’s own ability to successfully accomplish something (Brown, Malouff & Schutte, 2013). Self-efficacy provides teachers with confidence to effectively advance and respond to the social and emotional well-being of their students (Bandura, 2007). Teacher self-efficacy had been defined as a teacher’s judgment of his or her capabilities to bring about desired outcomes of learner engagement and learning, even among those students who may be difficult or unmotivated (Bandura (1977, 1997, and 2006; Tschannen-Moran & Woolfolk Hoy (2001).

I have thoroughly explained and defined self-efficacy in chapter three (refer to subsection 3.1.1). What Thado was doing was in line with Bandura's construct of vicarious experiences as he argues that vicarious experience can be enhanced through live modelling (Bandura 1977), that if others can do something, one too has capability to raise the performance (Bandura, 1997; Rangraje, 2002; Hoy and Miskel, 1996). Black, (2015) and Poulou, (2007) conclude by asserting that watching skilled teachers, especially if they are admired and trustworthy, affects the observer's confidence because they assess their ability by comparing themselves with others in similar plights. Thado's self-efficacy is evident here, as she was then able to discipline learners who were making noise in her classroom and continued using the method she modelled from her advisor as her new teaching practice. I therefore argue in this section that teachers are the role models for their learners. If teachers do well, their learners will also do well and if they are bad their learners will also be bad.

The literature that I have studied looked at the definition of teacher beliefs as attitudes and values about teaching students, personality characteristics, subject content knowledge, cognition, interpretation and the education process those teachers bring to classrooms (Belo et al, 2014; Khader, 2012, Liu, 2010; Soldat, 2013; Bryan & Abell, 1999; Clandinin & Connelly, 1996; Pajares, 1992). The whole of the comprehension of teacher beliefs was entrenched in Richardson's (1996) explanation that teacher beliefs come from three sources, which are a) personal experiences of the teacher in general, and teaching in particular, b) teacher's experience as a student and, c) the teacher's knowledge of the school courses. In addition to, Richardson (1996) and Fang (1996) argued that there were groups of different factors related to school which impact on the formation of teachers' beliefs, such as the administrative support, attitude of colleagues, school ethos, learners' abilities and backgrounds on top of the rules and regulations that applied in a particular school.

Bases on the above definitions, I have developed my own definition of teacher beliefs as attitudes, thoughts, values, tacit and unconsciously held assumptions teachers have about teaching students which teachers bring into classrooms and influence their classroom practices. Teacher beliefs come from personal experiences in general and teaching in particular, teacher's experience as student and teacher's knowledge of learners' abilities and the school ethos. It is this understanding of teacher beliefs as a concept that informed all my interpretations and conclusions that I made in this chapter. I therefore draw conclusion from the above-mentioned finding that teachers and teacher beliefs are inextricable components, which influence their

teaching practices in the classrooms. No teacher is immune from any particular belief that frame and guide his or her teaching.

### **7.3 Understanding teacher beliefs about teaching**

One of the fundamental intentions of this study was to try to comprehend teachers' beliefs about teaching and learning. One of the research questions that this research strived to answer was, 'What are teachers' beliefs about teaching?' Teachers' beliefs are related to levels of passion. Teachers believed that in order to be effective, they needed to be passionate about teaching. Passion is very relative to teacher beliefs, which is different across quintile rankings. Passion is related to both teaching and bearing the context of teaching. The relativity of passion to teacher belief is evident when one looks at what two teachers have said about their belief about teaching: *"We need to be passionate about teaching. ... if I am at home, I think of Economics and Economic Management Sciences (EMS) I think of mind map and concepts to teach"* (Tre, the teacher from quintile one school). Gug, (the teacher from quintile five school) shared the same sentiments with Tre as he said: *"Teaching was one of my passions, so I believe when you're doing a job; you have to be in love with that job so that you do it in a precise way."* The beliefs teachers had about their passion to teach are in line with Naicker's (2014) notion of inspired teachers as part of the conceptual framework underpinning this study.

According to Naicker (2014) and Bullough and Hall-Kenyon (2012) it is the teachers' call to teach and a sense of vocation that keeps pushing teachers to attain their goals to teach learners. When teachers are inspired, it is when they have capacity to affect learner outcomes, when teachers felt deeply connected to their colleagues, learners, parents and school management. They experienced mostly positive emotions of hope, joy and happiness. They felt motivated and enriched (Naicker, 2014) and all these contribute towards making teachers to be spirited. The above conceptual understanding supports the belief teachers have about passion; as teachers believed that they had passion for teaching their subjects thus making them inspired teachers.

#### **7.3.1 Passion as a crucial element of becoming a teacher**

Passion is a crucial element of becoming a teacher. In this thesis, I argue for the relativity around the notion of passion in teaching and the notion of relativity around passion. Passion

means different things in different contexts. In some context, passion is about the teaching practice and the urge associated with being meaningful to the lives of the learners or people outside oneself. Tre (quintile one school teacher) supports this finding as she said that she is passionate about teaching and that even at home she thinks of Economics and Management Sciences (EMS) as she thinks of mind maps and concepts to teach. The belief that the teacher has to teach beyond the call of duty and school premises surfaced from the data collected and formed part of the findings for this study. In another context, passion is about teaching profession that keeps the teacher in a profession itself irrespective of the context in which the teacher teaches.

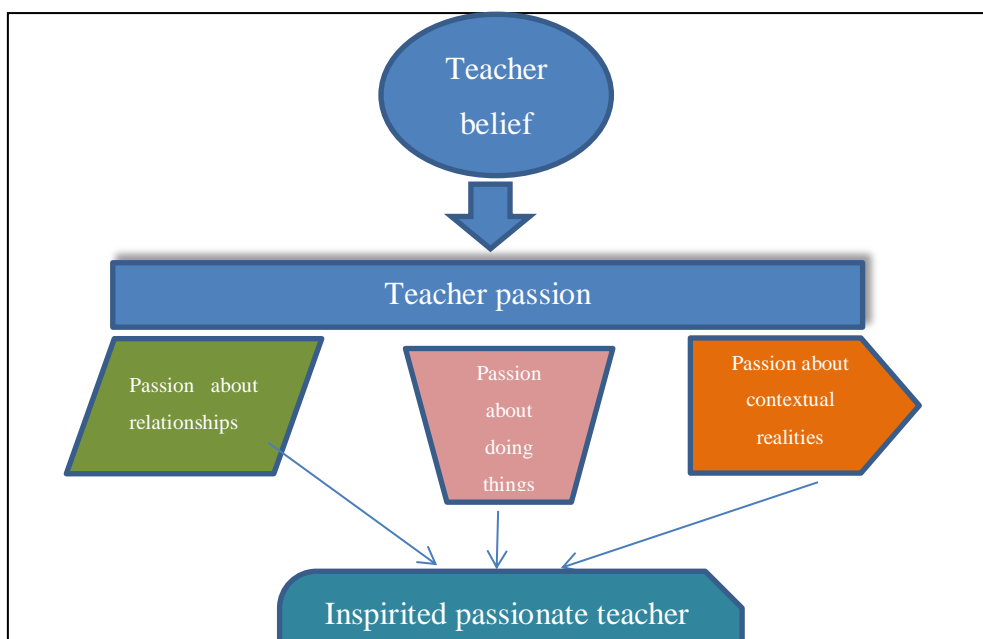
In addition to the above, this study extends the notion of passion by saying that passion is relative to teaching and the relativity is associated with various elements such as passion about relationships, passion about doing some things and passion about contextual realities. By passion about relationships element, I refer to the fact that teachers in this study showed that they were passionate about the relationships they had with each other within the school. They had passion of forming collegial relationships and love for each that would keep them in school. The above assertion was supported by Mag (an educator from quintile two school) when saying that at school they had that love for each other as teachers and they were like a big family and a home away from home. The above citation is in line with Bronfenbrenner's ecological systems model where he described microsystem as the first level which involves the immediate environment within which the child or the teacher closely interacts; such as school classroom, playground, home, friends' home neighbourhood and religious institution (Bronfenbrenner, 1979; Onwuegbuzie, Collins and Frels, 2013). The school has provided the environment conducive for building collegial relationships.

The other element of passion is passion about doing things or making changes in learners' lives. This element involves teachers being deliberate in making the lives of other people such as learners better by committing themselves in doing their work. In other words, passion is what keeps teachers motivated to schooling processes as well as staying true to teaching profession. The teacher belief mentioned above resonates with literature which has defined teacher beliefs as thought held by teachers about teaching, learning processes, classroom practice (Kader, 2012) and represent teacher's individual ideas of what is true by reflecting on their own experiences (Soldat, 2013). Theory on self-efficacy also suggests that a robust sense of teacher's self-efficacy inspires a strong commitment to the profession and collegial



relationships with colleagues and parents (Coladarci, 1992; Imants & Van Zoelen, 1995 & Caprara et al., 2006), contributing profitably to the advancement of a rich and exciting learning atmosphere. Passion for teaching as element of teacher belief seemed to be the core basis as teachers across all quintile rankings perceived themselves as passionate about their teaching. Based on this analysis I drew the conclusion that passion is related to teaching and to teachers' life as well.

One last element of teacher passion was passion about the contextual realities. As I have argued earlier on in this sub-section, passion is relative to context. In the study I conducted, I noted that passion is inextricably linked to the context in which teachers teach. Passion is very relative to teacher beliefs, which is different across quintile rankings with the exception of two teachers Tre from quintile one school and Gug from quintile five school. Both teachers seemed to have more passion about their teaching as compared to other teachers from other quintile schools. The majority of teachers that I interviewed showed that the level of passion they were having was dependent on the quintile their schools were at as they were saying that it was discouraging to teach in schools that were poor resourced as was determined by quintile each school belonged. In other words, the lower the quintile school is allocated the lower the level of passion was experienced by teachers and vice versa. The context in which teachers teach was because of the relationship they built with the schools. This finding resonates with theory as Bandura (1997) says that environmental factors exert strong influence on how an internal condition of the school is interpreted and thus the efficacy impact of physiological arousal on self-efficacy will differ depending on the situational factors singled out and the meaning given to them. The situation in this study is the condition of the school as determined by the quintile the school is assigned. The literature works of Belo, van Veen and Verloop (2014) and Frost (2010) suggest that teacher beliefs are consciously or unconsciously influenced by various factors such as schooling teacher education, classroom practice (including social and contextual constraints), and contextual factors. This context affects teacher passion as shown in this study. In order to reiterate my stance on the notion of relativity of passion, I have developed the model (see Figure 7.1) that illustrates the relativity of passion with the abovementioned elements. In this model, passion is illustrated to show...



*Figure 7.1.....A model showing resultant teacher passion*

Teacher belief with some elements of teacher efficacy influences teacher passion, which, in turn is influenced by passion about relationships, passion about doing things and passion about contextual realities. If all are positive, will produce teachers who are inspirited (inspired) and who are passionate in their teaching practices and relational underpinning, that is, inspirited passionate teachers. I have borrowed the concept ‘inspirited’ from Naicker’s (2014) conceptual framework of ‘inspirited and dispirited’ teachers in her study where she defined inspirited as the situation in which teachers feel deeply connected to other colleagues and felt validated , experienced mostly positive emotions of hope, joy and happiness and experienced sense of belonging. I therefore conclude this section by reiterating the push for the relativity around the notion of passion in teaching and the notion of relativity around passion and meaning its delimited to different context

### **7.3.2 Teachers as knowledgeable individuals**

Another finding that this study came up with was that teachers believed that they needed to possess content knowledge and knowledge of context and having ability to impart knowledge to learners. This finding had two important components (i) teachers believed that teachers needed to possess particular knowledge and (ii) that teachers believed that teaching is about imparting the knowledge to the learners. I divided this finding into three knowledge systems,

which are content knowledge (CK), pedagogical content knowledge (PCK), and curricular knowledge as differentiated by Shulman (1986). Shulman (1986) argues that there are three different forms of teacher knowledge; which are subject matter content knowledge, pedagogical content knowledge and curricular knowledge.

Teachers in this study of teacher beliefs about teaching and learning and its influence on learner performance, believed that they needed to have knowledge of subject content they were teaching. Teaching, according to teachers in this study only occurred if teachers have sufficient content knowledge of the subject. The knowledge had to be transferred or imparted to the learner and the transfer of knowledge included subject knowledge, values and life skills which teachers believed their learner needed. The teachers further believed that content knowledge developed the learner to understand or to be able to do something. This is evident when one is considering what Mr Zwan (the Maths teacher from quintile one school) said: *“...knowing the content as a teacher will make someone to understand and pass. If you are teaching, someone has to understand you, once he/she understands you, and then he/she can pass the subject. There is content in Mathematics as well. Teaching is based on this content, which will lead to learners understanding what you are teaching them. That will lead to learners passing the subject.”*

The above citation and belief is in line with the notion of teacher knowledge as the literature pronounces it. In order to elaborate on this finding, it is imperative to look at teacher knowledge and its forms. For Shulman (1986), Eraut (1996), Hashweh (2005) and Mhlongo (2013) subject matter content knowledge refers to an amount and organisation of the knowledge per se in the mind of the teacher to teach effectively. The teachers in this study believed that they possessed the content knowledge to teach learner as per Shulman's definition of teacher knowledge and this content knowledge resulted in learners gaining knowledge and understanding that will lead them to pass the subject that is taught and passing the subject resulted in improved learner performance. The above finding resonated with the theory on self-efficacy, which underpinned this study. There is an application of mastery experience as one of the social constructs on Bandura's self-efficacy. Mastery experiences occur when a person attempts to do something and is successful or unsuccessful in doing so; teachers are more likely to believe that they can do something new if it is similar to something they have already done (Bandura, 1994, 1997; Brown et al, 2005, 2013; Black, 2015; Skaalvik, & Skaalvik, 2016). Teachers in this study believed that they know content knowledge of the subject they were teaching and thus believed

that they have mastered that content. The belief was because they had taught their subjects for several years and had repeatedly encountered with subject content. Some of these teachers had taught the subject and had attained 100 % pass rate in Matric and that had motivated them to teach with more confidence and endeavour to obtain more as their confidence boosted because of mastery experience.

Drawing from this in engagement on teacher knowledge and teacher belief, the data suggests that just knowing the content may not be sufficient to be a successful teacher. Rather, the belief in knowing the subject content and the belief that they can teach that content knowledge forms an addition level to their confidence in their teaching practices. Hence while the literature focuses on what knowledge teachers need for their teaching practices, the belief aspect brings confidence to the teacher and this added level of confidence is related to Bandura's notion of self-efficacy – that I know what to teach and I believe that I can teach it to the learners. The *I-can-doism* in teaching, therefore includes a knowledge aspect and belief aspect.

According to Rangraje (2002) teacher self-efficacy is the magnitude to which teachers believe that they have the capability to impact learner performance and that teacher self-efficacy pronounces the teacher's estimate of personal effectiveness and showed teachers' evaluation of their ability to effect positive change to learners at their disposal. The teachers in this study have shown and believed that they possessed content knowledge, which made them to be capable of influencing learner performance, as learners were then able to pass their subjects. The literature on teacher belief, I have perused seemed to concur with the notion that teachers believed in teaching content knowledge as Hull, Brooker and Naslund-Hadley (2016) are saying that several predictor variables, which include but not limited to subject content knowledge, are theoretically and empirically correlating with teacher self-efficacy. According to Bello, 2014; Van Driel et al. (2008), teachers often have a particular purpose in teaching subject matter; they do “not only want their students to learn only specific subject matter, but also aim at more general science learning goals that lie beyond the subject itself” (p. 92-93).

The teachers in my study did not only teach subject content knowledge but went deep in teaching the specific areas of their subjects as alluded in the literature as well. Both the interviews and my own personal observation during school visit seemed to concur with the findings about teacher beliefs about importance of knowing content knowledge. The teachers I have observed teaching in classrooms showed that they vested with content knowledge of

their subjects. Only one teacher and seemed to be struggling with content knowledge and she was from quintile one school and was a novice teacher.

Teachers in this study believed that they also needed to have teaching pedagogy, which is the ability to pass the knowledge they have onto learners. This finding is an extension of the previous finding, that one of teachers having content knowledge of the subjects they teach. For the teachers to have the knowledge and wanting to pass this knowledge onto the learners, it can be possible if the teachers know how to pass on this knowledge. Shulman (1986) calls this pedagogical content knowledge (PCK). PCK is another form of teacher knowledge that goes beyond “knowledge of subject matter per se to the dimension of teaching, a skill of teaching or teachability of the subject matter content” (Shulman, 1986, p. 9) knowledge for teaching. The teachers’ believed that teaching also included the fact that they needed to make someone to understand the knowledge they were imparting. The belief was that when teachers understand the content and they have necessary skills of imparting that knowledge, it would make learners to understand the subject and thus pass at the end of the year. This notion of teachability is the extension of previous findings. Teachers, like Thado and Mze, believed that pedagogical content knowledge included knowledge about the learners and the circumstances that the learners were located. They took a holistic approach within a learner-centred philosophy to their teaching, suggesting that the ability to impart knowledge to learners went beyond the classroom and considered who the learners were and should be able to relate subject contents to the real life situations and being able to solve problems in the near future. This is in line with what the literature on teacher belief is saying as some authors argue that the pedagogical knowledge that teachers gain through their qualifications must be applied to their teaching, thereby narrowing the gap between theory and practice (Dhurumjay, 2013, Appleton 2003). It is further argued that Physical Science as a subject remains at a very theoretical level without any experiments to advance the comprehension and application of knowledge (Makgato & Mli 2006) in most South African public schools. Thus, teachers of Physical Sciences believe that theory and experiments are essential elements of teaching and learning. The idea that is pronounced here is how teaching should be done, that is, what skills are necessary for teachers to be able to impart knowledge. The literature on teacher beliefs speaks to this finding. According to Liu (2010) each teacher holds a set of beliefs that determine priorities for pedagogical knowledge and how learners acquire knowledge.

Mze (a quintile two Maths teacher) came up with the contrasting view on how teaching should be done and the role played by Mathematics as a subject. For him, teaching is an art of confusing learners and learners hardly relate what they have learnt to real life situations. He believed also that Mathematics confuses learners as well, but the logic that is taught in Mathematics makes it easier for learners to cope with confusions brought by life challenges. The line of thought of Mze was in line with Beswick (2011) who views Mathematics as problem solving agent which is regarded as a dynamic and creative human invention; a process rather than a product and the view that best reflects relatively recent changes in the way that mathematicians view their discipline. Mze's argument that Mathematics confuses learners although logic and taught by Mathematics make the learners to easily cope with confusions of the real life challenges. The above understanding matched most teachers believed in the study conducted by Beswick (2011) who regarded Mathematics as an organised and logical system of symbols and procedures that explain ideas present in the physical world and that Mathematics provides logic in any situation is finding ground in teaching as a practice.

The theory underpinning this study is the theory on self-efficacy. Brown (2013) articulates that watching others in training, a class or playing during games can provide observational experiences and enhance self-efficacy particularly if the person performing or learning a specific behaviour is similar to the one who is observing that behaviour. In other words, the more one associates one's self with the person who is watched, the more the influence on the belief one has to copy the behaviour that is observed. One may share sentiment with Rangraje et al (2005) when they assert that teachers with strong sense of efficacy are open to new ideas and willing to experiment and experience new methods to better meet the needs of the learners. The self-efficacy constructs by Bandura (1997) is more plausible in explaining the finding on pedagogical content knowledge. This is because it refers to observation done by a teacher to observe other teachers or learners conducting experiments, which are part of linking the gap between theory and practice when teaching.

Some teachers showed good use of PCK while some teachers had limited understanding and application of PCK due to their limited understanding of other teaching and learning knowledge domains such as general pedagogical knowledge, curriculum knowledge, context knowledge and knowledge of self (Preethlall, 2015). According to Rollnick Bennett, Rhemtula, Dharsey, and Ndlovu, (2008) and Preethlal (2015) PCK is an amalgam of their knowledge domains which is created through their teaching activities and observed as taking place during teaching

and learning. Dyches and Boyd (2017) argue that applying the PCK knowledge base demands that teachers had to consider both what (content) and how (pedagogy) to teach in order to increase teaching effectiveness and maximise student learning. I therefore argue that it is essential for the teachers to have knowledge through knowledge of PCK and other related knowledge systems, but for effective teaching the decision making process of combining content knowledge with teaching methods is based on the belief that teachers have on this content and methodology configuration. More importantly, the efficacy of the content and methodology configuration to maximize learning in learners is based on the teachers' belief in this efficacy.

The studies conducted by many authors also highlighted the significant link between teachers' beliefs as indicators of teachers' actions during classroom practice and teacher knowledge. Some of these studies showed that teachers' CK and PCK together with their personal beliefs about teaching and learning influenced their teaching practices (Ramnarain, Hlatwayo, 2018; Jääskelä, Häkkinen, & Rasku-Puttonen, 2017; Preethlal, 2015; Kaiser, 2014; Saad & BouJaoude, 2012; Hoy, Davis, & Pape, 2006; van Zee, Iwasyk, Kurose, Simpson, & Wild, 2001; van Driel, Beijaard, & Verloop, 2001; Hogan, 2000; Thomas, Pederson, & Finson, 2000; Richardson, 1996; Carlsen, 1993; Pajares, 1992; Lederman, 1992; Nespor 1987).

On the observation of teachers teaching the critical subjects, it sufficed that teachers taught their subjects with confidence and were able to apply both content and PCK in their teaching. The confidence is what drives the content/methodology process of teaching and this confidence is based on the teachers' belief and their trust in what works best in this content/methodology mix.

The knowledge of subject content and pedagogical content knowledge that the teachers in this study possessed were intrinsic factors that kept teachers motivated. There was an element of trust that existed within the teachers themselves based on teacher beliefs about teaching and learning and their influence on learner performance. Teachers in this study trusted their own teaching competence or ability to influence teaching and learning. The element of trust was within the teachers themselves and resulted in teachers using a lot of professionalism from within in all what they were doing. The intrinsic factors as well as element of trust as explained above contributed to teachers' *internal teacher professionalism* (a concept I have coined – see

chapter seven section 7.7.1 for more clarity on this conceptual framework). Teacher beliefs are related to internal teacher professionalism.

In this study, I therefore pushed the notion that subject content knowledge and pedagogical content knowledge as forms of teacher knowledge were important components of teacher beliefs. Teachers needed to possess and utilise the above teacher knowledge forms when teaching in order for them to yield positive results and improve learner performance. I argue that teachers' belief in CK and PCK configuration is the cornerstone for effective teaching and knowledge production.

### **7.3.3 Teachers as source of support to disadvantaged learners**

Another finding that this study established was that teachers believed that they needed to be supportive to learners as learners come from poor background and lacked basics that influence teaching. The study I conducted revealed that teachers believed that learners were vulnerable and the vulnerability arose out of the nature and history of the learners' background and their interest in education. Teachers believed that learners lacked zeal to learning as according to Mze (quintile 2 Schoolteacher) his learners *switched off when it came to Mathematics*. It is evident from the data in this study that teachers believed that they have responsibility to change their learners' perceptions and beliefs about their subjects. The above assertion resonates with literature as Ertmer (2012) distinguishes between two types of barriers that impacted teachers' teaching in the classroom, which are external to the teacher (including resources, training and support) and those internal to the teacher (include teachers confidence and beliefs). Ertmer (2012) called for the teachers to make use of blended pedagogical approach (using traditional and constructivist practices) in order to motivate already demotivated learners to focus and pay attention to their learning. Understanding the background of the learners in class is essential if learner performance is to be enhanced. The theoretical underpinning of this study is self-efficacy. The study conducted by Ysuf (2011) on the impact of self-efficacy, achievement, motivation and learning strategies on student achievement indicated that there is direct and indirect effect of self-efficacy and indirect influence of motivation on learner performance with an additional role of self-efficacy on achievement, motivation and learning strategies. In most classes I visited, I observed that teachers motivated their learners, which made them to be motivated as teachers, and learners were empowered to develop positive self-efficacy beliefs if they were exposed to encouraging, motivating and challenging classroom environments



(Arslan, 2012). In addition, Skaalvik and Skaalvik (2016) argue that motivating learners is a significant part of the instructional process and failure to motivate may be regarded as a lack of self-efficacy for teaching. I therefore argue in the thesis that teachers need to create an environment in their classrooms that is conducive and motivating for learners so that learners are motivated and focus on their studies.

The belief that learners lacked basics that influences teaching was evident in the present study. Content knowledge for learners and the language of teaching and learning (LOLT) were two main basics that were heightened as common factors influencing teaching. The finding suggested that learners lacked basic content knowledge as Mze (the teacher from quintile 2 school) asserted, *“Learners are lacking basic Mathematical skills and believe that Maths is difficult.”* Zwan, (the quintile 1 schoolteacher), further asserted that the books provided in schools did not give necessary content that will give learners basic skills that they needed. He stated, *“In terms of content support, something must be done because I believe that textbooks that we use are not sufficient to explain in terms of giving learners basic knowledge and types of problems that they may encounter in the examinations.”* The literature on teacher beliefs suggests that the slow cognitive development of learners is contributory factors to poor learner performance as shown in different subjects. According to Giannakopoulos and Buckley (2009), cognitive skills (include critical thinking, creativity and problem solving) of learners are pivotal for learners to succeed as they are used in the acquisition and application of knowledge in the real life situations. The shortage of the skills mentioned above were as a result of lack of content knowledge learners possessed. The above finding is in line with theory on self-efficacy especially Bandura’s mastery experience construct as Bandura (1994) and Brown et al. (2013) assert that a strong sense of self efficacy is developed when difficult tasks are attempted and obstacles are worked through. I concur with Skaalvik and Skaalvik (2016) and Margolis and McCabe (2006) when they suggest that learners should be provided with moderately challenging tasks with contemplation into their interests and inclinations.

Teachers should teach learners how to utilise learning approaches to cope with the tasks that implement peer modeling and that they should be reinvigorated to try new innovative things. The content knowledge that learners lacked according to this study were difficult tasks and obstacles that learners needed to attempt with the help of the teachers and that learners needed to be reinvigorated to try to learn new knowledge. I push the notion that learners needed to be taught content knowledge, which will lead them to be inspired learners as opposed to

dispirited learners. When teachers were doing so, they would have contributed towards improved learner performance and that contribution is part of internal professionalism.

#### **7.3.4 The impact of language of teaching and learning**

The language of learning and teaching (LOLT) was also cited as one of the basic factors that influenced teaching. South African Schools Act (SASA) (1996) permits that the medium of instruction in South African schools from Grade R to Grade 3 should be the mother tongue language used in that area. Thereafter, from Grade 4 to Grade 12 is English is used as LOLT, depending on the SGB determination. Most schools opt for English as it encompasses all nations and is most used internationally. This study came up with the finding that learners lacked basic English skills which were very important skills as most of the books learners read are written in English and the fact that English is the medium of instructions in most South African schools. That is why we heard teachers saying, *“I tell my learners that all subjects examined in English except IsiZulu as a language, so they cannot do away with English.... If the learners have that foundation and better English skills, they perform better.”* (Oshun, quintile 3 school teacher); *“You have to go according to their levels, especially those who find it difficult to understand English, we have to go down to their level and make sure they understand what is going on.”* (Gug, quintile 5 school teacher), *“Many of my learners don’t understand English so I realise the importance and need to analyse the question and teach the Physics English (Language).”* (a quintile 4 schoolteacher). These extracts above clearly indicated that teachers had pedagogical belief that lack of English skills influence their teaching. The literature I have perused have cited the language barrier as the contributing factor that affects learner performance in schools. It is true that most subjects are taught in a language that is not mother tongue, which makes learning to be difficult for most learners who do not use English as home language. They struggle to comprehend the content (which includes both practical and theoretical aspects of a subject) because they struggle with the language (Van der Poll & Van der Poll 2007).

The Trends in Mathematics and Science Study (TIMSS) indicates that there is connection between lower achievement levels in science and home language that is different from LOLT (Baker & Jones 2005). The literature on self-efficacy agrees with the above LOLT notion. Bandura (2006) and Schunk and Meece (2006) assert that self-efficacy regulates how environmental opportunities and impairments are professed and therefore influence people’s

goals, values, and behaviour. The skills that the teacher or learner possesses, the judgment of what one can do using particular skills (Hoy and Miskel, 1996) and the ability of the teacher or learner to make or utilise the sub-skills correctly and adequately (Rangraje, 2002) under varying situations are paramount in ensuring effective teaching. The fact that learners and teachers needed to make use of English as the LOLT during teaching and learning were like environmental impairments and opportunities that needed to be understood for comprehension.

In this study, there were varying understandings in the manner in which teachers used mother tongue instructions. Some teachers used mother tongue to explain difficult foreign concepts while some use mother tongue to teach. During my observation, I observed some teachers were using isiZulu when they were teaching and little code switching was done. The language policy of schooling does not allow the teaching of content using mother tongue language (if English is not the mother tongue language) beyond grade 4. It emerged during discussions that teachers' had views different in the manner in which they used mother tongue language instructions to teach or to explain concepts during teaching. The local teachers had an advantage over other foreign nationals who did not have the language capital of mother tongue (in this case, isiZulu) could not use it to give instructions. Some teachers believe code-switching that happens between LOLT and mother tongue language leads to effective teaching and learning. On the contrary, teachers also believed that it was very difficult and challenging to teach learners who had little knowledge of English as LOLT as they believe it compromises the learning of the subject content. Teachers like Oshu (see Chapter 6 sub-section 6.2.2) was frustrated as she was teaching Natural Science, Physics and Life Sciences in English which is LOLT whereas other teachers were code-switching to IsiZulu as they had an advantage of knowing IsiZulu. Thus the issue of language especially LOLT impacted a lot in terms of learner performance.

#### **7.4. Teacher beliefs based on qualification levels, personal beliefs and teaching experience**

Teaching as a profession requires teachers who are knowledgeable about the subjects they teach. In this study, I found that teachers believed that their teaching skills improved with qualifications teachers have, workshops they attended, further in-service training and the number of years in the teaching profession. The teaching experience also goes a long way in influencing teacher belief. The more years the teacher is in the profession, the more confident

the teacher becomes; like in the case of Gug (quintile 5 teacher) who had taught for 25 years who is always producing 100% pass rate in Geography due to the highest level of self-esteem and self-confidence which boosted his personal efficacy (Gibbs and Powell, 2012). Novice teachers experience low self-esteem as Ndwa has alluded in this study as she felt that she found it difficult to discipline learners and her small voice did not give her conviction to explain to learners so that they could understand her teaching. The literature that I have perused looked at different knowledge forms such as PCK, CK, knowledge of context, tacit knowledge, epistemological knowledge (Shulman, 1986; Eraut, 1990; Mosveld and Fauskanger, 2013; Charalambous, 2015) and so on which teachers needed to possess in order to be effective in their teaching practices. These knowledge forms and systems are learnt thorough schooling and by acquiring some qualifications. The theoretical framework underpinning this study is in line with this finding when Gibbs and Powel (2012) say that the development of belief in one's personal efficacy will change in response to experience and recognition a teacher is receiving. Also the understanding that mastery experience has contributed immensely towards efficacy beliefs amongst both novice and experienced teachers which researchers (e.g. Black, 2015; Brown, et al, 2013; Gibbs and Powell, 2012, Bandura, 1997, 1994) have supported the notion that teaching skills improve with experience, qualifications and personal beliefs. Furthermore, teachers get inspiration from the variety of sources such as “images during teacher education, professional literature, media images and directly observing other teachers teach” (Black, 2015, p.80). In other words, watching skilled teachers, especially those teachers who are admired and trustworthy, affects the observer's confidence because they assess their ability by comparing themselves with other teachers in the same situation (Black, 2015; Poulou, 2007; Rangraje, 2002). Therefore, the teaching qualifications and the experience that the teachers have influence largely the teachers' self-efficacy as they boost self-efficacy and self-confidence. In this section of the study, I argue that Teacher belief is relative to teacher professional qualifications and experience. Teachers with experience would have grounded beliefs about teaching and learning as compared to teachers with less experience.

## **7.5. Making sense of teacher beliefs about the factors influencing learner performance**

The teachers in this study have alluded to several factors that they believe influence learner performance. In this section I explore and engage with resources and school categorisations as influential factors, amongst other, that influence teachers' beliefs about learner performances.

### **7.5.1. The resources as contributory factor for learner performance**

This study has revealed that teachers believed that the lack of adequate resources and lack of parental involvement affected teaching, learning and learner performance, which resulted in poor communication between schools and homes. The study revealed that schools did not support teachers with necessary teaching aids such as calculators for Maths, books, electronic devices and so on which then resulted in poor learner performance. These findings are consistent amongst teachers in lower ranked quintile schools as opposed to schools that are higher ranked in terms of school categorisation based on a quintile ranking system. Within the South African context, schools categorised according to quintile ranking are based on the poverty level, school infrastructure and accessibility. Schools that are quintile ranked 1 are the poorest of schools with minimal resourcing and poor infra-structure while that of quintile ranked 5 school having well established resources, good infrastructure and have well-articulated access to its premises. The teachers from higher quintile rankings believed that the availability of resources in their respective schools contributed to the improved learner performance they were enjoying as their teaching practices were improved. Ndwa, Q4 teacher alluded that her school was better off in terms of resources as she did not need to write notes on the board as she stated:

*“Fortunately I have been in both, rural schools and urban schools. The difference here is that they have resources. ...it becomes easier to complete syllabus compared to rural schools. ...with this school there are machines, you just run out of worksheets that you have extra notes you just photocopy, and you give to all the learners. It is so good to teach here as I don’t have to write on the board.”*

The teachers from lower quintile rankings believed that the lack of adequate resources influenced greatly their teaching and learning, as they needed to adjust or improve some of their teaching strategies. The above led to what Naicker (2014) called ‘dispirited’ teachers who are teachers that were discouraged to teach because of lack of resources. For instance, Ntu a teacher from quintile one school felt that the shortage of resources led to learners to rely much on theory rather than practice and this mode of teaching hampers the performance of learners in the school. The allocation of resources to schools in quintile 1-3 was insufficient although these schools received larger slice of the budget from norms and standards.

The literature I have perused suggests that not all public schools in KwaZulu-Natal are equipped with sufficient resources such as textbooks; as a result, in some schools; learners are

not given a textbook to take home (Dhurumjay, 2013). The issue of resources therefore becomes the ‘survival of the fittest’, meaning those learners who are coming from a higher socio-economic status are more able to buy textbooks and other resources for themselves of which those learners who are coming from poor backgrounds could not afford to buy those resources. In addition, the research report by TIMSS (2015, 1999) revealed that learners who come from homes that are rich and having educational resources such as access to internet, educational study aids, study desks and a computer; they have a tendency of performing well as compared to those that are coming from disadvantaged backgrounds.

The literature on self-efficacy is in congruent with the above finding. There are conditions that bring constraints in the performance of teachers such as lack of incentives (Sharma and Sokal, 2015) as well as lack of resources that limit teacher performance (Bandura, 1986; Rangraje, 2002) which in turn affects learner performance. Skaalvik and Skaalvik (2016) conducted a study on teacher efficacy and potential stressors of which lack of resources was one of them, large classroom sizes, predictive of overall job stress and emotional exhaustion and low levels of commitment and teacher self-efficacy (Peker, Erol, 2018; Skaalvik and Skaalvik, 2016, 2011a; Collie et al., 2012; Fernet et al., 2012; Klassen & Chiu, 2010, 2011). Thado, teacher from Hlonga, a quintile 2 school admitted that she experienced large class sizes as the school did not have sufficient classrooms. On the other hand, Moh teacher from Seaview, quintile five school, indicated that her classes are small and manageable which makes her able to have individual learner attention when teaching. Therefore, smaller class sizes positively influence teachers’ teaching practices thereby contributing to improvement of learner performance in schools. Likewise, larger class sizes negatively influence teachers teaching practices and learner performance.

The literature is also quite clear about the relationship between having access to resources and improved learner attainment The DBE Grade 12 results of 2017 (see chapter 2, sub-section 2.9.3 ) attests to the fact that more bachelor passes were recorded in quintiles 4 and 5 schools in which adequate resources are available. This knowledge by the teacher seems to influence their belief about the value of such resources in learner attainment.

While the data from this study attest to the belief about school resources, there are teachers, especially from lower quintile ranked schools, who believe that there are other factors beyond resourcing that account for the lower performance of teachers. These include lack of parent

involvement, language barriers in term of LOLT and interest in schooling, suggesting that performances of learners is influenced by an ecology of factors that work in relation to each other to account for its learner performances as the next sub-section will allude to.

### **7.5.2 Understanding the context, quintile ranking and their influence on learner performance**

One of the findings in this study was that teachers believed that context which included quintile ranking, environmental conditions of schools, etcetera, influenced learner performance. The findings illustrated that learning environment is complex and is made up of various factors such as weather related issues (*“Our school was damaged by storm in 2015. No class is without a leak, when raining no teaching is taking place because classes are leaking...”* Oshun), interactions (*“Environment is fairly conducive to teaching and learning”* Moh), levels of SMT support (*“The principal is very good in terms of support...”* Mze), to mention but few. Some teachers believed that quintile rankings of their schools helped them to improve their teaching and learning as they made their schools to recognise their efforts. However, the study had shown that quintile ranking had both merits and demerits. As merit, all quintile one schools were benefiting in terms of rural incentives, quintile 1,2 and 3 schools were no fee schools thus no burden to collect school fees at the expense of teaching and learning, while in quintile 4 and 5 schools teachers’ morale were boosted as their schools performed well in terms of results. In terms of demerits, quintile 1,2 and 3 school teachers did not meet particular benchmarks and they did not aspire to achieve more as they believe that Department of Education knew their conditions, they were in their comfort zones as their quintiles disadvantaged them and limited expectation hindered their imagination to achieve more.

The literature on teacher belief concurred with the above-mentioned finding. Langa (2013) argues that it is cardinal to understand the context of the schools if teachers were to comprehend how schools function. Available research suggests that contextual (environmental) factors play an integral role in learner performance and subsequently school performance (Beck & Shoffstall, 2005; Petty & Green, 2007; Chance & Segura, 2009; Langa, 2013). The difficulty with this view is that of understanding what elements constitute the context of the school and how each of these elements influences teaching, learning and learner performance. This study alluded to several elements that constitute the context of the school and refers to this being environmental factors. Hence it is, therefore, argued, based on the findings of this study that

these environmental factors constitute an ecology that works collectively in accounting for the state of affairs in teaching, learning and learner performance. The belief that teachers have of these individual environmental factors in relation to how they account for their teaching, the learners' learning and learner performances attest to the complexity associated with an ecological perspective of the school environment as no one factor has the same effect across all of these schools nor are they solely to blame for the outputs of the respective schooling.

## **7.6 Teachers' rationality and means to improve learner performance**

It is paramount to discuss as a finding the rationality of teachers as to why learners performed well and performed bad in some schools and in some subjects and the ways in which they hoped will improve learner performance. Teachers in this study cited a number of reasons that contributed to increased learner performance in their respective schools and subjects. This study found that teachers' dedication, hard work and extra mile, teacher satisfaction, stakeholders support and so on, were some of the things that contributed positively towards improving learner performance. Mze, a quintile two educator served as testimony to the above finding as he said *I plan around how do I make them pass geometry then ... pass trigonometry because ... pass trigonometry automatically they pass Mathematics... it's about planning to the final details... I deal with a learner who got 10% in Grade 8 in Mathematics. I took learners who were doing well in Mathematics, I groomed them to be peer educators ...I teach them in the morning or during break I gave them problems... one learner will be helping 5 learners in group environment sort.* The same sentiments were shared by Thado (quintile 3 educator) as she alluded, *"I put a lot of time, I don't have holidays, weekends, and I make time even after school sometimes I stay with them. Even during break times, I help them I do not mind. I encourage them to come and ask me at any time."* The idea of hard work was evident in the teachers' assertions.

The study also revealed that there were various factors, which contributed to poor learner performance. Factors such as poor motivation of learners, poor discipline, DBE's lowering of promotion requirements, wrong quintile categorisation, to mention but few. It was the belief of most of the teachers interviewed in this study that all stakeholders in education should be involved in the teaching and learning activities in order to improve learner performance. The above finding has theoretical backup as Bandura (1997) argues that people do not live in isolation but as part of larger group and work together to produce desired results. Bandura



called that people's shared belief in their capabilities to produce effects effectively as collective agency. Gibbons, et al., 2018; Sharma and Sokal, 2015; Rangraje, 2002 expanded that good teaching practices can overcome internal or external negative factors in promoting positive learners outcomes and that teachers with a high sense of efficacy have higher expectations of learner achievement and work harder with learners thus improving teachers' sense of efficacy. The teachers' beliefs about their role they needed to play in teaching and learning resonates with literature I perused on teacher beliefs. Charalambous (2015) in his study pointed out that teachers constantly make decisions moment by moment when teaching and engage in various interactive decisions in the context of competing pressures such as time, the attention span of the learners, curricular demands, exam pressures and so on (Walsh, 2006). The above citation is in line with an understanding and finding that teachers work hard in order to achieve better results and improved learner performance and that teacher work hard against all odds.

It is clear from the above finding that teachers were aware of the challenges and that they needed to improve learner performance but that they were confident, through their belief, that they can manage these challenges and with positive outcomes. Things like going the extra mile, collaborate with other teachers and all other stakeholders, etc. bears testimony to their belief that they can work with the prevailing challenges to assist the learners to progress in their school work.

## **7.7 Construction and design of conceptual framework of teacher belief influencing teaching practices**

The main purpose of this study was to explore teacher beliefs on teaching and learning and its influence on learner performance in schools. The intention of the study was to explore and understand what beliefs teachers have about teaching and learning and ultimately how beliefs about teaching and learning influence performance of learners in the long run. The findings showed that teachers have various beliefs that influence teaching and learning and ultimately learner performance. In this section, I discussed the factors that influence teacher belief and teaching practices and that teaching and learning practices influence learner performance either negatively or positively. In order to clarify the link between teacher beliefs and learner performance, I have developed conceptual framework of teacher belief during teaching practice.

The model (Figure 7.2) shows factors on the left indicating the influence on the teachers as an individual or in person while the right-hand side indicate factors that are external to the teacher. Whether these factors are positive or negative, they directly impact on teacher belief where this belief influences teaching practice in which teaching practice influence learner performance. The discussions that follow are based on the figure 7.2 below which indicates conceptual framework for this study.

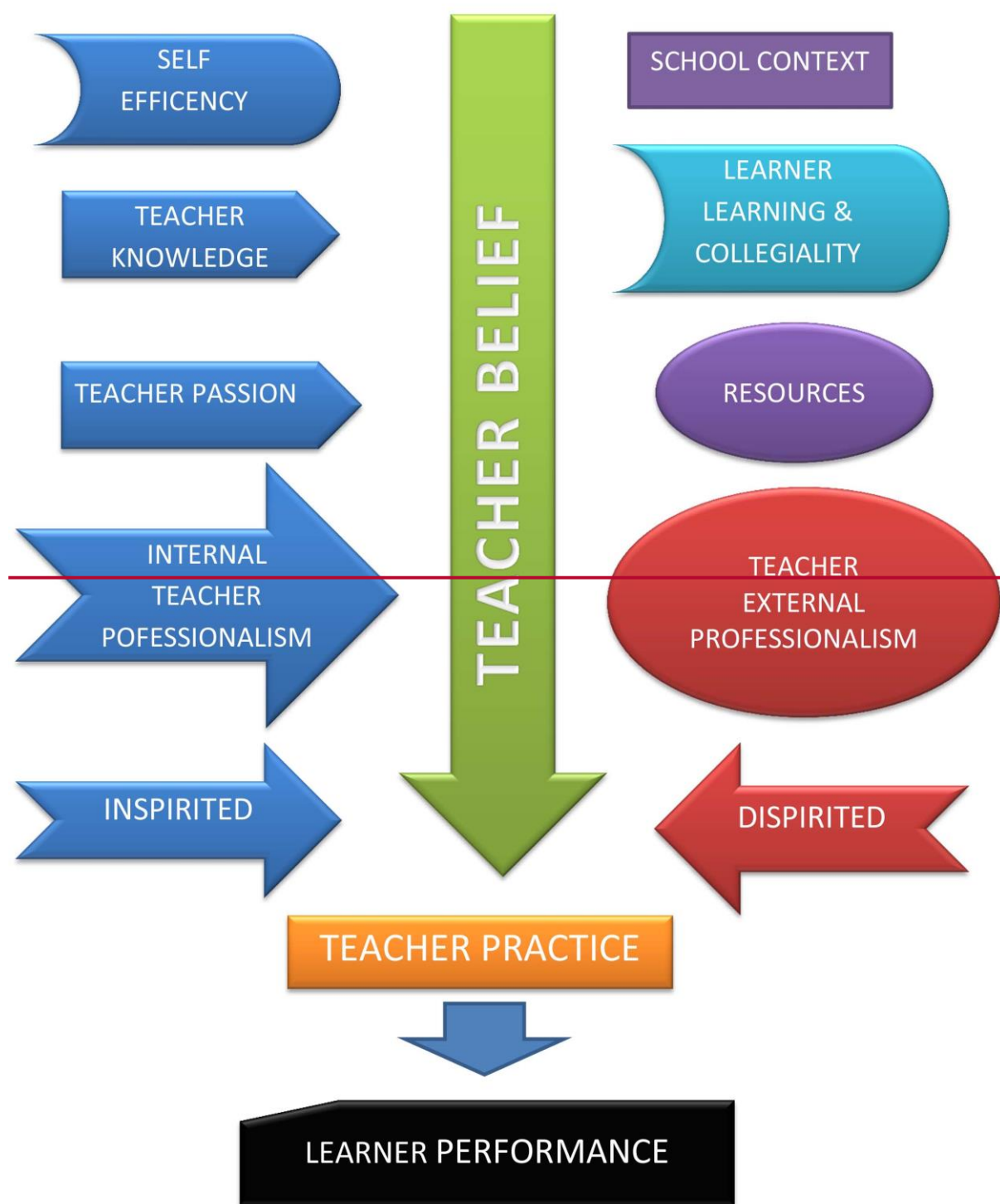


Figure 7.2: A conceptual Framework/model showing factors influencing teacher belief and teaching practice

In the model above, teacher belief is the stem of a tree that holds from the roots and has branches coming from the left to the right. I have decided to make use of the stem a in lieu of

teacher beliefs. The branches which are on the left talk to factors that are much more internal and personal to the teacher; those are: teacher knowledge, self-efficacy, teacher passion, inspired and internal teacher professionalism. The right part looks at the factors that are external but still influence the shape of the stem; those are: school context, resources, learner learning and collegiality at school. To make effect of the stem which is teacher belief, the reason why these factors exist as a belief is because they inform the manner in which the teacher looks at or views his / her practice. It is in the practice informed by the factors on the left or right that would inform how teacher teaches and how a learner performs or how learners perform.. When one looks at the drawing above from the opposite side, one would say learner performance is affected by teaching practice which in turn is informed by the position in which the teacher takes in a particular belief and lead to various factors. I now discuss various factors that are on the stem that inform teacher belief. The factors that have emerged in this study are many but I highlight those that are critical. While the following factors are discussed separately below, they are interrelated to each other.

### **7.7.1 Internal teacher professionalism and external teacher professionalism**

I decided to begin with this section because it underpins other sections that are to follow. While there, is an abundance of literature written about professionalism as a concept and teacher professionalism as specific area, the literature confirms professionalism to firstly, the belief those teachers had an ability to change; and secondly, the belief that changes can be brought from externally. The concept professionalism refers to a conduct, aims or qualities that characterise a profession or a professional person (Demirkasimoglu, 2017). It comes from the word profession, which means a calling requiring a specialised knowledge and often long intensive academic preparation on the side of the professional. Ozga and Lawn (2017) argue that moral foundations of teaching in different institutions are expressed in the four dimensions of professionalism, which are ideas, knowledge, community and accountability. Professionalism encompasses different attributes such as specialised knowledge, honesty and integrity, competency, accountability, image and self-regulation which make those professionals respected and valued individuals who are assets to their organisations (Ozga and Lawn, 2017). The above attributes are applicable to teachers as well as they have been trained and acquired specialised knowledge. Teacher professionalism is construed as a teachers' professional work field associated with ideological, sociological and educational construction,

skills, values and knowledge demonstrated within teaching fraternity (Gibbons, et al., 2018; Demirkasimoglu, 2017).

Teacher professionalism pays attention to professional qualifications of teachers like being good at work and by accomplishing the highest standards of excellence; the magnitude in which the teacher is able to perform the given tasks. Demirkasimoglu (2017) further asserts that teacher professionalism is measured by the best highest standards that enhance teacher excellence and associated with the improvement in the quality of teachers, teaching process as well as improvement in the outcomes set for the teacher to accomplish. Teacher professionalism is limited to the activities of teachers as professionals within teaching environment in enhancing improvement in the quality of teaching as well as learner performance as a whole.

In this study there is evidence to suggest the emergence of teacher professionalism of intending to include professionalism in this definition internal teacher professionalism and external teacher professionalism. Evidence from the data suggests internal teacher professionalism to be referring to factors that are internal and personal to the teacher that motivate and can be controlled by teacher him/ herself. This internal teacher professionalism is what accounts for teacher belief in them as professionals, their knowledge capacities and the ability to teach learners across varying school contexts. When teachers believed that they were the custodians of knowledge, passionate about teaching, supportive to learners, working hard, discipline learners, dedicated to their work, inspired to teach, to mention but few, are examples of findings indicating that teachers initiated these things and were intrinsically motivated to perform them. The more teachers believe in themselves and that they are capable of doing something, relate to internal teacher professionalism. Internal teacher professionalism is not limited to professional qualifications only but there are factors internal to the teacher that informs teacher professionalism mentioned above.

External teacher professionalism on the other hand refers to factors that teachers do not have control over them and outside of teacher's control. For example, the Department of Education formulated policies to achieve certain goals and outcomes, in this case, teaching, learning and learner performance. Teachers are expected to be in line with the thinking of the Department and therefore are required to do things mentioned in those policies and curriculum even if teachers are not in belief or trust the things said in the policies and curriculum. If teachers

believe that there are internal factors that are guidelines in terms of what is expected of them, then they have trust in their competence to influence teaching and learning which is linked to how the teachers relate to those guidelines. There are also instances where a teacher does not believe and trust the policies or guideline, to such an extent that the teacher uses other guidelines outside the parameters defined by the Department. There is an element of trust line between the teachers and the Departmental policy transcripts. The more we are closer to the trust line on structural issues, the more we follow policies and curriculum (conformity). When teachers follow patterns of doing things as prescribed in the policies and curriculum guidelines, they use lot of professionalism. I call this external teacher professionalism, as teachers believe more in external structures. Findings such as belief that teachers : lacked resources, worked hard under poor environmental conditions, their schools were wrongly quintile ranked, blamed DBE Grade progression requirements etcetera were some of the things teachers believed they had no control over them and they had to move away from trust line but remain professional. Hence these external professionalism has an influence on the strength of teacher belief – some increases their belief based on encouragements and experiences of positive outcomes despite the external professional contexts, some beliefs are put into questions based on the experiences of overt challenges and negative outcomes.

There are factors which are external to the teacher which dictate professionalism and hence the study distinguishes between two types of professionalism which are internal teacher professionalism and external teacher professionalism. I have also included these concepts in the model to demonstrate that internal teacher professionalism influences on the left and is positive whilst external teacher professionalism is on the right and influence from externally teacher belief and learner performance.

### **7.7.2 Teacher sense of self-efficacy**

One of the key components of this conceptual framework on teacher belief in relation to learner performance is the teachers' sense of self-efficacy. Teacher sense of self-efficacy refers to the teacher's belief in his or her capacity to organise and execute the course of action required to accomplish successfully a specific teaching task in particular context (Peker, Erol, 2018; Guidetti, et al. 2018; Summers, Davis, Hoy, 2017; Carney, et al. 2016; Tschannen-Moray, Bandura, 1997). Thus if teachers are able to do what is required of them, that is teaching with

strong efficacy belief then they are able to improve their teaching abilities and yield better results.

I discussed intensively Bandura's four constructs of self-efficacy in Chapter Three. The four constructs cut across all different factors constituting teacher belief. Self-efficacy impacts on each of the teacher belief factors as indicated in figure 7.3 below. Hence self-efficacy influences teacher beliefs in two ways (up and down - see figure 7.3) each of the factors mentioned in figure 7.2 is affected in two ways as well. In other words, if teachers succeed in what they are doing in class or at school as a whole, it is because of an increase in mastery experience, verbal persuasion, vicarious experience and a decrease in emotional state and self-efficacy increases as well. Likewise, a decrease in mastery experience, verbal persuasion, vicarious experience and increase to emotional state result in failure of the teacher in the activities and thus self-efficacy lowers. The figure 7.3 below illustrates the effect of the four construct of self-efficacy on either successful or unsuccessful impact. Thus a teacher's sense of self-efficacy relates directly to the expected outcome, which in this case is learner performance. If the teacher has a low sense of self-efficacy, then his or her belief in accomplishing his or her goal is weak. The opposite is also true, meaning that having a high sense of self-efficacy increases the chance of the teacher achieving his or her goal.

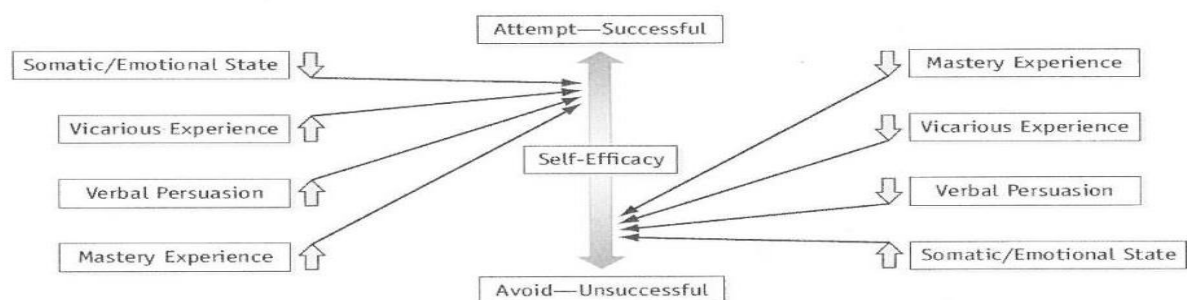


FIGURE 2-5 Self-Efficacy Theory

Figure 7.3. The figure showing the influence of self- efficacy theory constructs on teacher activities (Adapted from Brown et al. 2013)

### 7.7.3 Teacher knowledge as a component of teacher belief

Further to the discussion in 7.3.2 on teachers as knowledgeable individuals I have discussed in this context but additionally, the following are factors that further respond to teacher

knowledge. This study revealed that teacher participants possessed particular knowledge, understanding, and beliefs and various categories of teacher knowledge. Some of the teachers in the study had insufficient teacher knowledge although all of them claimed to have sufficient knowledge of subjects they were teaching. The findings in this study suggested that teacher knowledge included having PCK, CK, knowledge of curriculum and knowledge of context, but more importantly the belief that these knowledge systems would influence their teaching practices were keys in them achieving or not achieving their goals. Further, the findings suggest that the possession of good understanding of context or conceptual knowledge is essential in transferring the subject knowledge to learners. Evidence from class observation indicated that indeed some teachers demonstrated a fair amount of CK, PCK and knowledge of curriculum. However, some teachers found it difficult to assist learners in their construction of knowledge for conceptual understanding. The reason was that their lessons took on a teacher-centred approach and teachers did not have confidence to involve learners actively in their lessons (learner –centred approach).

Studies in education indicate the difference between teacher-centred and learner-centred orientations to teaching and learning. There is substantial evidence that learner-centred approaches perpetrate effective learning (Lee and Branch, 2018; Preethlal, 2015, Laksov, Nikkola and Lonka, 2008). Consistent with Preethlal (2015) there is a need to engage more on constructivist practices in order to promote learner- centred orientations. This study further revealed that teaching pedagogy as part of teacher knowledge was integral for teachers to teach effectively as teacher content knowledge informs teacher confidence in class. Teachers believed that they needed to possess such ability to transmit knowledge to learners which Shulman (1986) called PCK. I concur with Shulman’s (1986) assertion that CK without PCK may affect the teaching practice. These knowledge forms should work in harmony and each teacher should be able to utilise them during teaching and learning practices and eventually leading to improved learner performance.

Another aspect of teacher knowledge that contributed to teacher belief and influenced teaching practices was the teacher belief about qualifications, personal beliefs, exposure to new knowledge and teaching experience. The study indicated that experience, level of qualifications and attending professional development workshops boosted teachers’ self-efficacy as their level of confidence was elevated. Teachers believed and applauded their initial teacher training institutions for providing them with content knowledge of practice. In addition, the finding



showed that experience or number of years of teachers teaching practices and the above factors are likely to influence the factors on the decline which in turn influence learner performance. It is my submission in this thesis that teacher knowledge which include CK, PCK, curricular knowledge, teaching experience and qualifications of teachers form part of teacher belief and that teacher belief influenced teaching and learning practices which at the end influenced learner performance (see figure 7.3). As argued earlier on teacher sense of self-efficacy, each of the above factors increased with the increase in mastery experience, vicarious experience, verbal persuasion and decrease in emotional state. Therefore teacher knowledge and teacher belief form part of internal professionalism.

#### **7.7.4 The influence of teacher passion on teacher belief**

Teacher passion was also part of teacher belief as I have comprehensively discussed it in section 7.3.1 on passion as a component of becoming a teacher. In addition to the factors in 7.3.1, the following are some factors that further expand to passion as a main factor impacting on teacher belief. In this study I found teacher passion to include teachers' emotional attachment to their learners and their practice, teachers showing concern if their learners are not performing well or struggling to grasp certain concepts. Further, teacher passion extends to extra hours that teachers put into their work either on weekends or during school holidays, This further suggest that teacher passion, links with teacher self-efficacy. Teachers in this study believed that they needed to be passionate about teaching, passionate about relationships, passion; and also about doing things as well as passion about contextual realities. The lack of passion on teachers may be due to the decrease in self-efficacy and the decrease in mastery experience, verbal persuasion, vicarious experience and increase in emotional state of the teacher. The the opppposite is also applicable. Thus, the study found that teacher belief about passion is significant to inform teacher internal professionalism.

#### **7.7.5 Teacher belief about school context**

Langa (2013) argues that it is imperative to comprehend the school context. The study found that the school context is understood by the teachers in two ways: 1) conducive for teaching and learning and such context yielding good learner performance; 2) not conducive for effective teaching and learning. This finding showed that schools had their own dynamics and challenges, which needed to be treated uniquely. The study showed that whilst quintile 4 and

5 schools were enjoying the comfort of having resources, and conducive infrastructure, lower quintile schools were suffering although they were allocated a larger slice of norms and standards allocations but the gap that existed from apartheid era is still wide and still needs to be bridged. The perception of teachers whose schools were under-resourced lowered their self-efficacy while self-efficacy of teachers from well-resourced schools was uplifted. The unequal distribution of resources affected teaching and learning practices, which eventually influenced learner performance. Since teachers did not have control over the above factors, their patterns of doing things as prescribed in the government policies, they believed in external professionalism. These factors are clearly shown on the models as factors on the right, and external to the teacher, but equally affecting Teacher belief and impacting on the practice and the manner in which learners perform.

#### **7.7.6 Teacher belief about learners' learning and collegiality**

One of the findings of this study was that teachers believed that they had to work hard as their learners came from different family backgrounds and did not have the same knowledge foundation. Learners took different responsibilities at homes and did not have time to study; that learners were lazy and lacked discipline in some of the schools. The self-efficacy theorists Margolis and McCabe (2006) suggested that learners should be given tasks that are challenging with the aim of creating interest in them and that they should be taught to use learning approaches to cope with these tasks. Furthermore, teachers believed that learners disrupted classes and did not pay attention to learning activities. Learning is part of teacher belief. Teachers need to understand how learners learn and benefits of learning. In addition, the LOLT influenced learning processes. Quality learning ensured quality results in schools that were doing well.

Collegiality is a sense of belongingness and togetherness that exists among teachers at school. Collegial relationship (collegiality) is also a factor that influences teacher belief whereby teachers have little or no control over them. If teachers do not have good collegial relationships, it is likely that teaching and learning is affected. Based on the above notion, I have placed collegial relationships under factors on the right of the diagram as part of external teacher professionalism.

### **7.7.7 Inspired and dispirited teachers as factors of teacher belief**

In this study I have used concepts called ‘inspired and dispirited’ developed by Naicker (2014) as well as the perspectives on spirituality and spirituality in the workplace were derived from the work of Fry (2003), Giacalone and Jurkiewicz (2003), Karakas (2010), Lips-Wiersma (2002), Mitroff and Denton (1999), Neck and Milliman (1994) and Pfeffer (2003). According to study conducted by Naicker (2014), critical incidents in teachers’ lives affected the teacher’s spirit. When teachers through the appraisal process experienced mostly goal incongruence, it evoked negative emotions leaving them feeling dispirited (Naicker, 2014, p.239). On contrast, when teachers appraised the events as mostly goal matching, they felt positive emotions leaving them feeling inspired.

Drawing on Naicker’s concepts of teacher being to levels of in-spiritedness and dispiritedness, I have explored the issue of teacher belief. If the teacher is inspired, he or she will inspire others. The teachers in Naicker’s study were experiencing different critical incidents that were supposed to pull them down but instead the zeal they had, made them to cope and being inspired. Naicker argued that her participants were ‘inspired’. The idea of being inspired and dispirited is related to Bandura’s theoretical construct on vicarious experiences where one observes other people performing threatening activities without adverse consequences, (Miller, Ramirez, Murdock, 2017; Brown, et al, 2013, Bandura, 1997). According to Bandura (1997), the act of watching someone including yourself succeeding in completing something expected of him her, would increase self-efficacy as one is persuaded that if others can do it, one too has the capability of achieving the outcome. This is in line with what participants in this study were doing. Participants believed that they were quite capable of teaching and producing good results in their schools even if their schools lacked resources. They were willing to teach learners even if learners were not committed to their work, as they did not do their homeworks, classworks, they loiter around the schoolyards and absenting themselves from schools.

I argue in this study that teachers’ sense of in-spiritedness and dispiritedness is part of teacher belief that influences teaching practices and eventually learner performance. I have put inspired under factors on the left because if all factors on the left are positive or improved, so as the teacher spirit improves and become inspired. On the contrary, if factors on the right hand side of the model decrease so as the spirit of teachers decreases I have included these concepts into both sides of my conceptual framework in order to broaden the understanding of

the teacher beliefs that influence teaching and learning with resultant learner performance which is either improved or extremely bad.

## **7.8 Conclusion**

In this chapter, I discussed some findings of this study. I started by discussing the findings about the origins of teacher beliefs. I then looked at the comprehension of teacher beliefs about teaching and learning where passion was regarded as crucial element of becoming a teacher and the belief that teachers needed to be knowledgeable about their subjects and the context in which they work. It was also found in this study that teachers needed to be supportive to their learners as most of their learners come from disadvantaged backgrounds. Language of teaching and learning as a barrier in effective teaching and learning was also discussed in this chapter. I further discussed the finding that teachers believed that their teaching skills improve with qualification, personal beliefs and with teaching experience.

I discussed the factors that teachers believed influenced learner performance such as availability of resources, understanding the context and quintile ranking as to how they influenced learner performance.

I have also developed my own conceptual framework or model in order to demonstrate the links, connections, overlaps and influence of the teacher beliefs to teaching and learning as well as improved learner performance. The construction of conceptual framework or model of teacher belief and how they influence teaching practices and eventually learner performance were also discussed in this study. The model is shown in Figure 7.2. The link in each of the factors such as internal or external teacher professionalism, teacher sense of self-efficacy, teacher knowledge, teacher passion, school context, learner learning and collegial relationships as well as inspiritedness and dispiritedness of teachers were highlighted in this model.

## **CHAPTER EIGHT**

### **CONCLUSION AND FUTURE TRAJECTORIES**

#### **8.1 INTRODUCTION**

The previous chapter engrossed on the key findings emerging from Chapters Five and Six and then presented a discussion of these findings in relation to the literature and theoretical framework underpinning this study. In this chapter, I review the key research questions along the line of key findings of the study. I also reflect on the research process and conclude by identifying study's key contributions to the field of schooling including teaching, learning and learner performance; some recommendations for future research trajectories are also presented.

#### **8.2 Putting pieces of the puzzle together**

This chapter concludes the thesis by reflecting on how teachers believe teaching and learning occur in schools across quintile rankings.

This study illuminated the relationship between teacher belief, teaching methods and learning styles and how the above ultimately lead to learner performance can be one of the issues that contribute towards learner quality and learner performance. This study further found that there is a relationship between teacher beliefs, the way in which teachers teach and the way in which they facilitate learning and the way in which learners perform. While we know that teacher belief influences the way teachers teach and teaching methodology and the way in which teachers believe learners come from, however, in the different quintile rankings of schools there is a difference in beliefs and that beliefs begin to guide the way in which teachers teach. Moreover, the relationship between different quintile ranking schools and teacher belief which impact on the way in which learners perform in schools. The way in which teachers facilitate teaching and learning and how they impact on teaching, learning and learner performance, has been established by this study. This relationship is discussed and engaged in terms of the research questions in this study and further details and discussions around this relationship as they unfold.

### **8.3 Findings related to the key questions in this study**

This study was guided by and attempted to respond to the following research questions:

1. What are teachers' beliefs about teaching?
2. What are teachers' beliefs about learning?
3. Is there a relationship between the belief about teaching and the belief about learning?
4. How have teachers come to acquire their beliefs?
5. How do the teachers' beliefs influence the teaching and learning as manifested through the learner performance?

In this section of the thesis I attempted to look at the extent to which these research questions were answered and provided a clear line of argument. I took each of the research questions and looked at the responses that were provided by the participants as findings for this study.

#### **8.3.1 First research question**

##### **What are teachers' beliefs about teaching?**

This study sought to answer the above question. Data generated in Chapter 5 revealed most of the participants referred to two aspects related to belief about teaching. The first is that passion drives teaching and that this passion is context influenced. The second is that teachers needed to possess content knowledge as well as PCK in order for them to be effective in their teaching as teaching according to participants is about imparting knowledge to learners. Teachers' belief about the role of passion in teaching influences their teaching practices. In school contexts that are conducive to teaching and learning, and these have been noted to be in higher quintile ranked schools, high level of passion for teaching is noted and these higher levels engender positive beliefs about their teaching. The opposite is also true, meaning that in school contexts that are not conducive for teaching and learning, as noted in lower quintile ranked schools, levels of passion for teaching diminishes with time and this diminishing levels of passion for teaching negatively influences their belief about teaching.

Teachers' belief about the link between having good content knowledge and teaching skills and effective teaching is not influenced by variations in the context of schooling. The finding revealed that most of the teachers believed that they had good content knowledge and PCK as they were trained to teach during initial teacher training and during in-service training as they

attended workshops. From the data analysis and from the finding of the study, teacher belief influences the way in which teachers teach and how they impart knowledge and teaching methodology. While this finding is not new, taking a contextual variations to the diverse learning sites as categorized through the quintile ranking system, there are varying beliefs that teachers have and these varying beliefs influence their teaching practices. For example, in quintile one school, teachers believed that learners have little knowledge and teachers needed to expose learners as much as possible around school knowledge and outside knowledge. This is different as compared to quintile four and five schools whose teachers believed that their learners know and are exposed to a number of activities that promote teaching. They believed that their learners come with certain knowledge endowments and they only needed to harness these endowments into the way they teach these learners. There is more of teacher- directed teaching in quintiles one to three schools than in quintiles four and five schools.

A further insight from this study is that teachers believe that if they are confident in the content knowledge of the subject they taught, then they felt confident in the way they taught their subject. This finding is also consistent with literature (Shulman, 1986), but the revealing aspect of this is that this belief is not context sensitive, meaning that, irrespective of the contextual realities of the teaching and learning environment as suggested by the quintile ranking of the schools, this belief about knowing the content and being confident in teaching the content is held by all teachers and contributes to their self-efficacy. Strong efficacy expectations are developed through repeated success of behaviour (Brown et al., 2013) which all of the teacher participants have alluded to in this study. This means that there is a strong relationship between having competent content knowledge and self-efficacy and that these two attributes are independent of context of teaching.

A further attribution is that most of these teachers were qualified teachers and therefore had the academic knowledge and skills to teach professionally. Not having this professional qualification in teaching diminishes the teachers' personal efficacy for two reasons. The first is that they believe that they do not have the professional competence to teach appropriately and secondly they believe that by not having this professional competence they would not be able to teach a class because of causality issues.

Literature (De Neve & Harling, 2017) suggests that there is a tendency of qualified teachers to shy away from rural schools which then propels teachers who are unqualified or under

qualified to teach in these rural schools. In my study one of the participants was unqualified teacher teaching Grades 8 and 9 in one of the schools. This teacher indicated the difficulty she is facing when she is trying to teach as she struggled with content in Mathematics. Not having this content knowledge of Mathematics diminished her personal efficacy, resulting in her finding it difficult to discipline learners because she was not confident in her teaching mathematical content. Reduced efficacy expectations can be as a result of failure to achieve what was expected of an individual (Peker, Erol, 2018; Summers, Davis, Woolkolk Hoy, 2017; Brown et al., 2013). Hence teacher belief about teaching seems to align itself to teacher personal efficacy. Having a lower personal efficacy diminishes the teachers' ability to teach, while a higher level of personal efficacy increases the teachers' ability to teach. Teacher belief about teaching is, therefore, quite closely linked to their belief about having sufficient competence in the content knowledge of the subject they are to teach. This relationship is not context bound, meaning that irrespective of the teaching context the relationship between having competence in the content knowledge and personal efficacy is quite strong.

Based on teachers beliefs about the relationship between personal efficacy and good teaching, the participant teachers embarked upon several initiatives to strengthen their competence in the subject content. These initiatives included taking up and utilisation of opportunities to learn teaching skills, advance their knowledge through further studies, acquiring good classroom practices and developing interpersonal communication, all contributed positively towards personal efficacy. Having a high level of personal efficacy has contributed to teachers' belief about the relationship between teacher knowledge and their ability to teach across diverse school contexts.

### **8.3.2 The second research question**

#### **What are teachers' beliefs about learning?**

The study suggests that there are three elements related to teachers' belief about learning. The first is related to the vulnerability of the learners, recognized through their histories and their material living conditions. The second is related to the learners' interest in learning, recognized through the attitudes and behaviours of learners. The third is related to the basic knowledge that learners come with to schools which are considered inadequate to develop further learning. The first two elements are considered as distractions to learning, while the third element of teacher belief about learning is considered material to learning.



The histories and the nature of the learners' material world that they come from engenders a compassionate feeling from the learners and teachers believe that by supporting the learner from a humanistic perspective would somehow compensate for this historical and impoverished challenges that these learners have to navigate for formal education. Hence their teaching practices are influenced by their material realities and this impact on their teaching of the formal curriculum which ultimately reflects on the learners' performance at school. The vulnerabilities that learners experiences, therefore, shapes teachers' belief about learning and what the learner can formally learn and be assessed upon.

Teachers also believe that learners have little interest in learning and that this level of interest by learners influences what teachers can accomplish in the teaching and learning process. Low expectation of learning by teachers means that teachers' passion for teaching diminishes with ripple effects that includes lower motivation to teach these learners, no or little interest in extending these learners to excel and discipline problems that escalate beyond reasonable classroom control. The result of which is low performance of learners in school.

Inadequate basic knowledge of learners to build upon is seen by teachers as a major stumbling block in learning. Teachers believe that they cannot facilitate learning amongst learners who do not have basic knowledge to build upon. This lack of basic knowledge hinders the learning process which these teachers have experienced. Reasons for the lack of basic knowledge amongst learners' ranges from lack of interest in learning, no home support and no supportive leaning materials for self-study or home study.

These three elements that constitute teachers beliefs on learning are context related, meaning that in impoverished communities, the material conditions of living and the material conditions of schooling are the grounds for developing such beliefs in teachers. In more developed communities, learners' interest in learning and their supportive learning environments both at school and in their homes tend to overshadow the effects of the histories of past inequalities and as such teachers who teach in higher quintile ranked schools belief on learning is more influenced by the interest and support that learners have towards learning.

### **8.3.3 Third research question**

#### **Is there a relationship between the belief about teaching and the belief about learning?**

In trying to respond to research question number three which asks whether there is a relationship between the belief about teaching and the belief about learning, the study found that this relationship is not explicit. Rather, the issues related to teachers' belief about teaching are located largely within the teacher himself/herself and centres around confidence, self-efficacy, teacher knowledge of content and pedagogy and teaching experience, while issues related to teachers' belief about learning is externally constructed based on an appraisal of the contextual realities of the learning context and on the willingness of the learner to learn. While there are some elements that inform the teachers belief that could be related to the relationship between teachers' belief about teaching and teachers' belief about learning, no clear statement can be made from the data analysis of this study. The element that could be related to the relationship between these two belief systems include teaching experience and appraisal of the learning context, both of which could influence the relationship between teachers' beliefs about teaching and about learning. The appraisal of the learning context would inform the teacher on how and what to teach, while the teaching experience would strengthen or weaken the teachers' belief on teaching.

### **8.3.4 Fourth research question**

#### **How have teachers come to acquire their beliefs?**

This section of the thesis responds to question four which deals with the origins of teacher beliefs and what teachers think beliefs are. The findings of this study revealed that teachers had different beliefs about the origins of teacher beliefs. Some teachers indicate that their beliefs come from one's character as a personal opinion and are guiding principles in life that are learnt by someone as a child and that propels one to achieve anything. Some indicate that beliefs emanate from other people one interacts with in different environments.

Teachers in this study further believed that beliefs originate from own thinking, frames of reference and from general everyday life of an individual. Some teachers indicate that that their beliefs evolve from initial teacher training and the way an individual is taught through schooling as a process. Some teachers also indicate that beliefs emerge from experience. Hence the origins of belief in teachers are an influence of a variety of experience, exposure, thinking (frames of reference) and personal endowments as a result of their upbringing

environments, including their home, cultural and religious exposures. The influence is also not related to any singular event or experience, rather it is the internalizing of such events and experiences and the repeated exposure and response is what cements their belief.

### **8.3.5 Fifth research question**

#### **How do the teachers' beliefs influence teaching and learning as manifested through learner performance?**

Teachers have positive beliefs about their teaching and its relations to learner performance. Teachers' belief about their teaching was located in their drive to provide conducive learning environments and learning moments that will improve learner performances, despite that the challenges that they note as compromising their teaching attempts. The teachers recognize the varying differences that learners are faced across the quintile ranked schools and based on their appraisal of the teaching and learning context, the learners historical and material backgrounds they come from and on the willingness of learners to learn, and develop their beliefs accordingly. For example, learners that come from impoverished communities, the teachers beliefs regarding their learner performance is based on realistic expectations, while learners that come from more endowed backgrounds, the teachers beliefs on the learner performances are more on how to extend these learners both of which influences their teaching practices.

### **8.4. The Significance of the study**

The study sought to explore teachers' beliefs about teaching and learning and the influence on learner performance. Hence this study is significant to several persons and entities.

For the teacher, this study is significant in that teachers do need to explore their beliefs about teaching and learning and how these beliefs have influenced their teaching practices. Through this exploration and reflection, they would become conscious of how their beliefs have emerged, how it influences them as teachers and how such influences impact on school education, the school, the learners and on learner performances. Such reflections become the initiator for professional development amongst teachers. Drawing from this significance, it is recommended that teachers engage in self-reflexive practices on an on-going basis with a view to aligning their teaching practices to the realities of the classroom, the learners, the learners' biographies and of their competence and capabilities.

The study is also significant to the school leadership in that learner performance is a key area of schooling, especially within the context of high accountable regimes. By exploring teacher beliefs amongst its teaching force within each school, the school leadership would get a sense of what beliefs teachers have and how such beliefs have influenced their teaching practices to account for the learner performances in the respective schools. Hence it is recommended that the school leadership engages periodically with teachers, both individually and collectively to establish deep seated teacher beliefs and their influence on teaching and learning with the view to improving the learner performance in the school that they are accountable to.

The study is also significant to the Department of Basic Education in that the study of teacher belief would reveal teachers assumptions about teaching and learning and how these assumptions can be addressed to support teachers in their drive to provide quality education. Equally, the Department of Basic Education could attempt to change teachers' views and assumptions of teaching and learning with a view to enlightening such teachers on how their views are negatively impacting on the drive to provide quality education. It is, therefore, recommended that the Department of Basic Education pays attention to teacher belief and find ways to co-opt teachers and/or strengthen teachers to resolve to provide quality and relevant education to the learners with achievable outcomes.

Finally, the study has significance for teacher education institutions in providing initial and continuing teacher development programmes that focus on teacher reflections that can illuminate teacher belief and its influence in teaching and learning. It is, therefore, recommended that teacher education institutions include teacher belief and its relationship to teaching and learning as a key component of teacher development, both in the initial teacher education process as well as on-going professional development programmes.

## **8.6 Conclusion**

This qualitative and interpretive study set out to explore beliefs of teachers regarding teaching and learning and the influence teachers beliefs have on learner performance. The study investigated the knowledge teachers have and the beliefs teachers have on teaching and learning as well as the resultant learner performance. Teachers' knowledge and beliefs should be taken into consideration if schools and learner performance are to be improved. It emerged

from the study that teachers had different beliefs as to how schooling occurs and on how to improve learner performance.

The findings of this study highlighted the influence of teachers' beliefs on teaching and learning as teachers act, teach and behave according to what they believe will suit their actions. It was clear that there was a variety of beliefs teachers held about teaching and learning and how they believed learner performance can be improved. Some of the circumstances and situations improved their teaching which led to boosted self-efficacy while other situations tended to demoralize them thereby having negative self-efficacy.

This study has made use of self-efficacy theory as the conceptual model used to frame the study (see Chapter 3). The model provided an understanding on what beliefs teachers have about teaching and learning and their influence on learner performance. A conceptual model was developed out of the findings of this study illustrating how teachers respond and react on matters within themselves and matters outside them. I termed the model internal teacher professionalism and external teacher professionalism (see Figure.7.2 and Section 7.7.1). The model suggests that teachers believe they have ways of teaching and effect learning thereby dealing with issues that are within their locus of control (internal teacher professionalism). They also have the ability to deal with some issues outside of their locus of control (external teacher professionalism).

In summary, we are living in crucial times within the history of school education. Teachers experience drastic changes in the work they do and believe. The lives of teachers are bursting with convolutions and incongruities with a juncture of forces congregating in their lives, causing their lives to be fluid and vigorous (Naicker, 2014). Teachers have different beliefs about how teaching and learning can be achieved and believed differently on how we can improve learner performance. This study has shown how teachers acquired and developed their beliefs and how their beliefs influence their teaching practices which eventually impact on learner performance which is an ultimate goal of education as a system.

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# APPENDIX A

## ETHICAL CLEARANCE CERTIFICATE



09 April 2015

Mr Mbongiseni Phumla Mhlongo 9307822  
School of Education  
Edgewood Campus

Dear Mr Mhlongo

Protocol reference number: HSS/0287/015D

Project title: Exploring teacher belief of teaching and learning and its influence on learner performance

### Expedited Approval

In response to your application dated 07 April 2015, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted FULL APPROVAL.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shonuka Singh (Chair)

/pk

cc Supervisor: Professor P Ramrathan  
cc Academic Leader Research: Professor P Morojele  
cc School Administrator: Ms R Bhengu, Ms T Khumalo R Mr S Mthembu

### Humanities & Social Sciences Research Ethics Committee

Dr Shonuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X5400, Durban 4000

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Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)



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# APPENDIX B

## KZN DOE PERMISSION LETTER



education

Department:  
Education  
PROVINCE OF KWAZULU-NATAL

Enquiries: Nomangisi Ngubane

Tel: 033 392 1004

Ref.:2/4/8/320

Prof. P Ramrathan  
University of KwaZulu Natal  
Private Bag X 54001  
DURBAN  
4000

Dear Prof. Ramrathan

### PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS

Your application to conduct research entitled: **"SCHOOL CATEGORISATIONS: HOW DOES IT DEFINE TEACHING AND LEARNING WITHIN SCHOOL EDUCATION"**, in the KwaZulu-Natal Department of Education Institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 01 December 2014 to 31 December 2016.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Miss Connie Kehologile at the contact numbers below.
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report / dissertation / thesis must be submitted to the research office of the Department. Please address it to The Office of the HOD, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education:

Umlazi District  
Uthungulu District

Pinetown District  
Ugu District

Ilembe District  
Umgungundlovu District

**Nkosinathi S.P. Sishi, PhD**  
Head of Department: Education  
Date: 24 November 2014

KWAZULU-NATAL DEPARTMENT OF EDUCATION

POSTAL: Private Bag X 9137, Pietermaritzburg, 3200, KwaZulu-Natal, Republic of South Africa  
PHYSICAL: 247 Burger Street, Anton Lembede House, Pietermaritzburg, 3201. Tel. 033 392 1004  
EMAIL ADDRESS: [kehologile.connie@kzndoe.gov.za](mailto:kehologile.connie@kzndoe.gov.za) / [Nomangisi.Ngubane@kzndoe.gov.za](mailto:Nomangisi.Ngubane@kzndoe.gov.za)  
CALL CENTRE: 0860 596 363; Fax: 033 392 1203 WEBSITE: [www.kzndoe.gov.za](http://www.kzndoe.gov.za)

## APPENDIX C

### PERMISSION TO CONDUCT RESEARCH – PRINCIPAL

P. O. Box 61942

Bishopsgate

Durban

4008

09 March 2015

The Principal

Hloniphani Secondary School

Tongaat

4400

Sir

### REQUEST FOR A PERMISSION TO CONDUCT A RESEARCH IN YOUR SCHOOL

This letter serves to request a permission to conduct a study in your school. A brief description of how the study will be conducted is provided.

My name is Mbongiseni Phenius Mhlongo, a PhD student at the University of KwaZulu-Natal, Edgewood Campus. I am the researcher in an NRF funded research project titled: What explains learners' poor performances in South African schools. My area of focus is on: **Exploring teacher belief of teaching and learning and its influence on learner performance.**

The focus of the research project is to explore how the teachers' beliefs influence their teaching and learning as manifested through the learner performance. Your school has been identified through voluntary inclusion process as a possible site of research for this project to produce some data on teacher beliefs and possible reasons that explain learner performance. The data production process would involve using semi structured interviews and observations with teachers. The interviews will be audio taped to assist in capturing data produced during interview. Observations will be conducted in classrooms for the researcher to observe practicality of teaching

a particular subject in the classroom. The interviews will take on an iterative process, requiring up to 5 interviews per participant to obtain depth and clarity of information provided by the respective participant. The data collection will take up to two weeks and would take place at a time and venue convenient to the participants. This process of data collection would not interfere with the day-to-day activities of the school. All participants would be apprised of the research process, their participation and their rights in the research processes through informed consent forms. Their permission would be sought prior to their participation in the data collection process.

Please note that:

- All confidentiality is guaranteed as inputs from participants will not be attributed individually to person. Should the need arise for participant attribution, these would be done with the express permission of the individual concerned, and that pseudonyms would be used to protect the participants' anonymity.
- Any information given by the participants cannot be used against any of the participants, and the collected data will be used for purposes of this research only.
- Data will be stored in secure storage and destroyed after 5 years.
- The choice to participate, not participate or stop participating in the research is left on to the participant. No one will be penalized for taking such an action.
- The research aims at obtaining information about teacher beliefs and schooling in general.
- Participants' involvement is purely for academic purposes only, and there are no financial benefits involved.

I can be contacted at:

Email: [mzwakhemhlongo@gmail.com](mailto:mzwakhemhlongo@gmail.com), Cell: +27 079 091 3204 or tel. +27 32 294 9451 or you may contact my Research Supervisor, Prof Labby Ramrathan on 031 260 8065/ 082 674 9829 or [ramrathanp@ukzn.ac.za](mailto:ramrathanp@ukzn.ac.za) at the University of KwaZulu-Natal, Edgewood Campus.

You may also contact the Research Office through:

Ms Phumelele Ximba

031 260 3587,

Email: [ximbap@ukzn.ac.za](mailto:ximbap@ukzn.ac.za)

If you fully understand the above, I therefore request you to please complete the consent form below.

I hereby request your co-operation

Thanking you in advance

Yours Faithfully

---

Mbongiseni P Mhlongo  
Student No. 9307822

#### PRINCIPAL'S DECLARATION

I..... (full name of the Principal) hereby confirm that I understand the contents of this document and the nature of the research project, and I give permission for my school to be participating in the research project.

I understand that I am at liberty to withdraw my school from participating in the project at any time, should I so desire.

SIGNATURE OF PRINCIPAL\_\_\_\_\_

DATE.....

School Stamp

## APPENDIX D

### INFORMED CONSENT LETTER TO TEACHER

P. O. Box 61942

Bishopsgate

Durban

4008

Dear teacher participant

#### INFORMED CONSENT LETTER

This letter serves to request a permission to conduct a study in your school. A brief description of how the study will be conducted is provided.

My name is Mbongiseni Phenius Mhlongo, a PhD student at the University of KwaZulu-Natal, Edgewood Campus. I am the researcher in an NRF funded research project titled: What explains learners' poor performances in South African schools. My area of focus is on: **Exploring teacher belief of teaching and learning and its influence on learner performance.**

The focus of the research project is to explore how the teachers' beliefs influence their teaching and learning as manifested through the learner performance. You have been identified through voluntary inclusion as a possible participant in an interview process to produce some data on teacher beliefs and possible reasons that explain learner performance. The data production process would involve using semi structured interviews and observations with teachers. The interviews will be audio taped to assist in capturing data produced during interview. Observations will be conducted in your classroom for the researcher to observe practicality of teaching a particular subject in the classroom. You will be interviewed over a period of time and there may be up to five interviews held over the two week period. The interviews will be conducted at times and places that is convenient with you.

Please note that:

- Your confidentiality is guaranteed as your inputs will not be attributed to you in person, but reported only as a population member opinion.
- The interviews are repetitive in nature and would be over a period of two weeks.
- Any information given by you cannot be used against you, and the collected data will be used for purposes of this research only.
- Data will be stored in secure storage and destroyed after 5 years.
- You have a choice to participate, not participate or stop participating in the research. You will not be penalized for taking such an action.
- The research aims at obtaining information on teacher beliefs about schooling.
- Your involvement is purely for academic purposes only, and there are no financial benefits involved.

I can be contacted at:

Email: [mzwakhemhlongo@gmail.com](mailto:mzwakhemhlongo@gmail.com), Cell: +27 079 091 3204 or tel. +27 32 294 9451 or you may contact my Research Supervisor, Prof Labby Ramathan on 031 260 8065/ 082 674 9829 or [ramrathanp@ukzn.ac.za](mailto:ramrathanp@ukzn.ac.za) at the University of KwaZulu-Natal, Edgewood Campus.

You may also contact the Research Office through:

Ms Phumelele Ximba

031 260 3587,

Email: [ximbap@ukzn.ac.za](mailto:ximbap@ukzn.ac.za)

If you fully understand the above, I therefore request you to please complete the consent form below.

I hereby request your co-operation

Thanking you in advance

Yours Faithfully

---

Mbongiseni P Mhlongo

Student No. 9307822

### PARTICIPANT'S DECLARATION

I..... (full names of teacher) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to my participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

I also understand and give permission for the use of the following recording devices during the interview and data production process.

	Willing	Not willing
Audio recording		
Photographic equipment		

SIGNATURE OF PARTICIPANT

DATE

.....



## APPENDIX E

### INTERVIEW SCHEDULE FOR TEACHERS

#### INTERVIEW SCHEDULE

1. How long have you been teaching the subject you are teaching presently?
2. Have you been trained to teach your subject? What training did you acquire? (*Then how do you teach the subject in spite of such predicament?*)
3. What does it mean to you being a teacher in this quintile school?
  - 3.1 How has this quintile ranking affected you or strengthened you as a teacher?
4. What do you believe is a distinguishing character of this school that:
  - (a) affects your teaching?
  - (b) affects learners?,
  - (c) strengthens your teaching and
  - (d) supports learning by learners.
5. What are some of the things that should be done to assist learners learning and improve your teaching?
6. What do you understand about belief? How did you come into this understanding?
7. What is your understanding of teaching? (*what is your idea of teaching? i.e. knowing subject, content or learners*)
  - 7.1 Is that your belief of what teaching should be?
  - 7.2. Why do you have such belief about teaching?
8. What is your understanding of learning?
  - 5.1. Is that your belief about learning?
  - 5.2. Why do you have such belief about learning?
9. What beliefs do you have about **teaching and learning** especially in the subject you are teaching, **school** and **schooling** in general?
10. What topic (s) do you like teaching? Why do you believe that this topic has to be taught? How have you come into that belief?
11. Do you consider yourself effective when teaching the subject you teach?
12. How do your learners' backgrounds and beliefs influence the way you teach them?
13. Could you describe your pass rate in the last five years? What do you believe accounts for that pass rate?
14. Why you believe learners should perform well in the school?

- 14.1. How have you made this belief a reality, i.e. how you contributed to it?
15. What do you think is the cause of the learner performance your school is achieving?
16. What do you think should be done to improve or maintain the results of your subject?
17. How is the context of the school influencing your teaching of the subject and why?
18. Is there anything in your environment that could reflect your inner thinking or feelings about your belief of teaching and learning?

## APPENDIX F

### OBSERVATION SCHEDULE FOR TEACHERS

#### LESSON OBSERVATION SCHEDULE

The purpose of this observation schedule is to observe the interaction of teachers with learners in the class in order to how teachers' beliefs influence the way they teach. Also various classroom practices will be observed to get an insight on teacher beliefs. This schedule will be completed by the researcher during the lesson.

SCHOOL NAME : \_\_\_\_\_

TEACHER'S NAME : \_\_\_\_\_

DATE OF OBSERVATION : \_\_\_\_\_

SUBJECT OBSERVED : \_\_\_\_\_ PERIOD: \_\_\_\_\_

NUMBER OF LEARNERS : \_\_\_\_\_ CLASS : \_\_\_\_\_

OBSERVATION FOCUS	YES	NO	COMMENTS
<b>A. Classroom environment</b> <ol style="list-style-type: none"> <li>Are learners seated well in the class?</li> <li>Are there any charts, posters, diagrams etc. displayed?</li> <li>Is environment orderly?</li> <li>Are learners actively engaged in the learning activities with variety of resources?</li> </ol>			
<b>B. The relationship between teachers and learners</b> <ol style="list-style-type: none"> <li>Is there any pleasant conversation, laughter and excitement?</li> <li>Is the discipline maintained?</li> <li>Are there any positive individual, group or class social interactions observed?</li> <li>Are the learners motivated, respect, listen, excited about learning and initiate activities?</li> </ol>			

5. Are teachers enhancing learners' self-esteem and confidence?			
<b>C. Teaching and learning – classroom instructions</b> <ol style="list-style-type: none"> <li>1. Does the teacher use variety of learning strategies e.g. whole group, small group, etc.?</li> <li>2. Does the teacher believe and value the opinions of learners?</li> <li>3. Does the teacher extend learners' knowledge using the scaffolding technique and asking open ended questions, prompting thinking skills?</li> <li>4. Is the teacher responsive and builds on and shares learners' contributions?</li> <li>5. Does the teacher give clear instructions to learners?</li> <li>6. Does the teacher expect learners to respond correctly with one right answer?</li> <li>7. Does the teacher make use of variety of strategies to enhance communication – rephrase, code-switch, peer mediation, etc.?</li> <li>8. Does the teacher's own language competence meet the needs of the learners?</li> </ol>			
<b>D. Learner involvement</b> <ol style="list-style-type: none"> <li>1. Are learners given a chance to explore and actively participate in class and in the activities?</li> <li>2. Do learners use worksheets, workbooks and other abstract or two dimensional learning?</li> <li>3. Are learners encouraged to work in groups?</li> <li>4. Are learners encouraged to ask questions in class?</li> </ol>			
<b>E. Planning, Curriculum and professional development</b> <ol style="list-style-type: none"> <li>1. Is there any evidence of well-planned lessons, work schedule and learner activities?</li> <li>2. Is the appropriate time given to different aspects of the curriculum?</li> <li>3. Are there any regular curricular or planning meetings held with other colleagues/HOD/principal?</li> </ol>			
<b>F. Assessment</b>			

1. Is there any evidence of continuous assessment?			
2. Is the assessment based on holistic development of the learners?			
3. Are various different tools and activities used to assess learners?			
4. Are learners given a chance to assess each other?			
5. Is feedback given to learners frequently?			

### **Post observation interview schedule**

1. Why did you arrange the classroom the way you did?
2. What do you think is the reason for your learners to respond the way they did?
3. Your learners seemed to be very much determined/ not determined about what you were saying to them, what do you think were the reasons for that?
4. How do you assess whether your learners have understood what you have taught them?
5. What role is played by questioning in teaching your subject?
6. Do you plan the kinds of activities and questions that you would ask in your lessons, or are they spontaneous?
7. In what ways do your questions and activities help your learners to improve performance?

We have come to an end of our interview. Thank you once again for your time and participation in this interview. I would like to assure you that after carefully studying the responses, I would then double check with you to see if my interpretation of your responses coincided with your actual responses. Thank you very much.

## APPENDIX G1

### LESSON PLAN

**SUBJECT: PHYSICAL SCIENCES**

**TEACHER: MOH**

<b>Date:</b> 07/05/ -11/05/	<b>Grade:</b> 12	<b>Duration:</b> 55X4
Core knowledge, skills and values/content: Doppler's effect equations, application of Doppler's effect, comparing spectrum		
<b>Topic:</b> Doppler's effect with sound and ultra sound		
<b>Teachers Activity:</b> <ul style="list-style-type: none"> <li>State Doppler's effect for sound and give every day examples.</li> <li>Explain using appropriate illustration why sound increases in pitch when the source of sound travels towards a listener and decreases in pitch when it travels away.</li> <li>Use the following equation to calculate the frequency of sound detected by a listener(L) when either the source or the listener is moving:</li> <li>Use the following equations to calculate the frequency of sound detected by a listener (L) when either the source or the listener is moving.</li> <li>Check learners progress on the activities given and do remedial where necessary.</li> </ul>		<b>Learners Activity:</b> <ul style="list-style-type: none"> <li>Define Doppler's effect.</li> <li>Write down the equations for solving Doppler's effect.</li> <li>Do calculations using Doppler's effect to determine the frequency of sound and the speed of the source to and away from the listener.</li> <li>Describe the applications of the Doppler's effect in daily lives.</li> <li>Apply Doppler's effect in these red shift to conclude that most stars are moving away from the earth and therefore the universe is expanding.</li> <li>Do summative assessment on Doppler's effect.</li> </ul>
<b>Inclusivity:</b> use of science charts and micrograph in presenting the lessons and give more attention to slow learners		
<b>Resources:</b>	Learners text book, chalkboard, chart, exam guideline and JIT materials	
<b>Assessment:</b>	Homework and classwork.	
<b>Activity:</b>	From previous exam papers.	
<b>HOD/Principal comment &amp; signature</b>		

## *Life Sciences - Lesson Preparation*

Teacher: Oshun				Grade: 12		
Date:09/05/ (7days)						
Specific Aim	SA 1	X	Skills			
	SA 2	X				
	SA 3	X				
Topic	Nucleic Acid		Sub-Topic	-Structure of nucleic acid - location of DNA -function of DNA		
EAC focus	Discovery of DNA(case study)					
Prior knowledge	The animal cell					
Teacher activities		Learner activities		Resources	Assessment	Time
Revise the structure of the animal cell. (NUCLEUS)  Ask learners questions via previous knowledge of the functioning of the nucleus.  Explain the monomers of the nucleic acid called nucleotides. Explain the structure of nucleic acid. Discuss the location of DNA and types of DNA.(nuclear DNA, Mt DNA, chloroplastic DNA)		Label the structure of the nucleus and answer questions related to the structure. class work. Pg. 2 understanding life sciences.  Identify the structure of the nucleotides that make up nucleic acid. - (Sugar, phosphate and nitrogenous base.)  Write down short notes on the structure of nucleic acid and draw the monomers of each of them.		Exam guidelines JIT document 2016 ATP Previous exam guidelines Mind the gap study guide	Classwork, homework and practical demonstration	55 x3
Discuss the structure of DNA'. -Nucleotides of DNA (phosphate, Deoxyribose nucleic Acid) -the purines and pyrimidines of the two groups of nitrogenous base. - complementary base pair of the nitrogenous base of DNA		Classwork  Study diagram and Identify the type of nucleic acid molecule and answer questions related to it. Nucleic acid doc pg 5  Home work Structure of DNA molecule.		Learners' textbook- understanding life sciences.  Nucleic acid orientation document-2015	Practical experiment Classwork and home work	

<p>- the bond that holds the nitrogenous base pair.</p> <p>-the shape of DNA – double helix shape.</p> <p>Explain the functions of DNA.</p> <p>-organise and set up apparatus for extraction of DNA.</p> <p>Explain step by step how to extract DNA.</p> <p>Monitor learners and assist where necessary on the extraction of DNA</p>	<p>Nucleic acid doc 2016 pg 6</p> <p>Classwork</p> <p>Terminologies. Nucleic acid document. pg. 1 1-12</p> <p>Practical demonstration.</p> <ul style="list-style-type: none"> <li>- Extraction of DNA</li> <li>- Give the functions of some substances that is used during DNA extraction. - understanding life science pg 8</li> </ul> <p>Reading. Read and answer questions on the discovery of DNA</p>			
<b>Expanded opportunities and special needs</b>	<b>Assist learners more often during the lesson period</b>	<b>Enrichment</b> Use of JIT document and orientation document for nucleic acid		
<b>Teacher reflection</b>				



# APPENDIX G2

## TEACHERS' WORKSHEETS/TASKS

Accounting

6  
NSC

March 2016 Common Test

### QUESTION 5

ULUNDI LIMITED  
BALANCE SHEET AS AT 29 FEBRUARY 2016

<b>ASSETS</b>	
<b>NON-CURRENT ASSETS</b>	2775000
Fixed deposit	750 000
Fixed assets	2025000
<b>CURRENT ASSETS</b>	2025000
Inventory	375000
Cash and cash equivalent	2645000
Receivable	
<b>TOTAL ASSETS</b>	4800000
<b>EQUITY AND LIABILITIES</b>	
<b>SHAREHOLDERS' EQUITY</b>	540000
Ordinary share capital	3000000
Retained income	240000
<b>NON-CURRENT LIABILITIES</b>	810000
<b>CURRENT LIABILITIES</b>	1620000
Trade and other payable	1620000
<b>TOTAL EQUITY AND LIABILITIES</b>	2970000

10  
20

## APPENDIX H

### TEACHERS' BIOGRAPHICAL DATA

Please answer the following questions by placing a [ √ ] in the appropriate box.

Gender

MALE	
FEMALE	

What are your years of experience as a teacher?

0-5	
6-10	
11-16	
17 and over	

Grades taught in your subject?

Grade 8	
Grade 9	
Grade 10	
Grade 11	
Grade 12	

What is your current post level?

Post Level 1	
Post Level 2	
Post Level 3	
Post Level 4	

What is your current rank category?

Educator	
Head of Department	
Deputy Principal	
Principal	

What is your highest qualification after grade 12?

Certificate	
Diploma	
Bachelor Degree	
ACE	
Honours Degree	
Masters	

Are you currently registered with Higher Education Institution?

<input type="checkbox"/> YES	
<input type="checkbox"/> No	

# APPENDIX I

## TURNITIN ORIGINALITY REPORT



### Digital Receipt

This receipt acknowledges that **Turnitin** received your paper. Below you will find the receipt information regarding your submission.

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File size: 1.22MB  
Page count: 215  
Word count: 81 862  
Character count: 437 292  
Submission date: 22-April-2019 11:02AM (UTC+0200)  
Submission ID: 1060195589

EXPLORING TEACHER BELIEF OF TEACHING AND LEARNING AND ITS  
INFLUENCE ON LEARNER PERFORMANCE

CHAPTER ONE  
BACKGROUND OF THE STUDY AND LITERATURE REVIEW

#### 1.1 INTRODUCTION

Learner performance in South African schools has been a subject of major debates over the last decade, largely related to conflicting evidence through the increasing matric pass rates on one side and extremely low performances in Annual National Assessment testing and world rankings on the other side. Heightened focus on teaching and learning has thus been the process to address these debates. Teaching and learning as a major component of school education has various facets, including the nature of the curriculum, the expertise of the teachers and the context of schooling. Learner performance in South African schools has been a major concern for Government, parents, institutions of higher learning and other stakeholders in education. These concerns have arisen in spite of many intervention programmes and strategies that have been put in place to overcome poor learner performance, even though the largest slice of South Africa's budget is allocated to education. The interventions include, employing appropriately qualified teachers, workshops and other in-service training activities. The latter have been conducted as part of continuing professional teacher development (CPTD) to improve teaching and learning in schools. Further interventions focused on school infrastructure development like building of new schools as well as upgrading older school structures and renovating dilapidated schools. One other key intervention has been the introduction of the school nutrition programmes. Despite these all these interventions, learner performance has not improved significantly. Moreover, learner performance has in recent times, been reported according to the school quintile types.

There is correlation between school learner performance and teacher beliefs across the school quintiles. Spaul's (2013) idea of two school worlds was used to get insight into understanding the said correlation. According to Spaul (2013) schools in South Africa are divided into good performing while others have poor learner performance. Part of my argument is to respond to the two worlds that have been noted and are emerging in South Africa. In an attempt to advance the two school worlds debate, in this study I explore teacher belief as a lens to contribute to this emerging discourse.

1

## APPENDIX J

### LANGUAGE CLEARANCE REPORT

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3610

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## Dr Saths Govender

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21 MAY 2019

TO WHOM IT MAY CONCERN

### LANGUAGE CLEARANCE CERTIFICATE

This serves to inform that I have read the final version of the thesis titled:

**EXPLORING TEACHER BELIEF OF TEACHING  
AND LEARNING AND ITS INFLUENCE ON  
LEARNER PERFORMANCE, by M.P. Mhlongo.**

To the best of my knowledge, all the proposed amendments have been effected and the work is free of spelling and grammatical errors. I am of the view that the quality of language used meets generally accepted academic standards.

Yours faithfully

*S. Govender*

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**DR S. GOVENDER**

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