

**A critical analysis of the relationship between literacy
and disadvantage: A case study of grade 11 literacy
practices in a township school**

by

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Declaration

I, Dhanwanthie Haricharan, declare that:

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ABSTRACT

South Africa is currently in an educational crisis as evidenced by the performance of learners in a myriad of high stakes tests that they are exposed to. It has been established that this state of crisis is strongly correlated with the literacy levels of learners. The performance on the aforementioned tests are aligned with those who hail from previously disadvantaged backgrounds, performing overwhelmingly worse than those who do not.

The aim of this study was to examine the relationship between literacy and disadvantage. The objectives of the study were to interrogate the literacy practices in school and to identify the ways in which disadvantage manifested itself within these literacy practices. In order to investigate these critical issues, a case study was conducted. One grade 11 class located in a township school formed the case of study. Data was gathered using classroom observations, post observation interviews, focus group interviews with the learners and with the teachers, a semi-structured interview with the principal and a questionnaire for the learners.

Reading, writing, speaking and practical literacy practices were observed in the classroom. It was found that there was the general lack of a culture of reading amongst the learners and so the learners' level of reading was below grade level. Writing was emphasized in class or given as homework with much of the writing centering on note-taking. Learners had to work in an environment where there was a chronic lack of resources (such as textbooks) which impacted on their literacy practices. The teaching and learning environment in which the literacies were embedded was characterized by a lack of suitable reading and writing instruction (in all of their subjects), feedback and practical science literacy. There were however, instances where teachers successfully and practically demonstrated particular tasks. The interactions in the classroom were dominated by the teacher-talk. There was language fluidity in these interactions as teachers used multilingual resources such as code-switching and transliteration to facilitate learning. Teachers also employed innovative teaching strategies.

Further analysis of the data showed that disadvantage manifested in literacy practices in both obvious (such as lack of resources) and subtle ways (such as attitudes and social behaviours). The ways in which disadvantage manifested in the literacy practices also differed amongst the different

literacy practices. An ecological theory for literacy development was used in order to understand the extent to which literacy development is context dependent and thus more susceptible to influence from situational factors of disadvantage such as poverty, ideology, pedagogy etc. This perspective revealed a nuanced relationship between literacy and disadvantage and concluded that literacy is the product of the individual and his/her environment (which comprises the micro, meso, exo and macro systems).

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List of acronyms

ANAs	– Annual National Assessments
BICS	– Basic Interpersonal Communication Skills
CALP	– Cognitive Academic Language Proficiency
CAPS	– Curriculum Assessment and Policy Statements
C2005	– Curriculum 2005
DBE	– Department of Basic Education
DET	– Department of Education and Training
DOE	– Department of Education
EFAL	– English First Additional Language
EFL	– English First Language
FAL	– First Additional Language
FET	– Further Education and Training
FGL	– Focus Group with Learners
FGT	– Focus Group with Teachers
HEIs	– Higher Education Institutions
I, P	– Interview with Principal
IRF	– Initiation-Response-Feedback
L1	– First language
L2	– Second language
LiEP	– Language in Education Policy
LOLT	– Language of Learning and Teaching
LPT	– Learner as Pedagogic Tool

NLS	– New Literacy Studies
OBE	– Outcomes Based Education
PCK	– Pedagogical content knowledge
PIRLS	– Progress in International Reading Literacy Study
RNCS	– Revised National Curriculum Statement
SACMEQ	– Southern and East African Consortium for Monitoring Educational Quality
SES	– Socio-economic status
SFL	– Systemic Functional Linguistics
STEM	– Science, Technology, Engineering & Mathematics
TIMSS	– Trends in International Mathematics and Science Study
ZPD	– Zone of proximal development

Transcription Key

Numbers	– designate turns taken to speak
I	– Interviewer
SS	– Several Students talking at once
S1, S2, etc.	– Students identified according to order of interaction
S	– Student unknown
E	– Entire class
(.)	– Brief pause
(Secs/Mins)	– Measured pause
//	– Overlapping speech
Italics	– Indicated isiZulu or South African colloquialism
[]	– Transcriber’s commentary/explanation of actions
()	– Unintelligible
...	– Words omitted
(())	– What the transcriber thinks is said.
‘ ’	– English translation

Chapter One: Introduction

1.1. Background

Literacy levels are often used as a barometer of the condition of the education system. This is because educational failure in South Africa is directly related to linguistic issues (Heugh, 2013; Spaul, 2012; Ferreira, 2011). On a surface level, a child could essentially not be able to read or write and on a deeper level there might be a gap in the child's ability to use language to meet certain demands within the educational system (Halliday, 2009). Based on this premise it appears that the South African educational system is in a state of crisis. Letseka (2014, p. 4864) goes so far as to describe the country's education system as "a national disaster that is essentially dysfunctional."

Professor Jonathan Jansen, an acclaimed academic in South Africa, observed that failure had become the "new norm" within the South African educational system (Erasmus, 2015). Many scholars have arrived at this conclusion from the results of both local tests such as the Annual National Assessments (ANAs)¹ and international tests such as the Southern and East African Consortium for Monitoring Educational Quality (SACMEQ)²; Progress in International Reading Literacy Study (PIRLS)³ and Trends in International Mathematics and Science Study (TIMSS)⁴ assessment tests (Letseka, 2014; Spaul, 2011; Spaul, 2013; le Cordeur, 2014; Fleisch, 2008; Taylor, 2008).

According to the Department of Basic Education (DBE) (2016) the ANA's were established to assess the levels of learner competence in the areas of language and mathematics. The results of

¹ According to the Department of Basic Education (2011), the ANA was implemented in 2011 to provide data on the numeracy and literacy attainment of learners (in foundation, intermediate and senior phases). It was envisaged that this data would then be used to improve teaching and learning.

² SACMEQ generates data meant to inform educational policy by conducting surveys and testing both primary school learners and teachers areas such as reading and mathematics. There are 15 countries in the Southern and Eastern parts of Africa that participate in this project (Spaul, 2011).

³ PIRLS is an international test that measures "trends in reading comprehension at the fourth grade. First assessed in 2001, PIRLS has been on a regular 5-year cycle since then. Most recently, PIRLS was expanded in 2011 to include prePIRLS, which is a less difficult version of PIRLS" (TIMSS & PIRLS International Study Centre, n.d.).

⁴ TIMSS is an international test that measures "trends in mathematics and science achievement at the fourth and eighth grades. It has been conducted on a regular 4-year cycle since 1995..." (TIMSS & PIRLS International Study Centre, n.d.).

the ANA's paint a bleak picture in terms of the literacy and numeracy levels in South Africa with grade 9 learners scoring 31% on average in their English First Additional Language (EFAL) assessments and 4% average in their Mathematics assessment⁵ (DBE, 2015^a; DBE, 2015^b). Thus South Africa's internal monitoring mechanisms show that majority of learners in the country have serious problems in terms of literacy and numeracy.

The SACMEQ paints an equally dismal picture in its comparison of South African learners against fourteen other Southern and Eastern African countries. South Africa has a relatively high expenditure on education compared to these neighbouring countries, however in the SACMEQ tests South African learners fared poorly against these countries. South Africa ranked 10th out of 15 countries for reading and 8th out of 15 for mathematics (Spaull, 2011).

The PIRLS test has provided a picture of how South Africa compared to not only African countries but countries around the world. In 2006 South African learners ranked last amongst 40 countries with an overwhelming majority of learners having failed to reach low international benchmark in reading (i.e. a basic reading level) (Howie, van Staden, Tshele, Dowse & Zimmerman, 2012). Five years later the 2011 PIRLS show no statistically significant difference in the performance of learners as they performed below the international average and remained at the tail end of the list (ibid).

The same trend observed in the PIRLS is evidenced in the TIMSS test. South African learners performed dismally in the TIMSS 2011 test. The performance was poor for both mathematics and science on every benchmark including the "low international benchmark" (TIMSS, 2011). The "low international benchmark" is an indication that learners are conversant with the basic knowledge of the subject and are able to perform rudimentary calculations (TIMSS, 2011). Compared to the international counterparts, South African learners consistently underperformed earning a place in the bottom six of all forty-two participating countries (Reddy et al., 2012). Of particular concern is that all the other participants were in grade 8 yet participants from South African, Botswana and Honduras were in grade 9. The decision to test grade 9 learners was justified by pointing out that the curriculum coverage in grade 9 was better matched to what was

⁵ These were the 2014 ANA results which were latest available results at the time of writing this thesis.

tested in TIMSS than what was covered in grade 8 which indicates South African standards of education are lower compared to the international standard.

The report by the Centre for Development and Enterprise damningly concludes that aside from the privileged minority in this country many learners can be classified as “functionally illiterate and innumerate” (Spaull, 2013, p.3). Although not an exhaustive list, the following prevailing issues in South Africa have contributed to what is being perceived as the crisis in SA education: the lack of resources; frequent curriculum overhaul; teachers’ inadequate pedagogical content knowledge; difficulties with the language of learning and teaching; impoverished school environments; and poor home environments. These issues are discussed below.

1.1.1. Lack of resources

According to Spaull (2012) there is bimodality within the South African schooling system with only a minority of schools that have adequate resources while the majority of the schools in South Africa are characterized by a severe lack of resources. This stark difference is attributed to the apartheid regime (ibid). The learning environment is best described as dysfunctional in these schools (Letseka, 2014; Maringe, Masinire, & Nkambule, 2015; Hunter, 2015; Howie et al., 2012). Not only is there a lack of material resources such as textbooks (Howie et al., 2012; Zuze & Reddy, 2014; Reddy et al., 2015), there is also a lack of human resources that compounds the problem (Maringe et al., 2015; Reddy et al., 2015; Howie et al., 2012).

The difference in resources is correlated with educational outcomes. A greater quantity of resources in schools is linked with more favourable achievement in both literacy and numeracy levels than schools that had a severe lack of resources (Howie et al., 2012; Reddy et al., 2012; Reddy et al., 2015). For the 2011 PIRLS test, well-resourced schools outperformed poorly resourced schools by more than 100 points in reading (Howie et al, 2012). An interesting observation made in the analysis of the TIMSS 2011 results is that South African learners performed worse in mathematics and science than learners who attended similarly poorly resourced schools internationally (Reddy et al., 2015).

It is important to note, however, that a correlation between poorly resourced schools and poor educational outcomes does not necessarily imply causation. This is demonstrated in comparison of South African learners' performances against learners from its neighbouring countries. Learners from these countries who have a greater shortage of resources than their South African counterparts fared better in the SACMEQ tests (Spaull, 2011). According to Spaull (2011, p.26) "A poignant example is how Tanzania outperforms South Africa for every sub-population (rural-urban, rich-poor, male-female, overall)..." Wolhuter (2014) observed that the considerable financial input by the government into the educational sector in South Africa was not met with expected educational outcomes. It was also noted that the well-resourced schools in South Africa also did not perform as well as their international counterparts in mathematics and literacy benchmark tests (Reddy et al., 2012; Reddy et al., 2015; Howie et al., 2012). These examples illustrate the important point that although resources both material and human are essential in creating an environment conducive to learning, more monetary investment should not be seen as a magic bullet that will fix the educational crisis.

1.1.2. Curriculum overhaul

Within the South African educational landscape, there has been frequent curriculum overhaul since the abolition of apartheid when the country had its first democratically elected government in 1994. The curriculum for Africans⁶ under apartheid era served as an instrument of subjugation (Bloch, 2009). It is no surprise then that in democratic South Africa, there was a move away from a curriculum that was reminiscent of that which was used during apartheid. One of the first curriculum offerings post 1994 was called Curriculum 2005 (C2005). In March 1997 the Minister of Education (of the newly elected African National Congress led government) implemented C2005. According to Blignaut & Au (2014, p.396), "The adoption of C2005 not only signaled a dramatic departure from the apartheid curriculum, but it also represented a paradigm shift from

⁶ Race classification was a construct of the apartheid government that was based upon "scientific racism" and "cultural relativism" but it is still widely accepted as it has become part of the nomenclature in South Africa (Dubow, 1992, p.237). The term Africans in this thesis is used to describe one of the four race groups in South Africa. These four race groups are Africans (Black South Africans of African descent), Indians (South Africans of Indian descent), Coloureds (South Africans of mixed race) and Whites (South Africans usually from Europe of English or Dutch descent). It must also be noted that within the literature the term African is also used interchangeably with the term Black/s however in South Africa, Black was a term used to describe any person who was not White.

content-based teaching and learning to outcomes-based practices.” For several reasons (explored in chapter two), C2005 failed to achieve its outcomes.

This led to some changes in response to the criticisms levelled against the curriculum so the curriculum was revised in 2004 and called the Revised National Curriculum Statement (RNCS) but later in 2006 it was rechristened as the National Curriculum Statements (Mouton, Louw & Strydom, 2013). The pitfalls of this particular revised curriculum was made obvious when the first cohort of learners who graduated grade 12, turned out to be exceedingly unprepared to meet the demands of tertiary education (ibid). Therefore, more reflection and investigation was needed which resulted in the latest curriculum offering. This new offering was announced in 2011 and is called the Curriculum Assessment and Policy Statements (CAPS) (Maodzwa-Taruvunga & Cross, 2012). CAPS was implemented in 2012. Frequent overhaul of the curriculum within the space of fifteen years dictated more changes in terms of teaching and learning which was not particularly well received by teachers (Ramatlapana & Makonye, 2012; Pillay, Smit & Loock, 2013). This therefore had a negative impact on educational outcomes (Jansen 1999; Mouton et al., 2013; Msibi & Mchunu, 2013) as teachers had to come to grips with content and ever-changing pedagogical techniques.

1.1.3. Teachers’ inadequate pedagogical content knowledge

While some teachers have struggled to adapt to the changing demands that have arisen from frequent curriculum overhaul (Pillay et al., 2013; Chisholm & Chilisa, 2012; Chisholm, 2005), others struggle as a result of inadequate pedagogical content knowledge⁷ (PCK), especially in subjects such as Mathematics and the Sciences (Venkat & Spaul, 2015; Bansilal, Brijlall & Mkhwanazi, 2014; Bloch, 2009). However, the impact of the lack of PCK on learners is not only evident in the Mathematics and Science subjects, as the teaching and learning of language is also negatively impacted (Wolhuter, 2014; Howie et al, 2012; Pretorius & Currin, 2010).

⁷ Pedagogical content knowledge (PCK) is a phrase coined by Shulman (1986, p.9) who describes it as that which “...goes beyond knowledge of subject matter per se to the dimension of subject matter knowledge for teaching.”

Moreover, in a study conducted by Ramnarain & Fortus (2013), teachers in township⁸ schools and those in schools previously designated for African learners had themselves admitted that they had reservations regarding their competence to teach. Some of these reservations can be accounted for by the different curriculum changes, however for the most part it appears that the reservations may be due to many teachers in previously designated African schools being underqualified (Ramnarain, 2014). The lack of training of these particular teachers can be attributed to the inequitable schooling system of the apartheid era, which has perpetuated itself in the current educational system as the teachers who were not properly trained during that particular era continue to teach presently. This situation is made worse when the present system of teacher training is considered. Venkat & Spaul (2015, p.122) assert that “While the variable quality of teacher education under apartheid has been widely written about, concerns have continued to be expressed post-apartheid about the variable quality of in-service teacher training...”. This implies that the problem is still not resolved.

In a separate study by Geldenhuys & Oosthuizen (2015) teachers echoed similar sentiments to those expressed in the Ramnarain & Fortus (2013) study and acknowledged the need to increase their PCK to meet the increasing demands of the teaching profession in the current educational context. This is an important issue as increased levels of teacher PCK increases teacher confidence which consequently enhances the quality of teaching and learning in the classroom (Howie et al., 2012; Geldenhuys & Oosthuizen, 2015; Ramnarain & Fortus, 2013; Wolhuter, 2014).

1.1.4. Language of teaching and learning

Second to socio-economic status (SES), is the language of learning and teaching (LOLT) which has often been most cited as a factor that contributes to poor learner performance (Heugh, 2013; Spaul, 2012; Ferreira, 2011; Pretorius & Currin, 2010; Hooper, Mullis & Martin, 2014). “Unless children are fully functional in the language of teaching and learning they are at considerable risk of failure or repeated failure in primary school and dropping out of school at secondary level,” (Howie et al, 2012, p. xviii). The majority of African learners’ LOLT is often English, their second

⁸ A township is a remnant of the apartheid era. It is a “term that emerged to identify ‘non-white’ neighbourhoods alone and was thus a core spatial concept of the apartheid era - but it is a term that nevertheless continues to be used today” (Jürgens, Donaldson, Rule & Bähr, 2013, p.256).

(and sometimes third or fourth) language however it is their choice of LOLT because of the status that English holds in the language hierarchy (Khokhlova, 2015; Dhunpath & Joseph, 2014; Anthonissen, 2013). According to Howie et al. (2012), 9.6% of South Africans speak English as a first language yet it is used extensively (almost exclusively) for academic, commercial and government affairs. This exemplifies the power of the language in South African society and makes the appeal of learning it and using it as the LOLT understandable (Plüddemann, 2015; Thomson & Stakhnevich, 2010).

However, learners find it difficult to cope with both the demands of learning new content in different subjects while still learning the language of instruction as well (Ferreira, 2011; Plüddemann, 2015) as is the case in SA. According to Tikly (2011, p.92) there is “compelling evidence to suggest that a major source of underachievement, that impacts most heavily on the most socio-economically disadvantaged learners, is the use of a language of instruction in the school that is not spoken widely by the child outside of school...”. This makes learning subjects such as science difficult as the language of science is quite complicated and dense (Cobbing, 2011; Hooper et al, 2014). Lemke (1990, p.21) asserts that the language of science has developed “certain grammatical preferences... There is a lot of use of the passive voice, of abstract nouns in place of verbs, of verbs of abstract relation...” which makes learning science particularly difficult for learners whose first language is not the LOLT. The issue of language in education is a veritable quagmire with various conflicting views as to what the best practices should be (Dhunpath & Joseph, 2014; Plüddemann, 2015; Heugh, 2013). This is as a result of the history of South Africa and it will continue to be so because of endeavours to ensure the protection of linguistic rights in this country (Plüddemann, 2015; Heugh, 2013).

1.1.5. Impoverished school environments

School environment or school climate plays an important role in learner achievement (Howie et al., 2012). Schools in South Africa may be considered as a microcosm of society and as such many are characterized by violence and substance abuse which are detrimental to academic performance (Chikoko, Naicker & Mthiyane, 2015; Kapp et al., 2014; Jacobs, 2014). Masitsa (2011, p. 164) contends “that effective teaching and learning can occur **only**⁹ in a safe and secure school

⁹ Emphasis is mine

environment...” Therefore, if the majority of South African schools are dogged by violence and crime, then it is not surprising that learner achievement is poor.

An impoverished school environment or the absence of a culture of learning includes not only crime, substance abuse and physical violence but it also includes psychological, verbal and sexual abuse (Jacobs, 2014; Masitsa 2011). The discipline of learners contribute significantly to the climate of a school. Howie et al., (2012) found that as discipline decreased, so did academic achievement. What is interesting is that the mere perception of safety and discipline seems to get learners to behave in a more favourable manner as learners’ “experiences of connectedness, safety, respect and engagement in school are related to key academic outcomes of interest, including improved attendance, learning and achievement and reduced dropout...” (Godfrey et al., 2012, p. 548). The discipline and attitude of teachers is an equally important part of the school environment. Teachers that fulfilled their teaching commitments and who fostered caring relationships with learners established a culture of learning whereas those who were frequently absent and had poor relationships with learners contributed to an impoverished school environment (Wolhuter, 2014; Jacobs, 2014; Weeks, 2012).

1.1.6. Poor home environments

Research suggests that it is not only poor school environments but also poor home environments which play a role in educational outcomes (Visser, Juan & Feza, 2015; Howie et al, 2012). In fact, Spaul (2012) found that learners who attended impoverished schools were more likely to also have poor home environments which has a compounding negative effect on learner achievement. Home environment has a marked impact on all learning areas. Visser et al. (2015) and Hooper et al. (2014) have found that home environments that do not support learners (such as parents with low educational attainments) result in learners’ poor performance in mathematics. Literacy levels are also affected by the culture in the home for example, the number of books in the home can have profound effects on reading ability (Bridges, 2014; Levitt & Owl, 2013; Howie et al., 2012).

Many children in South Africa do not live in homes that are conducive to optimal learning as they have parents who are not well educated nor do they have resources that are necessary to foster literacy development (Wolhuter, 2014; Masitsa, 2011; Bloch, 2009; Machet, 2002). However, it

appears that not only are resources important in creating a good home environment it is also parental involvement and expectations that influence educational achievement (Ndebele, 2015; Hooper et al., 2014; Howie et al., 2012). In a study conducted by Heaton, Amoateng & Dufur (2014), it was found that family background was more of a determinant in academic performance than the school attended. This was attributed to the lingering effects of the apartheid era policies where many African families were forced to live in townships¹⁰ and continue to live there (Jürgens et al., 2013). Townships are replete with social pathologies such as “protests, diseases, malnutrition, violence and gender-based discrimination” (Ibid, p. 258). This has left many African families with a myriad of problems such as “school dropout, grade repetition, child abuse and neglect, marital breakdown, family violence, mental health problems, drug and alcohol abuse, teenage pregnancy and parenthood, violence, and crime especially, among the youth in these disadvantaged communities” (Heaton et al., 2014, p. 114). This is in a sense a self-perpetuating cycle especially in terms of education because social pathologies such as school dropout and grade repetition arise from poor educational opportunities.

1.2. Disadvantage: A key criterion

Thus far in this introductory chapter, the crisis in education has been illuminated. The attempt to remedy this situation with significant changes in the curriculum were also discussed. Other efforts have involved an infusion of finances into schools by stakeholders such as NGO’s as well the government (CDE Annual Report, 2015; Tikly, 2011; Taylor, 2008). This has been carried out by categorizing schools in terms of their level of disadvantage in order to distribute financial resources. As reported by Jansen and Taylor (2003) and Mestry & Naidoo (2009), the distribution of resources are determined by a weighting system - with the schools that fall within the lowest quintile (1) qualifying for the largest proportion of funding.

¹⁰ Townships were a direct result of the apartheid policy of separation of races. These were non-white or Black neighbourhoods that “developed as dormitory settlements without any substantial ‘urban’ elements, as witnessed by their rudimentary infrastructure (public services, recreation, industry, transport, green spaces)” (Jürgens et al., 2013, p.256).

According to Gustafsson & Patel (2006, p.69):

“The 1998 National Norms and Standards for School Funding (or the 'School Funding Norms') introduced provincial poverty quintiles as a key element in education planning. Each province was expected to assign a poverty score to each school, rank schools from poorest to richest, and divide the schools into five poverty quintiles, where each quintile had an equal number of learners.”

The above system of provincial quintiles was subsequently changed by the 2005 Education laws Amendment Act where schools across the country were assigned a national quintile. The poverty referred to above is clarified by the Department of Education (2006, p.27) as “the poverty of the community around the school.” The quintile system has been criticized for a few reasons. According to Smith (2011, p.81), much criticism has been levelled against this system as it has been noted that it is particularly insensitive to “actual poverty levels within the school intake.” This refers to the socio-economic circumstances of the learners that attend a particular school. Therefore, clarity on the term disadvantage is imperative. The term disadvantage is very significant not only within the basic education sector but also at tertiary level. Within the tertiary education sector ‘Disadvantage’ is used as a major criterion for the selection of students from a particular background into access programmes at most universities in South Africa and it performs the function of redress. The level of disadvantage of a school can be obtained from the Department of Education (DOE).

1.2.1. Definitions of Disadvantage

Defining disadvantage in the South African context is a vital task as this term is often used to meet out key government functions of redress. It determines how resources are distributed by government (as discussed in the preceding section). The current research will therefore, problematize the concept of ‘disadvantage’ and its relationship to literacy competency. It will argue that the presence of certain literacy practices (such as excessive note-taking and teacher-directed stance) and/or the absence of other literacy practices (such as lack of inquiry based learning or independent reading) is an additional dimension of disadvantage. It will therefore argue

that educational disadvantage is more complex than a single contributory factor such as a lack of physical resources or a community's socio-economic circumstances.

There are a variety of definitions for the term 'disadvantaged'. Most of which hone in only on one or two contributing factors of disadvantage. The issues of socio-economic status, gender and race are all considered critical contributory factors when defining disadvantage. The issues of social class, gender and race form a major part of an individual's identity which has implications for educational outcomes. This complex interplay between race, gender and class begins to affect educational outcomes at an early age as exemplified in the following excerpt:

“In asserting their masculinity in the preschool, working class boys might choose gross-motor construction activities over reading or pre-reading activities. Similarly, some girls may identify more strongly with home-corner play and favour nurturing activities over construction choices. Class, gender, ability and ethnicity are all complicit here and while the permutations are far from simple or even consistently applied, it is clear that they do exist and that they do often lead to underachievement” (Siraj-Blatchford, 2004, p.11).

It appears that from the onset of formal education, children begin to make critical choices that are informed by their race, class and gender which ultimately influences attainment. Although explored separately in the following section it should be noted these factors of race, class (socio-economic status) and gender are all inextricably linked and contribute in varying degrees to the level of educational disadvantage experienced by learners.

1.2.1.1. Socio-economic status (SES)

According to Ginsborg and Cleggs (2006), socio-economic status (SES) ranges from aspects such as family status and type of housing to maternal education. Ginsborg (2006) analyses how SES disadvantage impacts on children's language acquisition and use which have consequences for their academic literacy development and achievement. She provides evidence as to how low SES is detrimental to language development and it contributes to below average literacy levels. This is particularly important to the current research as it will take into consideration literacy development in a community that has a low SES.

Various other studies have shown that literacy proficiency, at every stage of acquisition, is adversely influenced by the poor socio-economic community in which the schools were situated (Ndebele, 2015; Howie et al., 2012; Hooper et al., 2014; Lessing & De Witt 2005; Pretorius & Machet 2004; Dixon, Place & Kholowa, 2008). In a South African study of grade 6 learners conducted by Smith (2011), a low SES was shown to be the common feature that characterized those who performed poorly, regardless of whether the school they attended was well resourced or not. This is particularly interesting as it points to the fact that the current form of redress might need to be reassessed. Aside from the physical resources in their schools a large majority of previously disadvantaged learners face other challenges to achieving good results which needs to be addressed at community level. It is interesting to note that SES as a contributor to educational disadvantage is a global phenomenon which is observable in affluent places like the UK (Demie, Butler, & Taplin, 2002).

Low socio-economic status does not only affect the home environment of learners but also the classroom environment. In South Africa, the intersection of poor home SES and the schools SES (such as those conditions experienced by learners in township schools) means that learners are doubly disadvantaged (Themane & Osher, 2014; Ndebele, 2015; Howie et al., 2012; Hooper et al., 2014). The impoverished home environment is met with the substandard education received by many learners because of teachers who are not adequately trained, a struggle with the language of instruction, a profound shortage of resources which is usually accompanied by overcrowded classrooms and poor governance (Chikoko et al., 2015; Spaul, 2012; van Staden & Howie; 2006). These are some of the issues that will be considered in this research on how disadvantage affects literacy. The research¹¹ is thus positioned amongst similar projects undertaken in Southern Africa (see Adams 2003; Netnou 2004; Rosa 2004; Dixon et al., 2008; Wildeman 2010).

1.2.1.2. Gender

Despite the strides made in terms of gender equality, being female means being disadvantaged educationally (UNESCO, 2015; Taş, Reimão, & Orlando, 2014). For many developing countries around the world, religious and political instability have a direct effect on girls receiving education.

¹¹ The unique perspective of the research is detailed later in the chapter.

Gender disparity in terms of enrollment and learning outcomes is still a concern. According to UNESCO (2015) in Sub-Saharan Africa, the number of girls that will never attend school is 70% and learning outcomes for girls are also compromised in poor countries like Zimbabwe and Kenya where girls underperform compared to boys. Legislation in South Africa makes schooling compulsory for all children up to and including grade 9. This has meant that there is now negligible gender disparity in terms of educational access or attainment (Heaton et al., 2014). However, girls are still disadvantaged because of sexual violence that is very prevalent in South Africa and this has been linked to low performance in both mathematics and literacy (Jacobs, 2014; Tikly, 2011; Themane & Osher, 2014).

There is still a marked dearth of participation of girls in key subjects such as Mathematics and Science which limits employment opportunities in the lucrative STEM¹² fields (Muller, Gumbo, Tholo, & Sedupane, 2014). Teenage pregnancy is another factor that disadvantages girls in terms of completing high school and it hampers them from achieving good results. It is not only the practical issues of being pregnant but also the discrimination that they subsequently face from society at large that puts them at a disadvantage (Bhana et al., 2010). It is important to ensure that girls are well educated as this will play a significant role in stopping the cycle of socio-economic disadvantage for successive generations. This is because research has shown that maternal educational level is one of the most important predictors of academic success which ultimately leads to overcoming disadvantage (Ginsborg, 2006; Timæus et al., 2013; Aram & Levin, 2001).

1.2.1.3. Race

One cannot attempt at defining educational disadvantage without factoring in race. During the apartheid era, race classifications were the single determining factor for every aspect of South Africans' lives including education. This legacy has continued to have effects in this country with terms such as previously disadvantaged still being used and is often used as a synonym for Africans. In a study conducted by Timæus et al. (2012, p.276), it was concluded that "Africans did worse at school than South Africa's numerically smaller racial groups (Coloured, Indian, and White)." According to van Broekhuizen (2013, p.45) a poor quality of education is still received

¹² According to Jacobs (2014) those who had STEM subjects as a major gained access to careers that required Mathematics and or Science. These careers were on average are more lucrative than non-STEM careers.

by “predominantly black and coloured pupils” and they are therefore unable to successfully transition into work or tertiary institutions as a result. Apartheid left scores of African people disenfranchised and educationally disadvantaged, however, it seems that race as a contributing factor to educational disadvantage is not a uniquely South African issue as evidenced in other parts of Africa and Latin America as well as in developed parts of the world (UNESCO, 2015; Taş et al., 2014; Siraj-Blatchford, 2004).

As evidenced by the studies on the different facets of disadvantage, this term is not a straightforward one. It in fact comprises of a cornucopia of factors that affect the performance of learners. The solution then is not merely to improve the physical resources at schools¹³ but to adequately address the other factors because “For the poorest pupils, it seems that other factors counteract the advantages of attending well equipped schools” (Smith, 2011, p.84). It is important, therefore, to understand the interplay of these factors that contribute to educational disadvantage.

1.2.2. The deficit model

The term disadvantage is often used to imply a deficit or intellectual deficiency in the person being referred to as disadvantaged. Deficit theory is used in education to explain why certain groups of people do not perform well academically (Valencia, 1997). It is a theory that postulates that poor performance is the result of an innate inability of the individual student/learner. It is not critical of the context in which that performance takes place i.e. all the factors that impact on educational outcomes, so it essentially blames the victim for what are systemic problems (Smit, 2012). In South Africa, the education system is pervaded by this model of thinking and its effects on teaching are evident (Marshall & Case, 2010). Deficit thinking locates the problem within the student so the approach to teaching is to try and ‘fix’ the problem and any failure of said efforts is attributed to either laziness or inability on the student’s part (Smit, 2012).

¹³ “The post-Apartheid government sought to overcome the widely varying quality of schools in terms of resourcing and facilities by targeting funding at improving school conditions, in particular for the schools and communities in most need. It was hoped that this would be a key element to raising attainment. However, this policy has undergone some criticism...” (Smith, 2011, p.89).

The use of deficit thinking is counter-productive to creating an equitable society because this way of thinking serves to reinforce certain stereotypes (Castro, 2014). According to Govender (as cited in Smit, 2012, p.372) the use of lower entrance requirements for African students in tertiary institutions is an example of this because “when ethnicity is used as a proxy for disadvantage, it almost inevitably leads to fixing stereotypes and, as some argue, racial prejudice.” Kapp et al. (2014, p.51) assert that labels such as “disadvantaged” and “marginalized” are harmful in that these have the effect “of stereotyping and thereby reifying identity.” This term disadvantage therefore needs to be used cautiously to guard against stereotyping individuals and further victimizing the victims of historical injustices (Valencia, 1997).

Therefore, in employing this term in the present study, the researcher is keenly aware of the negatives connotations that accompany it (Kapp et al., 2014; Marshall & Case, 2010). However, it should be noted that disadvantage in this study in no way implies intellectual deficiency. Rather, it is reference to the negative effects of the apartheid system which continues to affect people and their circumstances in post-apartheid South Africa more than two decades later (Walker & Mkwanzazi, 2015; Seekings, 2014; Moletsane, 2012). So there is no other term, according to the researcher, that more accurately describes the socio-economic conditions that majority of the South African population find themselves in than ‘disadvantaged’. It can therefore be said that the use of the term disadvantaged in this thesis is necessary and appropriate.

1.3. Rationale for the study

The personal motivation for this study arose from my experience of teaching students from what is largely termed disadvantaged backgrounds (according to the quintile ratings). I am currently employed at the University of KwaZulu-Natal and I teach a first year course designed to help students become scientifically literate. I was intrigued by the fact that there were learners in this programme who exhibited exceedingly poor levels of literacy despite attending schools that were not considered disadvantaged according to the Department of Education (DOE) rankings¹⁴. These students were most notably from township schools. Their level of literacy was on par with those students who came from schools that were ranked as disadvantaged. In an attempt to better

¹⁴ Although students from disadvantaged backgrounds are given preference for admittance into the programme, it is not a strictly adhered to criterion that students must be from a disadvantaged school.

understand my students' experiences within the township school and how this affected their literacy, I undertook this study.

My professional motivation was related to this term disadvantage and the inconsistent way that it is used in the educational sector, locally. In light of the importance of this term "disadvantaged" especially in South Africa and it being used as a criterion for redress as well as the inconsistency in coming to a universal definition, the aim of this study is to seek out an understanding of how the different issues that constitute disadvantage relate to one another and how they influence literacy practices. This study goes on to hypothesize that literacy practices is a critical factor that must be taken into account in the definition of educational disadvantage. It endeavours to problematize the current definitions of disadvantage held by stakeholders in the educational sector by showing how a school categorized as decidedly "not disadvantaged" can be constituted as disadvantaged by the kind of literacy practices that take place. Literacy practices may be the one aspect that might explain why schools that one would expect positive outcomes from (because they do not meet the traditional disadvantaged definitions) actually show poor performance amongst learners.

1.4. Significance of the Study

There is a dearth of research on literacy and its relation to disadvantage in township high schools in South Africa. The literature available on literacy in South Africa focuses mainly on early literacy development (Taylor & von Fintel, 2016; Makalela, 2015; King & Chetty, 2014; Dhunpath & Joseph, 2014; Spull, 2012; Manyike, 2013; Wessels & Mnkeni-Saurombe, 2012; Nassimbeni & Desmond, 2011; Smith 2011; Donald & Condy, 2005; Lessing & De Witt, 2005; Prinsloo & Stein, 2004; Wildsmith, 1992; Adendorff, 1999; Bloch, 2000), or on tertiary/adult literacy levels (Makalela, 2015; Woollacott, Simelane & Inglis, 2011; Pretorius, 2002; Hugo, 2003; van Dyk, 2005; van Wyk, 2002; Prinsloo & Breier, 1996).

There has been some work done on the literacy development in secondary schools in South Africa (Joubert, Ebersöhn, Ferreira, du Plessis, & Moen, 2014; Chaka, 2015; Dhunpath & Joseph, 2014; Dornbrack & Dixon, 2014; Cekiso, 2012; Pierce, 1994; Du Toit & Bouwer, 2009; Gerrard, Ward, & Proctor, 2003; Kapp, 2002; Kapp, 2004; Pretorius & Ribbens, 2005; Blunt 1998), but this body

of work is considerably underdeveloped compared to both early literacy development and tertiary/adult literacy development. Much of this research also focuses on either one aspect of literacy (e.g. reading or writing) or one aspect of disadvantage (e.g. maternal education or SES). The current research study falls within this body of work but proposes to bring a new perspective to the field by addressing literacy issues at secondary school level in a holistic manner. Multiple literacies as well as multiple disadvantage factors will be considered in relation to one another.

1.5. Conclusion

This chapter served to introduce the reader to the prevailing issues that currently dog the educational system in South Africa. The concept disadvantage and its various uses within the educational sector were briefly explored and lastly, the rationale and significance of this study were explained. The next chapter addresses literacy research conducted in South Africa with a particular focus on the development of literacy and disadvantage.

Chapter Two: Review of related literature

2.1. Introduction

The ensuing chapter details a brief history of the basic education system in South Africa. This is done to give context to the current study. It details how the political, economic and social landscape of the country has shaped the current education system in South Africa. This chapter provides a selective overview of the research that has been carried out in the country pertaining to the issue of literacy with particular reference to how it relates to disadvantage.

2.2. Apartheid legacy

The legacy of apartheid (implemented in 1948) and colonialism prevails in the current education system despite the strides made by the South African government since the inception of democracy more than two decades ago (Nel, Troskie-de Bruin & Bitzer, 2009; Spaul, 2012; Maringe et al., 2015). The majority of the South African population is denied access to quality education as previously disadvantaged schools continue to experience issues of poor infrastructure, teaching amenities and a lack of staffing, teacher absenteeism and poor pedagogical practices (Maringe et al., 2015; Spaul, 2013; Pretorius & Currin, 2010; Bloch, 2009; Pretorius & Machet, 2004). The history of the country pervades every sphere of the education system by influencing every decision made.

During apartheid, education was used as a political tool to segregate the races. A hierarchy in terms of which race would get the best education was created with the African race being subjected to substandard education (Manik, 2016; Spaul, 2012). Resources were unequally distributed with the white minority benefiting from the bulk of the education budget and with African schools getting minimal financial support (Jürgens et al., 2013; Mestry & Naidoo, 2009; Gustafsson & Patel, 2006). The schools were separated during apartheid under different departments run by and for designated race groups. According to Bloch (2009), in 1955 the Bantu Education Act was implemented for Africans which was followed by separate education for Coloureds (1963), Indians

(1964) and finally Whites (1967). The House of Assembly (HOA) was for Whites¹⁵, the House of Representatives (HOR) was for Coloureds, the House of Delegates (HOD) was for Indians and the Department of Education and Training (DET) was for Africans. This segregated system of education lasted till 1990.

From 1990 to 1994 is considered to be the transitions years as the country was preparing to dismantle the draconian apartheid regime and usher in a new democratically elected government (Chisholm & Chilisa, 2012). After the country's first democratic elections, these departments were all dismantled and a new management structure was proposed for the South African education system that saw a separation in the management of basic education and higher education (Heaton, et al., 2014). According to Spaul (2013, p.438) there is now in this post-apartheid era a bi-modality of performances that can best be described in the following manner:

“For whatever reason, historically disadvantaged schools remain dysfunctional and unable to produce student learning, while historically advantaged schools remain functional and able to impart cognitive skills...”

Further to this, the learners that attend historically African schools are African while the learner populations in historically White schools are racially heterogeneous: “almost all of these students are from middle and upper class backgrounds, irrespective of race” (Spaul, 2013, p.438).

2.3. The relationship between apartheid and the curriculum

Bantu education was introduced in 1955 for the masses of Africans to give them the necessary skills to provide the country with manual labour (Posel & Casale, 2011, Bloch, 2009). This was seen as the most fitting position for the majority of the people because according to apartheid ideology, non-whites¹⁶ were intellectually inferior and had to take on subservient roles in society. Africans were not given the kind of education that would enable them to easily gain access to economically powerful positions. So when the country was finally free of the heinous apartheid

¹⁵ My view on racial classifications is that they are abhorrent but any reference to South Africa's past necessitates their use.

¹⁶ Non-whites also used interchangeably with Black, was an apartheid construct that was used to refer to all other race groups (Africans, Indians and Coloureds) except White.

regime, there was an overwhelming psychological and political (discussed in more detail in the following section) need to move as far away as possible from the kinds of policies and programmes that were seen to be of that regime. Curriculum 2005 (C2005) was implemented in 1997 and was perceived as radically different from apartheid era education (Maodwa-Taruvunga & Cross, 2012)¹⁷. The curriculum of C2005 was outcomes based¹⁸ and was modeled on what was used in advanced industrialized countries (Macdonald, 2002). The pitfall of using such a curriculum was that systems were not in place for it to succeed. Resources were simply not available both material and human (Jansen, 1999; Bloch 2009; Chisholm, 2005).

2.3.1. “OBE, The epitome of political symbolism”

Jonathan Jansen has written extensively on the pitfalls of C2005 even when it was rather unpopular to do so (Jansen, 1999; Chisholm, 2005). The newly elected post-apartheid government sought the support of all major role players so it was looked at as a kind of betrayal when Jansen began to level criticism against this new policy in education that stood as an epitome of political symbolism during those years of transformation (Jansen, 2000; Jansen, 2001; Jansen, 2002). His critique on the educational policies in post-apartheid South Africa span more than a decade.

He has, however, ceased to be the sole critic of post-apartheid education reform. His position on this issue has been strengthened by other voices such as that of Linda Chisholm who has decried the poor relationship between policy and implementation and other related curriculum issues (Chisholm, 2005). According to Maodwa-Taruvunga & Cross (2012, p.126), Jansen’s “seminal “thesis” on why OBE would fail started a public debate that would attract other South African scholars into what would become one of the most important and captivating debates in the last decades of educational reform in developing countries.”

2.3.2. OBE as Problematic

The myriad of problems with the OBE curriculum were also convincingly argued by Macdonald (2002). At the heart of this curriculum was the theoretical underpinning of constructivism. The

¹⁷ “In its intent, C2005 was a dramatic departure from the authoritarian subject- and teacher-centred apartheid curriculum and pedagogy, as it marked a paradigm shift from a subject-dominated to an integrated curriculum with an active learner and a facilitating teacher” (Maodwa-Taruvunga & Cross, 2012, p.128).

¹⁸ Therefore, it was commonly referred to as Outcomes Based Education (OBE).

very nature of this theory implied that knowledge is created by the learners so this in essence implies open-endedness. Therefore, the notion of having specific “outcomes” using this approach is contradictory. The negative outcome of this contradiction has been two fallacies which have been detrimental to learners:

“First of all, it is a fallacy that one can dictate in advance the development of a learner and assume that all learners can achieve the same outcomes...The second is equally grave. It presumed that the process of language literacy and communication can simply be worked backwards from an ideal end state” (Macdonald, 2002, p.118).

These contradictions signaled poor understanding of literacy development/acquisition and perhaps teachers should have participated in the development of C2005 rather than just being called upon to implement it after it had been devised (Jansen, 2010). According to Blignaut & Au (2014) the lack of consultation with teachers and poor training for the implementation of C2005 was a major reason that it failed. The explicit teaching of reading and writing was not included in the curriculum outline so although many teachers continued to explicitly teach these skills, the majority interpreted this to mean that it would happen incidentally (Macdonald, 2002). The consequence of this was that early literacy of children was not prioritized jeopardizing their future scholastic endeavors because they were left essentially functionally illiterate (Spaull, 2013).

The irony of this situation was that C2005 which was meant to deliver quality education to all, ended up widening the gap between the previously advantaged and previously disadvantaged schools as those teachers who continued to teach explicit reading and writing were from previously advantaged schools (Maodzwa-Taruvunga & Cross, 2012; Spaull, 2013). Needless to say, the consequences of not learning to read had repercussions throughout the affected children’s lives as reading to learn is an imperative skill as one progresses through the education system (Bharuthram, 2012; Van Staden & Bosker, 2014). The evidence of the damage done by C2005 was evident when the first cohort of learners participated in PIRLS 2006 and performed dismally (Zimmerman et al., 2011).

2.3.3. Curriculum revision

As a result of the overwhelming criticism of the outcomes based nature of C2005, the South African department of basic education (DBE) revisited this policy and on 6 July 2010 the Minister of Education Angie Motshekga announced that there would be a revision which led to the National Curriculum statement (DoE, 2010). The revision included teaching the chosen LOLT as an additional language from grade R, developing workbooks for learners and ensuring the accessibility of textbooks for learners.

There were also changes made in terms of the assessment practices as there was a shift away from the large number of projects that learners had to produce. As with the introduction of C2005, the ambitious plans of the government were frustrated by the harsh reality of the South African educational landscape (Maodzwa-Taruvunga & Cross, 2012; Jansen, 2002). The same lack of concern for reality pervaded the revision process declared Spaul (2013). The document entitled 'Action Plan 2014: Towards the Realisation of Schooling 2025' (DBE, 2010) reads more like the government's wish-list than a practical plan of action with specifics on its implementation (Spaul, 2013).

2.4. Curriculum and Policy Statement (CAPS)

Further review and criticism by academics¹⁹ (as discussed in the previous section) and various other stakeholders led to yet another revision of the curriculum (Harrop-Allin & Kros, 2014). This time the 2002 curricula were combined from Grade R- 12 into one document instead of being separated into 2 categories (i.e. Grades R-9 and Grades 10-12). This new document would be called the National Curriculum Statement Grades R-12. Now instead of the Subject Statements, Learning Programme Guidelines and Subject Assessment Guidelines there would be Curriculum and Assessment Policy Statements (CAPS) for each of the DBE approved subjects along with a national policy in terms of promotions and assessment protocols (DBE-CAPS-EFAL, 2011).

This revision too has been met with some criticism. Msibi & Mchunu (2013) argue that it is self-defeating to try and modify the curriculum and not properly equip those whose job it is to teach

¹⁹ See Jansen & Christie, 1999; Potenza & Monyokolo, 1998; Taylor & Vinjevold, 2003 (as cited in Ramatlapana & Makonye, 2012).

that curriculum especially in the face of the crisis South Africa is currently experiencing with the lack of teacher professionalism. They add that CAPS in effect was a way to “teacher-proof” the curriculum by giving teachers as little autonomy as possible (ibid, p.25). Part of the characteristics of the lack of professionalism is the apartheid culture that prevails in township schools which consequently lead to poor pass rates (ibid).

Msibi & Mchunu (2013) argue that apartheid still has effects on the schooling system to this day and point out that these effects are particularly prevalent in the township and rural schools. Studies²⁰ showed that teacher competence in terms of their content knowledge (especially for mathematics and science) is so poor that “only 33 per cent of teachers teaching Grades 4–7 in 1 000 schools across four provinces were able to pass numeracy tests at the level that was expected of their pupils²¹,” (ibid, p.27).

Moreover, despite the three changes to the curriculum and assessment policy effected by the DBE from 1997 to 2012, none of these (C2005, RNCS & CAPS) articulated particularly well with the language in education policy (LiEP)²² (Heugh, 2013; Dhunpath & Joseph, 2014). The disjuncture according to Plüddemann (2015, p.190) is as a result of the language in education policy and curriculum policy being “developed along parallel, nonintersecting lines” where confusion arose regarding English as a subject and English as LOLT. The underlying intention of the 1997 LiEP was to place value on and preserve African languages by legislating multilingualism (ibid). The CAPS curriculum on the other hand, with its emphasis on the early introduction of English as a subject, presumes English as the LOLT of learners and thereby promotes subtractive bilingualism (Heugh, 2013). The sudden drop in learner performance from Grade 4 onward can be attributed to this disjuncture between curriculum policy and LiEP (Plüddemann, 2015; Spaul, 2013; Posel and Casale, 2011). This issue is more thoroughly discussed in the ensuing section.

²⁰ The following studies were cited in Msibi and Mchunu (2013, p.27): Bloch (2009); Ramphela (2008); Moodley (2003); and Zille (2010)

²¹ The word pupil is used interchangeably with learner although the correct nomenclature at present in South Africa is ‘learner’.

²² DoE (1997)

2.5. Language of learning and teaching (LOLT)

The language of learning and teaching (LOLT) is an area of contention (King & Chetty, 2014; Plüddemann, 2015; Heugh, 2013; Dhunpath & Joseph, 2014; Makoe & McKinney, 2014). During the apartheid era African children were forced to learn in their first language (L1) up to grade 8 and had to switch to either English or Afrikaans as the medium of instruction. Under the new dispensation, the language in education policy gives power to the schools' governing bodies to decide what the LOLT will be. In reaction to what some parents believed to be negative apartheid policy (educating learners in their L1), many parents opted to have English (which is often a second or third language) as the LOLT because of the "symbolic and material capital" of English (Heugh, 2013, p.218). This however has been argued to be detrimental to children as it has been proven that good proficiency in one's L1 inevitably leads to proficiency in the second language (Posel and Casale, 2011).

Research has consistently shown that additive bilingualism is more advantageous than subtractive bilingualism (Heugh, 2006; Luckett, 1992). In South Africa many children often struggle with the new literacy demands of the 4th and 5th grades (that of reading to acquire new knowledge) as a result of subtractive bilingualism because they have not mastered reading in the LOLT. According to Macdonald (2002, p.127) African children face a "register shock" when they are unable to meet the academic demands placed on them because LOLT not their first language.

2.6. Lack of resources

In addition to the complexities of using English as the LOLT, the lack of resources compounds the issue. The negative effects of the lack of reading material cannot be underestimated. Not only do children not receive books, when they do, they are not allowed to have their own copies and take them home (Smith, 2011; Heugh, 2013; Joubert et al., 2014; Howie et al, 2012). When learners are not allowed to take books home, it has a negative effect on learning and it seems to be a common practice in schools in low income areas (Taylor, 2008). The schools in these areas also characteristically have classrooms that are print poor environments. According to Pretorius and Machet (2004), print poor environments consist of minimal posters and charts which often do not relate to the syllabus.

A key issue that needs to be raised is whether the problems identified in various studies about the lack of resources (Maringe et al., 2015; Zuze & Reddy, 2014; Van Staden & Bosker, 2014; Macdonald, 2002; Probyn et al., 2002; Probyn, 2006; Prinsloo & Stein, 2004; Pretorius & Ribbens, 2005; van Staden & Howie, 2006) are being adequately addressed. Government spending on schooling can affect literacy in terms of resources. As noted in Krashen (2004) restricted or no access to libraries has a negative impact on the development of literacies required at school.

What is also important is that even if there are libraries at schools, it is important that these libraries are well stocked so as to give learners a choice of books. Choice encourages free voluntary reading which in turn has a positive impact on literacy acquisition. Krashen (2004, p.57) aptly summarizes the state of affairs in South Africa:

“One of the major goals of language education should be to encourage free voluntary reading...while we have paid lip-service to the value of reading...there has been only limited real effort in this direction.”

Lack of resources and underfunding has been shown to negatively impact academic performance (Smith 2011; Bloch 2009; Banda & Kirunda, 2005; Zhou & Botha, 2007; Pretorius & Machel, 2004). There are still many schools that are under-resourced and under-staffed (EMIS 2006). According to van Staden and Howie (2006) this stems in South Africa from factors such as the inferior education received by many learners because of teachers who were not adequately trained, their additional language being used as a language of instruction, a shortage of resources, overcrowded classrooms and poor school governance.

2.7. Financial solutions to a systemic problem

The South African government set out to address this situation by implementing a pro-poor²³ spending model (Gustafsson & Patel, 2006). However, the ravages of apartheid on the education system cannot be undone overnight. The government is currently trying to remedy this situation as “International and national studies on SA achievement over the recent decade or so attribute the

²³ Pro-poor spending is a description of the funding model adopted by the Department of education where finances are distributed on a sliding scale according to the poverty ranking of the school. This means that the poorest schools will get the most funding and the richest schools the least (Yamauchi, 2011).

vast attainment differences amongst primary school learners to the legacy of the Apartheid system in creating a hugely unequal society prior to 1994,” (Smith, 2011, p.80).

According to a study conducted by Gustafsson & Patel (2006), the public spending in the schooling system has dramatically improved compared to that which existed in the apartheid system in 1991 and before. In order to calculate this expenditure they used an elaborated Gini coefficient²⁴ called the concentration index. It is of interest to see what is being done to redress the problems created by the apartheid government with this reformed expenditure. “Based on the Norms and Standards of Minimum Funding Policy (South Africa, 1998), schools are funded according to quintile ranking. Those that were previously disadvantaged were to receive about seven times more than those schools that were advantaged” (Mestry & Naidoo, 2009, p.108).

According to Smith (2011), the substantial expenditure on the poorest schools has not yielded the kind of results (in terms of learner performance) as expected. There are a variety of reasons for this which include poor management; a lack of proficiency in the language of learning and teaching; the SES of learners; underqualified teachers; and the absence of the very poorest schools from state records which results in these schools being unable to access funding (Visser et al., 2013). As Morrow (2009, p. 26) succinctly points out “ it is a shallow and myopic educational policy that proceeds as if the simplifying manoeuvre of distributing the material resources for education more equitably will accomplish either equality or development.” Rather, it is in addressing the aforementioned myriad of problems that hound the educational system presently that true equality is possible.

2.8. Teacher competence

An alarming consequence of the insidious apartheid system was the vast number of teachers who remain in the system “have a poor foundation of knowledge and mastery of subjects,” (Smith 2011, p.80). Understaffing or under-qualified staff contribute to the success or failure of the country’s education system (Maringe et al 2015; Bloch 2009). Earlier research by Van Staden and Howie (2006) showed a link between teacher qualifications and learners’ low literacy levels.

²⁴ Measures equality in the distribution of income.

Currently, Msibi and Mchunu (2013, p.27) have pointed out that SA teachers lack qualifications and competence and although qualifications may have improved considerably since the dawn of democracy, “these teachers generally continue lacking the necessary skills to interpret and to engage critically with the requirements of the profession.” It has however, been argued that the quality of teachers is not solely dependent on qualifications as innovative use of materials may be more important (Cohen, Raudenbush and Ball, 2003)²⁵. This argument seems to be without substantiation as innovation is not possible without proper knowledge and mastery of subject matter which is acquired through professional qualifications (Wolhuter, 2014).

Disadvantaged schools in South Africa often have teachers who are ill-equipped to face the challenges that they encounter (Probyn, 2006). According to Pretorius and Ribbens (2005), with the implementation of Outcomes Based Education (OBE), teachers had a crucial role to fulfill by monitoring learners and making sure that they adhered to assessment standards set out in the National Curriculum Statement (DOE, 2003, p.5). However, many teachers lacked the necessary expertise to do this, so it became clear that assessment by these teachers was compromised (Van Dyk, 2005). Teachers felt powerless in the light of the many challenges they faced such as the severely impeded reading abilities. However, they (the teachers) were themselves not particularly good readers and did not model a culture of reading to their learners and therefore the validity of their assessment of learners was questioned by academics (Pretorius & Ribbens, 2005).

Although there has been a reduction of busy work for teachers when one compares the new curriculum (CAPS) to the previous ones (C2005, RNCS), the same feeling of unease and uncertainty characterizes how they feel with the implementation of the new curriculum (Taole, 2015; Geldenhuys & Oosthuizen, 2015). They felt that training was inadequate and inefficient (Ramnarain & Fortus, 2013; Lundgren et al., 2015). This leads to uncertainty in the classroom which can affect teaching and learning. Also, a lack of confidence is compounded by questionable teacher knowledge (Smith, 2011). In the SACMEQ (Southern and Eastern African Consortium for Monitoring Education Quality) programme, South African teachers opted not to be tested on their subject knowledge (Taylor, 2008). However, when teachers are tested in small government run projects, their knowledge of the subject they taught was less than desirable with the majority

²⁵ Cited in Msibi & Mchunu (2013, p.27)

scoring between 29%-50% on the language test (Taylor and Moyana, 2005). Also, teachers were keenly aware of their knowledge deficits. In a study conducted by Ramnarain & Fortus (2013), they found that teachers' self-perceptions were that they had insufficient content knowledge.

2.9. Pedagogy

The teaching strategies of South African teachers are also an area of concern with adverse effects to the children:

“The evidence is strong that teaching in most South African schools is very ineffective, moving too slowly and at too low a cognitive level to cover anywhere near the demands of the curriculum” (Taylor, 2008).

The issue with moving too slowly and not engaging learners at an appropriate cognitive level is that they are likely to become bored and consequently lose focus. Early on in the foundation phase of school, children are exposed to varying forms of poor pedagogic practice. Children are exposed to these poor practices from as early as preschool where chorus learning and recitation are used. This is indeed an acceptable pedagogy to engage learners in learning rhymes, however, it is argued that it becomes inappropriate when it comes to the introduction of reading and writing because this results in rote learning. Rote learning is detrimental to children in terms of early literacy development as there is a marked lack of “meta-awareness of how sounds and letters combine to make particular signs, or for reflexive deployment of these resources in any other way,” (Prinsloo & Stein, 2004, p.72; Pretorius & Currin, 2010; Van Staden & Bosker, 2014; Bharuthram, 2012). Children can therefore become stuck at a particular level of literacy development.

The use of rote learning in South African classrooms is rife and is detrimental to learning outcomes (Maringe et al., 2015). When rote learning is employed in teaching language, children recognize words but read without meaning (Howie et al., 2012; Van Staden & Bosker, 2014; Pretorius and Machet, 2004). Children in essence begin to bark at print²⁶. The effects of poor learning worsen as learners progress through the grades and this becomes evident in high school (Kapp et al, 2014;

²⁶ “Readers who can decode, without understanding, are able to read aloud; this is what Wardaugh (in Smith, 1978) refers to as ‘barking at print’” (Janks, 2011, p. 30).

Cekiso, 2012; Monyooe, Tjatji & Mosese, 2014). Learners are left with an inability to go beyond decoding text which means that they are unable to effectively use reading for learning purposes (Zimmerman et al., 2011). This issue is discussed in more detail later on in this chapter. In terms of mathematics and science, rote learning is equally damaging. When students enter into tertiary studies, they are unable to apply themselves or think beyond certain learned procedures of problem solving (Woollacott et al., 2011).

The role of the teacher and sound pedagogical practices in the acquisition of literacy cannot be ignored (Botha & Makoelle, 2012; Ludwig & Herschell, 1998). It is up to the teacher to apprentice the learners into the necessary school-based academic practices (Gee 2008). According to Ajayi (2008) successful teachers scaffold literacies by employing multiple learning activities like group work and multi-modal practices. The reality of the situation is that without proper teacher training this apprenticing is compromised. This is clearly illustrated in a study done in a township schools (Kapp, 2004). Some of the poor literacy practices observed was that teachers focused on the facts and rarely pointed out genre²⁷ conventions or engaged in meta-language²⁸ discussions. Discussions related to specific text types and their grammatical features are important in enhancing the learning of additional language that is being used as the LOLT (Van Staden, 2011). Explicit instruction regarding genre conventions and linguistic features of texts are reading strategies that have been proven to increase comprehension (Cekiso, 2012). Another poor practice observed by Kapp was the serious lack of feedback on writing tasks which results from the erroneous belief that writing well would be a natural consequence of good oral skills (Kapp, 2004). Also, Hannel (2009) has noted that proper questioning in the classroom is a vital pedagogical practice.

The pedagogical practices within the language classroom also affects the way in which learning takes place in the other subjects. Within the context of South African classrooms, teachers did not expect learners to think critically (Lundgren et al., 2015; Kapp et al., 2014; Pretorius & Currin,

²⁷ Genres are “clearly recognized text types that are characteristic, and these text types are instantiated through grammatical features that are common to school-based uses of language and that reflect the purposes for which language is typically used in schooling” (Schleppegrell, 2001).

²⁸ Meta-language is the language that is used to describe language.

2010; Kapp (2004). This was evidenced by the level of questions asked in class²⁹. Kapp (2004, p. 260) observes the following:

“The discourse practices of the English classroom are incompatible with the need to use the language at cognitively demanding levels in other subjects, resulting in extensive code-switching and rote-learning in those classes.”

The correlation between the English First Additional Language (FAL) mark and academic English proficiency that learners would need to engage in other subjects was also deemed to be very poor by Woollacott et al. (2011). This could be directly attributed to the fact that learners are not challenged enough in their English FAL classes (Kapp et al., 2014).

2.10. Classroom discourse

The ability of learners to successfully appropriate knowledge depends on the teacher’s ability to engage in the kind of talk that allows for this, as language facilitates cognitive development (Vygotsky 1978). This talk is part of a communication system within the classroom and refers to the teacher’s participation in the system (Russell, 2012). According to Grossman et al. (2002, p.9) “through the process of appropriation learners reconstruct the knowledge they are internalizing...” Therefore, good teacher talk is essential in aiding learners to construct and shape knowledge in ways that are acceptable within specific disciplines.

One of the ways that teachers aid learners to shape knowledge is through questioning. The kinds of questions that teachers ask can be very important in terms of what children learn in the classroom. Certain questions influence the way a child thinks about a subject. According to Erdogan and Campbell (2008), questions are an integral part of teaching and learning as it helps learners to focus on specific objectives and it is useful for scaffolding tasks.

There are two main reasons why teachers ask questions. The first is to lead learners to a particular response by asking restricted questions and the second endeavours to draw out learners’ ideas or opinions (Koufetta & Scaife, 2000). The first kind of question is called a ‘display’ question where

²⁹ This theme is explored more fully in the next section on classroom discourse.

the answer is known by the teacher while the second is referred to as a ‘referential’ question where the answer is not necessarily known by the teacher (McNeil, 2012). Using Bloom’s (1956)³⁰ taxonomy, teachers’ questions can further be classified into the following categories according to the complexity levels (from least complex to most complex): recognition; recall; translation; conjecture; explanation; evaluation. The more complex or cognitively demanding questions seem to enhance learning more than the less probing questions (Şahin, 2015).

According to Erdogan and Campbell (2008) it was found that teachers employing high levels of constructivist teaching practice engaged more in open-ended questions. If closed-ended questions were asked by these teachers, then they were used to help learners realise what was relevant in that particular topic and not merely used to help learners acquire concepts or content. A constructivist environment enables learners to actively construct knowledge rather than to reproduce it.

The kinds of questions teachers ask is therefore an integral part in guiding learners’ thought processes for optimal learning to take place. However, learners also need to take ownership of the learning experience. This is made possible when learners ask relevant questions in the classroom (Dudu & Vhurumuku, 2012). This phenomenon has not been given the kind of attention that teacher questions have been given (Watts et al., 1997). This is perhaps because the majority of the questions (approximately 96%) in class are asked by the teachers (Graesser & Person, 1994). If learners do actually ask questions it does not follow the conventions of a traditional triadic dialogue³¹ sequence in that there is no evaluation of the teacher’s answer to the learner’s question (Huq & Amir, 2015).

Some of the contributing factors for learners not asking as many questions in class is that teachers may find it distracting. Many teachers are under pressure to get through teaching the content of the curriculum. So even if the teacher appreciates the importance of learner questions s/he may

³⁰ According to Tutken et al. (2012), the original taxonomy has been revised by Anderson & Krathwohl (2001) in order to meet the demands of twenty-first century curriculum and therefore the revised version does not adhere to the strict hierarchical nature of the original version.

³¹ The concept of the triadic dialogue is used to describe the interaction in class between teacher and learner. It primarily consists of three turns. The first of which is a turn by the teacher who initiates the dialogue, the second is the learner/s who respond to the teacher and the third turn is once again taken by the teacher who gives feedback or elaborates on what the learner has said. Sometimes it may be initiated by the learner. This concept is discussed in more detail in the next chapter.

view it as an obstacle in his/her endeavour to cover all the given material (Rop, 2002). Within the context of township schools in South Africa, it has been observed that teachers often rushed through the syllabus (to the detriment of the learners) so that they would cover all relevant materials for the exams (Kapp et al., 2014). Perhaps this perception of teachers (that learners' questions are a distraction) would change if the types of questions that learners asked changed. Learners invariably model their questions after the kinds that they are exposed to which means the kinds of questions that their teachers ask. According to Graesser & Person (1994, p.106) "Most teachers are not excellent role models for asking good questions."

Social conventions play an important part in the ways in which learners and teachers negotiate the triadic dialogue in the classroom. Social and cultural norms are pivotal in garnering an understanding of how learner questions (or the lack thereof) may be interpreted in a lesson. Adversarial dialogue is an integral part of school discourse but many learners may not participate because it may conflict with certain cultures that teach children it is disrespectful to question/challenge older people such as parents, elders, teachers etc. (Gee, 2008). This is the view espoused by Chick (1996) who cites cultural norms as the reason that there seemed to be a lack of participation by learners and a more teacher-directed stance in classrooms in previously disadvantaged KwaZulu-Natal schools.

Another characteristic of classroom discourse is the tendency of teachers to hone in on learners who they think are able to keep up with them as well as those learners who show an enthusiasm towards learning. According to Kapp et al. (2014), this is especially prevalent in township schools. Teachers may perceive certain learners as 'target' learners when eliciting a response (Tobin & Gallagher, 1987). These target learners may often be perceived as more intelligent than the rest of the class. They may also be the ones that respond more frequently than others in the class.

2.11. Reading instruction

Reading instruction in South Africa is poor and this has led to negative impacts on reading competency. According to Zimmerman & Smit (2014) reading instruction in the foundation grades

in South Africa comprises of a considerable emphasis on decoding skills³² and little or no contextualisation which makes it difficult for learners to proceed from decoding words to reading with meaning. This is the traditional way of instructing learners to read and is particularly prevalent in poverty-stricken areas (Knapp, Shields & Turnbull, 1995). This way emphasises the learning of letters and words before learning to read sentences which means that a learner would have to master these smaller parts before they are given the opportunity of being exposed to larger more meaningful texts.

Lesaux (2012) contends that learners from high poverty, English Second Language (ESL) homes seem to master decoding skills as well as their counterparts who are first language English speakers and come from high income households. There is however, a marked difference between these two groups when it comes to reading for meaning. A large part of this is due to instructional practices that the learners are exposed to. There is therefore a need to improve reading instruction in South Africa where a vast majority of the population come from low income homes and do not speak the LOLT (Smith, 2012). For second language learners of English the importance of reading instruction is that much more important as research shows that there were significant setbacks in reading comprehension experienced by the learners (van Staden, 2011). Van Staden (2011, p.18) showed “that they benefited through explicit guidance and scaffolding to apply “higher order” comprehension strategies such as questioning, predicting, making inferences and summarizing.” According to Gee (1990) teaching involves breaking things down into smaller portions for learners to gain meta-knowledge. This means that they must be able to engage in meta-talk.

Reading instruction that focuses on comprehension is necessary. A study conducted by van Staden and Bosker (2014) found that reading instruction was an integral predictor of literacy achievement. The key aspects of instruction related to explicit reading strategies for primary school children included word recognition, text processing and reading comprehension skills. Some strategies to improve comprehension include:

³² I am not contending that this instructional practice is not valid merely that it is the foundation of reading instruction and as the reader progresses so should the instructional practice.

“(1) maximizing the opportunity to read, (2) integrating reading with writing and other subjects, (3) focusing on meaning and the means for constructing meaning, and (4) providing opportunities to discuss what is read and extend knowledge” (Knapp et al., 1995, p.771).

There are several factors within the South African context that make the above strategies difficult to implement. To begin with the majority of South African children have limited access to books³³. This situation is worse in township and rural areas (Nassimbeni & Desmond, 2011). It is rather difficult to maximize opportunities to read when one does not have access to books. The “superficial, haphazard and decontextualised way” in which reading is taught in South African schools means that there are minimal to no opportunities for integration of reading with other subjects and no meaningful engagement with the material (Zimmerman & Smit, 2014, p. 1). According to Pretorius & Currin (2010), South African learners experience the Matthew Effect³⁴. The poor foundation created in primary school, if not properly addressed, intensifies as the child grows up and enters high school. On the other hand those who have a good foundation in the primary grades excel in reading achievement in later years.

Learners’ perceptions of reading are shaped by the experiences they have early on in their schooling career. Therefore if they are taught that reading means knowing the vocabulary in the text, then this skewed perception continues as they progress through the different grades in school. This is detrimental as reading demands differ vastly as one gets to higher grades and the need to read effectively in order to learn becomes increasingly important³⁵. Lesaux (2012, p.75) states that “To read effectively, readers not only decipher words on a page, but also use accumulating knowledge to assess, evaluate, and synthesize the presented information.”

³³ Nassimbeni & Desmond (2011, p. 96) cite shocking statistics on the accessibility of libraries by South Africans: “85% of the South African population lives beyond the reach of a public library (South African Partners 2006).”

³⁴ “The term comes from the book of Matthew in the New Testament, 25:29: For unto everyone that hath shall be given, and he shall have in abundance, but from him that hath not shall be taken away even that which he hath (Pretorius & Currin, 2010, p. 67)

³⁵ Van Staden & Bosker (2014) describe how reading develops from ‘learning to read’ in the foundation grades to ‘reading to learn’ in the higher grades which essentially means that reading becomes an essential tool for learning.

The importance of reading instruction cannot be overemphasized and should be done as early as possible. According to van Staden & Bosker (2014, p.7) it is integral in helping learners “successfully progress from ‘learning to read’ in the Foundation Phase to ‘reading to learn’ in the Intermediate Phase and beyond.” This failure to move on to the ‘reading to learn’ phase has impacted on overall educational attainment (Bharuthram, 2012). The lack of effective reading has negatively impacted on educational outcomes across all disciplines (mathematics; science; and the languages) within the South African schooling system (ibid). It has been argued that teaching reading across the curriculum (not only in the language classes) is the best approach and ensures that learners receive maximum benefit (Staden & Bosker, 2014; Bharuthram, 2012).

2.12. Impoverished school environment

It would be naïve to believe that children’s learning is only the result of the curriculum and pedagogy as the environment created in the school is also a contributing factor (Maringe et al., 2015; Themane & Osher, 2014; Godfrey et al., 2012). The teacher brings to the classroom his/her social beliefs. For many children harsh discipline is part of the learning process. In examining the experiences of children in South African classrooms, Prinsloo and Stein (2004) provide the Sivile Pre-school Centre as an example of a school where harsh discipline forms part of the learning process. Teachers believed that it was their job to produce docile learners. Learning consequently took on a negative connotation as it became associated with corporal punishment³⁶. In South Africa, corporal punishment is a feature in some schools although it is illegal. “Corporal punishment is outlawed in schools but undoubtedly still occurs with frequency in many schools, where teachers defend it as being “part of our culture”,” (Prinsloo and Stein, 2004, p.77).

Many South African learners experience a schooling environment that is not conducive to learning because of the legacy of apartheid that continues to prevail. Some of the characteristics that arose during the apartheid era were “poor teaching; reliance on rote teaching and learning; low proficiency in the medium of tuition; poor school management; low levels of professionalism; and few resources,” (Pretorius & Machet, 2004, p.129).

³⁶ Corporal punishment is banned in South African schools (Tikly, 2011).

Despite having almost two decades of democratic rule in South Africa and significant changes to the school curriculum being implemented, it is questionable whether these changes have resulted in more productive literacy practices in the classroom, for example the implementation of C2005 at the onset of democracy. This system was an attempt by the Department of Education in the new democratic South Africa to remove all traces of Bantu Education. However, local conditions of a general lack of resources were not taken into account when designing this system. Thus thousands of schools suffered as a result of this mismatch between what the curriculum sought to do and the practical realities of the impoverished South African classrooms. Macdonald (2002) asserts that the outcomes based strategy that was used in C2005 was better suited to more developed countries than South Africa. He asserts that it would have been more successful if South Africa was similar to OECD³⁷ in terms of resources as schools in these countries had “favourable teacher-learner ratios, a high degree of professional education of teachers - well-resourced classrooms, and critical-thinking teachers” (Ibid, p.112) In South Africa the situation is markedly different with high teacher-learner ratios and a lack of human and material resources (Bloch, 2009; Maringe et al., 2015; Smith, 2011).

An overwhelming number of previously disadvantaged schools are still characterized by the underfunding, lack of resources and poor management (Kapp et al., 2014; Maringe et al., 2015; Pretorius & Mchet, 2004; Lessing and de Witt, 2005). The situation of poor resources is not however unique to South Africa. Many under-resourced countries around the world, such as Mexico and Zimbabwe, face the same situation with a lack of resources that impact negatively on literacy levels (Francis, 2000; Zhou & Botha, 2007).

According to Chikoko et al. (2015) poor school leadership and management also contribute to a schooling environment that is not conducive to learning. They assert that good leadership is so vital that a school that faces multiple deprivation factors³⁸ be successful if it is in place. The problem of absenteeism of teachers, timetabling issues and fighting amongst staff are rife in many schools across South Africa (Maringe et al., 2015; Spaul, 2012).

³⁷ OECD refers to Organisation for Economic Cooperation and Development, whose members are advanced industrialized countries

³⁸ Multiple deprivation factors refer to a confluence of measurable poverty indicators that “conspire against the developmental aspects” of learners (Maringe et al., 2015, p. 366).

2.13. Poor home environment

Since literacy is a function of several factors, these contributing factors (curriculum, pedagogy, school environment, home environment) need to be considered when trying to establish ways in which to improve literacy levels (Maringe et al., 2015; Spaul, 2013; Joubert et al., 2014; Van Staden & Bosker, 2014; Janks, 2014; Kapp et al., 2014; Nassimbeni & Desmond, 2011; Lundgren et al., 2015; Levitte & Owl, 2013; Bridges, 2014; Siraj-Blatchford, 2004; Masitsa, 2011; Haneda, 2006; Manyike, 2013; Janks, 2011; Smith, 2011). In South Africa, one of the contributing factors to poor literacy levels is poverty in the home. This is because children in disadvantaged homes generally do not have parents who “engage in literacy activities in the home and act as literate role models” (Pretorius & Ribbens, 2005, p.140). According to Bridges (2014) a large percentage of these children are never read to by their parents. The parents generally have very low literacy levels themselves and do not expect much in terms of academic achievement from their children.

Making literacy choices such as voluntary reading are informed by issues such as the financial situation of the family (Bridges, 2014; Levitt & Owl, 2013). According to Banda (2003) accessibility to reading materials outside the classroom does not only encourage general literacy development but it also facilitates access to dominant literacy practices required in school. A large majority of South African school children are only exposed to the kind of literacy that is required in school when they enter school (Bridges, 2014; Smith, 2011). They are then left to grapple with the literacy demands of school. They often read slower and are less successful than those children who have had “preliteracy experiences” that introduce those at school (Machet, 2002, p.4).

2.14. Poor reading levels

It is little wonder then that the South African education system seems to be dogged by the issue of poor literacy levels. In a 2006 international research project, PIRLS (Progress in International Reading Literacy Study), South African children performed the worst amongst 40 countries on different reading tasks (Mullis et al., 2007). The shocking reality presented by the study is that: “Only 13% of Grade 4 learners reached the Low International Benchmark, in stark contrast to the 94% of Grade 4 learners doing so internationally. Therefore, 87% of Grade 4 learners and 78% of Grade 5 learners did not reach any of the benchmarks,” (Zimmerman, Howie, & Smit, 2011, p.218).

The extremely poor reading ability of learners is directly linked to their performance in school as they have not learnt to read at the appropriate level (usually grade 4) and are expected to read to learn as they reach higher grades (Zimmerman et al., 2011). This trend of poor literacy levels also seems to be prevalent in the higher education sector (Van Wyk, 2002; Van Dyk 2005). Pretorius (2002, p.170) argues that this is an “educational crisis.” This crisis has resulted from a variety of complex factors such as under-resourced schools, inadequate teacher training and the language of learning and teaching. These factors can be viewed as the legacy of apartheid educational policies that resulted in inferior education for the majority of people in the country (Heaton et al., 2014).

There exists a clear relationship between reading ability and academic performance. In a study conducted by Pretorius (2002), there is evidence that although learners may be able to decode texts they are unable to use reading as an effective learning tool. The reading level of South African schools is very poor. According to Pretorius and Mchet (2004, p.47):

“In fact, local research reports that many learners from disadvantaged schools can decode texts quite fluently but have very poor understanding of what they have read.”

Learners being able to decode texts only with very little comprehension are cause for great concern because the ability to use reading as a learning tool is a good indicator for academic success. Zimmerman et al. (2011, p.217) contend that the PIRLS 2006 results are a clear indication that “South African learners are struggling to develop the reading literacy competences” which help them to make the transition from ‘learning to read’ to ‘reading to learn’.

2.15. Writing instruction

In South Africa as in many other countries around the world, writing instruction is not given as much attention as reading instruction (Kerfoot & Van Heerden, 2015; Dornbrack & Dixon, 2014; Al-Hammadi & Sidek, 2015; Fry & Villagomez, 2012; Harklau, 2002; Llosaa, Becka & Zhaob, 2011; De Oliveira & Lan, 2014; Wilson, 2011). In many disadvantaged schools writing may not be a priority for reasons as simple as the lack of writing materials to the inability of teachers to provide competent instruction (Smith, 2011). There seems to be this perception that if children do not possess basic language skills then writing would prove too difficult (Needels, 1995). In South

Africa it has been found that teachers' expectations of learners were very low so the level of instruction was very poor and this trend prevailed through the different phases (foundation, intermediate and senior phases) (Heugh, 2013; DBE, 2013; Layton, 2013; Taylor, 2008).

According to Needels (1995, p.85), there are six strategies that emphasize meaning in teaching writing:

“(1) maximizing opportunities for students to write extended text, (2) integrating writing and other areas of the curriculum, (3) de-emphasizing the mastery of discreet language mechanics skills and the mechanical correctness of written text, (4) teaching the process of writing, (5) connecting writing to children's backgrounds or base of experience, and (6) changing the social context of the writing task.”

There are several benefits in emphasizing the six strategies. Firstly, when learners write more they become more skilled writers. Secondly, when writing is integrated with other areas of the curriculum like science, it conveys to the learners how important writing is in all aspects of the school curriculum. It is vital for the areas of reading and writing to be integrated as this makes both practices more meaningful. Meaningful writing instruction involves allowing learners to develop frameworks for understanding how the different disciplines operate (Wilson, 2011). The third point regards the teaching of discreet skills which separates the skill from the application which is not beneficial to the learner. This does not mean that skills must not be taught but they need to be taught within a specific context. Point four addresses process writing which involves pre-writing, drafting and editing. The fifth strategy would be actively drawing on learners' lives outside of school to help learners make sense of what is meaningful to them. Lastly, writing with meaning is enhanced when there is adequate interaction with both peers and the teacher. These are all important aspects of good writing instruction however, in South Africa writing tasks in schools are “inadequate and infrequent,” (Heugh, 2013, p. 224). As a result of this, writing in schools is particularly poor.

The points mentioned above are closely linked for example points 1 and 4. When learners are given more opportunities to write then they are more likely to improve. This point is also related to the

view that learners need to regard writing more as a process rather than a product. So as much as they need to be given several different pieces of work to compose, they also need to be given the opportunity to draft a single piece of writing several times to emphasize that writing is a process. Extending composition to other areas of the curriculum is also important in writing instruction (Dornbrack & Dixon, 2014; De Oliveira & Lan, 2014; Wilson, 2011). This helps learners realise the importance of writing in all subjects. Just like reading individual units must not be emphasized, in writing the emphasis on mechanical skills does not optimize learning. The way that teachers view the whole concept of writing, informs the way they teach it (Wilson, 2011; Taylor, 2008).

The use of reading and writing has several applications in today's society where the former is practised more than the latter. A majority of jobs require at least a basic level of reading and very little writing while higher paying, high-status positions require a significant amount of both (Applebee & Langer, 2009; Kintgen, 1988).

2.16. The Articulation gap

Thus far this chapter has detailed how multiple factors (curriculum, pedagogy, home environment and school environment) impinge upon the educational outcomes of South African learners. This leads to what is referred to as the "articulation gap" when/if learners get to university then they are unable to progress successfully through their degree because their schooling career has not adequately prepared them. According to Rollnick (2010, p.91), "A gap can be characterised by what happens at the interface between the two levels of education...i.e. the articulation between the two courses or stages in education." In fact this gap starts even before learners begin school as learners who do not have the pre-literacy experience as their counterparts do are at a distinct disadvantage. "This 'articulation gap' is wider for students who come from townships and rural schools that are characterised by the unavailability of particular subjects, less qualified teachers and a lack of learning resources such as technical, laboratory and/or computer equipment" (Liccardo, Botsis & Dominguez-Whitehead, 2015, p. 378).

Spaull & Kotze (2015) and Pretorius & Currin (2010) assert that this gap widens as learners proceed through the system. Research studies have shown that the level of under preparedness for tertiary studies has grown which has serious implications (Liccardo et al., 2015; Nel et al., 2009;

Paxton, 2009; Layton, 2013). This leads to many students dropping out in their first year as they are overwhelmed by their lack of preparation for university (Dhunpath & Vital, 2014). In discussing the high first year attrition rates at universities in South Africa, Scott (2014, p. 34) asserts that “articulation gap is a major contributor to failure.” Another cause for concern is that “problems resulting from the gap between school and university have been exacerbated by inequalities that still exist in the South African secondary school system...” (Nel et al., 2009, p.975). Mgqwashu (2014) attributes the articulation gap to the lack of explicit reading instruction given to learners in school. He also asserts that learners from formally African designated schools whose first language is not English and who have poor SES are the ones that experience the most problems.

If the socio-economic and educational disadvantage that is experienced by students in the education system from Grade R all the way to university are not adequately addressed and arrested then the consequence of this inaction will be devastating. Students will be trapped in the generational poverty cycle that they so desperately want to escape. Employment becomes more difficult without a tertiary qualification and the student continues in a state of disadvantage which is eventually perpetuated in the next generation (Tikly, 2011). Not acknowledging articulation gaps also reinforces the stereotypes perpetuated by deficit theory by pretending that institutions, for example Higher Education Institutions (HEIs), are fair and that the students are innately deficient and therefore fail or dropout.

There are a range of factors that contribute to the high levels of dropout at university which include “career derailment, a lack of counselling, financial requirements and academic workload demands,” (Manik, 2014 as cited in Manik, 2015, p. 102). She highlights that students should not be viewed as deficient but rather that the level of student support needs to be addressed (Manik, 2015).

2.17. Science, Technology, Engineering & Mathematics (STEM)

Students entering into the Science, Technology, Engineering & Mathematics (STEM) fields of study experience the greatest articulation gap (Frith & Prince, 2009; Nel et al., 2009). Those experiencing this vast gap in knowledge are usually African and have low SES with African

females suffering the most disadvantage which can be attributed to the effects of apartheid (Liccardo et al., 2015). Their poor schooling preparation means that they are denied access to study core subjects like Mathematics and Science at tertiary level (except in a few cases where they are granted access through a university 'Access Programme') (Nel et al., 2009). This then denies them access into lucrative STEM fields of employment which means that the racial profile of those in these fields will not change. Several reasons have been given for this articulation gap. According to Howie, Scherman, & Venter (2008, p.31):

“...antecedent factors, such as students' home background and their age, religion, and gender, in addition to the type of school they attend and the locality of that school, affect student achievement in science...”

Despite these various factors, Howie et al. (2008) claims that language proficiency is the most consistent predictor of success in the sciences. This is not at all surprising since “sense-making tools of science are consistent with, if not identical to, those of literacy,” (Pearson, Moje, & Greenleaf, 2010, p.460). This could be used to explain why many African students perform so badly in mathematics and science. Their proficiency in the LOLT is not properly developed (as discussed in sections under reading and writing in this chapter). The language proficiency issue coupled with the lack of human and material resources in rural and township schools means that African learners are denied epistemic access, which is the “access to the knowledge that educational institutions distribute” (Kerfoot & Simon-Vandenberg, 2015, p. 177). This knowledge is governed by particular academic practices which vary according to different disciplines and epistemic access requires learners to become active participants in these academic practices (Morrow, 2009).

According to Motala (2007, p. 4) “Many learners who have structural access to schooling do not have ‘epistemic access’, or access to the content knowledge and skills needed to reach the required levels of achievement and competency.” This implies that the success of the South African schooling system may not be measured by the physical access that learners gain into institutions but rather the more accurate measurement would be their ability to understand and use knowledge

in order to succeed in school, university and their chosen career. The lack of epistemic access in school is exacerbated when learners enter HEIs.

The deprived school environments that learners are exposed to is one of the contributory factors to lack of epistemic access (Liccardo et al., 2015). The other factor according to Layton (2013) is the schools may have a very simplistic understanding of what literacy entails. This may be the reason for the high attrition rates. Language is a barrier with elementary forms of English used in SA schools, townships and rural areas especially (Paxton 2009; Makalela, 2015). What students learn in terms of literacy and more especially reading, does not empower them to effectively gain epistemic access as they progress into higher levels of education (Mgqwashu, 2014; Layton, 2013; Paxton, 2009).

2.18. Conclusion

This chapter explored a range of issues as they related to literacy development and acquisition in South Africa. It has highlighted how certain issues of disadvantage difficulties with LOLT, poor pedagogical practices related to reading and writing, impoverished school environments and poor home environments affect levels of literacy. Both the direct and indirect effects of apartheid on literacy attainment were discussed. These pertained to a lack of resources and poorly trained teachers that characterized many historically disadvantaged schools as well as the underlying historical, political and psychological factors that influenced frequent curriculum overhauls and choice of LOLT.

In the following chapter the literacy theory that underpins the current study will be explored. This theory makes use of a socialistic perspective in literacy development. What will also be explored, are the ways in which the ecology theory of human development can be used as a framework for understanding literacy development viz. an ecology of literacy development.

Chapter Three: Theoretical Perspectives

3.1. Introduction

Chapter two dealt with relevant research on literacy as well as educational disadvantage. The focus of the chapter was South Africa. Issues that were covered were the way the apartheid legacy pervaded the educational landscape with particular reference to language, resourcing and pedagogical practice. The lack of epistemic access in the educational system was also briefly highlighted. Other important concerns centred on the deficit discourse that seems to infiltrate developmental discourse and the articulation gap that exists (primarily as a result of poor high school literacy) between high school and university.

In this chapter the theories that are useful for the analysis of the phenomenon under consideration are explored. The difficulty in arriving at a definition of “literacy” is explored first. The two major perspectives used to conceive of literacy are considered. These are the autonomous and the ideological models of literacy³⁹. The attention then turns to New Literacy Studies (NLS) theory which falls within the ambit of the ideological model of literacy. This particular theory is discussed in depth along with the related terms and core conceptions as it forms the main theoretical framework guiding the study and it is also useful in fashioning an analytical framework when weaved with Bronfenbrenner’s ecology of human development theory .

There are several constructs that have arisen from NLS which include literacy events, literacy practices, primary discourse, secondary discourse as well as dominant versus vernacular literacy and multiliteracies theory. Systemic Functional Linguistics will also be explored and its usefulness in explaining why certain discipline specific discourses are particularly difficult to grasp. This chapter will also detail pedagogies that resonate with the ideological model of literacy such as scaffolding, genre-based pedagogy and inquiry-based pedagogy. Classroom discourse analysis is

³⁹ The terms ‘autonomous model’ and ‘ideological model’ are used to describe two vastly different perspectives on literacy. These terms were coined by Street (1984) who described the rationale behind them in a recent symposium: “The view that literacy in itself has consequences irrespective of (‘autonomous of’) context has tended to dominate educational thinking, a view I have described as an ‘autonomous’ model of literacy (Street, 1984). In contrast with this view, I have posed an ‘ideological’ model of literacy, which argues that literacy not only varies with social context and with cultural norm and discourses...but that its uses and meanings are always embedded in relations of power – which is why I use the term ‘ideological’...” (Street, 2016, p. 4).

also important in this theoretical exploration chapter as it is used in later chapters to analyse the interactions between teacher and learners as well as amongst learners. Issues around BICS and CALP will also be expanded upon. Lastly, the chapter turns to the ecological model of child development proposed by Bronfenbrenner and discusses its usefulness as a framework for analysing the development of literacies⁴⁰.

3.2. Pinning down a definition of literacy

The difficulty in arriving at a concrete definition of literacy is due to two major reasons. The first is that it has evolved through time because its use has evolved. Historically literacy has been shown to “span(s) a wide range of meanings from basic or functional literacy to the advanced ability to manipulate symbols and abstractions” (Janks, 2010, p.21). Therefore pinning down a definition is problematic because the definition evolves with time and according to context. An example of this is illuminated by Keefe & Copeland (2011, p.93) who discuss the changing definition of literacy offered by UNESCO:

“Their 1957 definition of literacy stated, "A person is literate who can with understanding both read and write a short simple statement on his (her) everyday life" (UNESCO, 2008, p. 18).”

This definition is very simple and quite broad in terms of what literate means. UNESCO subsequently changed the definition years later by providing context to the definition. In this case the community was the context. According to UNESCO (as cited in Keefe & Copeland, 2011, p.93):

“A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning of his (her) group and community and also for enabling him (her) to continue to use reading, writing and calculation for his (her) own and the community's development” (UNESCO, 2008, p. 18).

⁴⁰ In this study the term ‘literacies’ as opposed to literacy is employed. It is used as an umbrella term to cover reading, writing, speaking and doing that learners need, in order to acquire academic discourse within the schooling system.

This changing definition by one body shows how definitions change as our understanding of a phenomenon changes. Kintgen et al. (1988) provide an historical perspective of how the term has evolved along with society. They illustrate how being literate meant different things throughout history depending on what you were able to do. Initially being literate meant being able to sign your name. Then it (the definition of literate) progressed to mean being able to both read and recite well-known pieces of prose. The definition evolved further to include reading and comprehension of unfamiliar texts. Finally, being literate meant “reading unfamiliar material with comprehension, analysing it, and drawing inferences from it” (Kintgen et al., 1988, p. xiv).

This historical perspective reveals how the understanding of what it means to be literate has changed and signals that it is constantly evolving. Indeed, the very definition of literacy we have today will no doubt be different to the future definitions as man and technology evolve. In the past writing was reserved for the elite and the few who had the skill to use very intricate writing implements (Kintgen et al., 1988, p. xvi). Today it is regarded as a basic skill that all people need to have to be fully functional members of society. So in seeking to define and understand the concept of literacy one must be in touch with the ways in which it is used at present.

It is not uncommon to see the term literacy accompanied by modifiers which emphasize the dynamic nature of the term literacy. There are several such terms that serve as examples of the way in which literacy takes on a multiplicity of meanings in different contexts such *academic literacy*⁴¹, *emergent literacy*, *basic literacy*, *computer literacy* and *functional literacy*. According to Hodges (1999) there are approximately thirty-eight of these literacy concepts.

The second reason for the lack of a universal definition of literacy is because definitions have always been ideologically determined⁴². Literacy is a highly contested term because the very act of defining it has political, economic and social implications. This is clearly expressed by Street (2011, p.581):

⁴¹ The current study makes use of the term academic literacy.

⁴² “Definitions of literacy are not innocent: they incorporate beliefs and assumptions that have political implications” (Bartlett, 2008, p.739).

“With respect to literacy, this means that the power to define and name what counts as literacy and illiteracy also leads to the power to determine policy, to fund and develop literacy programmes in international contexts, to prescribe ways of teaching, development of educational materials, texts books, assessment.”

As a result of these contentions as well as the broadness of this term, various theories (undergirded by specific ideologies) have been developed to understand literacy. Today, the two distinct perspectives that dominate the field of literacy studies are The Autonomous model and the Ideological model (Street, 1984).

The Autonomous Model of literacy defines literacy “as independent of social context, an autonomous variable whose consequences for society and cognition can be derived from its intrinsic character” (Street, 1993, p.5). Literacy is conceived of as a cognitive decontextualized ability to read and write. The foremost proponents of this model were seminal authors Goody and Watt, who extolled the virtues of literacy in a landmark work called “The consequences of literacy” (1963). In it civilized societies are credited with having higher cognitive abilities than those of primitive societies because of the advent of writing. Literacy is consequently seen as the determining factor that sets communities apart.

The Ideological Model developed in response to the Autonomous Model⁴³. In this model literacy is conceived of as a multi-layered social practice (Street, 1984, p.44). According to Gee (2008, p.80):

“Street proposes, in opposition to the “autonomous model” of literacy, an “ideological model.” The ideological model attempts to understand literacy in terms of concrete social practices and to theorize it in terms of the ideologies in which different literacies are embedded. Literacy—of whatever type—has consequences only as it acts together with a

⁴³ This is not to say that The Autonomous model is not ideological, on the contrary it is “deeply ideological” and quite insidious in nature as it ultimately marginalizes those who are not conversant in the Western forms of literate behaviour (Street, 2011, p.581).

large number of other social factors, including political and economic conditions, social structure, and local ideologies.”

This means that literacy is context dependent and meanings are always socially constructed. New Literacy Studies (NLS) theory falls within this ideological conception of literacy. This literacy theory has become an interdisciplinary theory as it has grown substantially in recent years as a result of influences from other disciplines such as psychology and anthropology (Street, 1993). NLS takes account of the multiplicity of practices and interactions (amongst all parties involved) that take place in the teaching, learning and acquisition of literacy.

Despite the establishment of a considerable body of research based on The Ideological Model of literacy in the past three decades, the prevailing approach in educational institutions continues to be that of the Autonomous model (Parr & Campbell, 2012; Turner, 2012; Street, 2011; Bartlett, 2008). This traditional conception of literacy is simply “readily taught, learned, and tested” (Hodges, 1999, p. 28). It is still classified as a monolithic concept by policy makers in education so that it can be measured as an independent variable (Lankshear, 1997; Collins and Blot, 2003). This makes it easier to measure and to make decisions based on the statistics gained from standardized tests. It is for this reason that The Autonomous model is explored in some detail before the NLS theory (the theoretical framework for this study) is discussed.

3.2.1. Autonomous Model

The Autonomous model of literacy was one of the first theoretical approaches to literacy. It was therefore the dominant theory and continues to be the theory used in most educational institutions. A relatively large amount of discussion in this chapter is dedicated to this theory because it is still used to inform educational pedagogy and policy^{44 45}. Once the basic principles of the theory are

⁴⁴ This is picked up in chapter five where the literacy practices are scrutinized and the theoretical underpinnings of the pedagogical practices in the class are discussed.

⁴⁵ According to Parr & Campbell (2012, p.561), “Today’s literacy curriculum, instruction and assessment ideologies reflect assumptions that view literacy as a technological skill related to print where orality is not greatly valued; a generalisable ability; a concept or skill that can be used by everyone, often irrespective of its purpose or use. Further, literacy is often viewed as neutral and unbiased, not favouring any particular content, view of the world, habit, interest, value, attitude or practice. Societal assumptions include enhanced cognitive potential, greater opportunities for economic and social development, control, power and higher levels of success in life afforded by literacy (Freire and Macedo 1987; Lankshear and Lawler 1987; Olson and Torrance 2001; Street 2003).”

illuminated, it will become clear why the application of this theory in educational contexts can be used to disadvantage certain groups of learners.

The Autonomous model of literacy (a term coined by Street 1984) defines literacy as set of technical abilities/skills that are universal and can be learned in a series of phases. The basic tenets of the autonomous model are that literacy is a set of technical cognitive skills through which meaning is conveyed independent of context (Perry, 2012). It is from these tenets that certain assumptions are made such as the separation of orality from literacy and the labelling of societies (that do not possess a Western concept of literacy) as illiterate (Goody & Watt, 1963).

The model also proposes that literacy has far-reaching consequences such as an influence on logic. According to Reder and Davila (2005, p.171) the autonomous model is largely attributed to influential works of the 1960's and 1970's such as "Levi-Strauss' (1962) *The Savage Mind*, Goody and Watt's 1963 article "The consequences of literacy", Havelock's (1963) *Preface to Plato* and McLuhan's (1962) *The Gutenberg Galaxy*." "The consequences of literacy" (Goody and Watt, 1963) is the cornerstone of the Autonomous model of literacy. According to Collins and Blot (2003, p.10) literacy was viewed by Autonomous literacy proponents as a "technology of the intellect" that separated people in the different spheres of life. Some of these spheres such as intellect and politics will be discussed in the ensuing sections.

3.2.1.1. Oral versus Literate Divide

One of the fundamental principles that The Autonomous Model is built upon is the bias towards written forms of literacy. Supporters of this model argue for the written form and devalue the oral form. Goody and Watt (1963) are often cited as the foremost proponents of the oral-literate divide. The premise on which their theory is built is that the improvements in the different modes of communication led to progress in society. Man's "primitive mind" was improved by the rational thought that writing was responsible for (Goody & Watt 1963, p.305).

The oral form of communication was associated with primitive cultures and the written form was related to civilized cultures. Cultures that therefore employed an oral tradition rather than a written one were judged as "non-literate." The oral tradition is further judged as unreliable compared to

written traditions as information transferred orally from one generation to the next has the possibility of being distorted. Goody and Watt (1963) comment that the oral cannot be relied upon because of its fluid nature unlike the fixed nature of writing.

In terms of present literacy curricula, the oral abilities of learners are still not seen as particularly valuable (Parr & Campbell, 2012). This has implications for the teaching and learning of particular schooling literacies such as argumentation in writing which is prevalent in both hard science subjects (such as the discussion section in the report genre of science) as well as social science subjects (such as argumentative/persuasive essays). This is one of the academic literacies that is particularly difficult to grasp (Parkinson, 2011). It can however be improved by talking which improves learner's cognitive academic language proficiency (CALP⁴⁶) which in turn improves their writing (Layton, 2013). As literacy does not develop in a vacuum, oral engagement should be seen as a necessary part of literacy development. This point is summed up quite succinctly (Parr & Campbell, p. 565):

“There is no doubt that navigating the world requires an ability to read and write the word, but necessary precursors to reading and writing the word are hearing and saying the word.”

The importance of the oral aspects of literacy cannot be underestimated in every level of literacy development.

3.2.1.2. Consequences of Literacy

Supporters of the autonomous model of literacy assert that there are two separate societies i.e. literate and oral (Ong, 1982; Havelock, 1982; Havelock, 1986 as cited in Gee, 2008). Both are vastly different in terms of logic. This superior logic which resulted from acquiring literacy had several benefits for a particular society. Proponents of this model (Goody & Watt, 1963; Havelock, 1982 as cited in Gee, 2008) have made bold claims for the power of the written word. They claim that literate societies are more logical in the way they think than oral cultures because:

⁴⁶ CALP is discussed in more detail later on in this chapter.

“Writing is closely connected to, ‘fosters’ or even ‘enforces’ the development of ‘logic’, the distinction of myth from history, the elaboration of bureaucracy, the shift from ‘little communities’ to complex cultures, the emergence of ‘scientific’ thought and institutions and even the growth of democratic processes,” Street (1984, p.44).

Street (1984) questions the legitimacy of these claims as these claims are built upon the observation of two separate societies namely a literate and a non-literate society. But as Street successfully points out there is no such entity as a purely literate or non-literate society. Rather, all societies practice mixed “modes of communication” (Street, 1984, p.45). This is because the written word has been spread to communities that are considered predominately oral in some way by travellers etc. and every literate culture uses various forms of oral communication up to today. Street (1984, p. 47) argues that oral cultures did not only deal with “immediacy” of situations and that both meanings and knowledge could be preserved as the use of mnemonics and rituals allowed for such preservation. The idea that logic and scientific thought was the direct result of writing is also questioned. He points to the flawed nature of the argument presented by Goody. He explains that if Goody’s argument is that literate societies are more cognitively advanced than non-literate societies and that this literate nature is what causes the difference then this is a circular argument:

“There is a dangerous circularity about this argument. If it begins from the assumption of difference and then adduces literacy as the explanation, the argument is open to the same criticism that Goody himself levels at Levi-Strauss’ dualism; if, on the other hand, it begins from the assumption that literacy is the crucial source of difference and that the mental differences follow from this, then it is beginning from the very assumption that it claims to be setting out to prove,” Street (1984, p.49)

3.2.1.2.1. Logic

Proponents of the Autonomous Model attribute different social effects to the different stages of writing and in so doing emphasize the point of the positive consequences of the written tradition. This description begins with pre-historic man’s cave paintings and pictographs in general which were seen as very simple systems that allowed for very simple thought. As writing developed to include abstract ideas it is argued that this led to man’s ability to have higher levels of thought

(such as logic) which in turn led to great improvements in society (Goody & Watt, 1963 p.321). It was thought that the advent of writing allowed for the objective analysis of information because engagement with words on a page was assumed to be an objective process (ibid, p.326). Therefore, the separation of myth and history was finally possible because the oral traditions that merged the two were no longer in place. Greece is used as a prime example of how a well-developed writing system resulted in positive cultural consequences such as political democracy in the country (Goody & Watt 1963, p.332).

3.2.1.2.2. Accuracy

The spoken word, according to Goody and Watt (1963), is labelled as inaccurate as there tends to be editing that takes place in face to face encounters. So accounts of situations are thought to be unreliable. This criticism is meant to imply that writing affords reliability. The fact that having a permanent record of something does not necessarily imply that the record is accurate and does not seem to be a factor that Goody and Watt consider. What is also not considered is that in engaging with a text one brings meaning to it. Words are not neutral conveyors of meaning⁴⁷. Meaning is made from text by the reader's experiences. As much as an oral recounting of history can be distorted so can written histories- it all depends on who is writing it down.

3.2.1.3. Critique of Autonomous Model

3.2.1.3.1. Differently literate

At the core of the Autonomous Model is the value judgements attached to the different ways of engaging in literacy activities. What makes this model inappropriate in educational settings is that it immediately is prejudiced against non-Western ways of thinking and communication (Street, 1984). This model strengthens deficit discourses⁴⁸ by locating literacy development within the individual and ignoring the social, political and economic contexts in which that individual is situated.

⁴⁷ This is firmly established in Systemic Functional Linguistics theory which is discussed in the latter part of this chapter.

⁴⁸ Deficit discourses are discussed in chapter two.

What is deemed different is marginalized. Proponents of the theory admit that particular societies that did not belong to the West were literate in their own way but because it was not the same as theirs it could not quite be considered literacy (Street, 2011). The crux of Goody's argument is that the "advent of writing was of primary importance in the history of human cultures" (Goody 2000, p.4). This statement further merely reiterates the ethnocentric position held by Autonomous model proponents and is thus an unsubstantiated argument.

3.2.1.3.2. Intellectual deficiency

According to the autonomous model of literacy this monolithic concept called "literacy" is the cause of a "great divide" between human cultures and their ways of thinking" (Gee 2008, p.70). Literacy is seen as the key ingredient that can transform a society so drastically and make it better than societies that are not literate. Today it is used to champion the cause that literacy in and of itself can solve economic and social problems (Hamilton & Pitt, 2011). Goody (2000) (as cited in Street, 2011) has subsequently agreed with Street by conceding that correlation does not necessarily mean causation. Street argues that because there are several variables that are operating all at the same time and owing to the multiplicity of literacies "we need to define which literacies we are referring to and which inequalities we see as possible outcomes." (Street 2011, p.582).

Apart from what Street describes above as multiple literacies that are at work, there are factors that are interlinked with literacies also at work to impact society. Gee (2008, p.45) clarifies this point by asserting that it is not literacy per se that has the positive effects on society but rather the various social practices that literacy forms a part of:

"...literacy in and of itself, abstracted from historical conditions and social practices, has no effects, or, at least, no predictable effects. Rather, what has effects are historically and culturally situated social practices of which reading and writing are only bits, bits that are differently composed and situated in different social practices."

Gee asserts that literacy is an embedded practice. Different social institutions such as educational institutes for example schools and universities may use reading and writing to different ends than religious institutions. This 'embeddedness' of literacy makes concluding that there is any causal

relationship between societal effects and literacy very difficult. The ways in which literacy is socially embedded and context dependent is firmly established in NLS using ethnographic studies⁴⁹.

3.2.1.3.3. Political progress

The idea of political progress ensuing from literacy acquisition is another sweeping generalization purported by the Autonomous model theorists⁵⁰. Gee (2008) asserts that the socio-economic circumstances of all the people in a country needs to be taken into account. Literacy has differing effects for the middle and lower classes. In fact, literacy served to further stratify the different classes and certain ethnic groups were oppressed even further as societies became more literate. According to Gee (2008, p.81) “Greater literacy did not correlate with increased equality and democracy nor (sic) with better conditions for the working class...”

This is true even in terms of the South African context one can see that literacy (as defined by the autonomous model) in and of itself does not carry all of the promise of a highly progressive society. Bantu education is a prime example of this (Manik, 2016). Learners were able to read and write in the traditional sense of being literate yet there was no great progress in their lives because all the education prepared them to do was to perpetuate the status quo (Posel & Casale, 2011; Motala, 2007). They were educated to play a certain role in society which strengthened a deeply flawed political system. This is how ideology informs literacy.

In essence the autonomous model of literacy is based on several very weak assumptions that posit literacy (defined as a set of measurable skills) in and of itself gave rise to several wondrous consequences for societies that had ‘it’. As such a definitive case that literacy causes all these benefits to society cannot be made. In fact Hamilton and Pitt (2011, p.604) argue “literacy is a manifestation of inequality as much as a cause of it.” In response to the necessity for a new theory, a social practices model was formulated. The following section goes into detail about this theory.

⁴⁹ These studies are referred to later in the chapter under the heading “Literacy as social practice.”

⁵⁰ According to Brandt & Clinton (2002, p. 339) autonomous model proponents were “anthropologist Jack Goody (1986, 1987, 2000; Goody & Watt, 1968), classicist Walter Ong (1982, 1986), and psychologist David R. Olson (1977, 1994).”

3.2.2. New Literacy Studies (NLS) theory

In response to the critique levelled at the Autonomous model of literacy, a new theory emerged called New Literacy Studies (NLS)⁵¹. This new theory meant that the very definition of literacy had to change. It was a movement away from the definition of literacy advanced by the Autonomous model namely, a purely cognitive ability to read and write; and a neutral tool that can be used to improve society (Goody, 1968). Turner (2012) observes that Street's (1984) notion of The Ideological versus the Autonomous Model has generated a significant amount of research that illuminates and describes the stark differences between these approaches through ethnographic methodology.

Rather than some monolithic concept proposed by the Autonomous model, Gee (1990, p.49) offered an alternate perspective arguing against the perception of literacy being independent of social context by asserting the idea of "literacies as a plural set of social practices." Thus, it can be said that Gee (1990) and other proponents of the New Literacy Studies apply social theories of learning (Lave & Chaiklin, p.1993) to the acquisition of literacy. As the theory developed, literacy began to be viewed as ideological. According to Burnette & Merchant (2014, p.37):

"The influential body of work in New Literacy Studies has used analyses of situated literacy events to illuminate literacies as social practices creating a powerful language of description (Barton, 2007; Brice-Heath, 1983; Street, 1984). Such work has provided rich insights into relationships between literacies and power, identities, discourses and, more broadly, context."

The overly simplistic traditional explanations of literacy as the ability to merely read and write obfuscated the power relations involved in the process and this model sought to lay bare these undergirding ideologies. NLS theory proposed that social conventions and ideologies informed literacy practices (Street, 1984). According to Gee (2008, p.82) "Literacy has no effects-indeed, no meaning- apart from particular cultural contexts in which it is used, and it has different effects

⁵¹ In a recent conference, Street (2016) commented that the term Literacy as Social Practice (LSP) "has to some extent replaced" the term 'New Literacy Studies' however, for pragmatic reasons the term NLS is retained in this thesis as the large body of literature pertaining to this theory continues to refer to it as NLS.

in different contexts.” So it is not merely what is said in a situation. What is important is also how it is said and the actions that accompany that communication. The right “*saying (writing)-doing-being-valuing-believing combinations*” are what Gee (2008, p.154) refers to as discourses⁵².

NLS theory raises several important issues and questions traditional views regarding literacy. For example it seeks to address traditional beliefs regarding the importance of schooled literacy. Street (1998) argues that “elite literacies” learned in school are not as important in the workplace as “communicative skills of a broader kind and with counterbalancing social strengths to those indicated by tests of traditional literacy,” (Street 1998, p.9). He elaborates that employers do not seem to mind the fact that prospective employees have poor literacy levels if they possess other desirable qualities like scarce skills. He further asserts that the media and government overestimate the importance that improvement in traditional literacy skills will have in everyday life situations (ibid. p. 16).

The use of standardized tests is also viewed with scepticism. These tests are seen to be measuring literacy, based on the narrow conception espoused by the Autonomous model of literacy which is based on the misconception that “literacy is objectively measurable” (Bartlett, 2008, p.741). The relevance of these standardised literacy tests need to be questioned because these tests limit the scope to reading and writing tasks (Parr & Campbell, 2012). The media is responsible for sensationalising the results of literacy tests so the focus is on falling standards of literacy and the disastrous effects it will have on the learners when they leave school. The immediate reaction is thus a call to curriculum and pedagogical reform (Street, 1998). There is much attention given to curriculum reform in South Africa (Harrop-Allin & Kros, 2014). The reforms are based on the results of literacy tests which can also be flawed in the way that they are designed (Parr & Campbell, 2012; Street, 2011).

These reforms however, only address one aspect of the multitude of factors that affect literacy acquisition. All interventions are directed at the curriculum and pedagogical reform. This then provides a very superficial response to a complex issue (Dornbrack & Dixon, 2014; Hamilton & Pitt, 2011). According to Street (2016), many of these intervention policies depend on a skills

⁵² Gee’s notion of discourse is developed later on in this chapter.

approach to literacy i.e. literacy is taught in a decontextualized way. Issues such as home influences, identity and teachers' capacity to realise said curriculum changes are not taken into account (Makgato & Mji, 2006). NLS proposes a holistic approach to literacy teaching (Street, 1998). According to Street (2016, p.4), "this approach works across boundaries, the age groups and the institutions from a 'social' perspective that sees reading and writing as always embedded in social contexts whose meaning vary rather than being uniform, as they do in the 'skills' approach." It therefore can be said to an approach that takes cognisance of social factors.

Another important issue raised by NLS theorists (Street, 2016; Barton, Hamilton & Ivanič, 2000; Barton & Hamilton, 1998; Gee, 1990; Street, 1984; Heath, 1983) is the important issue of social hierarchy achieved by setting up one particular worldview as the standard to which all forms of literacy are measured. With regard to the power relations of literacy there are several key considerations that have to be made:

"What are the power relations among the participants? What are the resources? Where are people going if they take on one literacy rather than another? How do recipients challenge the dominant conceptions of literacy? This ideological model highlights this power dimension of literacy and raises these questions" (Street, 2005, p.418-419).

Literacy cannot be seen as anything other than intimately linked to power relations. The very act of naming something is an act of power. It controls the connotations of that particular word. By setting up the Western-schooled version as the only form of literacy a power imbalance is created between it and other forms of literacy. Such power relations are challenged by the Ideological Model of literacy (Street, 2005). NLS posits that nothing is neutral in literacy.

Both Street (1984) and Gee (2008) contend that the way in which literacy is defined and understood is never neutral because it stems from a particular ideological stance that attempts to assert itself and 'other' contradicting views. Therefore, it is suggested by proponents of NLS that the social aspects are a part of what literacy is and that issues of power relations are ever present even in the teaching and learning process (Street, 2016). "It is not valid to suggest that "literacy" can be "given" neutrally, and then its "social" effects only experienced afterwards" (Street, 2005, p.418).

Nothing occurs in a vacuum even the discourse around literacy and learning is imbued with ideology. For example functional literacy discourse may be construed as enabling deficit thinking as it “positions this learner as ‘abnormal’ or in deficit” (Hamilton & Pitt 2011, p.599).

As seen in the aforementioned tenants of NLS, it is useful in understanding social issues in relation to literacy acquisition and development. NLS theory is valuable in understanding the socio-political-economic issue of disadvantage as it relates to literacy. According to Lankshear (1997, p.3) “Within this frame, questions of power and the role of literacies as social practices within social productions and distributions of power have been foregrounded...” The intricate ways in which literacy and disadvantage are intertwined are effectively illuminated by NLS theory. Therefore, it is the overarching theoretical framework for this particular study.

3.2.2.1. Literacy as social practice

There have been several studies that were conducted that have influenced NLS theory. These studies clearly define literacy as socially constructed and context dependant i.e. literacy cannot be considered as an independent variable that can be measured without considering relating factors. The three seminal studies are Scollon & Scollon’s (1981) study of the Athabaskan people; Scribner and Cole’s (1981) study of the Vai people; and Shirley Brice Heath’s (1983) study of the Trackton and Roadville communities and how they compared to the mainstream community.

Scollon & Scollon (1981) studied the Athabaskan people in Alaska. They found that schooled discourse was significantly different from the Athabaskan people’s own discourse in that the values espoused by each conflicted with the other. The Athabaskan people believe for example in the importance of riddles and being able to draw inferences. So narratives for them involved talking around themes which the audience would then apply to their own experiences. This according to Gee (2008) is in direct conflict with decontextualization which characterizes the Western forms of essayist prose⁵³.

⁵³ “In essayist prose, the important relationships to be signaled are those between sentence and sentence, not those between speakers, nor those between sentence and speaker. For a reader this requires constant monitoring of grammatical and lexical information. With the heightened emphasis on truth value, rather than social or rhetorical conditions, comes the necessity to be explicit about logical implications” (Gee, 2008, p.83).

Another amongst the many issues of conflict between Athabaskan culture and a Western system of schooling is that in Athabaskan culture those who are subordinate (e.g. children) must not show off their abilities to those above their station (e.g. teachers). This is the polar opposite of what the Western system of schooling expects as children are encouraged to show off their abilities (Gee, 2008). This study showed how acquiring literacy is not a straightforward process as the belief system (which is related to one's identity) of the Athabaskan people would have to be adjusted to adequately acquire literacy.

The study of the Vai people by Scribner and Cole (1981) successfully showed how socialization into the schooling system and that the effects of learning to read and write are intertwined. Their research pointed to the fact that it is schooling more than the act of reading and writing itself that gives rise to specific ways of thinking. The Vai engage in 3 forms of literacy, English in school, indigenous Vai script and Arabic:

“Since some Vai are versed in only one of these forms of literacy, others in two or more, and still others are non-literate altogether, Scribner and Cole could disentangle various effects of literacy from effects of formal schooling, which affected only the English literates. If literacy is what is affecting mental abilities, then all literates (English, Vai and Arabic) should show the same effects but if schooling is responsible, then only schooled literates will show the effects...Scribner and Cole did not find that schooled, English-literate subjects, many of whom had been out of school a number of years, differed from other groups in their actual performance on categorization and abstract reasoning tasks. They simply talked about them better... suggesting that both task performance and verbal description of task performance improved as a result of *schooled literacy*⁵⁴...” (Gee, 2008, p.78).

This study clearly shows that those skills which are perceived to be desirable higher-order thinking are Western concepts that are obtained by being socialized in a school environment. This study by Scribner and Cole was used to problematize the notion of literacy being a monolithic entity devoid of context.

⁵⁴ Emphasis is mine

In the third study conducted by Shirley Brice Heath (1983) it can be seen how home literacy practices may serve to disadvantage learners who have a distinctly different set of practices than those that are highly valued at school. As indicated in the previous section the study “Ways with Words” by Heath (1983) is one of seminal works in the development of NLS theory. She used different literacy events such as the storytelling event to show that if there is a marked difference between practices at home and dominant school practices then young children would be disadvantaged. If literacy behaviours at home are closely linked to the kind of practices carried out at school then that child has a distinct advantage over a child who is not exposed to that kind of literacy practice. This is because practices that occur in specific domains (school, work and home) are structured and “socially powerful institutions, such as education, tend to support dominant literacy practices” (Barton & Hamilton, 1998, p.10).

The distinction between children from different environments and their levels of success in school is clearly illustrated in Heath’s ethnographic investigation of two communities in relation to mainstream society (Heath, 1983). Roadville (White working class community) and Trackton (Black working class communities) form the focus of Heath’s study (1983, p.1). The literacy events that take place in both Trackton and Roadville are described by Heath. She observes how children learn to value different aspects of literacy events because of the positive or negative reinforcement given to them by adults.

Children begin to exhibit these favoured behaviours in order to gain acceptance in the community. Children in Roadville are admonished for any deviation from the “truth” if they do not report events exactly as they occur. So, fairy tales encountered in school are unfamiliar because they do not follow the kind of “story” children are used to. In Trackton however, children are encouraged to “talk junk” and make story telling as entertaining as possible. Children are often rewarded with recognition and praise for their efforts. The entertainment aspect is foregrounded in Trackton which may be at odds with the expectation in school. For example if a child was asked a question and needs to give a straightforward answer s/he was regarded as unfocused if they employed the conventions of embellishment learnt at home.

The townspeople (both Black and White) described as “mainstreamers” also feature as part of the study. When Trackton and Roadville children were compared to the mainstream children it was clear that the kind of text-centred activity that the mainstream children were exposed to (e.g. being read bedtime stories) gave them a distinct advantage over their Roadville and Trackton counterparts. This is because the kind of interaction that mainstream children had with books was closely aligned with the ways that they were taught in the later years at school. From early on in their childhood, mainstream children were involved in literacy events that closely mirrored the structure and form of those literacy events that take place at school such as reading texts and answering questions (Heath, 1983, p.242). Also environmental features encountered in everyday life were related back to texts that were read to them (Heath, 1983, p.249). Although Roadville children were read to by adults, the kind of aforementioned literacy based activity was not encouraged. The Trackton children were more disadvantaged as they were rarely, if ever, read to and so their experience with literacy based items was limited and they only encountered such items when they reached school. The exposure to the kind of text-centred activity inevitably lead to mainstream children having an advantage over the non-mainstream children from Roadville and Trackton. Heath (1983) then concludes that the reasons for the poor performance of the Roadville and Trackton children in school was a result of having been socialized into literacy in a way that did not conform to the rules employed in school literacy events.

The study illuminates the ways in which certain literacy practices may be in direct conflict with certain cultural values and norms of different communities. It also demonstrates why the current curriculum may be disadvantaging learners by employing the Autonomous model of literacy which locates literacy within an individual rather than viewing it as socially constructed. If social factors such as home literacy are not taken into account, then it becomes easier to slip into the erroneous deficit thinking.

3.2.2.2. Literacy Practices and Events

The terms ‘literacy practices’ and ‘events’ are integral to the discussion of literacy from a NLS perspective. According to Barton and Hamilton (1998) the terms of literacy practices and events can be attributed to seminal studies of literacy carried out by Heath (1983), Street (1984) and Scribner and Cole (1981). Literacy practices are the basic component of NLS, however they cannot

be “observed” per se as they are composed of “values, attitudes, feelings and social relationships” (Barton & Hamilton, 1998, p.6). Literacy events, on the other hand, are observable. Literacy events and their relation to literacy practices are defined as:

“...activities where literacy has a role. Usually there is a written text, or texts, central to the activity and there may be talk around the text. Events are observable episodes which arise from practices and are shaped by them. The notion of events stresses the situated nature of literacy that it always exists in a social context” (Barton & Hamilton, 1998, p.7).

This “situatedness” of literacy is what makes it such a very difficult issue to investigate. It is therefore necessary to clearly define areas under investigation. As a result of the Autonomous Model view of literacy as a singularity, it was presumably easy to quantify and test. This is not the case for the ideological model, those assumptions could not be made. There was therefore a need to develop terminology that would help researchers study this phenomenon. Street’s working definitions of ‘literacy events’ and ‘literacy practices’ are helpful in this regard. Drawing on Heath’s (1983) study he defines ‘literacy event’ as “any occasion in which a piece of writing is integral to the nature of the participants’ interactions and their interpretative processes” whilst ‘literacy practices’ is defined as focusing on “social practices and conceptions of reading and writing” (Street, 2003, p.78).

Observation of literacy events enable researchers to gain insight into literacy practices. The most frequently used method employed in these studies is ethnography. Ethnographic studies have had an invaluable influence on the development of New Literacy Studies theory. These studies have been conducted all over the world (Street, 2016; Street, 2003).

3.2.2.3. Dominant versus Vernacular

This distinction between dominant literacies and vernacular literacies was originally made clear by Barton and Hamilton (1998) who described dominant literacies as literacy activities such as reading that are carried out as an end in and of itself and vernacular literacies are activities that are carried out as a means to some other end. Therefore, reading a novel would be a dominant literacy and reading a recipe would be a vernacular literacy because one is reading in order to produce a

cake (Barton & Hamilton, 1998). Dominant literacy practices are most prevalent in educational institutions. The values of these practices are reinforced by socially powerful institutions (Barton & Hamilton, 1998). It is therefore possible that one could have vernacular literacy and not necessarily be able to successfully engage in dominant literacy activities. This position has also led to the foregrounding of the fact that people have “multiple literacies” (explored in more depth in section 3.2.2.5.) (Prinsloo and Brier, 1996, p.19).

What is valued in the current educational system in South Africa are the dominant literacy practices. Failure to successfully acquire them early on in ones schooling career is detrimental. These practices are the foundation for success in tertiary education which in turn leads to success in the marketplace. This chain reaction serves to change the lives of people by changing their socio-economic status. There may be many hindrances to successfully acquiring the dominant literacies that are so highly valued in our educational system. This study serves to engage with these hindering factors. It is important to note that although this is the aim of the study the importance and value of those practices that do not fall within the ambit of dominant school practices are in no way devalued. It must be kept in mind that the focus of the study is on the dominant literacies that learners are expected to acquire in the schooling context.

3.2.2.4. Academic Literacies

Thus far we have seen how the NLS theory has successfully challenged some of the traditionally held beliefs and operating systems within institutions and society. Its usefulness however, can be seen in its application in educational settings. The academic literacies approach was the natural evolution of the NLS theory in addressing practical issues in education by drawing attention away from the formal aspects of language acquisition to much broader issues related to meaning making in context. According to Street (2005, p.5) “In the educational context this means making explicit both the particular genres, styles, and discourses associated with the literacies required for educational purposes and the underlying institutional power relations in which such literacy practices are grounded.” This approach is different from traditional perspectives on education (i.e. educational practices are neutral and similar across time and space) and proposes that educational practices are unique to particular educational domain (e.g. science) and are also socially constructed (Street, 2005).

Teaching using the academic literacies approach involves making explicit those conventions of the genre in specific educational domains that are normally taken for granted as being universal or common sense. According to Lea & Street (2006, p.227):

“An academic literacies perspective views student writing and learning as issues of epistemology and identities rather than of skill acquisition or academic socialisation alone, although the perspectives are not mutually exclusive and individuals may move between them according to context and purpose (sic).”

According to Turner (2012) the value of using academic literacies approach as a framework for teaching and learning is that it considers a wide range of factors (socio-political, geo-political, and Institutional contexts) that literacy practices function within. Although it was initially construed as a framework for higher education it can now successfully be used from pre-school to university level (Lea & Street, 2006).

3.2.2.5. Multi-literacies

The evolution of the term literacy resulted in research on multiple literacies. The implication of multiple literacies is that even if an individual does not attend a socially powerful institution such as school they cannot be considered illiterate. Scribner and Cole's (1981) study shows how people could have multiple-literacies and how particular literacies influence thinking processes in different ways. Much research has been done to validate the idea of multiple literacies and everyday literacy practices (Bloome and Enciso, 2006; Haneda, 2006; Barton & Hamilton, 1998; Prinsloo & Breier, 1996). However, some of these practices may not correspond to dominant school practices which could be problematic.

Several studies such as Scollon and Scollon's (1984) study on the Athabaskan people show how out-of-school literary practices that are brought into a formal school environment may be misinterpreted, as children not being able to cope. Seminal works that were done to show that literacy is context dependant is the work of Scollon and Scollon (1984) and Heath (1983). In the South African context, Prinsloo and Brier (1996) were instrumental in establishing this. Some influential works that were carried out by Heath (1983) and Scollon and Scollon (1984) provide

substantial qualitative data that foregrounds children's home literacy practices and how they relate to literacy practices in school. These works have provided invaluable insight as to how the absence of certain pre-literacy practices leads to the failure of communities of children within schools. This study will also focus on this aspect of learners' lives and assess the ways in which it affects the dominant practices found within the schooling system.

Multiliteracies probes the different ways in which people have begun to communicate and the different modes used as well. This is inclusive of but not limited to print literacy practices. The team known as the New London group is largely responsible for this branch of literacy theory (Cloonan, 2008). Although it has been argued that this is a separate theory from NLS such as arguments by Perry (2012), I think that because it has deep roots within the NLS and is not significantly different from NLS, it can more appropriately be considered as a significant branch or development within the NLS theoretical framework. In fact the members of the New London group, Cope & Kalantzis (2006, p.23), explain that one of the ways of understanding multiliteracies is the "variability of meaning-making in different cultural, social or professional contexts." This assertion falls squarely under the ambit of NLS where Gee (1996, p.vii) claims that language is always "attached to 'other stuff': to social relations, cultural models..." Multiliteracies places equal emphasis on the ways in which language interfaces with "visual, audio, gestural and spatial patterns of meaning" (Cope & Kalantzis, 2006, p.23).

This is interesting with regard to educational outcomes and goals. For example whether one can deem a child truly literate in today's world without knowing how to use the internet. It has implications for pedagogy as well. In terms of this perspective, a person could be disadvantaged if they did not know how to use a computer, cellphone, or a tablet. The rate of technological advancement also has implications for the term 'literate' (Burnett & Merchant, 2014). Reconceptualising the meaning of literacy means that curricula would have to change to accommodate this change. The digital/technological revolution can be compared to the invention of the Guttenburg printing press in terms of the ways in which the world of communication has been revolutionized (Cope & Kalantzis, 2006). According to Cope & Kalantzis (2006, p.32), digital technologies revolutionized communication in several ways:

“Forms of representation are also transformed by the new multimedia environment. The form of the message is transformed by the nature of the medium; or perhaps the scope and technological possibilities of the medium allow the creation of new forms of message, new ways of seeing and speaking and thinking in the world.”

Although new technologies have meant great advancements in communication, they do bring a few disadvantages. The world-wide conscience brought to us by the internet in fact not world-wide as access to the new technologies is not always possible by all. This excludes and thus disadvantages the poor who are unable to attain new technology due to the fact that technology is often unaffordable for the poor.

The multiliteracies perspective focuses on the practical aspects of literacy pedagogy. The basic understanding of what ‘basic’ skills are necessary in order to be literate would have to change. The way in which literacy (in its various forms) would have to be taught would change and so would the curriculum of subjects such as English where there would be a lot of attention given to visual literacy. The multiliteracies perspective argues for four areas to be considered for effective teaching which are:

<i>“Situated practice</i>	Immersion in experience
<i>Overt Instruction</i>	Systematic, analytic and conscious understanding
<i>Critical Framing</i>	Interpreting social and cultural contexts
<i>Transformed Practice</i>	Transfer of meaning-making approaches from one context to another” (Cope & Kalantzis, 2006, p.39).

Cope & Kalantzis (2006, p.42) summarize the multiliteracies perspective by arguing at the heart of this perspective is the aim of using education as a mechanism to include and enable students by:

“respecting the ‘situated’ experiences, languages and discourses of students, and enablement in the sense of providing learning experiences through which students will be able to access the most powerful forms of self-expression and communication in today’s locally diverse yet globalised world.”

3.2.2.6. Critique of NLS

NLS is often criticized for being too focused upon the local. The use of the ethnographic methodology meant that literacy events and practices were analysed in great detail but the results would never be applicable across contexts. This seems to be the reason the Autonomous model is supposedly so popular (Parr & Campbell, 2012). This could be as a result of the fact that the Autonomous model appears uncomplicated- unlike the Ideological model which proposes a more nuanced understanding of literacy thus making it difficult to measure (Street, 2011). This made it difficult to use results from studies to inform policies. The criticism against NLS is also that the research methodologies employed are not scientific enough. Funding agencies seem to regulate research by insisting it follow the scientific principles and “rigour” of such fields as medicine and technology (Street, 2003, p.86). Street counters this criticism by suggesting that the “scientific” enquiry method is a privileged methodology that emanates from the West.

NLS has been criticized for being too relative in nature. There are shortcomings of being too relative. One of which is the inability to inform policy. According to Simon (2005, p.125-126) there is a divide between NLS theorists and policy –makers which makes NLS impractical because of the overemphasis on “out-of-school literacy practices.” The other disadvantage of being too relative is addressed by Friesen (2014, p. 86) who contends that the valuable and insightful descriptions of literacy practices need to be connected to the educational outcomes laid out in curriculum in order to address the “practical realities of education.”

In defence of NLS theory Street (2003, p.xii) asserts that the evolution of the theory to include issues around text, identity and power “can lift the account of local literacies towards a more general, theoretically comparative set of terms whilst not losing the specificity that NLS has brought to the field.” Intimately related to text is the issue of power (Collins & Blot, 2003). Literacy practices are always dictated by power relations between the participants and the text/s involved. “Power relations are inescapable; they provide the framework for the interpretation of texts, the kind of text chosen also the identity the person adopts as they take part in literacy events” (Collins & Blot, 2003, p.5). Even not taking part in an event is an indication of power relations.

In terms of the current research that is being undertaken, although NLS provides useful conceptions of literacy (that is a socially constructed phenomenon that is influenced by a variety of factors) and units of analysis (events, practices etc.), it does not provide a model that allows one to gauge how a multiplicity of factors bears on literacy development at once. This is evident in the literature reviewed in chapter two where it can be seen how particular factors are isolated and their effects on literacy are examined. Therefore, there was a need to reconceptualise the way in which NLS can be used in relation to another model which would offer a more comprehensive view of the phenomenon. The next section addresses this issue by reimagining the NLS as an ecological framework.

3.3. Ecological literacy framework

Both NLS theory and the Ecological Framework for human development (viz. Urie Bronfenbrenner's (1979) model of human development) are based on the premise that there are a multiplicity of factors that contribute to development (literacy in the former and human beings in the latter). As discussed earlier in the chapter, NLS involves the application of various social theories of learning to literacy acquisition. Literacy is seen as context specific. Therefore, there is no single factor that is said to influence the development/acquisition of literacy but rather there exists a multiplicity of factors that are involved. The NLS can therefore be compared to the ecological framework for human development. This theory proposed by Bronfenbrenner also underscores the multiplicity of factors that contribute to development. One is able to therefore use this theory to develop a similar model to understand literacy i.e. ecological framework for literacy development.

3.3.1. Bronfenbrenner's Ecology of Human Development and socioliteracy studies approach

There are several ways in which Bronfenbrenner's human development framework is similar to the socioliteracy studies approach. According to Bronfenbrenner (1979, p.3), "The ecological environment is conceived as a set of nested structures, each inside the next, like a set of Russian dolls." According to this theory, every human being is affected by different environmental structures as well as the interactions among those structures to varying degrees. In essence a person is the product of the environment in which s/he develops. The socioliteracy studies approach has the same basis i.e. literacy is context specific and dynamic (Street, 1984; Heath, 1983; Freire,

1973). The different structures in the Bronfenbrenner theory are assigned levels according to the degree to which development is affected which are the microsystem, the mesosystem, the exosystem and macrosystems.

“A microsystem is a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics”, (Bronfenbrenner, 1979, p.22). Examples of settings in the microsystem are the home or classroom environment. In terms of socio-literacy theory, many studies have confirmed the profound impact that a good home environment plays in fostering good literacy skills (Pretorius & Ribbens, 2005; Aram & Levin, 2001; Bridges, 2014; Siraj-Blatchford, 2004). The classroom environment is equally important in influencing literacy development (Pretorius and Machet, 2004; Taylor, 2008; Levitt & Owl, 2013).

“A mesosystem comprises the interrelations among two or more settings in which the developing person actively participates (such as, for a child. The relations among home, school and neighbourhood peer group; for an adult, among family, work, and social life),” (Bronfenbrenner 1979, p. 25). So a mesosystem is actually the interrelations between the different microsystems in the person’s life. An example would be the relation between home and the classroom. There needs to be a synergy between the two spheres for optimal literacy development. Studies have shown that if one of those environments is not conducive to learning then educational outcomes are impacted negatively (Smith, 2011).

“An exosystem refers to one or more settings that do not involve the developing person as an active participant, but in which events occur that affect, or are affected by, what happens in the setting containing the developing person,” (Bronfenbrenner, 1979, p. 25). An example of an exosystem would be the school governing body. The child does not directly participate in this setting but what happens in this setting directly affects the child. For example language policies are decided on by the governing body of the school. It has been noted that it is often the case that parents who are part of these bodies make emotional decisions related to language of instruction. A policy that leads to subtractive bilingualism leaves learners at a distinct disadvantage (Lockett, 1992; Posel & Casale, 2011).

“The macrosystem refers to consistencies, in the form and content of lower-order systems (micro-, meso-, and exo-) that exist, or could exist at the level of subculture or the culture as a whole, along with any belief systems or ideology underlying such consistencies,” (Bronfenbrenner, 1979, p.26). This system or structure in the model comprises of the laws of a country, the economy, cultural traditions, ideology etc. In relation to literacy development, an example of a sphere of influence that would belong to the macrosystem would be the Department of Education. The policies regarding curriculum, assessments etc. are all decided upon authorities within this department.

It follows then that this proposed ecology of literacy development can be useful in unearthing the complexity of educational disadvantage by assessing the effects that the different spheres have on literacy practices as well as how these spheres shape secondary discourse⁵⁵ which is important in the schooling context.

3.4. Discourse

According to Fairclough (1989, p.17), discourse is “language as social practice determined by social structures.” Discourse is a key term in coming to an understanding of literacy in NLS. It involves the combination of three essential components language, identity and actions. According to Street (1993, p.15) discourse is the “complex of conceptions, classifications, and language use that characterise a specific sub-set of an ideological formation.” These components invariably change to suit certain situations. According to Gee (1990, p.131):

“A *Discourse* is a socially accepted association among ways of using language, other symbolic expressions, and ‘artifacts’, of thinking, feeling believing, valuing, and acting that can be used to identify oneself as a member of a socially meaningful group or social ‘network’ or to signal (that one is playing a socially meaningful ‘role’.”

The all-encompassing nature of the term discourse is more suited to use within the ideological model of literacy. Although the term is often used interchangeably with the term language- it

⁵⁵ Issues relating to discourse such as primary and secondary discourse are discussed in the following section.

means much more than language. Gee (1990, p.124) arrives at a definition of literacy by deconstruction of various misconstructions. The first issue that is tackled is the issue of language. The term language is often used interchangeably with the term grammar and meaning that is conveyed in communication. Poor grammar does not necessarily mean that the person is incapable of communicating effectively. According to Gee (1990), there needs to be agreement in terms of what one says, how it is said and the actions that occur while it is being said. “In socially situated language use, one must simultaneously say the ‘right’ thing, do the ‘right’ thing, and in the saying and doing, express the right values, beliefs, and attitudes” (Gee 2008, p.151).

Discourse is the coming together of language, identity and situation. The situation dictates the kind of communication that takes place. And successful communication requires all the different elements to come together. According to Gee (1990, p.127), it is not language that is most important but rather the combination of all the “right” elements that is important:

“Discourses are ways of being in the world, forms of life which integrate words, acts, values, beliefs, attitudes, and social identities, as well as gestures, glances, body positions, and clothes. A Discourse is a sort of identity kit which comes complete with the appropriate costume and instructions on how to act, talk, often write, so as to take on a particular social role that others will recognize.”

Discourses can therefore be said to be ideological in nature. Certain discourses are very powerful as they cause those who are in control of them to acquire money, power and status in society (Gee, 1996). This in turn leads to social stratification and all the consequences that result from it. The Discourse then is a highly coherent episode involving language and includes conversations, essays, stories etc. But it is more than that. Discourses in institutions often involve props like books and stage settings like classrooms. People mistake props and settings for literacy.

According to Gee (1990), primary discourse is that which is learned early in life in a particular family and social setting. Secondary discourse however, is the discourse into which people are apprenticed later on as part of a group, state, institution etc. One might wear many caps but the discourse enables us to see which role one is acting in or fulfilling for example, lecturer, mother,

pastor etc. Even a distinction is drawn between the two types of discourses, there is a reasonable amount of fluidity between them.

There are also two ways of acquiring discourses namely, acquisition and learning (Gee, 2008). Acquisition is sub-conscious but learning is conscious (Gee, 2008, p.169):

“Acquisition is a process of acquiring something (usually sub-consciously) by exposure to models, a process of trial and error, and practice within social groups, without formal teaching.”

For example ones first lanaguage is acquired. Exposure to models in the home (i.e. parents/guardians) results in acquisition of this primary discourse as one grows. There is not much by way of overt instruction. On the other hand learning requires overt instruction:

Learning is a process that involves conscious knowledge gained through teaching (though not necessarily from someone officially designated as a teacher) or through certain life-experiences that trigger conscious reflection. This teaching or reflection involves explanation and analysis...” (Ibid).

A great deal in life involves both learning and acquisition in different ratios. The balance of the two must be maintained in the classroom. What goes on in classrooms is learning but an environment conducive to acquisition can also be created by a process of apprenticeship (Friesen, 2014). According to Gee (1996), if there is an imbalance between learning and acquisition in school, run the risk of privileging those who have already begun the process of acquisition out of the classroom. Therefore, in certain schooling situations, those whose primary discourse does not support secondary discourse are at a distinct disadvantage. For example, the secondary discourse at school requires learners to successfully read. Therefore if learners are not exposed to preliteracy practices (such as reading) in their homes as part of the primary discourse, their acquisition of secondary discourse is impeded (Bridges, 2014; Smith, 2011; Machet, 2002).

According to Gee (2008), situating literacy within the framework of discourses allows for greater and deeper understanding of the workings within a classroom and would provide invaluable

contribution into educational practice. Gee (2008, p.176) defines literacy “as *mastery of a secondary Discourse*” and asserts that educational practitioners need to be cognisant of the fact that the relationship between the primary and secondary discourses is complex. They are able to mutually influence each other. It is also important to understand that even when the primary discourse supports the secondary discourse, this influence ceases at a certain point because the secondary discourse extends well beyond the primary discourse in all aspects (ibid).

Mastery of the secondary discourse is not easy for those whose primary discourse is in conflict with or simply does not support it. And since, as previously mentioned, discourse is often the seat of social power, those who fail to master dominant discourses continue to exist on the periphery. The solution to this dilemma as proposed by Gee (1996, p.147), is two-pronged, the first being “active apprenticeships in academic social practices” and the second is “mushfake Discourse.” The idea of a mushfake Discourse is that it is having just enough mastery of a dominant discourse as well as meta-knowledge to get by (Gee, 1996). According to Lankshear (1997, p.72) meta-level knowledge of discursive practices involves more than knowledge it is “knowing about the nature of that practice, its constitutive values and beliefs, its meaning and significance, how it relates to other practices...” This will in effect allow those that are on the outside to at least gain access to socially powerful institutions. This is a powerful agent for social change as gaining access to the dominant discourse consequently allows one to effect change from the inside. This complex relationship is outlined clearly by Lankshear (1997, p.70):

“To *have* access to power is to possess qualities that have been related positively to goods or means to accessing them. To actually *exercise* power is to draw upon these qualities, to ‘cash them in’, as it were. To *be* empowered is to have the qualities one possesses (or has available) made discursively- that is through Discourse- into ‘currency’ for acquiring goods and benefits, or for having them bestowed.”

It is thus evident that unless the issues of discourse and power are carefully considered and addressed within the schooling system, the cycle of disadvantage and exclusion from socially powerful positions in society will continue for those learners who come from poor socio-economic backgrounds (e.g. learners in township schools). A learner that does not have access to the

dominant discourse of school does not perform well in high stakes tests like the grade twelve exit examination (Tikly, 2011). This learner is consequently denied access to tertiary institutions and eventually higher income employment. A useful framework for understanding discourse within the schooling system is classroom discourse analysis which is discussed in the following section.

3.5. Classroom Discourse Analysis

A large proportion of what occurs in the classroom is oral. Discourse analysis elucidates a framework that makes the analysis of these interactions possible. Moore & Hoffman (2012, p.27) provide a succinct definition of classroom discourse:

“In classrooms, language interactions among students and teachers structure the very way they create meaning and extend current understandings. These interactions comprise what is known as classroom discourse.”

This definition also positions classroom discourse analysis as a socio-linguistics theory in that it postulates how meaning is co-constructed. Adger (2001) proposes that the main aim of classroom discourse analysis is to ascertain what learners would need to do linguistically in order to be successful in the school. This is important although it is not the only aim. What is also important is what the teacher does linguistically in order to foster optimal socialization into the important discourses (Sharpe, 2008). It enables the assessment of the quality of interaction by making visible the interactional units within the classroom.

One of the important constructs that has arisen from the theory is that of Initiation-Response-Feedback (IRF) (Sinclair and Coulthard, 1975). This construct is used in this study to analyse the data from the classroom observations. In terms of this construct, interaction in the classroom typically takes place in this triadic pattern or three turns in the conversation. This happens when the teacher initiates the interaction, the learner responds and it ends when the teacher gives appropriate feedback to the response. The third turn is also referred to as the “evaluation” turn by some authors which gives rise to the term IRE (Initiation-Response-Evaluation) (Mehan, 1979). This format may vary at times if for example the phase is used to initiate another related sequence. But most often it either involves the teacher giving feedback to learners that is an acceptance/

rejection of the response, commentary, reformulation of the response and/or repetition (Huq & Amir, 2015).

Adger (2001) discusses how classroom discourse analysis has brought to light certain pervading issues in terms of how interactions within the classroom affect teaching and learning.

The first of these was that when the culture of the learner was significantly different to that of the pervading school culture then the learner would be disadvantaged. Secondly, it helped establish the ways that talk and text were interwoven by showing how patterns of talk influenced writing. And so classroom discourse was a resource for literacy development. Thirdly, it is also used to determine the ways in which to best foster second language development. The fourth way it has helped, is to see how talk fosters learning and this has included Vygotsky's ZPD (1978).

3.6. BICS and CALP

Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP) are language constructs that were formulated by Cummins (1979) for the use in the educational sector. The difference between these two constructs is found in their use. BICS is usually referred to as the ability to carry out casual conversations and so requires only the most basic language proficiency to effectively communicate. CALP on the other hand is highly specialized language ability that is deemed necessary to effectively communicate in academic institutions (viz. school and university). The level of difficulty may be determined by looking at how cognitively demanding each mode really is. Cummins (1984) points out that BICS is context-embedded and so may be less cognitively demanding than CALP which is context-reduced. Context makes it easier to ascertain meaning as "language is supported by a wide range of paralinguistic and situational cues" (Cummins 1984, p.136).

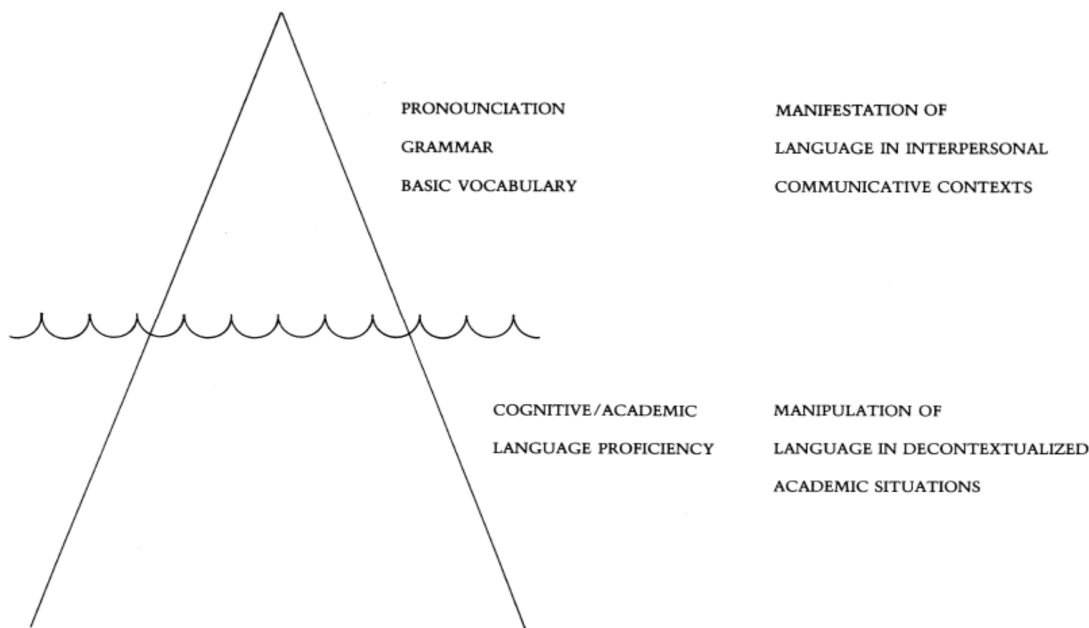


Figure 1. The "Iceberg" Representation of Language Proficiency

Figure 1. Cummins' (1981, p.22) representation of BICS and CALP

Krashen & Brown (2007) propose that there are dual components to CALP. Firstly, it is the knowledge of academic language and secondly it is the knowledge of specialized subject matter. Along with these components they argue that there are certain strategies that relate to these different components that if properly developed will enable learners to become more autonomous. One of the strategies that they point to is that of a mechanical approach to teaching a second language, where language structure is overtly taught focusing on grammar and vocabulary. This particular strategy is highly ineffective as it results in "a fragile form of linguistic competence that is hard to use, limited in application, and has little enduring effect" (Krashen & Brown, 2007, p.3). Other strategies involve more reading, consistent writing rather than waiting for large expanses of free time to write, revising work. In terms of improving knowledge of subject matter the strategy of being involved in actual problem solving instead of simply memorizing information is more effective. That implies that a practical aspect is important in grasping content knowledge (ibid, p.2).

Bylund (2011, p.5) contends that although BICS and CALP are important in describing the development of language proficiency in different circumstances, Vygotskian psycho-linguistic

theory of language development may be useful in understanding “the cognitive processes involved in second language development.” This is achieved by establishing commonality between the two theories. Vygotsky viewed language development as taking place on a continuum starting off with labelling objects and peaking at “concepts.” According to Bylund (2011, p.5):

“This represents the final stage of language development at which time we use concepts as cognitive tools for creating meaning from our experiences. This final stage is not language per se, but the intersection of thought and language.”

Further to this Bylund (2011, p.5) notes that learners who do not have these ‘concepts’ will have limited comprehension of what is being taught “even though they may have knowledge of individual words.” Therefore complex cognitive processes are particularly difficult for these individuals.

The concepts of BICS and CALP are relevant to this study in that the study is specifically about the acquisition of a particular kind of literacy that is academic literacy or school based literacy. It is also relevant because it aids in understanding the argument that subtractive bilingualism has disadvantaged learners in the South African context. Cummins (1981) contends that L1 (first language) development of CALP is essential in order to successfully develop L2 (second language) CALP. It is L2 CALP that majority of South African learners require to have positive educational outcomes.

3.7. Systemic Functional Linguistics

Systemic Functional Linguistics (SFL) is Michael Halliday’s (1978) theory of language that places special emphasis on text. This theory has grown out of several decades of writing and practical applications (Kilpert, 2003)⁵⁶. SFL is a theory of language which brings to the fore the interconnections that exist amongst language, text and context with meaning-making as its core

⁵⁶ “Halliday’s Introduction (1994a) is essential. Some good beginner-level introductions are Thompson (1996), Martin et al. (1997), and Butt et al. (2000). See Martin (1997:438) for a further list, and Matthiessen and Halliday (1997) for an online introduction. Two excellent short overviews are Halliday and Martin (1993:22–50) and Halliday and Matthiessen (1999:507–564), and two of the best comprehensive accounts are Thibault (1987) and Halliday (1996). Readers needing background in the functions aspect of sfl are referred to Halliday (1994a), and those wanting to go more deeply into the systems to Martin (1992) and Matthiessen (1995)” (Kilpert 2003, p.164).

concern (Coffin & Donohue, 2012, p.65). SFL then does not consider text to have meaning that is intrinsic or devoid of value rather meaning is made by the reader and the text is produced in a particular social context from which its meaning cannot be extricated. It is at this point of understanding (i.e. that text is socially constructed) that SFL theory and NLS theory converge as NLS also construes text as socially constructed:

“Any technology, including writing, is a cultural form, a social product whose shape and influence depend upon prior political and ideological factors” (Gee, 2008, p. 80).

The aspect of Halliday’s SFL that is relevant to this study is the ways in which the institution of school constructs text and how this construction is often a hindrance in terms of teaching and learning. In the context of school, there are highly specialized ways of language use. For learners to gain epistemic access into the different disciplines, they need to be able to effectively engage in the register⁵⁷ of schooling:

“Understanding the linguistic elements that are functional for making the kinds of meanings expected at school is important for effective assessment of students’ language development and for designing effective curricula for student learning” (Schleppegrell, 2001, p.431).

Register features differ according to particular genres which are described by Schleppegrell (2001, p.432) as “purposeful, staged uses of language.” She goes on to explore the different genres that are found within the schooling system such as the expository essay, definitions, narratives etc. which shows that the everyday conversational language (BICS) is insufficient. Lemke’s (1990) SFL based theory on “talking science” explores the highly scientific register that learners have to come to terms with. Scientific language takes on several distinctive features that set it apart from BICS as well as the kind of language used in the social sciences:

⁵⁷ “A register is the constellation of lexical and grammatical features that characterizes particular uses of language (Halliday & Hasan, 1989; Martin, 1992). Registers vary because what we do with language varies from context to context” (Schleppegrell 2001, p.431-432).

“There is a lot of use of the passive voice, of abstract nouns in place of verbs, of verbs of abstract relation (e.g., be, have, represent) in place of verbs of material action. It also has its preferred figures of speech, like analogy, and rhetorical patterns (e.g., Thesis-Evidence-Conclusion). .. It even has its own special forms of written texts: laboratory notes, reports of experiments, theoretical treatises, and so on” (Lemke, 1990, p.21).

For learners to successfully enter⁵⁸ into scientific Discourse they will have to be conversant with all of these features. This is best accomplished when scientific materials are used to highlight the different scientific conventions discussed above (Parkinson et al., 2007). The use of scientific materials enables acquisition to take place while explicit teaching of the scientific genre⁵⁹ (such as laboratory reports and scientific essays etc.) results in learning. In this way both acquisition and learning take place in the classroom which according to Gee (2008) is when optimal learning happens. Halliday’s Systemic Functional Linguistics is based on the notion that all learning is essentially a semiotic process:

“The distinctive characteristic of human learning is that it is a process of making meaning-a **semiotic** process; and the prototypical form of human semiotic is language” (Halliday, 1993, p.93).

SFL is important in this study as it foregrounds the importance of language in the process of learning. This is especially important in understanding the complicated relationship that learners in this case study as well as the greater South African context have with “content” subjects like science when the LOLT is not the learners L1. Furthermore, it is very important to bear in mind when considering how learners have poor outcomes in the science subjects how a lack of instruction and exposure to these highly specific linguistic features may be a contributing factor in disadvantaging learners. What compounds the situation is also the fact that it is not only the learners who seem unaware of these linguistic features; it is often that teachers are equally unaware (Ramos, 2015). Therefore, a specific pedagogy is required to address this situation. This pedagogy is called genre pedagogy.

⁵⁸ Enter in this context means both reading and writing scientific texts.

⁵⁹ This is called genre pedagogy and is explained in detail in the following section.

3.7.1. Genre-based pedagogy

Genre is a concept that has emanated from the SFL theory. SFL proposes that texts within certain academic disciplines have common observable features⁶⁰ such as nominalisation⁶¹ (Halliday, 1978; Parkinson et al., 2007) that are specific to those particular disciplines. These features are particularly dense and often serve to obscure certain meanings (Patterson & Weideman, 2013). To better equip learners to acquire and participate in these disciplines, genre pedagogy has evolved. SFL-based genre pedagogy has been very effective in instructing learners in the use of “genre-appropriate linguistic resources to present content knowledge, enact interpersonal relationships, and organize texts in the academic genres” (Ramos, 2015, p.19).

The benefits of genre pedagogy are quite clear as they give learners a level of clarity in terms of what is needed of them thus empowering them with linguistic resources. They are then free to participate in socially powerful discourses and if mastered, begin to use it in the production of new knowledge. Hyland (2007) underscores the point that often learners may not be conversant with certain genres and that these genres may not exist within certain cultures. However, this does not mean that learners cannot be taught about these genres and in so doing “exploit the expressive potential of society’s discourse structures instead of merely being manipulated by them” (Ibid, p.150).

It follows then that the first stage of becoming a knowledge producer is to be able to master the discourse. This according to NLS theory⁶² happens by both acquisition and learning. Genre pedagogy aids in both. Genre pedagogy is used for both reading and writing instruction (Huffman-Kelley, Perin, & Liu, 2015; Bharuthram, 2012; Llosaa, et al., 2011; Hyland, 2007).

As valuable as this pedagogy has been, it is not the “magic bullet” that will fix the literacy issues that we have in schools. This point is laboured by Rosen (2013) in his amusing (and sarcastic)

⁶⁰ Patterson & Weideman (2013) argue that defining academic discourse and pinpointing exact features is particularly difficult because although there are many observable features of academic discourse, these may change with the context and not every academic text will have all the observable features.

⁶¹ According to Patterson & Weideman (2013, p.115) nominalization is “the formation of a noun from a verb or adjective.”

⁶² Discussed earlier on in this chapter under discourses.

article titled “How genre theory saved the world.” He argues that the drawbacks of this approach are that it fails to address the following issues:

- “(1) How power works in classrooms and schools.
- (2) How written language is best acquired” (Rosen 2013, p.5).

These are valid arguments, but they should not be used to discount the value that this pedagogy has. It merely means that this pedagogy needs to be a part of a holistic approach in addressing literacy issues. This pedagogy is particularly valuable for learners in township schools who have language problems which interferes with their CALP (Cobbing, 2011; Hooper et al, 2014) in that it lays bare the academic features of particular disciplines and consequently enables learners access to dominant discourse.

3.8. Vygotsky’s Zone of Proximal Development (ZPD)

Vygotsky’s (1978) “Zone of proximal development” (ZPD) is a psycho-social concept that is used to understand learning. It is useful in this study in that it will illuminate the learning aspect of literacy development. The construct postulates that learning is ever progressive by arguing that there are always two developmental levels at any given time in the learning progression. The first of which is called the “actual developmental level” and the second is the “level of potential development” (Vygotsky 1978, p.86). The first level is the activities that learners can do independently as they have mastered that particular ability whilst the second can be described as that which learners are capable of, in collaboration with a more experienced other. The zone of proximal development then is:

“...the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky 1978, p.86).

This construct is particularly pertinent to this study as it shows how certain tests do not show the mental capabilities of learners as it only assesses the first level without considering the potential

of learners. The second aspect shows how the learning process may be negatively affected if (a) learners do not have someone to take them through their ZPD (b) the teacher is not more capable than the learners. The pedagogic strategy that is based on the ZPD is that of scaffolding.

3.8.1. Scaffolding

Scaffolding arose from Vygotsky's ZPD. According to Blatchford, Kutnick, Baines & Galton (2003, p.168) "The term was first used by Wood, Bruner, and Ross (1976), within the context of mother-child interactions, and has a central place in Vygotskian accounts..." Scaffolding involves taking a learner through their ZPD through assistance (that is gradually withdrawn) until the learner is able to perform the task on their own (Hyland, 2007). It involves both assistance in doing the task and creating awareness of how to do the task (Gibbons, 2003).

This strategy is utilized in all aspects of literacy development, which include reading, writing and speaking (Van Staden, 2011; McNeil, 2012; de Oliveira & Lan, 2014; Ramos, 2015; Gibbons, 2003; Blatchford et al., 2003). It is most effective when used in conjunction with genre pedagogy. According to Hyland (2007, p.160):

"The concept of scaffolding is also implicit in much ESP genre teaching which seeks to provide learners with the means to understand and then create new texts by a process of "gradual approximation"."

It is also in this area of pedagogy that one is able to see how reading, writing and speaking are all intimately linked. de Oliveira & Lan (2014) describe a writing pedagogy that uses both genre and scaffolding very successfully in helping learners acquire discipline specific discourse. They contend that discipline specific discourse is not easily attained by learners and that it is especially difficult for L2 learners. Deconstruction of discipline specific texts by the teacher in order to highlight certain features, followed by co-construction of texts by teacher and learner and lastly independent construction of text by the learner is an effective use of both genre pedagogy and scaffolding in helping L2 learners develop their academic language development (de Oliveira & Lan, 2014; Humphrey, 2013; Parkinson et al., 2007).

3.8.2. Inquiry-based pedagogy

Inquiry based pedagogy is an effective practice that is used in science. It requires learners to actively make meaning of science through practical means and build linguistic resources that they are able to use in high stakes testing (Ramnarain, 2014; Wright, 2008; Pearson et al., 2010). In a nutshell inquiry based learning is based on the concept of learning by doing. Learners “act” as scientists by investigating phenomena and build their knowledge and linguistic capacity through scaffolding by the teacher.

The benefit of this pedagogical practice is that it does not conceive of learning as one dimensional. It is a best practice model in terms of NLS theory regarding mastery of secondary discourse⁶³ (Gee, 2008). It entails both acquisition and learning. As discussed earlier in this chapter acquisition takes place in as natural a setting as possible where the learner is expected to function in a meaningful way. This is what a practical laboratory work as part of inquiry-based learning offers learners. They have to behave and perform as ‘real’ scientists by doing experiments, making observations and drawing conclusions from these experiments.

The second effective aspect of this pedagogical approach is that learning occurs as the teacher scaffolds the learners through their ZPD. This second aspect of explicit teaching that accompanies the practical work makes it a more meaningful learning experience than practical work on its own (Ramnarain, 2014). What inquiry based pedagogy does by incorporating both acquisition and learning is that it facilitates perceptual and linguistic objectification, which are key features of scientific Discourse. This is expanded upon by Wright (2008, p.227) who asserts that perceptual and linguistic objectification are complementary processes “students must first orient themselves to the activity and materials in such a way that they are able to carve out, so to speak, a thing to talk about.” She expands that even if learners are familiar with materials used in practical work, they need to reorientate themselves to perceive these materials as they are used within the discipline. This perception is realized through linguistic resources and is called “resemiotization” which is “the process of moving from perceptual objectification to linguistic objectification” (ibid). Thus, practical work aids CALP.

⁶³ Discourses that are acquired later on in life such as the language of schooling (Gee, 2008; Schleppegrell, 2001).

This pedagogy is highlighted in the CAPS statements as a practice to be used in the teaching and learning in both the Physical Sciences⁶⁴ and Life Sciences⁶⁵ subjects. The advocating of inquiry based learning puts the South African science curriculum on par with current worldwide trends (Ramnarain, 2014). This ideal set out in the latest rendition of the Curriculum documentation is not always realised in many schools which is a disservice to learners who need it the most. It is at this point of how learners are disadvantaged as a result of poor (or outdated) pedagogical practice that inquiry based learning is important to this study. Gee (2008) is at pains to point out that different situations may require differing quantities of acquisition and learning but there should be both for the mastery of secondary discourse. If there is a lack of acquisition, then those who have no acquisition prior to schooling are severely disadvantaged than those who have. Also if there is no learning through explicit teaching and raising awareness of meta-knowledge then there will be a lack of critical and reflexive capabilities (Gee, 2008).

3.9. Conclusion

This chapter detailed several theoretical perspectives on literacy such as the Autonomous model of literacy, the Ideological model of literacy and critical concepts in literacy relevant to the aim of this study. It was established that NLS which is based on the Ideological model of literacy would provide the overarching theoretical framework for this study as it is based on a socio-cultural understanding of literacy. It was also determined that in order to gain a holistic perspective of the phenomenon a re-imagination of the NLS theory would be necessary therefore, the Ecological model of literacy development was proposed which was based upon Bronfenbrenner's Ecology of human development because it provides a framework that allows for the consideration of a multiplicity of factors. Several other constructs that were deemed useful for analysis of the data were then discussed such the issue of Discourse as well as BICS and CALP. Also under consideration was the ZPD and SFL theory. Several pedagogical concepts and approaches were also discussed such as scaffolding, genre-based pedagogy and inquiry- based pedagogy. Chapter

⁶⁴“Physical Sciences promotes knowledge and skills in scientific inquiry and problem solving; the construction and application of scientific and technological knowledge; an understanding of the nature of science and its relationships to technology, society and the environment” (DBE-CAPS-Physical Sciences, 2011, p.8).

⁶⁵“Life Sciences’ is the scientific study of living things from molecular level to their interactions with one another and their environments. To be accepted as a science, it is necessary to use certain methods for broadening existing knowledge, or discovering new things. These methods must lend themselves to replication and a systematic approach to scientific inquiry” (DBE-CAPS-Life Sciences, 2011, p.8).

four elaborates on the methodology of this study. It also entails a detailed description of the method used in both data collection and analysis.

Chapter Four: Methodology and Design

4.1. Introduction

This chapter is primarily concerned with the methodology of the study. Methodology is a specific framework used to understand the world. According to Jupp (2006, p.175), methodology may be defined as “The philosophical stance or worldview that underlies and informs a style of research.” The methodological framework as well as the design employed in the research is explored in this chapter. The appropriateness of the qualitative methodological framework will first be dealt with, then the design or method of the project, which is the case study method, will follow.

At the onset the objectives and the research questions will be laid out. This is followed by discussions on how these questions are answered in order to meet the objectives. In the past qualitative research and in particular case study methods have come under much scrutiny. These criticisms will be discussed. Highly contested issues such as the quality of the research will be addressed under the headings of reliability and validity. The protocol of the research project will be highlighted including, gaining entry into the field, ethical issues, the data collection procedures and analysis.

4.2. Research Objectives

The purpose of this investigation is to examine the literacy practices of learners and highlight how disadvantage is manifested in these literacy practices. A broader issue that will be considered is also how these practices affect access into and success within higher education institutions, the next step after high school that the SA government is committed to facilitating for Black South Africans (given their denial of academic opportunities during apartheid).

4.3. Research questions

- What are the literacy practices within a grade 11 township high school classroom?
- How does disadvantage manifest in literacy practices?
- Why does disadvantage manifest in literacy practices?

4.4. Qualitative research

Qualitative research was undertaken for this particular study. Denzin and Lincoln (2011) describe qualitative research as interpretative practices that seek to portray the world through different kinds of representations such as field notes, interviews etc. “This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them” (ibid, p. 3).

The issue of interpretation of the researcher and the subject of research are of paramount importance. There is an emphasis on the organic settings. Observations of social phenomena take place as they occur. Even as the methods for gathering data are varied so are the interpretation techniques. These are all designed to gather as holistic a picture as possible when the different perspectives are put together. Qualitative research can also be considered to be multi-disciplinary and there is no single theory that specifically falls within the field (Denzin and Lincoln, 2011).

The term qualitative is set up as the polar opposite to the term quantitative when referring to the particular method a study employs. According to Jupp (2006, p.248-249) qualitative research:

“...investigates aspects of social life which are not amenable to quantitative measurement. Associated with a variety of theoretical perspectives, qualitative research uses a range of methods to focus on the meanings and interpretation of social phenomena and social processes in the particular contexts in which they occur.”

The aim of this present study was to interrogate the literacy practices of learners in a school that is considered to be disadvantaged. According to the theoretical underpinning of this study (that is literacy theory), socially constructed phenomena, such as literacies and disadvantage, cannot be quantitatively measured; therefore, a qualitative research methodology is most appropriate. This project falls within the field of qualitative research, more specifically within the interpretative framework of the critical paradigm (Denzin and Lincoln, 2000). A case study research method was used to gather data. The data was then interpreted using new literacy studies theory (NLS).

A case study approach was deemed to be the most appropriate method to employ since the subject under study (i.e. literacy practices) cannot be quantified because according to the literacy theory established in chapter 3, it is socially constructed. This study focuses on a school attended by children from a disempowered part of society i.e. a township⁶⁶. The purpose of this study is to investigate and understand the different literacy practices that occur in a social and educational context of “disadvantage” in a South African high school. The intention is to establish how these practices keep this particular group of learners at the educational periphery at a time in this country’s history when discussions of facilitating access to socially powerful institutions are gathering momentum for example through the “Fees Must Fall”⁶⁷ campaign.

The methodology of qualitative research has always been a contentious issue within the arena of research paradigms as quantitative research has traditionally been held as the standard against which it was measured (Denzin & Lincoln, 2011). Qualitative research has often received harsh criticism for not being “scientific” enough in terms of validity, reliability and representativeness (Jupp, 2006). These contentions that existed during the 1980’s were known as the ‘paradigm wars’ where qualitative research in education suffered greatly (Denzin & Lincoln, 2011). However, the value of qualitative research has subsequently been established in the social sciences as it continues to illuminate many of the issues that face the 21st century such as political and social injustice (ibid).

Qualitative research has often been at a distinct disadvantage compared to quantitative research especially within the realm of educational research. Empirical investigations into “causality, explanation and generalization” are favoured when research is needed to support existing policies or provide rationale for new policies (Torrance, 2011, p.569). The perception that quantitative research would better be able to inform policies stemmed from the fact that the design was experimental in nature and so the results would prove generalizable on both national and

⁶⁶ Townships are neighbourhoods that developed during the apartheid era. It is a “term that emerged to identify ‘non-white’ neighbourhoods alone and was thus a core spatial concept of the apartheid era - but it is a term that nevertheless continues to be used today” (Jürgens, Donaldson, Rule & Bähr, 2013, p.256). These neighbourhoods can be characterized by poor infrastructure and socio-economic problems such as poverty, violence, crime and poor educational opportunities.

⁶⁷ The “Fees Must Fall” campaign began in the latter half of 2015 when university students in South Africa protested against fee increments. The protests rose out of concern regarding the lack of access to universities for poor students.

international levels. There was also the necessity for the solutions to be simple enough to implement to garner or bolster political clout within certain timeframes (Torrance, 2011). So, politics plays a major role in the kinds of research performed as only the kind of research that falls in line with certain political agendas tend to be prioritized (Dubow, 1992). According to Bloch (2009), there is overwhelming evidence of this in South Africa as our history shows how educational policies during the apartheid era were implemented on the basis of such research⁶⁸.

Dubow (1992) highlights how biology was used to bolster racist discourse and eventually solidify apartheid as a national policy while Krige (1997) shows how certain social sciences such as psychology and anthropology influenced apartheid educational policies. The National Party conducted a decade long study of education before it came to power and its contents were published in a manifesto which was used to design the Bantu education system (Johnson, 1982). Yet in saying that, the position of researcher in qualitative research, as a biased instrument of interpretation of what is said by participants should also be considered.

The use of qualitative approaches within the field of education gained momentum in the 1980's primarily within literacy studies (Erickson, 2011). One of the influential studies conducted in the U.S. was by Heath (1983) on literacies within different communities and how they compared to those in school. Other aspects of educational research also began to be explored such as classroom discourse and "teaching for understanding" (Erickson, 2011). It can be said that the field of qualitative research reached a level of stability in the 1990's when a wealth of literature on methods was published and showed how this kind of inquiry could be both systematic and rigorous (Erickson, 2011).

4.5. Research paradigms

There are 4 major frameworks/paradigms that research can be classified into: positivist, post-positivist, critical and interpretivist/constructivist (Henning, Rensburg & Smit, 2004). The present research falls within the ambit of the interpretivist/constructivist paradigm. What follows is a brief description of this paradigm in terms of ontology (nature of reality), epistemology (relationship

⁶⁸ "The Eiselen Commission recommendations (1949-51) laid the intellectual and ideological ground for the decisive apartheid government strategy in education that was to follow" (Bloch, 2009, p. 43).

between researcher and object of study) and methodology (procedure followed in the investigation) (Terre Blanche & Durrheim, 2006). Each framework guides the research process according to its particular ontology, epistemology and methodology (Terre Blanche & Durrheim, 2006). According to Denzin & Lincoln (2011, p. 21), the “researcher approaches the world with a set of ideas, a framework (theory/ontology) that specifies a set of questions (epistemology), that he or she then examines in specific ways (methodology, analysis).” The interpretivist/constructivist paradigm was chosen for this study and is discussed below.

4.5.1. Interpretivist/Constructivist

Ontology: It is governed by relativism. According to Guba & Lincoln (1994, p.110) the constructivist paradigm posits that “Realities are apprehendable (sic) in the form of multiple, intangible mental constructions, socially and experientially based, local and specific in nature (although elements are often shared among many individuals and even across cultures), and dependent for their form and content on the individual persons or groups holding the constructions.”

Epistemology: According to Henning et al. (2004, p.20), “Knowledge is constructed not only by observable phenomena, but also by descriptions of people’s intentions, beliefs, values and reasons, meaning-making and self-understanding.” The findings of the research are created during the research process. This happens as the researcher and the subject of the investigation interact (Guba & Lincoln, 1994).

Methodology: “Unstructured observation, open interviewing, idiographic descriptions and qualitative data analysis are all ways to capture “insider” knowledge that is part of an interpretivist methodology” (Henning et al., 2004, p.20). The aim of the research then is to use all the above mentioned methods to gather as rich data as possible and synthesize this to construct reality.

The ontology of interpretivist/constructivist paradigm is closest in terms of alignment with the overarching theoretical perspective of this study i.e. the NLS theory (described at length in the previous chapter). The ontology of interpretivist/constructivist paradigm is relativist and NLS posits that literacy is not a static or fixed phenomenon but is socially constructed. In order to

answer the question of what are the literacy practices in a grade 11 classroom it was necessary to interrogate “people’s intentions, beliefs, values and reasons” (Henning et al., 2004, p.20) as literacy practices according to NLS are composed of “values, attitudes, feelings and social relationships” (Barton & Hamilton, 1998, p.6). As rich data as possible was necessary. Therefore there were unstructured observations. The researcher did not have a classroom observation schedule during the classroom visits as there were no preconceived notions of what to expect. However, having reviewed the relevant literature in the field the researcher was acutely aware of core reading, writing and oral literacy practices observed in similar studies (such as an absence of reading culture, reading levels that are not grade appropriate, poor written pedagogical practices, dominance of teacher-talk and problematic use of LOLT) so it was these core areas that informed the observations. There were also interviews with the participants that were under observation to provide an account of the different values and attitudes underlying the way in which participants behaved. The teachers, principal and the learners provided 3 different perspectives with which to compare and contrast observations.

4.6. Strategy of inquiry: Case study

The case study is the strategy of inquiry for this particular research project. “The case study method is ideal when a “how” or “why” question is being asked about a contemporary set of events over which the researcher has no control” (Gray, 2009, p.247). It is therefore an appropriate method of inquiry as the research incorporates both a ‘how’ and a ‘why’ aspect. Critical research question two asks “*How* does disadvantage manifest in literacy practices?” and critical research question three asks “*Why* does disadvantage manifest in literacy practices?” The ways in which the research questions are phrased also dictate the kind of method that should be used. According to Yin (2009), the use of “how” and “why” indicates that this is an explanatory study which makes case study the preferred method. What defines a case study is the actual boundaries that are set around the case itself and not necessarily whether it involves qualitative or quantitative methods (ibid). According to Jupp (2006, p.20), the “case” in a case study, “can be an individual person, an event, or a social activity, group, organization or institution.” According to Stake (1995) case studies can further be classified such as the intrinsic case study, the collective case study and the instrumental case study. This particular study falls into the instrumental case study category in that it seeks to understand the specific phenomena of literacy in the context of disadvantage.

The unit under study was the grade 11 classroom and the school and community in which the classroom was situated was construed as the context. One of the key features of a case study is the emphasis on contextual relationships. As established in chapter three, literacy practices are socially constructed phenomena and therefore, contextual relationships are integral in understanding the phenomenon under investigation. Using a case study enabled the researcher to observe these practices in a natural/conventional setting. The data gathered from this authentic setting was then interpreted taking into consideration the socio-economic and political context in which they occurred.

According to Flyvberg (2011) there are many more definitions of what a case study is with some promoting the view that it is not a fully-fledged methodology while others have confused it with the ethnographic model of inquiry. Yin (2009), discusses how research methods are often ordered hierarchically and the case study method is ascribed very little importance as it is seen as a preliminary research method. As a result, many researchers doubt the usefulness of the case study method in testing hypotheses and explaining phenomena. This of course is a misconception as the case study has been used in many disciplines since “recorded history” for explanation of phenomena (Flyvberg, 2011, p.302). Yin (2009, p.6) asserts that “some of the best and most famous case studies have been explanatory.” The case study cannot be criticized for the inability to test hypotheses as the case study falls within the ambit of qualitative research and therefore seeks to answer research questions rather than to test hypotheses (Yin, 2006; Stake, 1995).

There are other criticisms of the case study approach. According to Yin (2009), these are: lack of rigor, lack of generalization of results, they are protracted and are not true experiments. The lack of rigor refers to the researcher not following a set of procedures in an organized way. Yin (2009) faults the lack of availability of texts detailing procedures that need to be followed while conducting case study research so researchers sometimes tend to be unfocused. In terms of criticisms of the research method of case studies, the word generalizability is often heard. According to Jupp (2006, p.20), the case may not be “sufficiently representative to permit generalization.” The third criticism of case studies is that they take too long to conduct and result in copious amounts of information

(Yin, 2009). Lastly the case study method has been faulted for not being “scientific” enough and so they are not regarded as true experiments.

Although some of the abovementioned criticisms may be valid concerns, such as sloppy work by some researchers, they are largely misconceptions. This is evident when one considers the logic of design of the method which is included in the following definition (Yin, 2009, p.18):

- “1. A case study is an empirical inquiry that
- investigates a contemporary phenomenon in depth and within its real-life context, especially when
 - the boundaries between the phenomenon and context are not clearly evident...”

In terms of the current study, literacy and its relationship to disadvantage are contemporary phenomena as evidenced by the recent research conducted in the field of literacy (Taylor & von Fintel, 2016; Makalela, 2015; King & Chetty, 2014; Dhunpath & Joseph, 2014; Spaul, 2012; Manyike, 2013; Wessels & Mkeni-Saurombe, 2012; Nassimbeni & Desmond, 2011; Smith 2011; Makalela, 2015; Woollacott et al., 2011; Joubert et al., 2014; Chaka, 2015; Dhunpath & Joseph, 2014; Dornbrack & Dixon, 2014; Cekiso, 2012). In relation to the second point on case study, the boundaries between literacy and context are blurred as literacy is context-dependent (indicated at length in chapter 3). Yin (2009, p.18) further indicates that a case study inquiry “relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result.” This particular research project makes use of multiple sources of data that is subsequently triangulated.

Misconceptions/criticisms are serious as they attack the case study as a scientific method (Flyvberg, 2011). It is therefore important to address them. One of these misconceptions is that case studies are far too context dependent and that the findings cannot be generalized and so the results are not valuable (Flyvberg, 2011). While generalizability and theoretical knowledge are important aspects of research, they are limited in providing base knowledge. However in terms of the social sciences:

“Predictive theories and universals cannot be found in the study of human affairs. Concrete case knowledge is therefore more valuable than the vain search for predictive theories and universals” (Flyvberg, 2011, p.304).

These tensions are easily resolved when the purpose of the study is considered. Social issues cannot be conducted in laboratory settings; they need to be observed in natural settings. Social science and natural science have different aims and so the methods of inquiry cannot be expected to be the same. However, in making that statement one should not see case studies and statistical methods as mutually exclusive. Rather, they should be viewed as complementary methods that can be used to approach the same problem. The clearest picture of a social phenomenon can be attained when both are used because the outcomes are so different. “The main strength of the case study is depth-detail, richness, completeness, and within-case variance- whereas for statistical methods it is breadth” (Flyvberg, 2011, p.314). There should therefore be no tension between the two differing methods yet there still remains considerable amount of favor shown to statistical methods over and above case studies in the academic arena (Flyvberg, 2011). Finally it should be clarified that particular methods are employed to achieve particular ends. One cannot use quantitative criteria such as generalizability to judge the worth of a case study which is a qualitative research method.

Having addressed and resolved some of the criticisms levelled at the case study method, Yin’s (2009) definition of the case study as an empirical method of inquiry is revisited with the aim of ascertaining how the current study conforms to it. The following table is useful in this regard:

Table 1. How the present study meets the case study criteria

Case Study Definition (Yin, 2009, p.18):	Present Study:
“investigates a contemporary phenomenon in depth and within its real-life context”	The phenomenon under investigation were literacy practices within the schooling context
“the boundaries between phenomenon and context are not clearly evident”	The context-dependent nature of literacy ⁶⁹ made it difficult to delineate boundaries between context and phenomenon.
“copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result”	In this study multiple variables were considered (a) multiple literacy practices (b) multiple disadvantage factors
“relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result”	The multiple sources of data that were used were classroom observations, interviews, focus group discussions and questionnaires.
“benefits from the prior development of theoretical propositions to guide data collection and analysis”	The study relied on the well-developed NLS ⁷⁰ theory to guide data collection and analysis.

As seen in the table, the essential criteria for case study as an empirical research method have been fulfilled. In the following sections more details regarding the design of the study are discussed.

4.6.1. Site selection

The investigation of a disadvantaged school requires that initial criterion for consideration in choosing the research site is the status of the school in terms of resources. The quintile rankings might seem the obvious database to make the choice from since the schools in the poorest communities are given the lowest rankings starting from quintile 1 for the schools in the poorest

⁶⁹ Gee (2008, p.82) asserts that “Literacy has no effects-indeed, no meaning- apart from particular cultural contexts in which it is used, and it has different effects in different contexts.”

⁷⁰ “The influential body of work in New Literacy Studies has used analyses of situated literacy events to illuminate literacies as social practices creating a powerful language of description (Barton, 2007; Brice-Heath, 1983; Street, 1984). Such work has provided rich insights into relationships between literacies and power, identities, discourses and, more broadly, context” (Burnett & Merchant, 2014).

communities and goes up to quintile 5 for schools in affluent areas (Wildeman, 2010). However this system is highly problematic as a school in a poor community may be well resourced because of government intervention or a school in an affluent community may be given a high ranking but may not be particularly well resourced. Also, ranking schools is a labour intensive process and it has not been without criticism (Smith, 2011; Reschovsky, 2006).

The researcher therefore opted to go physically to different schools and assess the sites to establish whether the school visited was under-resourced in terms of not having a library, having a shortage of textbooks and teachers. The other criterion was that the school should also be situated in a low income area with no public library and poor infrastructure such as minimal tarred roads etc. Disadvantage as a criterion for this study included a consideration of the following: being situated in a township that has a low socio-economic status, lack of physical resources at the school and relatively low pass matriculation pass rates compared to schools in the surrounding area⁷¹. This school was the only high school in that township. In this school the grade 11 class would be observed as they were taught throughout the day for the entire duration of the school year, unlike grade 12, the exit year.

Another criterion that was considered was the accessibility of the school to the researcher. This secondary criterion was used to purposely sample the research site. The site was in close proximity to the researcher. This is termed a convenience sample (Hamilton & Barton, 1998, p.59). For practical purposes the researcher needs to have relatively quick and easy access to the site. This facilitates spending as much time as possible to gather information and make observations of participants carrying out their functions in a normal setting. It enhances the reliability of the study as data gathered over a short visit would yield different observations from data gathered over a substantial period of time.

The school in this study will hereinafter be called Winchester High School⁷². It is located in a township and is populated by Africans. This township neighbours an Indian suburb which has two high schools which parents in the township opt to send their children to if they can afford to do so.

⁷¹ See Table 2.

⁷² This is a pseudonym which has been given to the school to protect its identity.

This is because the pass rates of these other schools are notably better for the matriculants (grade 12).

Table 2. Three year comparison of grade 12 pass rates (DBE, 2013)

School Name ⁷³	Ranking	Education Department ⁷⁴	2010	2011	2012
Winchester High School	Quintile 5	DBE ⁷⁵	47%	34%	57%
Mordoor Secondary	Quintile 4	Ex-HOD	85%	92%	96%
Victory Secondary	Quintile 5	Ex-HOD	94%	92%	95%

4.6.2. Participants

The rationale behind choosing the school arose from the fact that there was dearth of information on literacy practices in disadvantaged high schools. Majority of the research conducted focused on the formative years (as discussed in earlier chapters). There is a definite need to analyze why students from disadvantaged backgrounds that enter the tertiary education system seem to exit before they are finished with their degrees. Assessing the apparent disconnect between the educational policies set out by the DBE and the reality of the classroom seemed to be a key to addressing this issue of the under-preparedness of students entering tertiary institutes.

The study involved one school that was attended by learners that came from poor socio-economic backgrounds. The obvious choice of study would have been the grade 12 learners but they do not have a full year of teaching and most of it is geared toward passing the matric exam. Teachers focus solely on grooming learners for this decisive event (Monyoee et al., 2014;

⁷³ All school names have been changed to protect identity of the school under investigation as use of the actual name of neighbouring schools makes the identity of Winchester High School obvious.

⁷⁴ The education department is a governmental structure that is responsible for the running of schools within South Africa. In the apartheid era there were separate departments for each of the designated race groups: The House of Assembly (HOA) was for Whites, the House of Representatives (HOR) was for Coloureds, the House of Delegates (HOD) was for Indians and the Department of Education and Training (DET) was for Africans. After the abolition of apartheid, the democratic government dissolved all these departments and all schools are now run by the Department of Basic Education.

⁷⁵ Current department

Wolhuter, 2014; Bloch, 2009). So the grade 11 class was used as a unit of study. The number of participants in the class was fifty-six learners. Their gender distribution of the class was almost equitable (30 females and 26 males). All participants were African. The average age of the class was 16 years old. These participants were appropriate for this study in that they all lived in the township within which the school was situated and the income of the township was particularly low⁷⁶.

4.6.3. Ethical issues

This PhD project had to be authorised by the university ethics committee (see Appendix 9). All protocols for entering into the school were observed. Permission to enter the school was first sought from the DOE, the Principal, the governing body of the school and the teachers respectively (see Appendix 10). Consent forms in isiZulu were then given to the learners and their parents (see Appendices 11 and 12 respectively)⁷⁷. Teachers consent forms were however in English (see Appendix 15). The identity of the school, names of teachers and the learners were not disclosed. All participants have been given pseudonyms in this study.

According to Christians (2011, p.65-66), four major pillars of ethics have been established within the social science research field. These are:

- “1. Informed consent: participants in the research should be duly informed of the nature and consequence of the research and agree to participate in the research of their own accord in the absence of both physical and psychological pressure.
2. Deception: There should not be intentional deception of the participants. There should be complete transparency in terms of the purpose.
3. Privacy and confidentiality: The identities of both individuals and institutions should always be protected especially if the research is sensitive in nature and/or may cause embarrassment.

⁷⁶ On 19 May 2014, Mr Mathando Lukoto e-mailed me relevant Census 2011 data for the township in which the school is situated.

⁷⁷ See Appendices 13 & 14 for English versions of the consent forms for learners and parents.

4. Accuracy: Data should be accurate in that they should be free from all manner of tampering and omissions by the researcher” Christians (2011, p.65-66).

This research study adhered strictly to these pillars. All participants had to sign informed consent documents. These documents were also translated into isiZulu (see Appendix 10 and 11) so participants fully understood the content of the documents and there were no misconceptions regarding the purpose of the study. The name of the school and all participants were given pseudonyms to protect their identities. I grappled with the issue of identifying the school involved. Disclosing the name of the school would have been useful in terms of allowing the reader to verify the facts and to apply any prior knowledge they had regarding the school (Yin, 2009). However, the research took place with the understanding that the school would not be identified as any unfavorable assessments would prove to be further disadvantageous to the already disadvantaged school. Finally, the data was meticulously handled by the researcher to ensure the accuracy of it.

Since critical social science (postmodernism, critical feminism and post-structuralism) deals with issues of politics and power there is a demand for something more than a set of universal regulations to guide the researcher (Kincheloe, et al., 2011). In fact having a set of regulations to guide this kind of research would defeat the purpose of this research as it constantly questions the status quo in society. Therefore, a branch of ethics termed critical research ethics is necessary when engaging in any form of critical social science inquiry (Cannella & Lincoln, 2011).

At the heart of the difference between conventional social science inquiry and critical social science inquiry is the positioning of the researcher and their purpose. Whereas traditional social science positions the researcher as “savior”, in critical social science the “Researcher must avoid the perpetuation or maintenance of inquirer-orientated power (as savior, decolonizer, or one that would empower)” (Cannella & Lincoln, 2011, p.82). There was a need for awareness by the researcher not to reconstruct the realities of the marginalized or oppressed but to engage with their realities. Self-reflection should always be taking place throughout the process. I was keenly aware of my position as researcher, as someone who had access to a powerful social institution. I was also aware that I belonged to a different race and social class to the participants. I used this self-awareness to guard myself from biased value judgments in my analysis of the data.

4.6.4. The generation of data

It is not uncommon to find literacy discussed as if it were a uniform, easily measured phenomenon that lends itself to be comprehension by a singular standard. Kintgen, (1988, p.xix) asserts that “there is no such privileged perspective, but rather various ways of investigating a complicated and multidimensional topic.” Therefore, using a variety of sources to collect data proved to be the best way of creating a clear picture of literacy practices in a particular context. The use of multiple sources is one of the major characteristics of case study method (Jupp, 2006). The complexity of the phenomenon does not allow for the use of straightforward method of analysis. The intention was to explore the different layers of disadvantage and see how they all come together to impact literacy.

Data collection consisted of four weeks of site visitations and intermittent visits thereafter to clarify emergent matters as the data was subsequently analysed. During those visitations, different subject lessons from the social sciences (English First Additional language and Geography) as well as the pure sciences (Physical Science and Life Science) and mathematics were observed and recorded. Copious notes were taken and focus group discussions were conducted with both teachers and learners. The tools used to gather data were observation, questionnaires, focus groups and an interview. Content validity was used to establish the trustworthiness of the questionnaire. According to Kimberlin & Winterstein (2008, p. 2279) “because there is no statistical test to determine whether a measure adequately covers a content area or adequately represents a construct, content validity usually depends on the judgment of experts in the field.” The questions in the questionnaire used were modelled after similar questions used by experts in the literacy field to illicit information on literacy practices. For example one particular question in the questionnaire deals with learners’ experiences of being read to by parents during childhood, this is modelled after Shelly-Brice Heath’s seminal study on literacy practices. Heath (1983) uses the reading of bedtime stories to ascertain whether literacy practices in the home support those that occur in school.

Observations of the different lessons were carried out in the grade 11 class. This entailed detailed field notes as well as video recording of certain lessons. The questionnaires given to learners were used to establish a background of the learners in terms of their literacy habits. A focus group

discussion with the learners was carried out in which certain issues that were observed in class were further probed. A separate focus group discussion was also done with the teachers. The principal of the school was also obliging in giving an interview. Census information⁷⁸ was also used to understand the socio-economic state of the township and corroborate data from the focus group discussions and questionnaires.

4.6.4.1. Classroom Observations

Observational data provides a rich source of information. This kind of data should have sufficient depth and detail as to enable the reader to visualize the environment and the actions that have taken place in that environment (Patton, 2002). There are two kinds of observation techniques direct observation and participant-observation. The kind of observation I used was direct observation. According to Angrosino & Rosenberg (2011, p. 467), “Qualitative social scientists are observers both of human activities and of the physical settings in which such activities take place.” Observations within the constructivist paradigm occur in natural settings. My non-participation in the events meant that I did not in any way influence the events that were observed. These observations however are never viewed as objective as the researcher influences and is influenced by the subject/s under observation (Henning, 2004). This was something that I was very conscious of throughout the research. My position as an educator at a tertiary institution influenced the way I was perceived by the staff at the school by making them initially suspicious of my motives. My experience with students from disadvantaged schools in my current job also coloured to a large extent the way in which I saw the school.

Observations allow the researcher to witness firsthand the events/behaviours under study. This meant that I was able to witness literacy events in their natural settings (the classroom) as they occurred. I observed thirteen and recorded eight lessons⁷⁹ thereof. These formed the source of my observational data. I made a conscious decision not to record at the beginning of observations (the first five lessons) so that learners and teachers would become comfortable with my presence and that I would acclimatize myself, so that interactions in class would be as authentic as possible. In

⁷⁸ On 19 May 2014, Mr Mathando Lukoto e-mailed me relevant Census 2011 data for the township in which the school is situated.

⁷⁹ Each lesson ran for approximately 55 minutes.

order to witness a range of academic literacy practices, I chose to observe lessons in the social sciences (English FAL and Geography) and the pure sciences (Physical Science, Mathematics and Life Science).

Although I was not a participant observer, I did not prepare an observation schedule as recommended in Henning et al. (2004). I believed that using such a tool would result in tunnel vision and important aspects may be overlooked. I took notes using the theoretical frameworks and constructs as guidelines. According to Yin (2009, p.102) although observations have many positive attributes such as covering events in real time and contextualizing the case, there are also several weaknesses that should be noted:

- ◆ “Time-consuming
- ◆ Selectivity- broad coverage difficult without a team of observers
- ◆ Reflexivity- event may proceed differently because it is being observed
- ◆ Cost- hours needed by human observers”

These drawbacks were certainly a factor within this research project. The time factor could not be avoided as sometimes unforeseen circumstances such as strikes could not be controlled by me. Also lessons run for a particular duration so I had to sit through the entire lesson. I was the sole observer in the research field as opposed to a team so the coverage was not as comprehensive as it would have been if there had been a team. However, having other sources of data added depth to the study findings. Also any issues regarding the quality of the observations was overcome by triangulating data from the other data sources (that is the questionnaires, interview and focus group discussions).

4.6.4.2. Interviews

Henning et al. (2004) describe two types of interview techniques. The first type is what is referred to as the ‘standardised interview’. This kind of interview is viewed as a tool to illicit information from participants. This information is unquestioningly taken as reality. The interviewer does not in any way influence the process and in so doing taint the outcome. This first type of interview is

highly structured and is most often used in job interviews (Stuckey, 2013). I opted not to use this interview technique but rather use the second technique.

The semi-structured interview is the second type of interview (Henning et al., 2004). Semi-structured interviews operate in a very fluid way. The set of questions asked are largely predetermined but the interview takes the direction in which the participants' responses lead (Stuckey, 2013). This is the technique that was employed for both the interview with the principal and the two focus groups discussions (see Appendices 1, 2 and 3). It was the most appropriate technique for what I aimed to accomplish because even though I had a range of areas that I wished to cover in the interviews, ultimately I wanted to ascertain the participants' values, attitudes and beliefs that informed their literacy practices⁸⁰.

According to Kamberelis and Dimitriadis (2011, p.545), "focus groups are collective conversations or group interviews", that serve multiple purposes. The focus group allowed for participants to feed off each other in terms of response. There were two focus groups that were carried out both lasted for approximately 25 minutes each and were held in the shipping container that had been brought onto the school property that was to be converted into a library. One group was with six grade 11 learners whilst the other group was with ten grade 11 teachers with different subject specialties. They were held on different days. The kinds of questions used in both the focus groups were largely open-ended. This allowed participants to construct their own realities without preconceptions being imposed on them by the researcher.

Although the principal was one of the teachers in a lesson that was recorded, he was interviewed separately from the rest of the teachers. The reasons for interviewing the principal were twofold. This is because firstly, I thought that the absence of management (the principal) allow teachers to express themselves more freely in the focus group discussions. Secondly, I thought that he was the best source of information regarding school's policy on language, staffing issues and the economic position of the school.

⁸⁰ "Investigating literacy as practice involves investigating literacy as 'concrete human activity', not just what people do with literacy, but also what they make of what they do, the values they place on it and the ideologies that surround it" Baynham (1995, p.1).

4.6.4.3. Questionnaires

Learner questionnaires (Appendix 4) were used as a part of the study. According to Patton (2002) the use of a questionnaire is a basic practice in qualitative data collection. These were intended to add to the depth of the study. Forty-five questionnaires were distributed in class and a total of thirty-three were collected back from the learners. The questionnaire was focused mainly on the history of literacy practices in the participants' lives as well as current literacy events in learners' lives. The questionnaire consisted of a balance of open-ended and closed-ended questions. These questions were devised to elicit information that would inform critical question two and three 'How does disadvantage manifest in literacy practices?' and 'Why does disadvantage manifest in literacy practices?'

The questionnaire was used to illicit background information on several issues related to the learners' literacy practices such as the approximate age they were exposed to dominant discourses, the kinds of literature they most frequently use and issues pertaining to language (both in and out of the classroom). These proved useful to a certain degree only. The open-ended questions were especially disappointing in terms of the kind of data they yielded. More often than not the questions were left blank. This could be probably because participants were not interested or that the participants felt intimidated by the task of constructing responses or even perhaps that they did not know how to answer questions because they did not understand the questions (Scholz & Zuell, 2012) . This is, however, not uncommon:

“There are severe limitations to open-ended data collected in writing on questionnaires, limitations related to writing skills of respondents, the impossibility of probing or extending responses, and the effort required of the person completing the questionnaire” (Patton, 2002, p.21).

I think that perhaps all of the above played a significant role in the responses on my questionnaires. Having said that, it was still a useful exercise as it was used to triangulate responses from interviews and the observations that were done.

4.6.4.4. Documentation

In case studies documentation corroborates evidence from the other sources and can range from personal communications to reports and newspaper articles (Yin, 2009). Certain worksheets from the Life Sciences (Appendix 5), Geography (Appendix 5), Mathematics (Appendix 7) and English FAL (Appendix 8) classes were used to add to the description of literacy events. Digital photographs were also taken of learners' workbooks, exercises that were written on the chalkboard and learner's Physical Science test. Curriculum documents (available on the DBE website) was used to contextualize particular practices that were going on in the class (South Africa, Department of Education, 2010). It was important to compare the teaching and learning in the classroom to the ideals set out in the curriculum statements and to identify any incongruences between policy and practice. It is often the case in South Africa that the education policy makers are people who are far removed from the realities of the classroom.

Table 3. Research objectives and strategies

CRITICAL QUESTIONS	REASON FOR DATA BEING COLLECTED	RESEARCH STRATEGY	DATA SOURCE	NO. OF SOURCES	SITE OF DATA SOURCE
<p>What are the literacy practices within a grade 11 township high school classroom?</p>	<p>To explore what literacy practices are taking place in a grade 11 classroom.</p>	<p>Classroom observations Focus group discussions Questionnaire</p>	<p>English FAL Lesson Geography Lesson Mathematics Lesson Physics Lesson Life Science Lesson Questionnaires for learners Teachers in township school Learners in township school</p>	<p>2 2 2 1 1 33 10 6</p>	<p>Winchester School High</p>
<p>How does disadvantage manifest in literacy practices? Why does disadvantage manifest in literacy practices?</p>	<p>To examine the ways in which disadvantage manifests in literacy practices and understand why this happens.</p>	<p>Classroom observations Focus group discussions Semi structured interview Questionnaire</p>	<p>English FAL Lesson Geography Lesson Mathematics Lesson Physics Lesson Life Science Lesson Questionnaires Teachers in township school Learners in township School Semi-structured interview with principal</p>	<p>2 2 2 1 1 33 10 6 1</p>	<p>Winchester School High</p>

4.7. Data analysis

The data was analyzed in three stages. The initial stages of the analysis made use of a qualitative data software package (NVivo). The first stage involved data preparation. The visual materials such as the photographs were organized into sets. The digitally recorded material was edited (to make it manageable) before it was uploaded to NVivo. Transcriptions of audio material and field notes were also imported to NVivo. Once the data was uploaded “coding” took place. Jupp (2006, p.30) seems to relegate coding to use in analyzing questionnaires. He goes on to describe the process as classifying answers to questions which he posits is a quantitative data analysis technique. This is a very narrow view of what coding actually is. Coding is also commonly used as a data analysis technique in qualitative research.

According to Henning (2004, p.104) coding involves labeling “units of meaning in the data.” This is when stage two began which was identifying emerging themes from the aforementioned process. Sets were then created by grouping together the different items (audio visual and field-notes etcetera) that exhibited the same themes and trends. When this was accomplished, stage three took place where the integrated data was discussed within the theoretical framework i.e. NLS theory.

In order to analyze the data, an analysis of discourses was done within the NLS framework. According to Jupp (2006, p.74), Discourse Analysis is:

“Detailed exploration of political, personal, media or academic ‘talk’ and ‘writing’ about a subject, designed to reveal how knowledges (sic)are organized, carried and reproduced in particular ways and through particular institutional practices.”

Classroom discourse is crucial for analysis when one is considering literacy practices in the classroom as “speech unites the cognitive and the social” (National institute of Education, 1974, p.1). Traditionally there are two basic methods that are used to understand speech in the classroom and these methods are employed to fit a specific outcome (Cazden, 1986). The first termed “process-product” research evolved out of a need to evaluate which teaching strategies were most effective (ibid, p.432). This would more appropriately be termed quantitative research as the predetermined set of criteria would be measured for example in order to measure the effectiveness

of teacher questions, the researcher would quantify the number of high level questions were asked in a session.

The second method is purely descriptive. This kind of method is classified as qualitative research. The researcher makes observations and the observations then dictate which phenomena require focus. Cazden (1986, p.433) describes this method as “sociolinguistic.” This sociolinguistic method was employed in this study as there was no predetermined set of criteria. After observations of literacy events were made in the classroom and the focus group discussions with both educators and learners had been conducted, the prevailing themes regarding literacy practices were determined in conjunction with established literature on the subject.

4.8. Data Presentation

The data of this study is presented in response to the two critical questions posed first considering literacy practices and then issue of disadvantage. Below each critical question the source of the data and themes explored are noted. The themes that emanate from critical question 1 are further explored in relation to the themes that emanate from critical question 2 and 3.

Table 4. Data presentation

Critical research question	Sources of data	Themes
1. What are the literacy practices within a grade 11 township high school?	Classroom observations Focus group discussions Questionnaire	Literacy practices: Reading practices, writing practices, pedagogical practices, use of resources, oral practices and practical literacies
2. How does disadvantage manifest in literacy practices?	Classroom observations Focus group discussions Questionnaire Interview	Absence of a culture of reading, poor pedagogical practices, lack of resources
3. Why does disadvantage manifest in literacy practices?	Classroom observations Focus group discussions Questionnaire Interview	Manifestations of disadvantage: Socio-economic disadvantage, historical disadvantage, psychological disadvantage and educational disadvantage

4.9. Validity

Jupp (2006, p.311) defines validity as “The extent to which conclusions drawn from research provide an accurate description of what happened or a correct explanation of what happens and why.” The importance of ensuring validity in social science research stems from the fact that certain measures/actions follow such as policy reform in the light of this kind of research. This has to do with the authenticity of the research where one would be confident enough to construct social policy or legislation based on the findings (Lincoln et al., 2011). It is therefore important that the conclusions reached in such research be valid because reforms based on faulty/erroneous research could lead to more problems.

The idea of validity is something that differs depending on which paradigm the research falls within. For those within the positivist tradition the emphasis is on rigorous methodological processes while those within the later established paradigms tend to see both the method and

interpretation process as important in establishing validity (Lincoln et al., 2011). These tensions cannot be resolved as they go to the fundamental ontological bases of the different paradigms.

As pointed out in section 4.4. This study falls within the interpretivist/constructivist paradigm. Within this paradigm the positivist criteria of internal and external validity are replaced with the criteria of trustworthiness and authenticity (Denzin & Lincoln, 2011, p.92). This is ensured by triangulation (Henning et al., 2004). This is done by using multiple methods to collect data. In this study several methods were used to collect data namely, observations, recordings, questionnaires thus ensuring triangulation of data. According to Stake (1994, p.241):

“Triangulation has been generally considered a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation. But, acknowledging that no observations or interpretations are perfectly repeatable, triangulation serves also to clarify meaning by identifying different ways the phenomenon is being seen.”

Triangulation thus ensures that all stakeholders and the researcher’s view are included. It protects against bias. In this study, the classroom observations were not the only source of data. Analyzing this data on its own could lead to researcher bias. Therefore this data was triangulated with the questionnaires given to the learners, the focus group discussions with the teachers and learners and the interview with the principal.

4.10. Reliability

Reliability is consistency and rigor in data collection methods. Jupp (2006) defines it in terms of the consistency of the measuring instrument. According to Gray (2009), “Conditions for reliability are met if the findings and conclusions of one researcher can be replicated by another researcher doing the same case study.” Yin (2003) goes on to clarify that the second researcher would be able to get the same results following the same procedure as the first research in the *same case* (emphasis mine) not a different case. This is possible if the procedures are meticulously documented and protocol is followed. Yin (2003) in Gray (2009, p.263) describes this as protocol and it should contain the following sections:

- “-An overview of the case study project, including objectives and theoretical issues.
- Field procedure, including: access to the case study ‘sites’ and people; general sources of information; back up procedures including eliciting help, if needed, from colleagues; timescales; and contingency plans- for example, if interviewees decide not to cooperate.
 - Case study questions, table templates for collecting data and the potential sources of information for each question.
 - A structure to guide the final report.”

These protocols have been duly followed as the research was conducted for the purposes of a thesis which requires one to follow certain institutional guidelines. As such a proposal was first drawn up that included detailed overview of the research project including the theoretical background, objectives, research questions, research instruments (questionnaires) and proposed timeframes. Aside from this as the research progressed, a log of activities was also kept. This log was kept as it is necessary within the constructivist paradigm to maintain flexibility. Few case studies end up following the proposal laid out at the onset of the research.

4.11. Limitations of the research method

As with much of social research there are always variables that are completely out of the control of the researcher. This made the use of this method very difficult. The project ran longer than expected because of several issues. The first was that of observation times. The principal agreed to observations being done during the first few weeks of the semester so that crucial testing/exam times would not be interrupted. There was also a teachers strike during the year. Lack of proper school administration also made planning data collection difficult as the school timetable was constantly being changed. Some of the teachers were also unwilling to be observed or filmed. Even after building a rapport with the principal and other teachers, my research was still viewed with suspicion. Many of the teachers seemed uninterested in voicing their opinion in the focus groups. It was exceedingly difficult to collect written materials as there was firstly, a shortage of worksheets in the classes. Secondly, I was not allowed to take any of the learners’ written artefacts (such as workbooks or test scripts off the school property). Thirdly, the photocopying machine was an old but a precious resource to the school and so could not be used. The single case study

was not able to provide illumination as to how the literacy practices at the disadvantaged school compared to those of an advantaged school. Multiple case studies of disadvantaged schools could have allowed me to make more generalizations regarding typical literacy practices at such schools.

4.12. Conclusion

The use of qualitative methodology was the only appropriate philosophy to adopt considering the theoretical framework of the research project is the socio-cultural literacy theory i.e. New Literacy Studies (NLS)⁸¹. This theory proposes that literacy is a socially constructed phenomenon. This implies that it is never really a fixed concept. Discovering what literacy means to a particular society at a particular point in time requires one to investigate the multiple perspectives of the people in that society and also to use those perspectives to construct reality. Disadvantage is also a social phenomenon, the definition of which is also constructed in the same ways as literacy. So, qualitative research has allowed the researcher to gather data that could be analyzed using a constructivist/interpretivist paradigm. The method of the case study allowed for enough depth to adequately answer the question of "how" disadvantage was manifested in this particular school.

⁸¹ This theory is discussed at length in chapter 3.

Chapter Five: Presentation of findings and analysis of literacy practices in a grade 11 classroom

5.1. Introduction

The previous chapter detailed the methodology used in the study. Qualitative methodology was argued to be the most appropriate one to investigate the socially constructed phenomena of literacy and disadvantage. The case study method employed to gather the data was also explored at length. Both the merits and demerits of this method were discussed. It was concluded that to answer the main research question of how disadvantage manifests in literacy practices, the method of a case study would be the most useful. Different instruments were used to gather the data i.e. interviews, observations, questionnaires and focus groups.

This chapter will discuss the findings from the aforementioned instruments. The data will be subdivided in the following categories: reading, writing, speaking and practical literacies. The discussion of critical research question one, “*What are the literacy practices within a grade 11 township high school classroom?*” is herein detailed.

Using Street’s (1997)⁸² definition of literacy practices and events I approach each lesson as a literacy event⁸³ in which certain literacy practices⁸⁴ occur. These practices, although discussed here in discrete sections, are intimately associated to each other. This is the very essence of the sociolinguistic approach i.e. the interconnectedness of knowledge as well as the interconnectedness of this knowledge to the matrix of socio-economic-political culture (Fairclough, 1992). Following Gee (1990, p.122), I view literacy through an “integrated-social-cultural-political-historical” lens. This is a socio-cultural view of literacy which according to Street

⁸² “By literacy practices I mean not only the observable behaviours around literacy – Heath’s ‘literacy events’ – but also the concepts and meanings brought to those events and which give them meaning,” Street (1997, p.50).

⁸³ These are the concrete/observable behaviours involving literacy such as reading, writing, speaking and doing (Street, 1997; Gee, 1990).

⁸⁴ “Investigating literacy as practice involves investigating literacy as ‘concrete human activity’, not just what people do with literacy, but also what they make of what they do, the values they place on it and the ideologies that surround it. Practice provides a way of linking the cognitive with the social, opening up the possibility of an integrated approach to the study of literacy in use,” Baynham (1995, p.1).

(2002, p.128), “demands that we see reading (and writing and speaking) as not one thing, but many: many different socio-culturally situated reading (and writing and speaking) practices.” Street further asserts that even though the school environment may be considered as somewhat “artificial” the reading and writing that takes place within this environment is still socially constructed as “the school, like other contexts, has its own social beliefs and behaviours into which its particular literacy practices are inserted” (Street, 1997, p.48).

Therefore, the ensuing chapter cannot solely be about instances of reading and writing but it has to deal with the “social beliefs and behaviours” into which literacy and the acquisition thereof is immersed. The practices that occur in these classrooms are what Gee (1996) refers to as secondary Discourse⁸⁵. Discourse should not be conflated with language because it constitutes more than language. Rather, according to Gee (1990, p.127) it is the right “saying (writing)-doing-being-valuing-believing combinations.” In institutions like the school, the literacies of reading, writing, speaking and doing are important components of the secondary Discourse that learners are expected to master. The literacy practices that occur within the context of the classroom will be examined in terms of the aforementioned four pillars of academic Discourse in this chapter and particular trends that were found in the data analysis will be explored. In response to critical question two, “*How does disadvantage manifest in literacy practices?*” and critical question three “*Why does disadvantage manifest in literacy practices?*” the macro social issues and their impact on the literacy practices that occur in schools will be examined in the next chapter drawing on an ecological perspective derived from Bronfenbrenner’s ecology of human development theory.

5.2. Reading practices

Reading events in all of the lessons observed were restricted to reading out aloud by teachers and learners (both individually and in chorus). This entailed reading questions that needed to be answered from worksheets and learners reading during the oral lesson.

⁸⁵ Following Gee (2008, p.155) I use Discourse (with an upper case D) to refer to “distinctive ways of speaking/listening and often, too, writing/reading coupled with distinctive ways of acting, interacting, valuing, feeling, dressing, thinking, believing, with other people and with various objects, tools, and technologies, so as to enact specific socially recognizable identities engaged in specific socially recognizable activities.” This is opposed to discourse (with a lower case d) which refers to long expanses of interconnected language such as one would find used in a conversation. Therefore, it should be noted that discourse will form part of Discourse.

5.2.1. Reading aloud

In the English FAL lesson (A) (see Appendix 16) Mrs Dlamini⁸⁶, read out the summary exercise question and then the instructions. All learners had the worksheet and followed as she read out loud. The purpose of reading the instructions out loud was to clarify the instructions⁸⁷. When this was done the teacher proceeded to ask a learner to read out the paragraph to be summarized. The following is what the learner read out:

EFAL A:

4. S1: [Giggles then starts to read- quite expressionless] “Bullying in schools. Bullying is common in schools where there are large groups of children. Teachers may not always maintain close supervision on the playgrounds. It take various forms from beating children up to other types such as such as pinching, tripping, poking teasing and even stealing. Bullies are not always boys, girls bully other girls and can also be violent but only their bullying is more psychological. Like spreading stories and r...r...raining another girl’s rep reputation. Often children don’t like to () about being bullied because they have already been shamed and humiliated. Parents must be seni...sensitive to any changes in their children’s behaviour. The best way for parents to protect children against bullying is to teach them self-confidence. Children who lack confidence are more likely to become victims of bullies. Parents can help children who lack social skills by enrolling them in

⁸⁶ Referred to as Mrs D in the transcription.

⁸⁷ EFAL A:

1. Mrs D: Ok. We are marking the summaries heh. I just want to check if you have it on your exercise books. [Mrs Dlamini walks into class holding worksheet. Students take out worksheets]. Ok (.) the question says: The following article appeared in a magazine. The life-orientation teacher wants to send a memo to parents to suggest ways to counteract bullying and actions that can be taken based on this article. We are asked to write down 7 points on what parents can do to stop bullying from happening at school. Ok, so what are we going to summarise here? What is the best way to summarize? [Students continue to shuffle and mumble while teacher reads this. She reads it very quickly and without much expression. To me it sounds a little like she is uninterested. When question is asked- there is no intelligible response from class- just a lot of mumbling].

2.E: () [mumbling].

3. Mrs D: Ya? What parents...[writing on board] SO this is what you will be summarizing. And then the instructions: the first one is list 7 points in sentences using not more than 70 words. So your summary must not exceed 70 words. Number your sentences from 1 to 7. So no roman figures, no letters, no stars no bullets just numbers. Write only one point per line. Use your own words. Indicate the number of words you used at the end of your summary in brackets. So those are your instructions. Ok? [Doesn’t wait for any other responses- turns and starts to write the question on the board: “What can parents do to stop bullying from happening at schools?”]. Let’s get somebody who is going to read the passage for us (.) [looks around- no volunteers]. Goodness, where are you? Where is Goodness? Ok, read for us.

activities outside of school. Children who display () are less likely to be intimi...intimidated by bullies at school. Parents should also listen to their children when they complain about bullying. If they see that something is wrong and they children don't talk about it they should they should keep on asking until they find out. Parents should talk to other parents about the bullying. If one child if one child is being bullied it is likely that other children are also being bullied. If they school see anything wrong () they should insist on an investigation.”

The reading of this passage was neither fluent nor expressive but according to Mrs Dlamini, the reason for this particular learner being called upon was that she was one of the best readers in the class. The practice of reading aloud by both teachers and learners in class is practiced around the world in an attempt to help with understanding and it is done to compensate for any inadequacies learners may have with decoding text (Reed, Swanson, Petscher, & Vaughn, 2014). However, evidence of enhanced understanding as a result of this read aloud event was absent. The reader's lack of fluency and poor expression indicated that even though she was deemed one of the best readers, her understanding of the text was not particularly good. According to Paige & Magpuri-Lavell (2014), the lack of fluency and expression is indicative of a lack of basic reading achievement which means compromised comprehension.

The above example speaks to the level of fluency that learners had in their FAL. There appeared to be a general lack of mastery of decoding amongst the class as a whole which shows that the basic reading levels are poor for grade 11 learners. This is most notably evident in the oral lesson. In English FAL (B) lesson (see Appendix 17), learners prepared a “reading aloud” paragraph from *The Coffee-cart Girl* by Es'kia Mphahlele for their oral assessment. Such a task is in accordance with the teaching plan outlined in the CAPS document⁸⁸ for EFAL (DBE-CAPS-EFAL, 2011, p. 68). This lesson is used to demonstrate the learners' poor reading abilities. In the ensuing paragraphs evidence of this unsatisfactory reading ability is illustrated using individual learners to highlight specific poor reading habits as examples. These individual learners displayed all of these

⁸⁸ “*Oral year mark from cumulative speaking and listening and/or reading. Final mark should include at least one prepared speech task, one listening task and one other, e.g. prepared reading aloud/unprepared speech/informal speaking in group work” (DBE-CAPS-EFAL, 2011, p. 68).

habits/characteristics of poor reading in varying degrees which have been underlined however, specific learners were chosen to highlight a particular habit as they displayed a high frequency of this particular habit.

Learners' reading was characterized by poor pronunciation. The learners often exhibited hesitation at common vocabulary⁸⁹ and were not particularly fluent. According to Paige & Magpuri-Lavell (2014), "The first indicator is the ability to read words in the text with accuracy without stumbling over their pronunciation." They stumbled at words that were part of the core vocabulary⁹⁰ that was necessary in order to successfully navigate academic texts (Brezina & Gablasova, 2015). This high level of poor pronunciation (indicated by the word mispronounced) in the class is demonstrated by the following learner's reading:

EFAL B:

18. S4: (). [Continues reading while rest of the class looks disinterested and looks around. Monotonous plodding & word by word- reading in a staccato fashion.]. "Pinkie and China panicked [mispronounced as picked] at the thought of a love affair and remained dumb [repeats 'remain dumb, remain dumb'- back-tracking].

'Pinkie, I've got a job at last!' [no expression- read flat monotonous plodding]

'I'm happy for you, China!'

'You'll get a present, first money I get. Ach, but I shouldn't have told you. I wanted to surprise you.' He was genuinely [mispronounced] sorry.

'Don't worry, China, I'll just pretend I'm surprised really, you'll see.' They laughed. [Does not pause for any of the punctuations monotonous plodding & word by word]

Friday came.

'Come, Pinkie, let's go.' [no differentiation between the speakers- monotonous plodding]

'Where to?'

'I'll show you.' He led her to the cheapjack [mispronounced] down the street.

'Mister [mispronounced], I want her to choose anything she wants.'

⁸⁹ Common vocabulary refers to words that one would expect grade 11 to be conversant with

⁹⁰ Core vocabulary refers to common or frequently occurring words in the English language. A list of 3000 words can be found in the *New General service list* compiled by Brezina & Gablasova (2015).

The cheapjack [mispronounced] immediately sprang up and in voluble [mispronounced] cataracts [mispronounced] began to sing praises [mispronounced] upon his articles.

Poor pronunciation is an indicator that learners lack the requisite basic reading skills such as phonemic awareness that is necessary to read and is also indicative of a lack of exposure to reading in general (Paige & Magpuri-Lavell, 2014). The hesitation at pronunciation led to lack of confidence which made learners read in a softer volume. There were several instances where reading was so soft that the researcher and the teacher were unable to hear. The following example, however, was considered to be the worst of the entire lesson:

EFAL B:

21. Mrs D: Ok thank you. Sibusiso?...Sibusiso you start at number 6

22. S6: ().

23. Mrs D: Shshshshsh ey keep quiet! Give him a chance [Interrupts S6 to try to get learners to be quiet.

24. S6: (). [completely inaudible].

25. Mrs D: Sh. Is there reading or what? Cause I can't hear anything!

26. S6: ().

27. Mrs D: Sorry? Haibo it's not done like that! What's your problem? Ok you can come and sit here. [Tells S6 to come and sit at the front of the class].

28. S6: ().[continues mumbling].

29. Mrs D: Go stand there by the wall. [Despite effort to bring him to the front- he is still inaudible. Some of the class are now jeering and laughing at him].

30. S6: ().

31. Mrs D: What is this? [directed at S6]. I can't even hear you. [Class's rowdiness contributes to the problem of inaudibility].

32. S6: ().

33. Mrs D: Shhhh

33. S6: (). [S6 continues reading for the last time. Seems that Mrs Dlamini has given up on trying to hear him].

In addition to the aforementioned poor pronunciation, other lack of fluency characteristics were also observed. Purcell's (1963) poor reading habits⁹¹ that are characteristic of a lack of fluency were evident in the class. These comprised of word by word reading, back-tracking⁹², finger following and monotonous plodding. This is important to note since there exists a correlation between oral reading fluency and reading proficiency in schools that perform poorly and are considered high-poverty schools (Baker et al., 2008).

These features which characterizes this class of grade 11 learners as poor readers, according to Purcell's (1963) definition of poor readers, is illustrated in the following example:

EFAL B:

2. S1: () [This learner reads very softly and I cannot hear what she is reading. Reads with little finger in her mouth. Uses her finger on the other hand to keep place on the page- finger pointing].

“What to do now?” [this is a question in the text but it is not phrased as a question, instead the reading is monotone and flat- monotonous plodding]

'Like most of us,' looking up straight into her eyes, 'beat the road early mornings just when the boss's breakfast is settling nicely in the stomach. No work, no government papers, no papers, no work, then out of town.' [Does not differentiate between the direct and reported speech in tone. Everything is read in a staccato fashion- word by word]

'It's hard [repeats 'it's hard'- back-tracking] for everybody, I guess.'

'Ja.' [Omits this word]

'I know. When you feel hungry and don't have money, come past here and [repeats 'and'- back-tracking] I'll give you coffee and pancake.' [Does not pause at full stops and commas- monotonous plodding]

'Thanks, er [omits this word]-- let me call you Pinkie, shall I?' [Monotone, no pauses and no intonation in asking the question rather question read as a statement- monotonous plodding]

⁹¹ Purcell's (1963) list of poor reading habits consist of the following 12 features of an inefficient reader.

⁹² “Back tracking means going back to reread words or phrases that were not grasped” (Purcell, p.355). Therefore, consistent back tracking is a sign that a reader's inability to grasp the material being read.

'Hm,' [long 'hmmmm' and then laughs] she nodded automatically. He shook her hand (.)'Grow as big [adds extra words to text 'as you'] as an elephant for your goodness, as we say in our idiom [omits entire phrase 'as we say in our idiom']!' He shuffled off. For a long time, until he disappeared, she didn't take her eyes off the stooping [mispronounced as stopping] figure, which she felt [mispronounced as left] might set any place on fire. Strange man Pinkie thought idly [mispronounced] as she washed up." [Monotonous plodding all the way through].

All of the above excerpts clearly show that basic reading and comprehension in this grade 11 class is compromised. Learners exhibited a lack of expression as evidenced by the monotonous plodding and word by word reading. There was also a lack of fluency often faltering at common vocabulary by either mispronouncing the word or not reading it at all. Other features of the learners' reading was also back-tracking and finger-pointing. All of these features reveal that there is a lack of basic reading literacy.

5.2.2. Nominal feedback and instructional practices

As indicated in the previous section, it was evident that learners were struggling greatly with texts that they were supposed to be familiar with (i.e. these were not unseen texts)⁹³ in the EFAL B oral lesson. The oral lesson was based on a set book which learners were given⁹⁴ to prepare for the oral presentation. It would follow then that they had a very basic reading literacy attainment. The learners were not made aware of this as no feedback was given to individual readers after their turns were taken except when the teacher could not hear them as in the example with Sibusiso (detailed in the previous section turns 21-33 in EFAL B) as well as an incident where the teacher reprimanded a learner for chewing gum⁹⁵.

There was also no whole class feedback given on completion of the orals. The need for feedback and the rationale thereof are clearly set out in the CAPS-EFAL document (DBE-CAPS-EFAL,

⁹³ Learners were given extracts of texts on worksheets that they were allowed to take home. There were not enough of these sheets to take one for this research and copyright restricts me from reproducing the text that was given from Es'kia Mphahlele's short story *The Coffee-cart Girl* which is one of the short stories prescribed to learners.

⁹⁴ Learners only got copies of sections of the book.

⁹⁵ 13. Mrs D: That chappies (). I can't hear the words it's because of that chappies. [Chappies is a brand of chewing gum but is often used as a synonym for any type of gum].

2011, p.77)⁹⁶. So in theory there should be some kind of feedback given but in reality there was none. This is in keeping with the assertion made by Zimmerman (2014, p.2) that though the “rhetoric of improving educational quality stands, in developing countries translation of this rhetoric into practice has not yet occurred.”

Another obvious omission was that there was no reading instruction given at all in the English lessons observed over the four week research period. It is of concern that no priority was given to reading instruction despite the levels of reading not being particularly good. There needs to be adequate teaching so that learners may be able to engage in critical reading and reflection (Gee, 2008).

Interestingly, worksheets/ handouts were seldom given to learners to take home and read themselves⁹⁷ despite the poor reading levels. In every instance the teacher read through the material with the learners and collected them when the lesson was over. This is consistent with a “teacher-directed stance” which is correlated to low reading achievement (Taylor, Peterson, Pearson, & Rodriguez, 2002, p.278).

5.2.3. A Culture of reading

A culture of reading cannot be cultivated when there is minimal reading in the classroom. On average less than 5% of the time in class was spent on reading. Of the eight lessons recorded there were only two instances that learners read. The first was when they had to do their ‘orals’. In the second instance, only one learner in a class of approximately 50 learners read the summarization passage out loud for instructional purposes. There were no provisions made for independent reading. This general lack of reading is mirrored in the home environment and it seems to be driven by the attitudes that the learners had towards reading.

According to NLS theory “values, attitudes, feelings and social relationships” are an integral part of literacy practices (Barton & Hamilton, 1998, p.6). As such, learners’ attitudes toward reading

⁹⁶ Assessment should be both informal (Assessment for Learning) and formal (Assessment of Learning). In both cases regular feedback should be provided to learners to enhance the learning experience.

⁹⁷ More thoroughly discussed under the sub-heading literacy props

were explored. The focus group discussion with the learners (see Appendix 18) and the learner questionnaire revealed valuable information on the reading practices of the learners. The extract below from the focus group interview with the learners shows that reading is not a priority for the learners. There are indications that they read when they have time or when boredom sets in as evidenced below:

FGL:

42. S2: We read magazines sometimes other books

43. I: How much of time do you spend reading?

44. S2: Not very much time. I'm spending time watching TV [laughs].

45. I: Ok

46. S2: I think it's about thirty-five minutes. It depend what I'm doing at home. When I'm bored I actually read.

47. I: Ok and you?

48. S1: Usually study sometimes but not every day. When I have time to read, I read.

It is evident from the learners' articulations that they do not read regularly and one learner revealed she reads when bored whilst another only when he has time free. Thus, reading is not part of a routine for these learners but rather cluster reading with the feeling of boredom. There seems to be a general lack of enthusiasm when discussing it. The preceding extract detailed the reading habits of learners, which can be used to infer that learners had a negative attitude toward reading. The negative attitude is inferred from the amount of time that learners spent on reading and the lack of prioritization. S2 comments that TV gets preference over reading and that "not very much time" is spent on reading. These sentiments are echoed by S1 who uses the word "sometimes" to describe the infrequency of reading for him. The focus group interview with the learners addressed this attitude more directly and essentially validated this assessment of the situation. Certain learners were very candid about their negative feelings toward reading as evidenced below in the focus group:

FGL:

59. S3: I don't really like reading

60. I: Mhmm
61. S3: I sometimes study.
62. I: Why do you think you don't usually read?
63. S3: Er
64. I: Is it time or is it boring or you do too much at school or what do you think it is?
65. S3: Time. I don't have time to read. But at times I read an article in newspaper.
66. I: In a newspaper. OK and you?
67. S5: I sometimes only read sports articles mainly soccer articles. Now and then I do read and do study but not usually
68. I: So you don't read like storybooks and things?
69. S5: No [smiling shaking head]
70. I: Not for pleasure. You just you just study?
71. S5: I read sports articles
72. I: Mhmm in the newspaper? What kind of newspaper you read?
73. S5: I like this soccer rite newspaper. There only soccer in it.

The phrase “not usually” once again points to the infrequency of reading amongst learners. While the learner in turn 65 comments that newspapers are read, this is also limited as evidenced by the use of the word “an”. Aside from the dislike of reading (turn 59), the above extract also shows that there is a conflation between reading and studying. What learners understood to be reading was actually learning for tests and exams. They also occasionally engaged in reading non-academic materials such as newspapers and magazines. Although, as argued by Krashen (2008), any time devoted to free voluntary reading is beneficial in terms of improving the reading competency of learners, it has to be noted that only certain types of reading materials are useful in developing learners' CALP which will eventually improve academic outcomes (Snow, 2010). These materials are easily distinguishable from non-academic materials because they utilize language that is concise “achieved by avoiding redundancy; using a high density of information-bearing words, ensuring precision of expression; and relying on grammatical processes to compress complex ideas into few words” (ibid, p.450).

None of the reading done by the learners in the focus group was voluntary except one particular learner who claimed to read novels as well as scientific encyclopedias for about 2 hours a day.

FGL:

49. I: Ok and the gentleman here?

50. S4: Two hours at least

51. I: Two hours at least of novels?

52. S4: Of like novels but mostly encyclopaedias science encyclopaedias

53. I: You like reading science encyclopaedias?

54. S4: ((yes it is interesting)).

56. I: So what do you want to do after school?

57. S4: Be an astronomer

This learner was the exception rather than the rule. Certain learners are intrinsically motivated to read on their own given their career orientation. Other learners seemed to be extrinsically motivated as they only read when they had to (i.e. when there was an impending assessment) and it was related to some school activity as evidenced in Questionnaire- question 11 which indicated that only 21% read for pleasure. The remainder of the participants indicated that they did both. Froiland & Oros (2014, p.120) succinctly make the distinction between intrinsic and extrinsic motivation in relation to reading⁹⁸ and highlight the idea that intrinsic motivation predicts reading achievement. A more in-depth discussion of the intrinsic motivation to learn on academic achievement is detailed in the next chapter.

Perhaps another reason for the lack of desire to read (aside from intrinsic motivation) could be attributed to the lack of cultivation of reading (as a habit) during childhood. Evidence for this assertion is found in the questionnaire where about 45% of respondents reported that their parents did not read bedtime stories to them. While 52% of the respondents on the questionnaire answered that they had been read to by their parents. This 52% figure seemed to be an encouraging finding yet upon deeper interrogation, there was a surprising absence of a culture of reading⁹⁹ amongst the

⁹⁸ “Intrinsic motivation entails learning for the sake of personal fulfilment and because learning is inherently interesting and enjoyable (Mouratidis & Michou, 2011)... This differs from extrinsic motivation, which involves doing things for the sake of earning rewards (e.g. good grades) or avoiding punishment (Hayenga & Corpus, 2010)...”

⁹⁹ “Habitual reading is the foundation of a reading culture” (Joubert et al., 2014, p. 400).

learners as predicted in literature (Joubert et al., 2014; van Staden, 2011; Dixon et al., 2008; Ribbens, 2008; Machet, 2002). The lack of sustained voluntary reading is confirmed by learners (as discussed in the preceding paragraphs) during the focus group discussions and the questionnaire. It is also an issue of concern to the teachers who voiced their disappointment at the lack of reading by learners (even when they were tasked to do so for particular academic activities) which can be seen in the extract below from the focus group discussion with teachers (see Appendix 19):

FGT:

75. LO: ...The kids are lazy. They don't even want to work they are just lazy. You give 2-3 pages that you have to read first- they don't want to do that.

In the following excerpt from the focus group interview with the learners, it can be seen that parents seemed to prioritize homework over reading for pleasure. This is perhaps as a result of parents' lack of awareness of the importance of free voluntary reading (Bridges, 2014; Krashen, 2008). Also evident in the excerpt, is the lack of learners' preliteracy experiences.

FGL:

103. I: So tell me about your experiences like in childhood? Did your parents used to read to you like storybooks and stuff?

104. S4: No they just tell us stories- not books

105. I: So when did you start reading books – when you came to school or before?

106. S5: The minute I realized I had some kind of attraction to soccer then I start to wanna know more about soccer- that's when I start maybe I was like 7

107. I: When you started reading about soccer.

108. S3: I started reading at school grade R. My mom helped ((gave me to read)).

109. I: Your mom helped you to read.

110. S1: I used to go to the library to read some books mostly storytelling books. Ya I love them.

111. I: You like stories?

112. S1: Yes

113. S2: I didn't usually read the novels that much but they helped me with my homework. When I want to read I just take a book and read. Anytime I want to read, I take a book and read.

114. I: So you didn't have like bedtime stories for example

115. S2: [Shaking head] No

116. I: They never used to read like fairy tales to you and stuff like that. None of that?

117. S2: [Laughs and shakes head]

It is also interesting to see that the earliest experiences of reading only began when they entered school- mainly grade 1. But responses ranged from grade R to age 7. The majority of the reading experiences took place at school. In turn 104, S4 says "No they just tell us stories- not books" which indicates that storytelling during childhood was oral rather than text-based. This is not uncommon in South Africa as there is a rich oral tradition in Southern Africa and bedtime storybook reading events are a Westernized practice (Tappe & Hara, 2013; Higham, Tönsing, & Alant, 2010).

If literacy practices such as storytelling in childhood are misaligned with the literacy practices expected in academic settings, it often means that learners are at a distinct disadvantage (Tappe & Hara, 2013). This is because storybook reading with preschool children has been shown to develop essential critical thinking skills that are necessary for children to be successful once children start formal schooling (Higham et al., 2010). This has been established by Heath (1983) in her seminal study where it was shown in order to be successful in school (which is based Western¹⁰⁰ system) it is important for a learner to be socialized at an early age in text-based practices.

As a result of reading not being part of learners' early socialization, they view it as something that is only related to school and therefore, an environment conducive to a reading culture is not established in their lives. Doiron & Asselin (as cited in Joubert et al., 2015, p.401) assert that the ideal situation for the development of a reading culture is "where reading is regarded not simply as something developed for school purposes but something practiced in all aspects of our lives."

¹⁰⁰ Anglo-American ideologies currently dominate our schooling system (Tappe & Hara, 2013).

From the evidence presented in this particular section of the lack of text-based practices in childhood; the lack of reading in the classroom and the negative attitude of learners toward reading, it can be concluded that a reading culture has not been established in the lives of many of these learners. Joubert et al. (2015, p.401) argue that:

“a reading culture can be defined as ‘the collective attitudes, beliefs, and behaviours of all the stakeholders in a school regarding any and all of the activities associated, which enables all learners to read at the highest level of attainment for both their academic and personal gain.”

According to the above definition then, it appears that the stakeholders of the school (i.e. the learners, parents and teachers) have all contributed to the creation of an environment where reading achievement is not optimized. Parents do not actively encourage free voluntary reading and within the home environment, there is a distinct absence of preliteracy experiences for their children (as evidenced in the questionnaires). The learners appear to also lack enthusiasm for free voluntary reading (this is demonstrated both by their responses on the questionnaires and their responses in the focus group interviews). Compounding the situation is the teachers’ poor pedagogical practices which are also ineffective in supporting learners’ reading literacy (as evidenced in both EFAL lessons discussed at the onset of this chapter).

5.3. Writing literacy practices

Writing in this class was relegated to note-taking. Teachers refrained from giving learners too much of work because they felt that the classes were too large and so marking was difficult. When learners were given writing tasks they were cognitively undemanding. Learners did not express any enthusiasm toward writing and commented about the lack of writing that they did in the focus group discussion¹⁰¹:

¹⁰¹FGL:

92. S2: [laughs] I don’t write

93. S1: [Smiles and shakes head] I don’t write

94. I: Writing?

95. S3: I actually don’t write but sometimes I write (my homeworks)

96. I: Mhmm

97. S4: I write letters for my mother at home

5.3.1. Excessive note-taking

From the lessons observed, it was evident that writing (i.e. text construction) was not prioritized. Writing was relegated to learners note-taking from the chalkboard. This involved either taking down definitions from the chalkboard or doing “corrections” to their homework/question given at the beginning of the lesson. Both the teachers and learners were not particularly happy with this practice but seemed resigned to its necessity. The Geography lesson (which will be discussed first) proved to be the only exception to this poor writing practice.

The Geography lesson (A) (see Appendix 20) was the exception to the poor writing practices detailed in the lessons to follow (Physics, EFAL and the Maths lessons). In the Geog A lesson, there was considerable less note-taking from the chalkboard. In this lesson learners were given a question/s at the beginning of the class and worked with the question/s through the entire lesson. The teacher, Mr Pillay¹⁰², wrote the question on board:

Geog A:

29. Mr P: Now I'm gonna give you 2 points on the map. You gonna calculate for me true bearing, ok? Everybody write the question down. Watch here- watch here. I'll write this question down as an exercise. Ok I'll write this question down as an exercise. You must calculate the true bearing. Are you all with me?

30. E: Yes

31. Mr P: Are you all with me?

32. E: Yes

33. Mr P: Right, calculate number one. What's happening to all this chawks? Calculate true bearing of windmill K10 from reservoir. [Writing on the board while learners copy]. This is the question in the test. Assume you are writing a test- on Wednesday this is one of the questions- five marks. Five percent calculate true bearing of windmill from reservoir. Got it? Take this question down answer it (). Remember the steps...

When learners took down the question the teacher guided them through it by working collaboratively with them using the teacher led Initiation-Response-Feedback (IRF) pattern. In this

¹⁰² Referred to as Mr P in the transcription.

particular IRF loop, the teacher elicits a whole class response which signals him to move on and elaborate in his feedback turn. As he explained each step, he waited for the class to complete before moving on to the next step. While they were completing the steps he proceeded to walk around the class to check if they were following. During this walkabout in the class his attention was given to individual learners who received specific feedback:

Geog A:

43. Mr P: Right, let's see what answer you get. I caught you, you know why I caught you, because you'll find that the reservoir is the R in J9 and there's a F in J9 which represents a windfarm. And I'm sure many of you never think of that because the cross was already there. So you assume that is the place. There cross was already there ().

44. S5: Oh

45. Mr P: Ya, the cross is showing here [walks around checking work- looking at S5's work]. Let's see what you got 144 –the angle is 144. Listen. Oh ok. Good. See here hey- Windfarm- windmill one and the same thing. Ok. Your key doesn't show you windmill but windfarm. How's it going? [Starts walking around class checking more work]. Right good, good, good- you're making progress here. You're got you're done there?

46. S2: Yes

47. Mr P: Right, let's see you, let's see you. Yes good, good. Measure the angle now. Very good...

The above shows the teacher and individual learners engage in the IRF pattern. The feedback from the teacher is generally positive towards the learners. When the teacher was satisfied that learners had successfully attempted the exercise and that they had sufficiently grasped what he had taught, learners were told to copy the answer from the board¹⁰³.

In the Physics lesson (Appendix 21) writing was restricted to note-taking. Learners took down definitions as the teacher proceeded to explain and write them on the board¹⁰⁴. This occurred even

¹⁰³ Geog A: 141. Mr P: That is your angle thirteen degrees and eighteen minutes. That is your angle. The magnetic declination for the year that they asked you. Now please, take that down neatly. Ok. And step by step because guaranteed I'm gonna ask you in the test. [Learners chat amongst themselves as they take down the examples]...

¹⁰⁴ see Physics lesson

though learners had worksheets with some (not all) definitions and exercises on them. They however, did not have textbooks so they spent some time (approximately 15%) during the lesson copying from the board. Therefore, it could be said that valuable time spent copying notes from the chalkboard could have been more profitably spent engaging with the subject at hand.

In the EFAL lesson on summaries, writing was relegated to doing corrections to homework. This was a very interesting lesson as the lesson starts off with the teacher saying that they were going to mark the work¹⁰⁵ implying that it was homework which should have been done before class. But she changed the direction of the lesson when she discovered that the majority of learners had not done the work¹⁰⁶ so she then opted to make it a class work activity thereby successfully navigating non-compliance. Learners spent approximately ten minutes with the exercise. They were not given any direction by the teacher as to whether it was meant to be an individual exercise or group work activity therefore some learners worked in pairs while others opted to work on their own. The teacher walked around while the learners were busy but there was very little teacher interaction with the learners. When the teacher felt that they were all done she then gave feedback. This was in the form of the IRF pattern with the extensive use of cued elicitations¹⁰⁷ for the ‘initiation’ part of the dialogue and the feedback part of the dialogue was accompanied by writing the answer on the chalkboard. After the feedback was given, the learners were asked to take down the version on the board as “corrections”¹⁰⁸.

Another observation made about the writing events in class is that often teachers re-write the questions on the board even though the learners have the question in front of them. This was primarily because there were often not enough textbooks/worksheets to go around. One example of this is the lesson described in the preceding paragraph¹⁰⁹. Another example is the other English

¹⁰⁵ EFAL A: 1. Mrs D: Ok. We are marking the summaries heh. I just want to check if you have it on your exercise books...

¹⁰⁶ EFAL A: 5. Mrs D: Ok, thank you. Ok you are going to read it only once cause you have already read it before. Ok so now what you have to do is underline those points the main points the ones that we going to use in our summaries. Some of you have done it but others have not...

¹⁰⁷ Cued elicitation forms part of the IRF pattern where in the ‘Initiation’ phase “the teacher leaves a ‘discourse space’ for the student to complete a word” (Sharpe, 2008, p.136).

¹⁰⁸ EFAL A: 43. Mrs D: ... You just check- check your points and then if you feel that you have to copy that and write it as your corrections, please write it down...

¹⁰⁹ EFAL A: 1. Mrs D: Ok. We are marking the summaries heh. I just want to check if you have it on your exercise books. [Mrs Dlamini walks into class holding a worksheet. **Students take out worksheets**]... 3. Mrs D: Ya? What

FAL class where the teacher passed out the worksheets and wrote the question on the chalkboard. This took up valuable time as the questions were a repetition of what was on the worksheet¹¹⁰.

The point to be laboured about this writing event and the others observed throughout the lessons observed is that there was an inordinate amount of time taken to write on the board. In some cases it was not necessary because learners had the exact content in the form of a worksheet in front of them but in others it was because learners did not have the material to refer to such as in the Physics class (already discussed at the beginning of this section) where learners needed to copy definitions and examples. Similar to the Physics lesson, in the Maths lesson (B) (see Appendix 22) the teacher had to rewrite that which was in the textbook. The teacher lamented the process which was as a result of a shortage of textbooks:

Maths B:

18. Mrs D: () it's 10.11 [talking to herself as she writes. Writes the questions on the board which has been subdivided into 5 sections for each example. While she is writing on the board the learners are chatting to each other and some are looking bored- yawning and placing their heads on the desk]. **You see they don't have the textbooks so we tend to waste a lot of time writing by on the board...**let us not make noise. Let us not make noise! [Turns towards me to explain why she's writing it all on the board. **Class is rowdy as she continues to write on the board so she reprimands them**]...

The need for these copious amounts of writing by the teachers on the board is mainly due to the shortage of textbooks available for use in class. The adverse effects include the loss of lesson time in writing (and sometimes re-writing as in the case of the English lessons) the questions and definitions down. Moreover, learners are hard-pressed for time because they need to get through

parents...[writing on board] So this is what you will be summarizing. And then the instructions: the first one is? List 7 points in sentences using not more than 70 words. So your summary must not exceed 70 words. Number your sentences from 1 to 7. So no Roman figures, no letters, no stars, no bullets just numbers. Write only one point per line. Use your own words. Indicate the number of words you used at the end of your summary in brackets. So those are your instructions. Ok? [Does not wait for any other responses- turns **and starts to write the question on the board: "What can parents do to stop bullying from happening at schools?"**].

¹¹⁰ EFAL A

the syllabus and therefore do not engage in written expression (paragraph and sentence construction) for extended periods of time.

The above excerpt also shows that learners get bored when engaging in such tasks. It appears that the class did not find the writing task cognitively demanding as they did not seem to be fully engaged by the task. The speed at which they became rowdy may be considered as an indicator of this lack of engagement. Tasks that are more complex or cognitively demanding result in greater participation (which means less rowdiness because learners are engaged in the task) than tasks that are not, according to Şahin (2015). This point is discussed in the following section.

Some learners held negative views towards the writing of notes from the chalkboard and indicated that they would prefer to use textbooks. Except for S5 who was quite happy about copying notes from the board the other learners did not think that it is a productive activity. S5 believed that copying the notes off the board would help him remember:

FGL:

130. S5: I think writing it are ((an)) effective because as you copy it from the board you can just write it without reading it. As you reading it- it stay in your head. That's what I think.

The following excerpt shows a negative attitude towards copying from the chalkboard because of the time-consuming nature:

FGL:

267. S4: Teacher writes on the board and tell us this and this...

268. SS: [Interrupt and laugh]

269. S4: It is not easy to understand because you not doing it yourself. You take them down and just forget them. You don't have a textbook- it was writing on the board and it was rubbed before you write it. You forgot it- forgot it.

The issue of writing on the chalkboard is not bad in and of itself. It is the inordinate amount of time that is spent on writing notes on the board and copying those notes that is the problem. Further to this, textbooks are not available to learners in order to reinforce the learning. Another valid concern raised is that if the learner is not quick enough or the teacher was going at a fast pace then it was very likely that the learner would not get valuable information. This is problematic because the notes are the only source of content the learners had. Lastly, the learner intimates that once the notes have been copied, he does not refer to the notes which might be interpreted as a lack of commitment to his work.

5.3.2. Range of written tasks

Observations revealed that the kinds of questions that are given to learners to produce written texts were usually based on comprehension and recall of knowledge which according to Bloom's taxonomy are on the lowest level of the cognitive engagement pyramid (Bloom et al., 1956). The only time learners engaged in writing that was cognitively more demanding was in the Life Sciences lesson (see Appendix 23) where they were asked by Mrs Xuma¹¹¹ to "tabulate differences" between different phyla:

217. Mrs X: So this is the habitat for these, eh animals. So I want you to do this activity. It's a class activity. We are going to- **tabulate the difference** (...). [Goes to chalkboard "tabulate the differences between"]

218. S: (.). [Tells teacher "differences" is spelled incorrectly].

219. Mrs X: Oh, differences, thank you. Thank you very much. [Continues writing on board after correcting mistake]. **Tabulate differences between the phylum porifera (...). Shh! Shh! Ok, so when you are comparing this you are going to look at the- the body plan you are going to look at the coelo -the coelo whether the coelo is coelo, acoelomate or pseudocoelomate. You are also going to look at the type of nutrition, you are also going to look at the symmetry that is existing.** Just do it.

These tasks are beneficial in developing learners' CALP (Woollacott et al., 2011; Kapp et al., 2014). Rudimentary tasks do not aid learners to reach the final stage of language development

¹¹¹ Referred to as Mrs X in the transcription.

which according to Bylund (2011, p.5) is when “we use concepts as cognitive tools for creating meaning...” It is at this point that language and thought intersect. The lack of ‘concept’ development retards learners’ understanding of the specific subjects being taught (ibid).

5.3.3. Writing instructional practices

The different research instruments¹¹² confirmed that there was also not as much attention given to writing within this school as stipulated in the curriculum. DBE-CAPS- EFAL¹¹³ (2011, p.17) makes this distinction between reading and writing as well with slightly more time allocated to reading than to writing (45% and 35% respectively). However, it is unlikely from the data gathered that this amount of time is given to the practice of writing¹¹⁴ in this particular school. Of the eight lessons observed, the class activity in Life Science¹¹⁵ was the only occasion that learners were asked to construct some text themselves (the only writing learners did in the other lessons were restricted to copying notes off the board and one word answers for mathematics).

The following is an extract of the focus group discussion with the teachers which offers some insight into lack of writing tasks given to learners:

FGT:

32. LO: Exactly. And also those that you pick up because **you end up even cutting down on the activities that you give**. So the ones that you would pick up or monitor their improvement- you can’t do that because this class is too big. One day you come and mark the left row. The other day you come and mark the right row. The other day you too tired you only mark 10 just to see that somebody has grasped.

These sentiments expressed by the teacher in the focus group discussion allude to possible reasons that the amount of writing does not meet the standard as prescribed in the curriculum. The teachers feel overwhelmed at the class sizes and therefore cut down on “activities” as these require them to

¹¹² Classroom observations, the questionnaire and the focus group interview with the learners

¹¹³ Since English is the LOLT and is not the home language of the learners, it is this document that I will consider in my analysis

¹¹⁴ If one had to exclude note-taking.

¹¹⁵ Learners had to tabulate the differences between different phyla

mark large amounts of work which is very tiring in large classes (± 50 learners in a class). The second important issue that one is able to infer from this statement is that marking is not done in detail¹¹⁶ as teachers are mainly interested if learners have grasped the material. This means that it is only the content that is the focus of the marking.

While making the assertion that language instruction is meant to happen across the curriculum and not solely in the language subjects, CAPS for all the subjects other than the language subjects falls short in that it does not emphasize or explain how teachers would achieved this other than the somewhat undefined references to affording learners opportunities for reading “scientific texts” and writing “reports, paragraphs and short essays”¹¹⁷¹¹⁸. Teaching language is a skill and it is not fair to expect the subject teachers to do this if they do not have the necessary training to do so. An example of this shortcoming is the “research” given to the learners in the Physics lesson. What is interesting to note is that the research that the teacher gives to the learners is not clearly defined as to which assessment category it falls into and it probably fits into the “projects” criterion given in the CAPS document for physical sciences because there is no provision made in the formal assessments for research or any extended writing:

“• Formal assessment tasks are control tests, examinations, experiments and projects”
(DBE-CAPS-Physical Science, 2011, p.9)

¹¹⁶ Marking in detail involves other important aspects besides content it involves looking at grammatical and organizational features as well.

¹¹⁷ “2.5.4 Developing Language Skills: Reading and Writing

Teachers of Life Sciences should be aware that they are also engaged in teaching language across the curriculum. This is particularly important for learners for whom the Language of Learning and Teaching (LoLT) is not their home language. It is important to provide learners with opportunities to develop and improve their language skills in the context of learning Life Sciences. It will therefore be critical to afford learners opportunities to read scientific texts and to write reports, paragraphs and short essays as part of the assessment, especially in (but not limited to) the informal assessments for learning”, (CAPS-DBE Life Science, 2011, p.19).

¹¹⁸ “2.8 DEVELOPING LANGUAGE SKILLS: READING AND WRITING

Teachers of Physical Sciences should be aware that they are also engaged in teaching language across the curriculum. This is particularly important for learners for whom the Language of Learning and Teaching (LoLT) is not their home language. It is important to provide learners with opportunities to develop and improve their language skills in the context of learning Physical Sciences. It will therefore be critical to afford learners opportunities to read scientific texts, to write reports, paragraphs and short essays as part of the assessment, especially (but not only) in the informal assessments for learning”, (CAPS-DBE Physical Sciences, 2011, p.14).

The Physics teacher, Mr Masondo¹¹⁹, gives the learners a research project for “marks” and the interaction with the learners is devoid of any meaningful instruction on how to write this assignment. His preoccupation with giving marks for the assignment can also be inferred by his use of the word “my” in the extract below signifying that the assignments belonged to him. Therefore it may be argued that assigning learners marks was prioritized above teaching and learning. In fact, the instruction may be construed as encouraging plagiarism because his only instructions pertain to downloading information off the internet.

Physics:

125. Mr M: ...Right, my research how far with my research? Due date is on Monday

126. S: How! No, no, no. You said 2 weeks. [Shocked/protesting].

127. Mr M: *Ya*, that’s this coming Monday. The information is available on the internet and Monday you submit...

138. Mr M: Nooo five rand for thirty minutes [This is the cost for the use of the internet].

No, you won’t spend more than fifteen minutes. **Go to internet. After internet you go for google. You press in your question press enter and then you wait for it**

139. S12: ().

140. Mr M: She did it yesterday, huh? She did it yesterday. It will take you less than fifteen minutes.

141. SS: (). [Still protesting about going to Spar].

142. Mr M: She did it yesterday and he did it. Now, shh! Shh! Now do me one favour [me emphasized- signaling that homework is to satisfy the teacher]. This homework I gave you-

I want to give you some marks for that. Please write it neatly, it must be ready for marking on Monday. Number (). [Points to learner].

...

146. Mr M: Monday, please neatly **you’ll get marks for it**. So today I don’t want to see you go home. But you’re going home means homework. [Walks out after last instruction].

This episode represents a missed opportunity in teaching learners how to construct their own texts as well as establish how writing in science is different to other types of writing. It has been

¹¹⁹ Referred to as Mr M in the transcription.

established that the language of science is highly specialized. de Oliveira & Lan (2014) have described scientific writing in terms of syntax and organizational features as being highly complex.

It has been noted that learners have difficulty in grasping the kind of academic language necessary to demonstrate their knowledge in high-stakes tests and examinations (Llosa et al., 2011). Upon interrogation of this issue with teachers in the focus group discussions, teachers were quick to dismiss the idea of teaching question answering techniques. They chose instead to blame the poor grasp of English on the poor written expression in the examinations and tests. The following is an extract from the focus group discussion with the teachers:

FGT:

22. I: Couldn't the people setting the exam then argue, **why aren't you teaching the same question techniques in class. You know where you teach the answering of questions** in such a convoluted sort of way.

23. G: **You can't** – you need to deal with the second language learners. The first language learners get away. But the second language learners are disadvantaged. They need to get the questions little bit more concise.

The response by the teacher could be interpreted as a fundamental lack of understanding of the benefits of scaffolding which is a strategy that involves taking a learner through their ZPD¹²⁰ through assistance that is gradually withdrawn until the learner is able to perform the task on their own (Hyland, 2007). It involves both assistance in doing the task and creating awareness of how to do the task (Gibbons, 2003). A sampling of class tests showed the learners' inability to apply their knowledge and communicate causal reasoning which is a distinctive feature in scientific writing.

¹²⁰ Developed by Vygotsky (1978)

4.1 State Newton's first law of motion in words.

(2)

When thread S_2 is given a sudden pull one of the threads breaks.

4.2 Which thread, S_1 or S_2 , will break?

Explain with reference to the inertia of the block.

(3)
[5]

Figure 2. Questions from Physical Science test

Question 4.1 requires learners to demonstrate their theoretical knowledge or what Liccardo et al. (2015, p.376) refer to as “knowledge- that”. Question 4.2 on the other hand requires learners to demonstrate their application of this knowledge. Liccardo et al. (2015, p.376) refer to this as knowledge-how”. The following example is from the learner who had the highest mark for the test (72%). It is clear that the learner is able to demonstrate his ‘knowledge-that’ but is unable to express his ‘knowledge-how’:

Question 4.

4.1 Newton's first law of motion state that if an object is moving at constant ~~veloci~~ speed it will continue moving until an unbalanced force act on it.

4.2. S thread S_1 the force ^{applied to} of thread S_1 is now larger than that of thread S_2 because thread S_1 forces are the weight of the block plus the force applied to pull.

Figure 3. Learners' response to question in Physical Science test

The memo shows that in order to get the maximum mark for question 4.2 learners would have to clearly express scientific reasoning:

4.2 S₂. ✓
 Sudden pull does not allow the force to overcome the inertia ✓ of the body.
 Hence thread S₂ experiences all the force. ✓

(3)
[5]

Figure 4. Marking memorandum answer to question 4.2

The learner would have to employ “causal construction” (which is a common feature in science used to explain cause and effect relationships) to express the answer (Parkinson, 2011). According to Ramos (2015) this specialized kind of academic writing is difficult for learners to grasp and especially so for L2 speakers of English. Therefore, it is important to take opportunities to illuminate these features in order to apprentice learners into scientific Discourse. It is difficult for this to happen if teachers believe that “you can’t” as stated by G in the focus group discussion with the teachers (FGT, L23). The issue of learners’ inability to successfully demonstrate knowledge-how is discussed at length in chapter six.

The EFAL A lesson is further evidence that there is a lack of writing instruction. The teacher gave the exercise on summarization to the class and did “corrections” at the end of the lesson. These corrections consisted of reading out aloud the model answer. There was no evidence of scaffolding learners’ writing in terms of teaching paraphrasing and no attention was given to the way in which one selects information to include in the paragraph. The teacher instead asked the learners to check their “points” (referring to the content) and preferred to mark the work herself.

EFAL A:

42. S: ((We must mark))

43. Mrs D: No don’t mark it! Don’t mark it, please. You just check- check your points and then if you feel that you have to copy that and write it as your corrections, please write it down. There are **so many things to consider when marking a summary** so you cannot mark it yourself. There are no quotations and some people have too many quotes and if I mark I have to check how many quotations you have and I have to penalize you for that. I have to check the number of words, if it exceeds 70, I have to penalize you for that. I have to check grammar everything, spelling all that so I have to mark it myself.

If indeed there were so many things to consider when marking a summary, it implies that there were many things that are necessary to write a summary. Therefore, learners would have benefited from the teacher scaffolding the writing of a summary instead of only giving the learners what to look for in terms of content. Once again it appears that it is the teacher's lack of understanding of the value of scaffolding tasks that results in poor pedagogical practice. This is not unusual since the number of teachers who are aware of and use SFL strategies such as scaffolding is exceedingly low in South Africa and especially amongst teachers in previously disadvantaged areas (Kerfoot & Van Heerden, 2015; Akinyeye & Plüddemann, 2016). The lack of scaffolding may also be attributed to the large number of learners in the class as scaffolding requires explicit formative feedback which is particularly time consuming and teachers with large numbers in their class simply cannot cope (Akinyeye & Plüddemann, 2016). This matter was discussed in the focus group meeting with the teachers¹²¹.

Summarization is an important skill that learners need to grasp as it improves reading. According to Dollins (2012, p. 23) "research has shown that the ability to summarize text serves as a powerful comprehension strategy." The poor reading levels established at the beginning of the chapter seem to warrant innovative pedagogy to improve these levels. However, summarization is considered to be a particularly difficult task for those whose first language is not English (i.e. L2 and EFL speakers) (Marzec-Stawiarska, 2016; Wichadee, 2014). Therefore, scaffolding the task would have taken learners through their ZPD and resulted in positive learning outcomes. Overt genre-based pedagogy that is founded upon SFL can be of significant benefit to learners to (Akinyeye & Plüddemann, 2016; Kerfoot & Van Heerden, 2015) where tasks which are scaffolded receive progressively less until the learner is able to perform the task on their own (Hyland, 2007). It involves both assistance in doing the task and creating awareness of to how to do the task thereby creating a useful metalanguage which is particularly useful in L2 teaching (Gibbons, 2003; Kerfoot & Van Heerden, 2015; Van Staden, 2011).

¹²¹ FGT:

32. LO: Exactly. And also those that you pick up because you end up even cutting down on the activities that you give. So the ones that you would pick up or monitor their improvement- you can't do that because this class is too big.

These innovative pedagogic practices were not employed in class which indicates that the teacher is either unaware of these practices or does not appreciate the value of such practices in aiding the learners. This suggests that perhaps there is a need for more teacher training. According to Akinyeye & Plüddemann (2016, p. 2) “teacher education in literacy teaching methods may be the single most effective intervention” in remedying the literacy crisis in South Africa.

5.4. Skills based pedagogy for reading and writing

The questionnaire indicated the kinds of pedagogy that learners were exposed to in the formative years of their schooling career. Some of the responses that the learners gave to *Q.19.*, “*What is your first memory of writing? Describe this experience in terms of your age, where it occurred and in what language*”, on the questionnaire were as follows:

- a,e,i,o,u in isiZulu and in the age of 6
- A,B,C,D e.t.c. in English and isiZulu in age of 7¹²²
- AEIOU. I was (6) six years old in grade 1. And it was on isiZulu.

We see similar responses to *Q20.* “*Describe what you remember of your experiences of writing in early grades of primary school*”:

- I was writing the sentence not on top of the exercise lines.
- I learned to write my name and sentences
- numbers, Alphabet. a;e;i;o;u & A;B;C;D
- it was hard to write even numbers so it wasn’t easy anymore

Learners mention learning vowels and alphabets as significant memories of their early years and this introduction to school based literacy took place in school¹²³. These are all focused on discreet

¹²² While some learners indicated that they learnt primarily in their L1 in the foundation grades in school, a few learners did indicate that they were exposed to a bilingual model where they were taught both English and their L1 in the foundation grades which is not in line with the LiEP policy of South Africa.

¹²³ The significance of the age of exposure to school based literacy cannot be overstated. When asked in Q.19 about their earliest memories of writing learners respond around 6 and 7 years of age. This coincides with the age that learners start formal schooling i.e. Grade 1. This would imply that these learners do not have adequate exposure to school based literacy at home which according to Heath (1983) can put the learners at a disadvantage.

skills and therefore we can say that a skills-based approach to writing was employed in the early years of the learners' literacy education. A skills-based approach according to Ivanič (2004) is concerned with the formal aspects of spelling, grammar and is highly focused on “phonics” in the case of reading. The oral lesson (EFAL B) discussed earlier in this chapter is another example of skills based pedagogy. The learners were assessed on the sole ability to decode the words in the text. There was no interrogation as to the level of comprehension of the learners (i.e. learners were not questioned by the teacher). Word recognition is but one of the indicators of effective reading however, “to read effectively, readers not only decipher words on a page, but also use accumulating knowledge to assess, evaluate, and synthesize the presented information” (Lesaux, 2012, p.75). One of the observations that was made during the oral lesson was that the teacher did not question learners after they had read the text and based the mark only on the way in which the learner read the passage. In this oral assessment it is evident that reading was considered a discrete skill (i.e. separate from speaking and/or writing).

Another feature of this skills-based pedagogy is the view that reading and writing should be taught as separate entities. This approach is based on the autonomous model of literacy espoused by Goody and Watt (1963)¹²⁴ and therefore views reading and writing as context independent. Based on this definition of skills-based writing pedagogy, it is the only pedagogy learners are exposed to as the CAPS statements for EFAL for all phases espouse the same pedagogy and this is the current model utilized in the classroom. The following is an exercise that grade 11 classes were tasked to do:

¹²⁴ The autonomous model and its deficits as well as its differences compared to NLS is discussed at length in chapter 3.

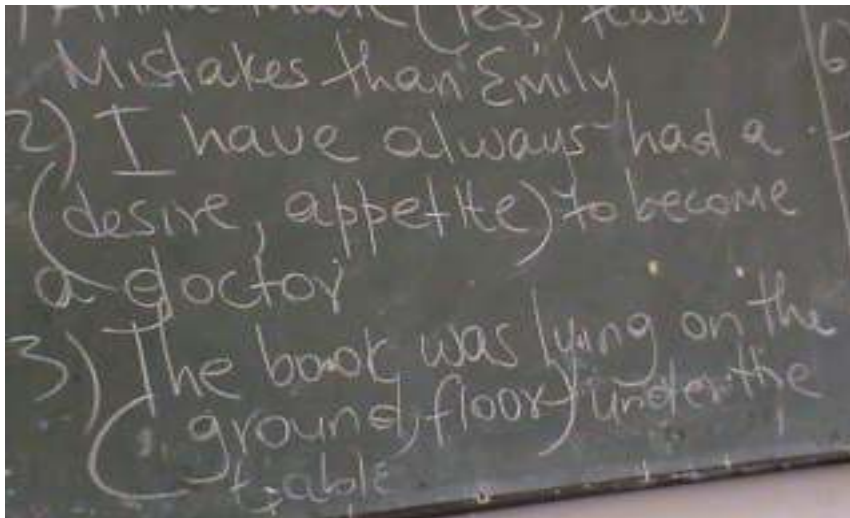


Figure 5. EFAL exercise on word choice

This is the kind of decontextualized language learning that took place where learners were expected to merely underline the correct word. The same style of questioning was also used in the following exercise on editing:

Exercise: Language and Editing

Correct the mistakes. Change the word(s) in [square brackets] if necessary.

1. I enjoy [listening] music while [study] English.
2. When he [arrive] at the hotel yesterday, he [sign] the guestbook.
3. There are some [bird] in the cage.
4. His [cars] does not seem to be [bad] damaged.

Figure 6. EFAL exercise on editing

The above exercise is in keeping with the style of testing used in the exit (Matric) examinations. Decontextualized language exercises are inadequate in developing learners CALP. It is evident that there is a disconnection between the EFAL classroom discourse practices and the cognitively demanding language required in the other subjects (Kapp, 2004). Thus as observed by Woollacott et al. (2011), there is a distinct lack of correlation between the EFAL mark and academic English

proficiency that learners would need to engage in other subjects. This could be directly attributed to the fact that learners are not challenged enough in their EFAL classes (Kapp et al., 2014). The implication of this sort of writing pedagogy is discussed in more detail in the following chapter.

5.5. Resources and literacy practices

The lack of resources described by Spaul (2012) is not an uncommon occurrence in the South African educational landscape and the school in this study is no different. The school was characterized by the lack of both human and physical resources. The lack of both these resources affected teaching and learning in varying ways as discussed below.

5.5.1. Staff

Learning opportunities were compromised because of the lack of staff in the school. A lack of staff meant that subject choices for learners were limited as there were no subject specialists available for certain subjects such as accounting. In the focus group discussion learners commented about how their choice of subjects was at times hindered because of the lack of teachers. One particular learner complained about how she had to switch course mid-way through the senior phase of her schooling career to a completely unrelated field as a result of the lack of subject specialists at this school:

FGL:

28. S2: ...I had to do life sciences because **they don't do subjects** I used to do. I didn't used to do commerce. I used to do physics and geography, accounting and the other subjects. I didn't attend for accounting so I had to replace accounting with life science.

The above learner transferred from another school. After having done Accounting in grade 10 she had to consequently change her subject choice because there was no accounting teacher available and switch to doing Life Sciences. This meant that she had to bring herself on par with her peers all the while learning new material at grade 11 level.

A lack of staff also meant that teachers had to perform many different functions. For example, the principal who also taught Physics was so busy with administrative duties that it took him away

from his teaching duties but there was no other teacher at school who was qualified to teach Physics who could ensure that teaching carried on even if he was not there. The problem was compounded by the teacher taking on more than the requisite teaching load for a principle. Learners were vocal about the ways in which his administrative duties affected teaching and learning:

FGL:

175. S4: Most of the time in Physics when I go down there to see him- he is always busy. So I wish we had a different science teacher because when I go to others¹²⁵ they are telling me. But he is always busy.

This learner compares the Physics teacher to the other teachers and the way they respond to the learner in terms of consultation. Another learner's comments (S1) verified this claim that the principal/physics teacher was too busy and as a result he felt that the teacher rushed through the lessons in the classroom and also had insufficient time to respond to queries outside of the classroom:

FGL:

180. S1: In Physics, the teacher who is teaching us is very fast and she's or he's¹²⁶ always busy all the time cos he's the principal of the school. He don't get time to teach us properly his class and he's faster we don't really get- get him exactly it's where the classes are getting affected.

181. I: So it's only like Physics cos the teacher is so busy.

182. S1: Yes, we wish we could get new teacher.

183. I: Is that affecting your marks?

The learners' perception of the Physics lessons was that they were too fast paced and they felt that they could not keep up. It appears that the principal rushed through lessons in an attempt to make up for time that he had to be away from class. However, even though they were generally unhappy

¹²⁵ Referring to teachers

¹²⁶ L2 speakers of English often find pronouns problematic

about the situation they seemed to justify it by pointing out that his commitments as the principal was the reason that he rushed through lessons and they did not “get him exactly”.

The following is an extract from the Physical Science classroom which shows the pace at which the teacher goes through the lesson:

Physics:

90. Mr M: The lines will move from positive to negative. [While lesson going on much noise outside- some learners are loitering about]. What- and I can see this in a test. What can you say about the strength of the field around each of these bodies? I'll give you 2 words. Is it uniform or is it non-uniform? Is the field around each charged body uniform or non-uniform?

91. SS: Non-uniform

92. Mr M: Non-uniform. In other words it's not the same around the body so as you move further from the charge it gets bigger and bigger so it's non-uniform. The field- field strength it's a new word we going to get for field strength its field intensity. The field strength- its non-uniform for this here. Now let's look at two parallel planes/plates. This plate is here is positively charged- positively charged- positively charged and this one here is negatively charged. If a test charge is place on a field which direction does the test charge move?

93. SS: Outwards

94. Mr M: It will be repelled and attracted. So the field lines will be from positive to negative. Positive to? [Pointing to the upper and lower planes respectively].

95. SS: Negative

96. Mr M: Uniformity, non-uniformity? What can you say about the field strength now? [Pauses for answer. No one answers]. So the force- if you have a charge there A, and you have a charge somewhere else here C, the force that will be experienced by A is the same as the force experienced by C. Why?

97. SS: (). [Mumbling].

98. Mr M: The reason is the field is uniform between parallel plates. Between parallel charged conductors. So the field is uniform between two parallel plates. Now we said q

stands for the charge and q is the symbol and C stands for charge and what symbol we use for force () [answers question himself quickly].

Mr Masondo generally tends to ask question upon question which may be somewhat confusing for learners as seen in turn 96. This turn shows three different questions that come one after the other. He also asks a cognitively demanding question at the end of that turn ('Why?') and gives learners no time to think about the answer before he answers it himself. This question required learners to demonstrate their knowledge-how (Liccardo et al., 2015) in the same way test question 4.2. did in Figure 2. However, learners are not allowed to develop the cognitive ability to answer such questions because of a lack of time and so are unable to competently answer such questions in their tests and exams. Further discussion and theorisation on knowledge-how is detailed in the next chapter.

The lack of human resources also resulted in very high class numbers and this made it difficult for teachers to pay individual attention to learners. This is pointed out by the teachers in focus group discussion:

FGT:

26. LO: Yes and also it's very difficult to overcome that in class because of the **big numbers**. You need to focus on a small group to teach that particular technique and also a thing like maths lit- its mostly word problems. So I'm wondering if there's a way of changing that. **Because with the numbers we have in class, its waaay too... we have to monitor on a daily basis, individually and their paces will be different. Some will be on that level and others will be on another level so you need to intensify that individual attention so it's very difficult for us. The numbers are too big.**

27. I: What's your average class ratios?

28. LO: **50 and more**

The teacher is concerned with the impact that large numbers have on pedagogical "technique". Large class sizes are not conducive to effective scaffolding for example which allows the teacher to take each child through their individual ZPD. This of course would require the teacher

establishing the level of understanding that the learner was currently on before proceeding and that would require individual attention. The larger numbers in the classroom (± 50 learners) meant that teachers were unable to intervene at important stages where learners were unable to grasp important material. Learners' understandings of material were therefore somewhat compromised by unfavourable teacher to learner ratios.

5.5.2. Computers

Some of the factors that contributed to this general lack of computer literacy was that there was a lack of useable computers. There were computers that were donated to the school but these were never used because there was no computer teacher to teach learners nor was there reliable electricity due to cable theft. There was also no internet connectivity also due to cable theft. The "research" given to the learners for the physics assessment (discussed in section 5.3.3.) presented an excellent opportunity for learners to acquire computer literacy skills as well as learn to effectively make use of the internet to enhance learning. However, there was very little instruction or cross disciplinary teaching and learning.

As discussed in chapter 3 the definition of what it means to be a "literate" person has changed quite a lot over time. The twenty-first century is a highly technological age and so being literate entails the ability to use technology to achieve certain goals. In terms of a multiliteracies perspective, learners need to be provided with "learning experiences through which students will be able to access the most powerful forms of self-expression and communication in today's locally diverse yet globalised world" (Cope & Kalantzis, 2006, p.42). In the world we presently live in, if one is unable to utilize basic technology such as computers and the internet then ones literacy is not fully developed (Street, 2013). This technological literacy was not developed in the school.

5.5.3. Literacy props

Gee (1990) explains that literacy props are items like books and magazines; and warns against confusing these items with literacy itself. The most utilized form of artefact in class is the worksheet or handout on which the learner is given bite-sized pieces of information. These are usually focused on the particular section that is being taught. Consequently, the literacy of using a textbook is underdeveloped. Not only are textbooks important sources of information necessary

for understanding the different subjects, they are also important as they act as model materials for the kind of writing that learners are required to do in specific disciplines (van den Broek, 2010; Parkinson et al., 2007). Some of the literacies associated with reading textbooks are the ability to “arrange facts in order, separate facts from researchers (sic), take most knowledge as accepted, and infer knowledge using cohesive links” (Parkinson & Adendorff, 2005, p. 215).

Both learners and educators in their respective focus group discussions, emphasized the necessity of having textbooks. While learners appreciated the worksheets that they received, they nevertheless felt the disadvantage of not having their own textbooks as can be seen in the comments made by several learners in the focus group:

FGL:

127. I: And tell me about the use of like worksheets and textbooks in class. What do you think of their use? Is it useful to have worksheets or textbooks or both? What do you feel you would like in class?

128. S4: Textbooks are useful because only the teacher have the book and has to write on the board so it's difficult. The worksheets are also useful because he don't need to write the notes on the board.

...

134. S3: I think I like textbooks

135. I: Why would you want textbooks?

136. S3: Cos like some some worksheets get wasted.

137. I: Ok

138. S3: Misplace them. Textbooks- all the papers are together and you can't easily misplace the book.

139. S1: I prefer textbooks because it has got more information than sheets. Some sheets very summarized so you can't get what you want exactly.

The above conversation with the learners showed their preference for textbooks based on textbooks being a source of detailed information and all information being located in one place (the text) and it also highlighted the problems associated with the use of worksheets. The first of which was that

on a practical level, textbooks would be a better option as loose pieces of paper would get lost if they are not properly stored and/or filed away. The second concern voiced was that the information given on the worksheets may not be adequate because it only had what the teacher felt was important to know. What was important for the learner, however, was to have the ability to read widely and deeply on the subjects they were learning. NLS theory postulates that this immersion in the practice of reading is necessary for the acquisition of academic reading to occur (Gee, 2008). This immersion is clearly not possible if learners have no material (if they lose their worksheets), limited material or inadequate “literacy props.”

According to the Life Sciences curriculum statement each learner is expected to have his/ her own text book. But the reality of the classroom is different from the ideal set out by the DBE in its CAPS statement. It can be argued that it is an indictment on the DBE that learners share what textbooks are available and for life sciences they are told to buy their own textbooks and study guides¹²⁷. This sets up distinctions within the social classes in the classroom between those who have the financial resources and those who do not. Only a handful of learners then benefit from having access to their own textbook. This disadvantages are immense for those learners who are poor. Learners who were desperate resorted to criminal tendencies by stealing books from other learners:

FGL:

154. S1: But life sciences you have to buy your own book and your own study guide.

155. I: You have to buy your own study guides?

156. S1: ()

157. I: You don't get a textbook for life science?

158. S1: //You have to buy it for study guide.

159. S2: //You have to buy it for study guide.

160. I: Ok how do you feel about that?

161. S3: Not so good cos some people don't have the money to buy

¹²⁷ FGL:

154. S1: But life sciences you have to buy your own book and your own study guide.

162. I: What if you don't have the money? What do you have to do?

163. S2: It's hard so you have to borrow sometimes- you have to borrow cos you don't have the textbook but it's hard cos the learners they steal it from us. You buy the textbook and the following day it gets stolen. You don't know who stole it.

The learners highlight a very important issue pertaining to poverty and the way in which it affects their ability to learn and the values bred as a result of relative deprivation¹²⁸ (Manik, 2014). In this short discussion the desperation that some learners feel is evident in that some borrowed money to buy the textbook while others felt compelled to steal in order to access education. It is a stark example of the direct effects of poverty on literacy.

5.6. Oral literacy practices

Oral literacy practices such as bilingualism, code-switching and transliteration are explored in the ensuing section. The largest percentage of time (approximately 80%) in the classroom was taken up by oral interactions between teacher and learner/s as well as amongst learners¹²⁹. Therefore, discourse analysis within the classroom formed an integral part of understanding the teaching, learning and the acquisition of the different academic Discourses.

5.6.1. Bilingual literacy practices

It has been shown that language plays a vital role in reading proficiency (Joubert et al., 2014; Berens, Kovelman & Petitto, 2013; Nassimbeni & Desmond, 2011). It was therefore important to gauge the reading practices of learners in relation to language. The language of the learners' reading materials was interesting to note. In the following extract from the focus group with them it can be seen that learners mainly read English texts:

FGL:

76. I: That's good. And how much of the stuff you read is in English and how much is in isiZulu?

¹²⁸ "Relative deprivation is a construct conceived in the context of developing countries. It is appropriated from migration literature and has an economic foundation emanating from social justice discourse" (Manik, 2014. P159).

¹²⁹ On any given day talk takes up the majority of the time in class. This is the norm in almost every school (Adger, 2001).

77. S4: English
78. S5: That newspaper is only in English
79. I: That newspaper is only in English. And your books?
80. S4: Most of them are in English
81. I: English
82. S3: Bit of both (.) Some of the books they are in Zulu and some of them are in English.
83. I: Mhmm
84. S2: Mostly in English.
85. I: Mostly in English.
86. S2: I read English books- only English books most of the time because I can't read Zulu properly.
87. I: Is it because you can't read Zulu properly or that there is a lack of Zulu stuff to read?
88. S2: I think it's the lack of Zulu. It's cos I don't read Zulu properly after I can't even pronounce other words that's the problem.

The above excerpt shows that learners read most often in English. There were some learners who engaged in reading activities in both English and isiZulu. However, this was generally not the case. It appears that the minimal instances of reading isiZulu books is an indication of the lack of desire to read in the language. However, this trend may also be attributed to other factors for example, that there are many publishers who do not publish in African languages (Edwards, 2008; King & Chetty, 2014) and so learners do not have access to books written in their L1. Also, learners indicated that most of their reading was relegated to school-based tasks, it would make sense that majority of the texts they read were in English as academic materials were in English. Therefore, it can be said that they read in English because of its utility value.

There is thus an environment created for subtractive bilingualism¹³⁰ in this school context. This is clearly indicated in turn 88 of the focus group discussion where S2 comments that he cannot really read isiZulu properly. His admission that he cannot pronounce the words when reading an isiZulu text implies that the very basic reading level of decoding has not been attained. In terms of reading

¹³⁰ Manyike (2013, p.190), "Where a child does not achieve a fairly even development in L1 and L2, subtractive bilingualism may occur whereby L2 is added at the expense of the first language as the consequence."

then it can be seen that there is a pattern of subtractive bilingualism as this trend (seen in the focus group) is corroborated by the findings of the questionnaire (Q10.2) where learners indicated that they started off reading both isiZulu and English books (53%). The remainder of the learners reported that their earliest exposure to reading was in a single medium (either English or an African language). Of this remaining group 15% responded that they read in their L1 and twice as many (30%) responded that they had read in English. The subtractive bilingualism in the school is in conflict with the language in education policy of South Africa which is additive bilingualism and/or multilingual education (see Plüddemann, 2015; Heugh, 2013)

It did seem as if not much thought was given by the learners as to the language of the materials. The magazines and newspapers tended to be in both English and isiZulu according to the questionnaire findings. However, upon interrogation the focus group with the learners revealed that books that were read were primarily in English. One possible explanation for this trend (reading mainly in English) could be that learners experienced difficulty in reading in their first language. This is as expressed in the focus group by S2 in turn 86 and also brought up in the learner questionnaire where a learner make the following comment about reading in their first language: “It was difficult to read words that were long and I firstly read in my language.”

These findings are of concern because they indicate a state of subtractive bilingualism. The current curriculum prioritizes home language over FAL with only a quarter of the time allocated for FAL as compared to home language¹³¹. The proportion gets progressively more equitable as learners move through the grades (as discussed in chapter two).

The issue of language is also brought up with regard to the readability of examination questions. One of the teachers commented that the examiners did not take into account that the exam is in the majority of the learners’ second language and that complex language is used to ask questions:

FGT:

19. G: I generally find that English secondary language learners- the examiners don’t consider them. Simply why, there’ll be questions asked in the examinations -write about 5

¹³¹ DBE- EFAL Grades 1-3 (2011:6)

or 6 lines on a question that carries 2-3 marks. Now by the time the learner comprehends that entire 5-6 lines he's lost. Rather than asking one short question the learner is ready to give the answer for but that question. So questions don't take into consideration the second language of the learners.

The teacher was asked he had taught learners how to deal with complex questions so that learners would not be taken by surprise in examinations, he simply responded that this issue had apparently been raised by himself with the examiners and other superiors but nothing had been done about it thus far. His response indicates that he does not take personal responsibility for the problem at hand and is simply waiting for a top down approach. His position was supported by his colleague¹³² who offered class large numbers as a reason why question techniques were not taught in class. From these responses we can deduce that the "language issue" was more of a pedagogical issue as teachers expected the department of basic education to remedy a situation that the teachers could remedy themselves. It could be argued that the teachers need to be more proactive in preparing learners by teaching them how to decode and answer complex questions.

5.6.2. Code-switching practices

It should be noted that the language policy of the school is that English is a medium of instruction¹³³. Therefore, lessons were predominantly conducted in English. However, there were instances when there was extensive code-switching¹³⁴. This is something that is not unusual in South Africa (Heugh, 2013).

This fluidity of language practices was evident in the observations of various lessons with the purpose of code-switching from English to isiZulu varying from basic instructions and information to wide scale teaching. Teachers also felt that it was necessary part of classroom life to code-switch as seen in the response of focus group discussion with the teachers (FGT, from turn1 to turn 3).

¹³² FGT:

26. LO: **Yes** and also it's very difficult to overcome that in class because of the big numbers...

¹³³ The psycho-social, historical and political reason for this choice of English as LoLT is discussed in detail in the next chapter.

¹³⁴ Code-switching generally involves two (or more) languages which are the "codes" and a shift between (amongst) the different codes (Makalela, 2015).

The teachers usually code-switched to give instructions such as in the following excerpts taken from one Mathematics and two English FAL lessons:

Maths B:

175. Mrs D: *Kunezinto engizishiyile kule chapter, kumele nenze i transformation geometry kuqala* ‘There are things I left on this chapter, you need to transformation geometry first’ *ka* Tomorrow we are going to start a new chapter which is transformation dimension. Soon as we finish it we will go back to intersection *kunezibalo ezithile engizishiyile lapho kemele nazi i transformation kuqala before nikwaz ukzenza* ‘you need to know transformation first before you do these sums’ will be able to do those sum().

EFAL A:

52. Mrs D: So be prepared. Go back to your work and revise it. Cartoons will be there, uh reading and editing will be there (). Don’t fail your first paper! *U revise ke umsebenzi wakho* ‘Revise all your work’. Ok need to check *manje abantu aba absent* ‘people who are absent’. [Takes register].

The use of isiZulu was mainly for emphasis and reinforcement of the instructions/information. Code-switching was also frequently used to clarify explanations or to re-phrase questions:

Maths B:

124. Mrs D: The next one, “show that the following lines intersect at one point and state the coordinates of that point.” Show that the following lines intersect at one point, *sizobananjanikeukuthilabolayinibayaintecector* at one point? ‘How are we going to work out? See that these lines intersect at one point’. [Silence]

Mrs Duma reads out the question in English and then switches over to isiZulu to re-phrase it in an attempt to make the question more assessable to learners. The re-phrasing did not seem to help as the teacher is met with silence. As the lesson continued Mrs Duma did the example and learners only chimed in when there was a fairly basic equation substitution to be made but when a slightly difficult computation needed to be made no one ventured an answer as seen below:

Maths B:

151. Mrs D: Then you multiply out. What is $-4x-8$? [**No one gives the answer to this basic math question!**] Is it not 32?

152. SS: Yes

153. Mrs D: $-4x-2$?

154. SS: 8

The computation question in L153 is answered by many learners in L154; however, the question asked in L151 is only met with silence. Here it can be seen that code-switching was not as effective as it could have been if the level of understanding of subject itself was at the appropriate grade level. Re-phrasing in isiZulu did not aid answering the question in this particular instance as the learners simply did not know the answer to minus four multiplied by eight.

5.6.3. Transliteration practices

In the Life Sciences lesson we come across yet another example of the ineffective use of code-switching. This time the issue of transliteration was the focus. Transliteration involves using a foreign stem to create another and “equivalent” word in the mother-tongue and it is used as a coping mechanism especially in the sciences (Msimanga & Lelliot, 2014).

Life Sciences:

176. Mrs X: Especially the what? They marine. Like the hydra they live in what? They live in fresh water therefore we are saying they are aquatic animals. Let's look at the characteristics of the phylum ((cnidara)). They have no visible color some species are sedimentary while others are floaty. Other words there are species of this ((cnidaria)) which are found in the rocks while others are just floating on air. Ok. Most species have tentacles with stinging cells. **Tentacles. [Stops to observe he confused look on learners' faces]. What are tentacles? Most species they have the tentacles. What are tentacles? [Silence].**

177. Mrs X: These **tentacles** with stinging cells. Is this a first time you come across the word tentacle?

178. SS: Yeees

179. Mrs X: **Amatentacles?**

180. SS: (). [Mumbling and confusion].

181. Mrs X: Usually in insects like the locust. [Someone knocks on door]. They have these what? Outgrowths which are found in their head. [**Puts her 2 fingers on head mimicking tentacles**].

182. SS: Yes [Majority seem to grasp the concept, now].

In turn 176 Mrs Xuma uses the word “tentacles” to describe a species. On realizing that learners did not understand the term, she asked them again. When there was no answer she attempted to facilitate understanding using transliteration so “tentacles” became “amatentacles.” However, this was ineffective as many were still confused. According to King & Chetty (2014, p.46) “The addition of a Bantu-like affix may make a foreign word more “Zulu-like,” but the affix does not translate the concept that underlies the label into home talk.” The English explanation using a locust as an example accompanied with actions finally fostered a level of understanding. It would seem like the actions of the fingers over her head more than the transliteration of the term was more useful in explaining the term. This particular excerpt further exemplifies the SFL notion that meaning is context embedded and therefore merely transliterating a word does not aid learning because language is a resource that allows one to make meaning (Halliday & Martin, 1993). It is only when the verbal (use of locust as an example) meets the non-verbal (use of hands to mimic tentacles) in this lesson that the word “amatentacles” becomes meaningful.

The main issue is that there are no Zulu equivalents for many of the terms in both mathematics and science as evidenced by most of these lessons where Mrs Xuma and Mrs Duma had to transliterate many of the terms. The following are examples of terminology that was transliterated in the life science and mathematics lessons respectively:

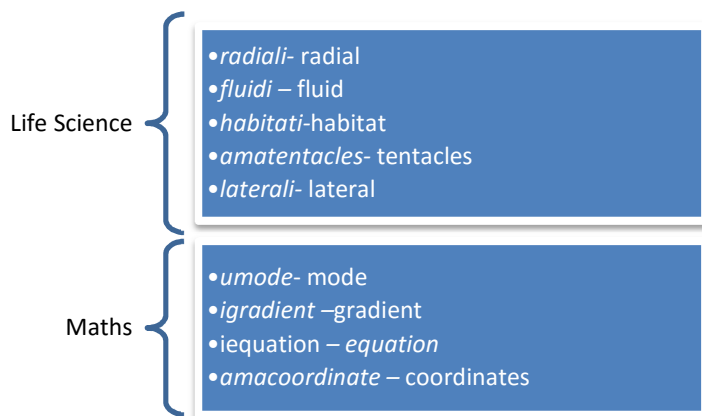


Figure 7. Examples of transliteration

The problem of learners gaining access into the Mathematics and Scientific Discourses is a global concern and if learners' first language can be effectively used as a resource as seen in the examples above then more needs to be done in terms of research to establish best practice policies (Msimanga & Lelliot, 2014). Code-switching and transliteration in particular, facilitate the flow of communication in the classroom and should be seen as a resource in facilitating understanding, however, it should not be seen as the "quick-fix" that learners need for their language problems as is the perception of Mrs Xuma, the Life Sciences teacher in turn 4 below.

FGT:

1. I: Let's talk about code-switching in class. Do you do it? And when you do it
2. LO: Sometimes and also the meaning of instructions
3. I: The meaning of instructions?
4. LS: **Sometimes like in life sciences the bigger words it's not easy to explain them**
5. I: So, you're saying that it will be easier to have um a sort of vocabulary in the learners' first language for life sciences?
6. LS: That is a main issue. I'm not sure maybe they lack clarity whether the textbooks can be more clear. I don't know maybe sometimes if it's the textbooks or whether the questions are not understood.

The Life Science teacher (in turn 4 above) alludes to the use of code-switching to facilitate understanding of content knowledge. She also intimates that she feels that perhaps the textbooks

that they have been provided can be improved. It appears once again, that the teacher does not accept responsibility for learners' poor understanding and is waiting for an external solution (i.e. improving the textbook) to the problem. The use of learners' L1 as a resource to facilitate epistemic access has been established as an effective pedagogic strategy (Kerfoot & Simon-Vandenberg, 2015; Makalela, 2015).

Nevertheless, content knowledge does not guarantee a positive outcome in the examination. It may not necessarily enhance learners' L2 CALP. If code-switching and other multilingual practices are employed in the classroom, then the issue of CALP needs to be considered because inevitably the exit examination is written in English which is the L2 and therefore it is this language that needs to be adequately developed (King & Chetty, 2014). Therefore, multilingual practices are most effective when they are used in conjunction with other pedagogic strategies that allow learners to practice mastering the language of testing as well (Ibid, p. 49). One example of such a strategy is genre-pedagogy¹³⁵ which strengthens learners' CALP (Kerfoot & Simon-Vandenberg, 2015), however genre-pedagogy is not used in any of the lessons observed. This issue of the tensions of coping with the language of science in the learners' FAL is detailed at length in the next chapter.

5.6.4. Practices related to teacher talk

The most common feature in any classroom is teacher-talk (Moore & Hoffman, 2012; McNeil, 2012; Sharpe, 2008; Sinclair & Coulthard, 1975). Moreover, every interaction with learners was teacher initiated. The interaction unit where teachers and learners take turns in the classroom is termed Initiation-response-feedback (IRF)¹³⁶ (Sinclair & Coulthard, 1975). The rationale behind examining this IRF feature was to determine whether these interactions were conducive to the development of learners' CALP or whether certain kinds of interactions proved to be a hindrance (Cazden, 2001)¹³⁷.

¹³⁵ Genre pedagogy allows learners to “use genre-appropriate linguistic resources to present content knowledge, enact interpersonal relationships, and organize texts in the academic genres” (Ramos, 2015, p.19)

¹³⁶ This unit is also referred to as Initiation-Response-Evaluation (IRE) by Mehan (1979) and it is also called a triadic dialogue by Lemke (1990).

¹³⁷ The opinions on this particular feature vary greatly amongst researchers and this fact is discussed in chapter three.

Bloom's taxonomy (Bloom et al., 1956) was used to analyse the level of questions that were asked with questions forming the "initiation" portion of the IRF sequence. From the lessons observed across the disciplines, the overwhelming majority of questions were based on the 2 lowest cognitively demanding levels in the taxonomy. These questions required the learners to either recall previously taught information or comprehend information. These questions were usually phrased in a way that dictated one word answers or very short phrases. Interactions were usually characterized by lengthy explanations from the teacher in terms of the initiation portion of the IRF sequence followed by a question or a cued elicitation¹³⁸. The Physics lesson demonstrates variations of the IRF pattern. Similar IRF patterns were also observed in other classes for example the Maths A¹³⁹ class and the Life Science¹⁴⁰ class. The following excerpt from the Physics lesson demonstrates these features:

Physics:

3. Mr M: Now we have to look at Colombes law and under this we, learn about charged bodies. Let's look at the field around a charged body. How many charges do you know? **A positive charge and?** [Class is still quite noisy and Mr Masondo speaks in a very low tone that is inaudible most of the time competing with the noise].

¹³⁸ According to Sharpe (2008, p.136), "Another typical teacher talk pattern identified is cued elicitation, where the teacher leaves a 'discourse space' for the student to complete a word."

¹³⁹ Maths A:

25. Mr T: And then you have to take the?

26. S4: Square root

27. Mr T: Square root. Now there's one more thing here before we do the standard deviation – if we didn't have standard deviation, what we call this here?

28. S4: Variance

¹⁴⁰ Life Science:

122. Mrs X: Also egestion after the your food is digested so the remains are egested it will be excreted so the same thing applies in this type of what? Animal. A blast system evolve to resolve the first two problems an excretory system with nephilia to solve () we talk of the through gut. Some animals such as the annelida and free living have only one digestive opening which is used for both the ingestion of food and egestion of undigested material. So if we look at the through gut, we look at the animals who got the one opening which serve all purposes intake of food and also? Also for what for?

123. S: Egestion

124. Mrs X: So the guts of annelids molluscs, arthropods, invertebrates have two digestive openings that is the mouth and the //anus.

125. S: //anus

126. Mrs X: And it is therefore described as a?

127. SS: Through gut

4. E: Negative charge

5. Mr M: Here is a body that is positively charged. How do we detect- how do we detect the direction of the field? Electric field lines around any charged body? We can have a negative charged body or a positive charged body – how do we detect? what do we use to detect direction of the electric field? **What will happen if we bring a positive charged body to a positively charged body?** [Begins to draw the diagram on board].

6. S1: It will ().

7. Mr M: What will happen if we bring a positive charged body near a positively charged body?

8. S1: **Repel**

Turn 3 shows the long explanation accompanied with a cued elicitation (in bold). The word “and” in the elicitation has a raised intonation to which the learner responds. Turn 5 on the other hand comprises of a series of questions that the teacher does not wait for the learners to answer instead he settled on a question that was cognitively undemanding as the one he wants answered. He subsequently repeats this question in turn 7 “What will happen if we bring a positive charged body near a positively charged body?” He signals his wish to have the question answered by pausing. The question is then answered with a single word “Repel” by S1 in turn 8.

What turn 5 also indicates is the pace at which Mr Masondo teaches in the Physics class. This fast pace has been something that learners mentioned as an area of concern in the focus group interviews. The following comment is from the focus group interview regarding Mr Masondo:

FGL:

186. S2: Most of the class they don't pass because we don't understand him properly and at the time he used to expect something and then **he will jump to another thing** then he'll explain it again. Then we get confused. **He's telling us 2 different things at the same time**

Here we see how a problematic Initiation phase may hinder the response and may even stifle responses as learners may be confused as to what they should actually be responding to when

multiple questions are phrased. While it may be argued that cued elicitations may be useful in creating a shared discourse and gives the teacher the assurance that learners are following through “participating” (Sharpe, 2008), these perceived benefits came at the expense of learners participating in more meaningful and discursively challenging ways.

Aside from the cognitively undemanding¹⁴¹ nature of the questions and the way that teachers were posing them, the speed with which they conducted these IRF sequences also necessitates commentary. It seemed at times that teachers were racing to get through material and the quality of the feedback ranged from none to minimal as in the case discussed above of the Physics lesson and the quick fire session that was done at the beginning of the Life Sciences lesson where the teacher proceeded with her questioning as long as a learner answered the question. Her feedback to the answers was monosyllabic in the form of “Ya”¹⁴² (discussed below). There did not seem to be much in the way of interrogation of the thought-processes that got learners to an answer rather, a very brief appraisal of whether the answer given was correct. Interrogation of thought processes with the use of referential questions can be useful for learners (especially L2 learners) “to comprehend and produce target language that reflects their own thinking and provides opportunities for teachers to assist in those processes” (McNeil, 2012, p. 396). Assisting in those thinking is vital if learners are to gain epistemological access (Liccardo et al., 2015; Kerfoot, & Simon-Vandenberg, 2015; Layton, 2013).

In the following excerpt the word “ya” is used both as feedback to affirm that the answer given is correct and as an elicitation of the next example as is the case in the Life Sciences lesson:

Life Sciences:

15. Mrs X: They do not have a backbone. And then we said this invertebrates are divided into phyla. Do you still remember the phyla that makes the- that form the group of invertebrates?

16. SS: Yes [Chorus]

¹⁴¹ Based on Bloom’s (Bloom et al., 1956) taxonomy recall and recognition questions are deemed lowest in the hierarchy of cognitive demand.

¹⁴² “Ya” is a colloquial term used in South Africa and is derived from the word “Ja” in Afrikaans meaning “yes”

17. Mrs X: *Ya? One?*
18. S3: Phylum porifera
19. Mrs X: Phylum porifera. *Ya?*
20. S4: Phylum cnidarian.
21. Mrs X: Phylum cnidarian. *Ya?* Yes at the back there?
- 22.S5: Phylum annelida
23. Mrs X: Phylum annelida. *Ya?*
24. S6: Arthropoda

This uniquely South African response ‘Ya’ was used by the teacher to affirm the answer along with a repetition of the correct word and simultaneously ask for the next answer. This facilitated the flow of the lesson. Teachers felt a need to move at a fast pace as they were test focused and this is evident in some of the classroom discourse. The following excerpt from the Geography class serves as an example:

Geog A:

5. Mr P: Right come on, you gotta start to get serious now. You gonna write the test and there are sections in the test on Wednesday that you have to cover today and tomorrow

Manyatsi (2015) also found that geography teachers only taught for the assessments and exit exams in Swaziland and this is also an occurrence in many other countries like SA. Moore & Hoffman (2012) assert that this pressure to teach for high stakes tests and examinations is a global phenomenon.

In the pursuit of covering the curriculum and a singular focus on high stakes tests, teaching and learning is compromised. This is because learners who may have knowledge gaps remain hidden from the teacher. Teachers were aware of this but maintained that they felt the need to move on even if not all learners were at the same level. This is one response regarding the vastly differing levels present in classes and the issue of having to proceed regardless of whether learners were on par or not:

FGT:

32. LO: Exactly. And also those that you pick up because you end up even cutting down on the activities that you give. So the ones that you would pick up or monitor their improvement you can't do that because this class is too big. One day you come and mark¹⁴³ the left row. The other day you come and mark the right row. The other day you too tired you only mark 10 just to see that somebody has grasped. **If three out of ten has grasped the idea then you go on. Ya, a lot of them are left behind. And then at the end of the month you concentrate all your marking¹⁴⁴. And what about those who didn't get it at the first of the month and then you can't do anything about it because you have taught so much.**

The learners were keenly aware of the strengths and weaknesses of different teachers in terms of feedback. Learners did however, have some positive experiences as evidenced in the comment below (turn 233). The learner relates that he did not approach his own teacher but rather chose a grade 12 teacher who was very helpful. The conversation did not take place in the learner's classroom but it took place with another teacher outside of class.

FGL:

233. S4: Some teachers are ((of them)) it's good to ask sometimes that (). There was a sum that I didn't understand. Then I asked the maths teacher grade 12. I did the sum and go to her and say this is how I did it. Then she tell me it's not like that. Then I go myself at home and do it then the teacher was marking it, was saying its correct.

234. I: Ok

235. S4: See some of () it's good to ask

236. S1: Some of the teachers are not good at explaining

237. I: Mmm

238. S1: And that also affect us

239. I: Like an example of that?

¹⁴³ Referring to learners' books.

¹⁴⁴ I understood this to mean that the teacher would mark all the work done for the month at once.

240. S1: Like I can say the principal. I can say he's not good at explaining and making you clear of what he's doing- I think it's *ya*.

These observations seem to imply that the quality of feedback in the classroom is not as rich as it could be and this hinders the learning process because learners use the feedback to enhance their understanding.

5.6.5. Chorusing practices

As discussed in the preceding section the contributions of learners was minimal in the IRF sequences with their teachers. It was noted that the learners responded in general with single words or short phrases. One of the other common features of response by learners was a response in unison that was slightly prolonged and at times exaggerated which can be described as “chorusing behaviour.” There are different cues that elicit this response (Pérez-Milans, 2012; Sharpe, 2008; Chick, 1996). These are referred to as contextualization cues (Gumperz, 1976). The first cue is a particular kind of question and the second is the raised intonation of the teacher. This behaviour was prevalent across the different disciplines and persisted even when teachers reprimanded learners for example in the Life Sciences class. Mrs Xuma lets learners know from the onset that she prefers interactions to be conducted in a particular way:

Life Science:

1. Mrs X: Boys and girls! We said under animal under kingdom Animalia, we have 2 divisions. What are those divisions? [A learner erases work on board from previous lesson].
2. SS: (). [Random shouting from class].
3. Mrs X: **Hands up, please!**
4. S1: Vertebrates and invertebrates
5. Mrs X: Vertebrates and invertebrates. We said how how are they different? How is vertebrate different from invertebrate?
6. SS: (). [Random shouting from class].
7. Mrs X: **Hands up! Keep quiet! Hands up!** [Few raise hands].
8. S1: Because they are ().

It can be seen from turn 3 to turn 7 she had become increasingly annoyed at the random shouting out coupled with the correct answer being given as a response. The lesson proceeded in quite an orderly fashion with individual learners raising their hands to answer the questions until the following interaction happened:

Life Science:

162. S16: I think it's cause when we cut it ().

163. Mrs X: **Do you all agree?**

164. SS: No

165. S13: *Radiali*

166. Mrs X: Somebody saying radial symmetry. **You all agree?**

167. SS: Yes

168. Mrs X: Why you say its radial symmetry?

169. S13: Because its round so it can ().

170. Mrs X: It's roundish so it can because of its round shape it can be cut in any part. Alright. So the *habitati* of the cnidaria these are aquatic animals. What do I mean if I say these animals are aquatic?

171. SS: It live in water. [Random shouts].

170. Mrs X: *Angiyfuni i chorus* '**I don't like chorus**'. **I don't- I don't like ichorus!** [Reprimands them for shouting out the answers together].

171. S20: They are water animals

What is evident is that the interactions only become more chaotic when Mrs Xuma elicits this kind of whole class response by the questions in turns 163 and 166. She is then highly annoyed when the learners revert to this chorusing behaviour and reprimands them in turn 170. Mrs Xuma behaviour is ironic as she warns against this behaviour yet it is she who prompts it by her questioning style.

This learner behaviour is prominent in the EFAL class as well. The excerpt below represents a typical interaction in which cued elicitations are used. It can be seen that this interaction was used to elicit simple answers which were usually shouted out in a whole class response:

EFAL A:

5. Mrs D: Ok, thank you

...

Looking at paragraph one, are there any suggestions given in paragraph one for parents?

6. E: **No** [Chorus- style].

7. Mrs D: Ok, so there is none there. Paragraph two?

8. E: **No** [Chorus- style].

9. Mrs D: Right. Three?

In the same lesson it was used in a very playful way:

EFAL A:

32. E: **Parents should insist on investigation [Sing-song chorus style].**

33. Mrs D: Parents should insist that the school do investigations...So these are the seven points. So you finished the summary. So what's next to do now? [Proceeds to write on board].

34. S: Count the words

35. Mrs D: Count the number of words that you have used. Ok, count them.

36. SS: **1,2,3,4...61 [In a sing-song chorus style. Many start giggling].**

The tone of the English lesson was less serious than the Life Sciences lesson. Mrs Dlamini was not particularly concerned with the way in which learners responded as she did not acknowledge the behaviour and merely carried on with the lesson. It seemed that the learners' response was an indication to Mrs Dlamini that she could carry on. She seemed pleased that they responded at all. In keeping with other studies, it was noted that the chorus was used to reflect basic content or repetition of what was already known (Simons, 1986; Chick, 1996; Kapp, 2002).

Also of note is the assertion by Simon (1986) that this feature is used to signal to the teacher that the class is following and is all together so that s/he can continue. The following example in the Maths lesson (A) (see Appendix 24) with Mr Thamoo¹⁴⁵, illustrates this:

Maths A:

337. Mr T: There are 2 steps ok. You have a one variant you want frequency you press shift. Have you pressed shift?

338. SS: Yes [Chorus]

339. Mr T: Right then set-up. Have you got set up? Right, now scroll down now can you see where the table. The arrow, you know which arrow is scroll down? You know how to scroll down huh?

340. SS: Yes [Chorus]

341. Mr T: You scroll down and go to 3 stag. Go to 3 stag now watch out for your calculator sometimes the 3a look like a 3. Now have you got 3 stag there?

342. S: Yes [Chorus]

343. Mr T: EY! Have you got 3 stag there ey! Right then you press 1 alt. Have you pressed 1 alt?

344. SS: Yes! [Chorus]

Mr Thamoo scaffolds¹⁴⁶ the task of doing a calculation and using the different calculator functions to do so. At each stage of the calculation he explains first then shows the learners what to do. He then asked the learners if they had successfully completed that particular stage and only when he was satisfied that all were with him did he move on. The learners' chorused response indicated to him that he could carry on to the next step.

5.7. Peer learning practices

According to Msimanga & Lelliot (2014) peer learning is an important resource in the classroom. Osborn (2010, p.464) reports that in terms of learning activities "those that are interactive and require collaborative discourse and argumentation (either with a peer or an expert tutor)" proved

¹⁴⁵ Referred to as Mr T in the transcription.

¹⁴⁶ Scaffolding (McNeil, 2012) involves a more learned other (in this case Mr Thamoo) guiding one (the class) through one's ZPD (Vygotsky, 1978). Successful scaffolding results in one being able to perform the same/similar task on one's own.

conclusively to have the most gains compared to constructive activities (such as producing a report or essay) and active pursuits (such as conducting an experiment). There is a sub-culture of peer learning that does not get as much attention as it should because it is a very important part of teaching and learning that occurs in classrooms:

“Any classroom contains two interpenetrating worlds: the official world of the teacher’s agenda and the unofficial world of the peer culture. Most research concentrates primarily on the first” Cazden (1986, p.451).

This sub-culture is evident in two particular peer learning events, both of which took place in the mathematics classroom under the authority of two different teachers (Maths A and Maths B).

In the first event, an interesting use of code-switching was observed where one of the learners scaffolded the use of the calculator for the rest of the class. The learner was used by the teacher as a pedagogic “tool” to both code-switch and scaffold this particular exercise (i.e. how to use the calculator). I therefore conceptualise this occurrence as “Learner as Pedagogic Tool” or LPT, where a learner is used as the medium through which teaching and learning goals in the classroom are achieved. The mathematics teacher, Mr Thamoo, is an English first language speaker and his use of isiZulu was not particularly fluent used a learner to explain a calculation process (using the calculator) in the learners’ L1. The following is an excerpt from that lesson:

Maths A:

48. Mr T: Now I want you to use the calculator and do it properly and I want somebody to come in the front. You see all the rules are here -see here? So when you get this in examination, you must learn this as well because if I give you a question and if you don’t know how this works then you will have difficulty. Now when somebody comes in the front here and show the (...) **Sizwe, will you do this? Explain this how- you gonna use your calculator to get your mean and your standard deviation. Ok ey! Some of you don’t know how to do it. Just follow it. It’s written there all the rules are written there. Right, can you just tell -us explain how.**

49. Sizwe: Must I show them how to use this?

50. Mr T: **Yes, show them how you gonna enter those scores on the calculator because in the examination (...)** listen! Hey! if you haven't got a calculator then you have to do it like this. And then if you haven't got- if you got the older type of calculator then you have to do it (). I see all of you! got the Fx 82. Alright, carry on explain to them. The rules are there. Just pay attention now.
51. Sizwe: **Ok now first of all upresa u munwe la, then pressa u 2. 'Ok now first of all you press your finger here, and then press 2'** [Explains what to do using the calculator demonstrating to them].
52. Mr T: Ey! Ey! Ey! Please follow there. [**While Sizwe is explaining, the class gets rowdy as they seem to disagree with something but Mr Thamoo quietens them**].
53. Sizwe: *Siyahambisana?* **'Are we following each other?'** [Continues to explain with some agreeing as he goes along].
54. S5: *Qala phansi* 'Start afresh'
55. Mr T: Ey! Shhh! Ey please, please follow there. [Says this while Sizwe continues explaining].
56. Sizwe: *Ngigale phansi?* 'Start afresh?'
57. SS: Yes, yebo. [**Some learners begin protesting, it seems they don't agree with something Sizwe has said**].
58. Mr T: Wait [a plea to allow Sizwe to finish].
59. Sizwe: *icalculator yakho ikanje manje angithi? I casio le engikhuluma ngayo. Presa umode, then u 2, then mase u pres u 1 ufaka u 15 = 23* 'Your calculator is like this? I am talking about casio, press mode, then 2, then you press 1, put 15 = 23'
60. S6: *Ayfani neyami eyakho* **'Yours is not the same as mine'**.
61. Sizwe: ***Kuyafana* 'It's the same'. *Lelelani, lalelani* 'Listen, listen'**.
62. S6: ***Kuno zero* 'mine has zero'**
63. Sizwe: ***Then shaya umode* 'hit mode'**.
64. S6: ***Kyafana, kyavela* 'It's the same, its coming'**.
65. Sizwe: *Shaya u mode, bese ushaya u 2 sis sthath, kusele izinto eziningi kabi. Ushaye u 1, angithi uyabona? Sekuvele kanje? Neyakho i right, qhubeka ufaka. Bese uyayvalake. Emva kwalokhoke bese ufaka ama scores bese ushaya u =, ufaka u 15=,23 =,19=,21=, 25. Mase kukanje into okmele uyenze, into oyenzayo upresa u shift and then press AC. No no*

no no (...) ‘Hit mode, then 2, there are lots of things left. Press 1, can you see, now it’s showing like this. Yours is also right, continue and enter, then you close. Then after that you put scores then but =, put $15=23=21=25$. When it’s like this what you need to do, what you do you press shift and then press AC. No, no, no (...)’ [Seems to have done the wrong thing].

66. S6: *Weeeeeeeeeeeeeeeeeeeee, kuhluleka icalculator, uthisha obhedayo*. Practice makes perfect too, *batshela* ‘**Weeeeeeeeeeeeeee, the calculator is failing, the teacher is misleading. Practice makes perfect too, tell them**’

67. Sizwe: *Mase usuqedileke ushaya ama scores akho ke, ushaya u AC, AC is next, kzosuka yonke into, mese sishaya manje u shift, bese ushaya u 1, kuzovela kanje, mese ushaya u4, u5* ‘When you are done with your scores, press AC, and your calculator will be clear. Press shift then 1 and press 4 and 5’.

68. S6: *Awukho u 4* ‘There is number 4’.

69. SS: *Qhubeka* ‘Continue’.

70. Mr T: Now some calculators are different just be careful huh?

71. SS: Yes

This interaction is quite significant because the level of participation on the part of the entire class goes up quite dramatically with Sizwe as the LPT. Rollnick & Rutherford (1996) in Msimanga & Lelliot (2014) refer to this as peer interpretation and note how “discussion spaces” are opened up in the classroom. What is observed is that those learners who were quiet and who looked particularly disinterested began to participate in the conversation with the LPT. The level of participation made the joint construction of knowledge possible. This joint or co-construction of knowledge allowed for the learners to move through their respective Zones of Proximal Development as they interacted in “collaboration with more capable peers” in this case their peer, Sizwe (Vygotsky, 1978, p.86).

One of the aspects of this interaction was how learners challenged what the LPT was saying. The learners were quick to criticize the LPT when he faltered in his explanation. We see evidence of this in turn 52 and turn 57. It is in turn 66 that the criticism takes on a personal nature. Perhaps this could be interpreted as intellectual jealousy that the teacher chose this particular learner as the LPT

and the rest of the class felt that it was their duty to put him down/in his place to show that the LPT was no better than they were. This kind of challenge is possibly the outcome of the intervention of Mr Thamoo in these discussions. At every point of disagreement of the class with Sizwe the LPT, Mr T steps in to mediate (see turn 52, turn 58 and turn 70).

In the second event, a LPT is also used by the teacher, Mrs Duma in the Maths B class for the purposes of reviewing homework:

Maths B:

21. Mrs D: Ok, do the first one for us [Starts reading out the question. Mrs Duma has taken approximately 8 minutes to get to this point where the example is actually being done. This is because she has been painstakingly writing four different problems on the board. A learner walks up to the board and starts to do the example]. We all know that a triangle has got 3 sides and 3 angles. Then the question reads: determine the equation of the perpendicular bisector. Is it possible for you to explain while you are writing? [Speaks to learner who is at the board doing the example].

...

24. S2: (). *La sizo calculator I equation yalolayiniosuka la ku B uza la ezansiozoba perpendicular ozohambakanje, ozohamba la.* 'Here we will calculate the equation for this line that start from B to here at the bottom, that will be perpendicular and that will go like this'. [Points to what he has done and explains entirely in isiZulu except for words like 'perpendicular'].

25. S3: What (). [Some think its funny and ask questions].

26. S2: (). [Proceeds to explain].

27. Mrs D: Shhh! Quiet!

28. S4: ***KhulumaiEnglish, shuthawyaziiEnglish*** 'Speak English, you mean you can't speak English?' [S2 continues to write and explain in isiZulu but then writes without talking for a while].

29. SS: Haibo! [This Exclamation indicates that what has been done is incorrect].

30. S2: Huh? [Begins to erase what he has written].

31. S4: (). [S5 gives S2 the correct information to use on the equation].

32. S2: *SqalangoY* ‘We will start with Y’ (). [Carries on with the equation and explaining in isiZulu].

33. S4: *O X njelabamfethu?* ‘These are X’s?’

...

38. S2: *I gradient sesiyayaziukuthi iwu2. Sesizo substitute lama points lawaakwi multiplication ne gradient. UY wethu u 3, M=?, Y3+C. 3=6+C. -3=C. Y=2X-3. I equation yalolayini lo oshonaphansi* ‘Now we already know the gradient is =2. Now we are going to substitute these points, the ones on multiplication and a gradient. Our Y IS 3, M?, y3+C, 3=6+C, -3=C, Y=2X-3’

39. S5: *iequationyalapho?* ‘**Is that the equation?**’

40. S2: *Le I perpendicular bisector asikwaziukucalculaor I midpoint* ‘This is a perpendicular bisector, we can’t calculate the midpoint’

41. S4: *Hhaysyakwazi* ‘**No we can**’

42. Mrs D: (). [reads out question again]. Now which 2 things you need to calculate? () to which (). [Speaks to whole class when S2 finishes on board].

...

55. S2: *Lana sizoyenzakanjanike mam ngobakthiwa u DM? Askwazukuyi calculator I perpendicular bisector* ‘How are we going to do it here mam, because here it says DM? We can’t calculate a perpendicular bisector’[Continues to explain].

56. S: *Isdomu, hhawemaaaaaaaa* ‘**You are so dumb, it’s unbelievable!**’

57. Mrs D: That is another sum. Do it your own way. So at the end what was the equation?

Ok so you all got y is equal to 2x-5 except Mr Ntuli?

58. SS: Yeeees [Chorus-style and **some laugh quite loudly at S2**].

In turn 31, S5 gives S2 the correct information to use in the equation after realizing that he was struggling with the question. This is another example of peer learning. In the first event (previous example -Maths A) there seemed to be a kind of understanding that one of the purposes of getting the learner to explain was to actually speak in isiZulu because the teacher was unable to do so fluently. However, in this particular instance the learner is ridiculed for doing the explanations in isiZulu and not English. The choice of language of the LPT became one of the aspects that the learners used to tease/mock the chosen LPT by implying that he chooses to speak in isiZulu

because he cannot speak in English (see turn 28). The LPT seemed unfazed by this mockery and continued with the example, however, as he continued learners began to point out a few errors in his answer. When he does not respond to the polite suggestions to change the answer (see turn 31, turn 39 and turn 41) he is met with very harsh criticism thereafter (see turn 56) and simply laughed at (see turn 58).

Like the interaction in the other lesson with Mr Thamoo, Mrs Duma was somewhat protective over the LPT. Perhaps the protective stance by both teachers could be attributed to them wanting the class to accept the LPT as a form of authority figure. She did not tell him that he was wrong in front of the class and did not stop him immediately when he began to get the steps to the calculation incorrect- he continued till the end. In post-observation interview it this decision not to stop him when he began to calculate incorrectly was probed. It was established that the learner was one of the brightest learners in the class and Mrs Duma allowed him that leeway in the hopes that he would realize his mistake and self-correct. It was interesting to note that towards the end of the lesson she sat with him on an individual basis and explained how he had gone wrong with that particular example. It was a very rare occasion where a learner was given individual attention for a sustained period of time (5 minutes). Perhaps Mrs Duma's obvious special treatment of this learner was cause for some of the hostility that the other learners showed toward him.

5.8. Practical science literacy practices

In Gee's definition of Discourse¹⁴⁷, one of the elements that make up acquiring a Discourse is the ability to "do" or to act the correct way. In many subjects the practical aspects work together with reading, writing and speaking to enhance understanding of the discipline under study and to ultimately enable the learner to fully acquire the Discourse. The disciplines that fall under the umbrella terminology of science (such as biology¹⁴⁸, chemistry and physical sciences) best exemplify this synthesis.

¹⁴⁷Discourse is the right "saying (writing)-doing-being-valuing-believing combinations" (Gee, 2008, p.154).

¹⁴⁸ In this thesis the terms Biology and Life Science are used interchangeably as referring to a specific discipline within the broad umbrella of science studied by learners at school.

“To do science, to talk science, to read and write science it is necessary to juggle and combine in various canonical ways verbal discourse, mathematical expression, graphical–visual representation, and *motor operations*¹⁴⁹ in the world” (Lemke, 1998, p.87). Therefore in order to teach science the practical aspects must feature adequately in the curriculum. This is to ensure that learners are actively apprenticed in the “academic social practices” of scientific Discourse (Gee, 1996, p.147). An effective pedagogy to accomplish this apprenticeship is inquiry-based learning in science which has proven to be a highly effective pedagogic strategy (Ramnarain, 2014).

Ramnarain (2014) casts inquiry-based learning as a more enhanced pedagogy than practical activity model that encourages handling of materials and observations. It is disconcerting then that even this less advanced model of practical activity is not employed in the teaching of science at this school. Lemke (1990, p.157) notes “lab work is necessary and valuable as one part of a good science curriculum.” There was no proper science lab. They did have a room called the science lab but this was merely a label because this room was devoid of science apparatus and science materials (such as chemicals or specimens) that could have been used to aid teaching and learning. Learners were keenly aware of how this affected them and expressed a desire for more practical literacy:

FGL:

244. S4: Maybe we should go into the lab more. **In a test maybe they ask- they give you an apparatus that you don’t know and ask what is this.** You don’t know cos you never used that before.

245. S1: **Or ask you the colour of a chemical. What colour is a chemical so we don’t know. You can’t ask something that you will never ever see before.**

246. I: So you don’t go to the chemistry lab?

247. S1: No, no

248. I: There’s no physics lab?

249. S2: There is but...

250. S1: [interrupts] But it is not done

251. S4: **It’s all old**

¹⁴⁹ Emphasis mine

252. I: It's old equipment?
253. S3: //Yes
254. S4://Yes
255. I: So you hardly go to the physics lab or do you go?
256. S3: **The chemistry lab it's done but we don't go**
257. I: So you don't know what certain compounds look like?
258. E: [Nod heads] Yes
259. I: How do they expect you in a test to know what a compound is? Do they expect you to read the text book?
260. S1: Yes maybe they expect because the books are have all of them
261. I: So they tell you that magnesium is this colour and you have to know.
262. S2: Yes
263. I: Without having seen it? And you haven't done...Have you done any experiments?
264. E: [Shake heads] No.
265. S3: Only do theories
266. I: Only do theory?
267. S4: Teacher write on the board and tell us this and this...
268. SS: [Interrupt and laugh]
269. S4: It is not easy to understand because you not doing it yourself. You take them down and just forget them. You don't have a textbook- it was writing on the board and it was rubbed. You forgot it- forgot it.
270. I: Never seen a test tube?
271. S3: We have seen it
272. I: You've seen a test tube?
273. S1: Yes
274. I: The teacher brought it to class?
275. SS: No
276. I: Then when have you seen a test tube?
277. S5: **In grade 9 science teacher bought them**
278. I: Ok. They didn't do anything with it though?
279. S4: **Just showed us this is a test tube**

280. I: And all the other apparatus- pipettes and things like that?

281. E: [shake heads]

282. I: No? Haven't seen them? So actually having a lab will make things better for you? Doing the experiments for science and for biology. The biology part- have you seen specimens?

283. S1: **Um biology even a microscope we haven't seen them**

284. I: Never seen them? So there's no specimens here in school?

285. S1: **But we know that there is a specimen and a microscope but we don't know how they look.**

An essential component of Discourse acquisition is “doing” (Gee, 1990). Learners had very little opportunity to acquire scientific Discourse by way to doing. Learners did not have the right context (in this instance that would be a laboratory) in which to study both physics and chemistry. In turn 250 the learner is referring to the fact that there is a classroom dedicated to be a physics lab but it does not have any equipment to serve this function. In turn 256 the learner is referring to the new work benches that were installed into the chemistry lab and in his assessment the lab is “done” even though they do not have any equipment or chemical supplies etc. that would make this lab functional. Learners were therefore not exposed to a proper laboratory setting. The sum total of the learners' experience was that they had seen some science apparatus in books like microscopes and some have been shown to them such as test tubes (in earlier years of study- two years ago)but they had never used them in a way those people who are part of the community of science would use them. They had therefore never been “actively” apprenticed in the Discourse of science.

5.9. Scaffolding practical literacies

Mr Thamoo's mathematics and Mr Pillay's Geography lessons are examples of the large extent to which practical skill teaching and learning can be successfully scaffolded. Mr Pillay spends the entire Geography lesson (B) (see Appendix 25) scaffolding the task of doing a cross-section by first explaining then instructing and finally showing learners how to do the task:

Geog B:

22. Mr P: **Right let's go step-by-step.** We have to draw a cross-section. We have to draw a cross-section of this contour lines. You all can see here?

23. E: Yes

24. Mr P: You got the line here. The cross-section is going to be there. What I want you to do now- what I want you to do(...). All of you follow step by step. I want you to take another piece of paper. Get another piece of paper and put it across- put it across the line from A to B...

26. Mr P: Now you put it across this line, A B. **The first step** I want you to mark off(...) all of you watching? I want you to mark off the point A then mark off the point B. Mark it off. Don't move the paper, ok? Keep it firm and mark off point A point B. Hey! Follow, follow, follow! **You're marked it off?**

27. E: Yes.

28. Mr P: You sure? I'm coming round to check the diagrams you gonna give me. Right mark it off. Right, got it? All with me? Then we gonna go the first line to touch the paper [shows on board]. Put a mark- put a mark. First line to touch the paper. First line to touch the paper put a mark. Now what's the height of that line? What's the height of that line?

...

This step by step scaffolding continues throughout the lesson until all the learners have eventually completed the example. This lesson shows how the Mr Pillay takes the learners methodically through their ZPD. This scaffolding is a well-planned teaching strategy as evidenced with him giving the learners the x and y axes in this lesson and expecting them to do it on their own in the following lessons with the use of this exercise as an example:

Geog B:

68. Mr P: ...**What you've done- you now able to draw a cross-section of a feature that you find. You are able to see now what type of feature is this.** Here's it here, here's the feature here. Ok, so basically you are learning how to draw cross-sections. Using the contour lines identify features on the maps. Are you all with me?

69. E: Yes

70. Mr P: I have given you the x and y axis on your worksheet. **From tomorrow I'm not gonna give you this x and y axis, you gonna draw this x and y axis.**

In the Maths A lesson Mr Thamoo achieved dual purposes in this lesson by going through the calculations and showing learners how to use their calculators. He had detailed the different steps that learners needed to take in order to do the calculation but seemed doubtful whether they would be able to follow these:

Maths A:

326. Mr T: Right now, the next question there was what? Ok before we do the next question, we need to put this in the calculator and see if it's correct. Right the rules are there, can you see the rules?

327. S: Yes

328. Mr T: Must I explain it to you or are you able to follow the rules?

329. S4: We will be able to follow the rules.

After the assurance from the very loud learner at the front of the class, S4, he allowed the class to proceed. Upon interrogation he found that they were unable to follow the rules regarding the use of the calculator for this calculation and he then stepped in to assist. What follows is an example of how he takes the learners through their ZPD:

Maths A:

335. Mr T: Hey, alright now listen. Just hold on a minute, you know what's happening here, you are not please- you are not getting 2 tables there simply because I want you to look at the rules there all of you and follow those rules. Right let's just follow the rules there. Ey,ey right. Let's start ok have you all got ok.

336. SS: Yes

337. Mr T: There are 2 steps ok. You have a one variant you want frequency you press shift. Have you pressed shift?

...

366. Mr T: Ok, before I go I want you to go over- try and do the calculations [Learners doing work on their own Mr Thamoo checks that they are doing it correctly. Many have managed to do so].

The step by step instruction continues until they collectively reach a solution and then they are asked to do the rest of the examples on their own which most of them successfully do. Mr Thamoo successfully scaffolded the task. The learners who were unable to perform the task in the beginning were led through the different stages of the task by him (i.e. a ‘knowledgeable other’) and were eventually able to perform the task independently. This lesson highlights the importance of not making assumptions about learners’ ability to perform certain tasks even if they are properly outlined¹⁵⁰. The constant checking to see whether learners were following along with him showed that he was aware that learners have different levels of knowledge and only proceeded once he was satisfied that all were at the same level. It also emphasizes the point that teachers should not to take for granted that all learners are conversant with the use of certain literacy tools like calculators. Practical demonstrations might actually be a more appropriate strategy than clearly delineated written procedures (such as the rules supplied by Mr Thamoo see Appendix 7).

5.10. Conclusion

This chapter began by posing the critical question of what literacy practices were evident in a grade 11 classroom. It also began with the reiteration of the NLS conception that literacy is socially situated and that the school is social construction (Street, 1997, p.48). The literacies that learners would have to master were reading, writing, speaking and doing. These literacies are all part of the secondary discourse that successful learners acquire (Gee, 2008). While being cognizant of the interrelatedness of these literacies, it was important to separate them into sub-categories for ease of analysis.

It was found that in terms of reading, there was a general lack of a culture of reading amongst the learners. It was therefore no surprise that the level of reading was not grade appropriate. Writing was also not a particularly prominent feature in class or at home. Much of the writing by learners

¹⁵⁰ Instructions on how to perform the calculations were clearly laid out in the learners’ worksheets.

centered on note-taking. Learners had to work in an environment of chronic lack of resources which impacted on their literacy practices such as the lack of books.

The teaching and learning environment in which the literacies were embedded was characterized by a lack of instruction (in both reading and writing), feedback and practical science literacy. However, there were instances where teachers successfully and practically demonstrated particular tasks. The interactions in the classroom were dominated by the teacher-talk. There was language fluidity in these interactions as teachers used multilingual resources such as code-switching and transliteration to facilitate learning. Teachers also employed innovative strategies such as the Learner as Pedagogic Tool (LPT).

This chapter offered the reader a “snapshot” of what happens in the grade 11 class in terms of literacy practices. In the next chapter, these trends will be discussed further in relation to the literature. The different psycho-social-political and economic factors will be illuminated to show how they influence the literacy practices thus perpetuating the cycle of disadvantage.

Chapter Six: The manifestation of disadvantage in literacy practices

6.1. Introduction

Chapter five highlighted the different literacy practices (in responding to critical question one) that were evident in the case study grade 11 classroom. These included reading, writing, oral and practical literacy practices. In this chapter there is a close examination of the relationship between literacy and a host of disadvantage factors. This is done in order to answer critical research question two “How does disadvantage manifest in literacy practices?” and critical research question three “Why does disadvantage manifest in literacy practices?” Although distinctions are made between the literacies (for example reading and writing), in reality distinctions should not be made because literacies are interdependent. For example, reading and writing¹⁵¹ influence each other and these literacies undergird scientific and mathematics literacy so the reader should bear in mind that distinctions have been made purely for pragmatic reasons.

As discussed in chapter three, Bronfenbrenner’s (1977) ecological model of human development will be used as a framework to analyse on a deeper level and theorise on literacy development i.e. the development of an ecological framework for literacy development. It is a useful framework to ascertain the complex relationships amongst the confluence of factors in a township school as will be elaborated on below.

As discussed in chapter one of this study, there are various definitions of disadvantage that are used to refer to a particular set of factors for example historical disadvantage, psychological disadvantage, socio-economic disadvantage and educational disadvantage. These different forms of disadvantage will be discussed in relation to the literacy practices described in chapter five. On a macro-level both issues of power and identity have a profound effect on literacy. Institutions such as schools are subject to higher institutions such as the government. The case grade 11

¹⁵¹ Anderson & Briggs (2011) argue that “When we write, we read; when we read, we compose meaning. A wide body of research documents the reading–writing connection (see, e.g., Fitzgerald & Shanahan, 2000; Harste & Short, 1988; Pearson, 1990; Shanahan, 1980; Tierney & Pearson, 1983).”

classroom situated in a township school is enveloped by these multiple forms of disadvantage which manifests itself in ways that impede good teaching and learning from taking place. These ways range from psychological and behavioural problems to a lack of resources (Bayat, Louw, & Rena, 2014; Godfrey et al., 2012; van der Berg, 2008; Knapp & Shields, 1990). Studies conclude that children who attend schools that are underpinned by a culture of poverty are at a distinct disadvantage in terms of academic achievement (Bayat et al., 2014; Ndebele, 2015; Spaull, & Kotze, 2015; Spaull, 2013; Godfrey et al., 2012; van der Berg, 2008). This poor academic achievement of learners in high-poverty schools exists because of poverty but also perpetuates poverty because poor academic achievement of the learners will, in the end, result in minimal economic opportunities. So there is a self-sustaining cycle that needs to be broken. In the following chapter some key issues, as related to this self-perpetuating cycle, will be discussed in relation to various literacies.

6.2. Factors that adversely affect reading

Reading is an important competence that needs to be mastered in school¹⁵². In chapter two, it was established that the levels of mastery of this competence are very poor in a number of South African schools. In chapter five, it was noted that the reading literacy of the learners was characterized by a lack of availability and accessibility of books (both academic and leisure reading material) which meant that learners could not refer to textbooks as they studied and there was no free voluntary reading. What was also prevalent was a dismal reading culture¹⁵³ both in and out of school.

¹⁵² Bialystok, Luk, & Kwan (2005) boldly assert that “Learning to read is indisputably the premier academic achievement of early schooling.”

¹⁵³Joubert et al. (2015, p.401) define a reading culture as follows:

“A reading culture can be defined as ‘the collective attitudes, beliefs, and behaviours of all the stakeholders in a school regarding any and all of the activities associated, which enables all learners to read at the highest level of attainment for both their academic and personal gain’ (McEwan, 2002). Another essential aspect of a reading culture is highlighted in the definition of Doiron and Asselin (2010), in which they imply that the optimum situation would be one ‘where reading is regarded not simply as something developed for school purposes but something practiced in all aspects of our lives.’”

6.2.1. Limited access to textbooks

Learners had limited access to the use of textbooks as the teachers kept them. The literacy of using textbooks was therefore not developed. Taylor (2008) describes how learning is impeded when learners are denied access to textbooks to take home and asserts that this is an especially prevalent practice in economically disadvantaged communities. This is primarily because textbooks offer learners access to the entire curriculum unlike the fragmented nature of worksheets.

In this study there are several instances where the socio-economic disadvantage of learners affects the literacy practices of these learners. There were three socio-economic reasons that account for learners' lack of textbooks. The first two were localized issues. The first of which was that learners could not afford to buy the textbooks. The second was the element of crime that seemed to affect the school environment as learners were victims of theft:

FGL:

157. I: You don't get a textbook for life science?

158. S1: //You have to buy it for study guide.

159. S2: //You have to buy it for study guide.

160. I: Ok how do you feel about that?

161. S3: Not so good cos some people **don't have the money** to buy

162. I: What if you don't have the money? What do you have to do?

163. S2: It's hard so you have to borrow sometimes- you have to borrow cos you don't have the textbook but it's hard cos **the learners they steal it from us**. You buy the textbook and the following day its get stolen. You don't know who stole it.

The third reason for the lack of textbooks was both local and a broader issue. Local in the sense that the school was struggling financially and so had limited resources to work with and the broader issue was something that related to the DBE which was unable to supply the learners with an adequate number of textbooks. The interview with the principal (see Appendix 26) of the school revealed the dire financial situation that the school was under. In terms of the textbooks that the DBE supplies, he reveals that their allotment is inadequate for the number of learners in the school. The issue of supplies for learners must be weighed against other issues as well:

I, P:

47. I: Ya and other resources like textbooks are you getting them regularly?

48. P: Um we are getting from the department it's our allocation but it's not sufficient **although we getting it's not enough because out allocation its limited** I think we get we ((receive)) 51- we owing the electricity. We are owing R92000. But we will pay R23000 that's from the allocation from the department. Now we can't pay but we have to pay something. I ended up making an agreement with the municipality that maybe I can give them maybe R1000 a month plus I have to make a plan for that R23000.

This situation is not unique to this school. It is a countrywide issue which is in fact more severe in certain other provinces with some schools not getting any textbooks at all (Smith, 2011; Taylor, 2008).

The emphasis placed on textbooks should not detract from the larger picture which is that textbooks form the most basic requirement in terms of developing skilled readers in their different disciplines. This argument is picked up later on in this chapter and focuses on a range of materials that are necessary for effective disciplinary knowledge. It is an indictment on the basic education system of South Africa that learners are still not exposed to the basic academic reading materials such as textbooks (Smith, 2011; Bloch, 2009). Although access to textbooks has increased since the abolition of apartheid¹⁵⁴, there are still many teachers who also lack the necessary skills to use them and that further complicates the aforementioned problems (Bloch, 2009).

6.2.2. Reading culture at school

During the course of this study, the school obtained a container library that was stocked with a very limited number of books. However, learners never gained access to these books for several social reasons. Firstly, there was no one to oversee the library. There were some staff issues that arose pertaining to who would receive the training to undertake this responsibility. The Life Orientation teacher felt that since it was her initiative in securing the facility in the first place and that she was already doing a lot of the administrative work regarding the library, that she should

¹⁵⁴ Bloch (2009) notes that this improvement in the rollout of textbooks happened during the tenure of Naledi Pandor, who was the second post-apartheid Minister of Education.

be the one to go for the training. Eventually, no one went for the training as there no consensus was reached about who should go. Secondly, teachers felt that there were too few books to start lending them out. Thirdly, teachers felt that there needed to be quality materials available for the learners so they decided to wait for these quality materials. What constituted “quality” was never really examined. These sentiments are expressed by a teacher in the focus group:

FGT:

72. I: And in terms of resources, this is a new library. So the fact that you have a library does it improve the situation or the fact that there’s hardly any books here

73. LO: Um this is quite new- no kid has been here to use the library so it’s like we’ve never had a library before. And, and this is through our own efforts not the departments and we are still in the process of solicit more books to fill this library cos we don’t want nonsense here we want books that work, quality books that kids can read. So that’s why it’s delaying because sponsors are coming but not as fast as we want them to but we getting there on our own. I mean this is a lot.

The accessibility and availability of reading materials play a pivotal role in furthering reading literacy (Nassimbeni & Desmond, 2011; Krashen, 2008; Pretorius & Machet, 2004). It is ironic then that the teachers who voice concern that there is a lack of comprehension on the part of the learners are the ones who deny the learners access to the very reading materials that might help improve their reading and comprehension skills (FGT, L77). According to Ribbens (2008), consistent reading habits result in good comprehension. Gee (2004, p.13) makes an important point regarding the culture of reading and the way in which it fosters learning to read successfully:

“Children who learn to read successfully do so because, for them, learning to read is a cultural and not primarily an instructed process. Furthermore, this cultural process has long roots at home – roots which have grown strong and firm before the child has walked into a school. Children who must learn reading primarily as an instructed process in school are at an acute disadvantage.”

The questionnaire established that these learners were those who had to learn reading as an instructed process. This means that these learners started off their schooling career with a distinct disadvantage. As such learners progress through the grades the problem become progressively worse as the transition between learning to read and reading to learn is in many cases never complete. Zimmerman et al. (2011), cite the PIRLS study as evidence of the aforementioned lack of transition:

“Results suggested that South African learners are struggling to develop the reading literacy competences needed to make a successful transition to using reading as a tool for learning which is needed for academic success.”

If this critical stage in reading literacy is not developed in the foundation phase of school then it would logically follow that (barring intervention, of course), it would not be developed in the later grades (Joubert et al., 2014). In this study, the different factors considered such as learners’ reading habits in both the classroom and at home, learners’ attitudes toward reading and teachers’ pedagogical approaches and attitudes towards reading could be construed as some of the reasons for poor reading abilities. According to Heugh (2013, p. 224)“The curriculum assumes that in the school setting learners are actually given books to read on a daily basis, and that these books will be taken home for further reading at home.” In this school both these assumptions are untrue.

6.2.3. Reading practices in the home

Home environments are very important in establishing a reading culture in children (Heaton et al., 2014; Smith, 2012; Van Staden, 2011; Smith, 2011). The 2011 census data indicated that the educational levels of the community was not particularly high with only 43% of the age group 20-120 years of age having completed grade 12/matric, only 6 % who have gone on to study further and 3% not having gone through any formal schooling at all. The data on educational levels do need to be further interrogated as it only relates how many people have gone up to and including grade 12 but not how many have passed. It does not reveal what their subject choices were. For learners whose parents had been through such a dysfunctional apartheid educational system (and had not pursued tertiary education), it would be logical to ask whether they would have the tools

to help their children with the complex school discourse their children needed to come to terms with in the current educational system.

This is compounded by the fact that there was no reading culture in the home. In the review of the literature pertaining to the phenomenon (chapter two), the profound effects of family literacy practices and the ways in which they affect children are detailed. Due to the socio-cultural nature of literacy acquisition, early exposure to dominant literacy practices gives those learners exposed to such practices an advantage and those that are not can be considered educationally disadvantaged even before they enter formal schooling system (Heaton et al., 2014; Heath, 1983). According to Ndebele (2015, p. 78) “Parents from lower socio-economic environments (such as townships) tend to be less active in promoting literacy and reading skills among their children, compared to parents in higher socioeconomic settings...” Time then only increases the gap between advantaged and disadvantaged learners (Van Staden, 2011). Parental literacy and more especially, maternal literacy becomes an important determining factor in establishing good literacy practices in the children (Ginsborg, 2006; Heaton et al., 2014). One particular learner relates how he has to write letters to his father on behalf of his mother who is unable to write them herself. It serves as an example of poor maternal literacy:

FGL:

97. S4: I write letters for my mother at home

98. I: Who are the letters to?

99. S4: They are to my father

Maternal literacy has been shown to be particularly problematic in poorer communities (Motala et al., 2007; Ginsborg, 2006). According to van der Berg (2008), maternal education (more than paternal education) had a marked positive effect on a child’s literacy levels as mothers tended to be the primary caregivers and therefore children modelled their literacy behaviours. The teachers confirm that learners do not receive academic support at home:

FGT:

75. LO: ... most of the kids here are sick. I mean emotionally, psychologically. The socio-economic situations are not very good their backgrounds are not good...

76. LS: They don't have parents who can support them.

The teachers describe the learners' backgrounds as dysfunctional and therefore the parents are unable to provide the necessary academic support to their children. It has been documented that in many South African homes there is "no culture of reading" (as discussed in chapter two) (Ribbens, 2008, p.115). It is therefore not a surprise that the practice of reading in preparation for the next lesson does not work (FGT, L75). Reading before class is exceedingly important for learners to garner understanding of a topic and leads to robust discussion in class. This is perhaps a reason for the lack of such discussion in the classrooms observed in this study. This also ties up to the view that learners have of reading only when they have to undertake a set task. The implication could be that they do not value reading for pleasure. This attitude of reading only when learners have to do some kind of academic work was further established in the learner questionnaire¹⁵⁵ where 55% of learners who did visit local libraries commented that they did so because of school assignments.

These findings correlate with trends around the world where youth choose alternate activities such as watching television instead of free voluntary reading (Rimensberger, 2014). Studies show that learners who engaged in free voluntary reading and who had a generally positive attitude towards reading had better overall academic skills of reading, writing and comprehension (Nassimbeni & Desmond, 2011).

6.2.4. Insufficient reading instruction

Research suggests that teachers need to provide learners with models or coach learners in order to be effective readers (Nassimbeni & Desmond, 2011; Taylor, 2002). More time needs to be spent developing reading in the classroom by explicit instruction as discussed in chapter five so that learners may be motivated to engage more meaningfully in the classroom. The lack of a reading culture is a result then of a variety of factors not least of which is insufficient instruction from their teachers. It has been found that direct instruction improves reading which creates an environment

¹⁵⁵ Questionnaire "12.2. If yes, did you use the library and for what purpose did you use the library?"

conducive to reading (Van Staden, 2011; Joubert et al., 2014; Zimmerman et al., 2011; Zimmerman & Smit, 2014) According to Zimmerman et al. (2011, p.230):

Current government directives (DBE, 2009) do not give any reference to the need to coordinate instructional goals and targets between the grades and the primary school phases to ensure continuity, which seems to be a serious oversight.

There is a stark contrast between what is set out in the curriculum statement for subjects and the reality that exists in the classroom. The National Curriculum Statement for Languages (Generic First Additional Language) (DOE, 2003, p.13) states as its learning outcome for reading:

“The learner is able to read and view for understanding and to evaluate critically and respond to a wide range of texts.”

This statement is of course fleshed out in the ensuing paragraphs. The ability to read and understand critically any text comes with much practice. The fact that learners are not involved in “independent reading and viewing” (as stated in the most recently revised curriculum statement) is of great concern (DBE-CAPS-EFAL, 2011, p.10).

There is minimal reading that occurs in the classroom and independent reading is virtually non-existent. The curriculum also advocates for the learner to be able to respond to a wide range of texts. However, this would require the learner having access to these “wide range of texts” which is an unreasonable expectation since there is a shortage of basic prescribed texts.

This lack of instruction is problematic as it has been firmly established that South African learners, particularly those from low SES backgrounds have consistently been tested and shown to have “frustration” levels of reading (van Staden & Bosker, 2014; Cekiso, 2012, van Staden, 2011; MacDonald, 2002). The majority of the learners have only learned to read at foundational levels and this level of reading proficiency does not improve as they enter into the senior phase of school (Zimmerman et al., 2011; Van Staden, 2011). Gee (2008, p.36-37) describes this retardation of progress as the “fourth grade slump” because at this stage of their schooling careers (fourth grade)

learners begin to transition from “learning to read” to “reading to learn” and many of the learners are unable to make this transition. In fact, the reading literacy problem is compounded when learners progress into the higher grades because reading becomes more cognitively demanding as a consequence of the subjects that become more linguistically demanding (Schleppegrell, 2009).

What is interesting is that much has been written about the “articulation gap”¹⁵⁶ between school and university in South Africa when there may perhaps be a problem located within the schooling system itself. The schooling system comprises of phases i.e. foundation, intermediate and senior phases going on to the FET phase and therefore there exists opportunity for articulation gaps to arise. This sentiment is expressed in Jansen & Blank (2014, p.65) as “Mistake #5” in the South African schooling system:

“We fail to establish solid foundations for learning early in the school cycle, with the result that learners in the later grades remain in a constant state of “catch up”...”

Gee (2008, p.36-37) discusses this articulation gap between the different levels in school and argues that “fourth-grade slump” affects learners epistemological access¹⁵⁷ in both the sciences as well as social science subjects because learners are unable to read effectively.

The effect of reading on writing and vice versa should not be discounted. Poor reading literacy affects writing as learners are not exposed to the vocabulary, structure, content and grammatical features that learners would have to produce (Dornbrack & Dixon, 2014). These are the ways in which written literacy is impeded by poor reading practices.

6.3. Factors that adversely affect writing

As discussed in chapter three, writing has always enjoyed an elevated status in terms of defining what literacy is regardless of which school of thought one prescribed to whether it was the

¹⁵⁶ “A gap can be characterised by what happens at the interface between the two levels of education; between the end of Stage A and the beginning of Stage B, i.e. the articulation between the two courses or stages in education ” (Rollnick, 2010, p.91).

¹⁵⁷ Epistemological access is the access to “established academic knowledge” and the specific ways in which that knowledge is constructed (Liccardo et al., 2015, p.376).

autonomous model of literacy (Goody & Watt, 1963) or the ideological model of literacy (Street, 1984). And even though NLS has effectively deconstructed this definition and defined the term literacy as much more than writing and reading, this assertion in no way negates the fact that writing is still a dominant literacy practice in the socially powerful institution of school (Street, 1984). The acquisition of this particular literacy practice is therefore, important if one wants to succeed in school; gain access to and obtain a higher education; and be successful in the workplace (Al-Hammadi & Sidek, 2015). Mastering this dominant literacy practice is essential for entry into other socially powerful institutions such as university and for gaining access to careers that pay well thereby becoming participants in the economy of the country.

Therefore, where there are situations that hinder learners from acquiring this skill, learners in those situations can be defined as disadvantaged. In this study the factors that disadvantage learners in terms of written literacy are that firstly it is not adequately instructed in high school; secondly they have no exposure to literacy before entering into school; and thirdly the underlying theory of the present pedagogical models in schools is the autonomous model of literacy that proposes that reading and writing are discreet skills that can be learned in context independent ways.

6.3.1. Lack of prioritization of writing

As discussed in chapter five, minimal attention was given to writing within this school. This is not unusual since the lack of prioritization of writing is a global phenomenon and in South Africa there are several factors that contribute to this as confirmed by Dornbrack & Dixon (2014, p.1):

“As is the case in many countries, the teaching of writing has not had the same attention paid to it as reading instruction; many teachers are less skilled in the teaching of writing and time requirements and fair assessment remain contentious issues.”

NLS postulates that in order for learners to acquire Discourses they need to be actively apprenticed (Gee, 2008). For this to take place teachers need to be familiar with genre pedagogy¹⁵⁸. Teachers

¹⁵⁸ Genre pedagogy (based on SFL theory) dovetails with NLS as it is based on a socio-linguistic approach (Vygotsky 1978) that emphasizes the inter-relationship between language, content and context (Halliday, 2007). This is discussed in detail in chapter 3.

must have strong meta-knowledge¹⁵⁹ of the Discourse in order to teach these conventions to learners. The other issue that needs consideration is that the LOLT is not the learners' L1 and so adds another level of complexity to the situation at this school. Once again genre pedagogy may be advocated for as it has been shown to be very effective in teaching L2 learners (Ramos, 2015; de Oliveira & Lan, 2014).

Scaffolding¹⁶⁰ is another important strategy for teaching writing. This is seen in terms of answering questions in almost all the lessons observed, however, this is not done in terms of writing. Where scaffolding would have been useful was in the English lesson where learners had to do the summary exercise. One of the main goals of the exercise was that learners would have to write in their "own words" i.e. paraphrase. When learners failed to paraphrase, the teacher merely repeated the instruction regarding the use of the learners' own words and then proceeded to write the correct, paraphrased sentence on the board.

EFAL A:

13. Mrs D: That's correct. **But then because it said do not quote you mustn't quote the sentence as it is from the passage. Yourl need to use your own words cause instructions** () instruction laphayana ithini? 'What is the instruction saying?' So use your //own words

14. SS: //Own words!

15. Mrs D: So parents must look out for () behaviour in the child. [**Proceeds to write the paraphrased sentence on the board**].

The above represents a missed opportunity to scaffold writing that is necessary for learners to be conversant with for their grade 12 examination and usually constitutes around 12% of the total marks in English FAL paper 1¹⁶¹. Another kind of writing that is required in examination is the ability to write down extensive answers. This is a key area in summative assessment therefore;

¹⁵⁹ Lankshear (1997, p.72).describes meta-knowledge as "knowing about the nature of that practice, its constitutive values and beliefs, its meaning and significance, how it relates to other practices..."

¹⁶⁰ Scaffolding is based on Vygotsky's Zone of Proximal Development Theory (Vygotsky, 1978) which entails teacher/more competent peer heavily aiding the learner and allowing independence incrementally.

¹⁶¹ I looked through the past year examination papers on the Department of Basic Education website.

learners have to master this ability in order to become successfully literate in the dominant literacy. This assertion is supported by Taylor (2008) who found that rather than the quantity of writing tasks, it was the quality of the writing tasks (i.e. extended writing tasks) that was most effective in literacy development. In the focus group with the teachers (FGT, L23), the issue of not being able to answer complex questions in exams was attributed by the teachers to the complex language used to phrase the questions in the examination papers. It seems likely that the inability to answer such questions is probably also a result of not having enough practice writing long/extended answers.

6.3.2. Negligible preliteracy experiences

The issue of acquisition and learning Discourse as discussed in chapter three is very pertinent in this section. While the curriculum focuses heavily on teaching and learning, the aspect of acquisition¹⁶² is all but ignored. This I think is to the detriment of many learners who come from social backgrounds where the school setting is the first place they encounter any of these dominant literacy practices. According to Gee (2008, p.170-171), Discourses are not mastered by learning but by acquisition:

“That is, Discourses are not mastered by overt instruction, but by enculturation (apprenticeship) into social practices through scaffolded and supported interaction with people who have mastered the Discourse...Classrooms that do not properly balance acquisition and learning, and realize which is which, simply privilege those students who have already begun the acquisition process outside the school.”

From the discussion of the learners' earliest experiences in school regarding writing, it can be seen that these learners did not begin the acquisition process out of school. When asked about their experiences prior to entering into a formal school environment, learners indicated that they had no experience of school-based practices such as reading or writing. This means that we can infer from

¹⁶² According to Gee (2008, p.169), “*Acquisition* is a process of acquiring something (usually sub-consciously) by exposure to models, a process of trial and error, and practice within social groups, without formal teaching. It happens in natural settings which are meaningful and functional in the sense that acquirers know that they need to acquire the thing they are exposed to in order to function...”

Gee's (2008) above assertion that those learners who have not begun the acquisition process outside the school may be disadvantaged. The following is an excerpt from the focus group with the learners and it centers on earliest exposure to the written literacy:

FGL:

118. I: No. K um so did u start writing in school or someone teach you before you went to grade R?

119. S2: I started writing when I started school in grade R

120. I: Mhmm

121. S2: Ya, that's when I started writing and giving me a chance to practice even when I'm writing when I'm going back home cos my mother used to tell me every time I come from school I have to do my homework first then go and play that's when I started writing.

122. I: Mhmm

123.S3: At school

124. I: At school

125. S4: [Smiles and nods in agreement].

126. S5: At school also

There is a disjuncture between what is set out in the Curriculum and what appears to be the reality. This compounds the disadvantage that learners experience when they are not exposed to writing literacy prior to entering into school. According to Heugh (2013, p. 224) the curriculum:

“... assumes that school students will be given frequent writing tasks each day. Although the latest version of the curriculum (DBE, 2011a) does provide far greater guidance to teachers, DBE research finds that foundation phase teachers continue to have low expectations of students' progress, and writing tasks are inadequate and infrequent (DBE, 2013a)” .

Frequent tasks are not given and although the DBE provides more support in respect of writing pedagogy the reality is that these guidelines are quite problematic as well (Akinyeye & Plüddemann, 2016). It follows then if the learners' writing literacy is not properly developed in

the foundation phase then they will experience problems when much more complex ways of writing are required of them in later grades such as grade 11.

The Questionnaire revealed that the concerns around writing focused mainly on grammar in the early years of primary school but as the years progressed learners felt more confident. This was an indication that learners' perceived of good writing as having a good command of the technical aspects of a language such as spelling and grammar. It is interesting to note that a couple of comments that indicated a negative experience with writing focused on writing in Physics and Mathematics as areas of concern. The following are comments from Section E of the questionnaire (High School- Writing):

“25. Describe your experiences of writing at high school. Are they positive or negative?”

-Are negative because my marks was not good at all. Physical science, mathematics are the thing that I failed

-Some is positive some is not, especial in grade 11 if I'm writing physics and math I get confused

Learners seem concerned about their inability to write in certain subjects like mathematics and science. In this school however there is not a lot of emphasis on writing in science and mathematics even though the way the learners are assessed is predominantly through writing. It seems that learners would benefit from genre pedagogy in the science subjects. This issue is discussed later on in this chapter.

6.3.3. Pedagogy underpinned by Autonomous model

The other major factor that affects the written literacy of learners is that the prevailing pedagogy in South African schools (as is the case in educational institutions globally) is underpinned by the autonomous model of literacy (Parr & Campbell, 2012; Turner, 2012; Street, 2011; Bartlett, 2008). This is established in chapter five where examples of the kind of decontextualised grammar exercises that are given in class are highlighted. According to Ivanič (2004, p.220):

“Policy, practice and opinions about literacy education are usually underpinned, consciously or subconsciously, by particular ways of conceptualising writing, and by particular ways of conceptualising how writing can be learned.”

In this case the pedagogy in class is informed by the way in which the DBE conceptualizes how writing can be learned which appears to be in a decontextualized manner. This is evidenced by the way in which language learning outcomes are measured at the end of learners’ schooling careers. The following is an extract from the 2012 DBE exam for English FAL P1:

Correct the SINGLE error in each of the following sentences:

- 5.1.1 Body language make up 50 to 100% of a conversation.
- 5.1.2 Robert Phipps, a body language expert, tells you how to interpret this non-verbal clues.
- 5.1.3 Most of us are comfortable with a few second's eye contact.
- 5.1.4 If people start too copy you, it means they are open to your ideas.
- 5.1.5 If you are training someone, it is usefull to know how his mind works.

Figure 8. Editing question in English First Additional Language Paper 1

When the autonomous model of literacy informs policy and practice there is a surface level of engagement with writing resulting in an inordinate amount of time spent on spelling and grammatical features. This is not to say that spelling and grammar are unimportant but rather these should not be the sole focus of writing pedagogy. Attention also needs to be paid to issues such as genre and meaning making¹⁶³. The drawback of this model is discussed extensively in chapter 3. However, some of the major concerns in using this model is that it locates literacy within the individual and asserts that “if they can think well, they can write well, and vice-versa”(Turner, 2012, p.18). This kind of thinking is conducive to deficit thinking because it does not take into account that literacy is always situated and is subject to a variety of external influences. Therefore,

¹⁶³ Street & Lea (2006) propose an *academic literacies model* which has all of these features.

if as we have seen, learners have poor written expression, instead of interrogating the reasons for the poor written expression, the learner is viewed as incapable.

Perhaps the idea behind the lengthy explanations of the process of writing in the CAPS¹⁶⁴ language documents is an attempt by the DBE to address the issues such as poor pedagogical practice by teachers especially in previously disadvantaged schools (Blignaut & Au, 2014). In theory this is a good idea however, writing pedagogy is more complicated than that and trying to simplify into generic steps may lead to varying degrees of confusion for both the teacher and eventually the learners. It is also likely to only create a surface level understanding of writing without the ability to transfer knowledge over to other subjects. For example in a study carried out by Dornbrack & Dixon (2014), they argue for more explicit pedagogy and clarity in terms of what is established in the current CAPS documents with reference to writing. They illustrate how there is a conflation between two very different pedagogical approaches to writing i.e. the process method and genre pedagogy. This is problematic because (Dornbrack & Dixon, 2014, p.2):

“This conflation requires teachers who can read between the lines by drawing on prior knowledge of both approaches, as well as understand the significance of each (missing) step in both approaches. This is a challenge for any teacher but more so for teachers who have had little access to these approaches in their own education and training.”

Herein lies the problem, teachers are only able to draw from their own experiences to teach and unless these teachers are trained to implement different practices they will continue to do as they have always done. In post-observation interviews teachers intimated that in light of the constantly changing curriculum, they had no choice but to do “what works”. This issue of confusion over pedagogical approach relating to changing curriculum was also echoed in the focus group discussion with teachers “Ya, so we don’t know how much change is coming and how to carry that” (FGD, turn 40). Gee (2008, p. 80) highlights this point by asserting that “Any technology, including writing, is a cultural form, a social product whose shape and influence depend upon prior

¹⁶⁴ “The CAPS curriculum is quite prescriptive to the point of demanding uniformity in implementation across the nation. The uniformity is strictly monitored by government officials” (Ramatlapanana & Makonye, 2012).

political and ideological factors.” Teachers have been taught to think about literacy in certain ways and their writing literacy is shaped by this ideology and so are their teaching practices.

According to Kintgen et al., (1988), standards of writing differ greatly amongst the different classes and the ability to write and do it well sets one up for economic success. This means that the poor acquisition of written literacy at this school have set learners on a path to “blue collar” careers which inevitably reinforces this cycle of disadvantage.

6.4. Disadvantages related to language

Reading and writing are important literacies for navigating the educational landscape but speaking and listening are equally important (Parr & Campbell, 2012). Therefore, oral literacy practices were observed and analysed. This was accompanied by an analysis of attitudes toward the language of learning and teaching (LOLT). Multilingual practices (code-switching, translanguaging¹⁶⁵ and transliteration¹⁶⁶) were an integral part of the classroom life in this school. All learners were L2 speakers of English which was the LOLT. Learners pointed out that they were taught using a dual medium of instruction in the questionnaire (Question number 3).

6.4.1. LOLT

In a study conducted by Kapp (2002) teachers expressed the view there needs to be an emphasis on speaking the LOLT so that learners get enough practice in English. This issue of learners having enough exposure in English so that there would be more capable of competing outside of school was echoed by the principal in the interview (I, P). However, the reality was quite far removed from the ideal as both learners and teachers switched effortlessly from the LOLT to the L1 of isiZulu. Within the classroom there seemed to be no conscious decision that had taken place regarding switching. In every lesson with the exception of the geography lesson (which was taught by a L1 English speaker) the teacher engaged in code-switching and or translanguaging¹⁶⁷.

¹⁶⁵ A term coined by García (2009) which indicates the fluidity of language (Heugh, 2013).

¹⁶⁶ Msimanga & Lelliot (2014) report that in order to cope with the lack of technical scientific terms in vernacular languages, speakers use a foreign stem to try and create an “equivalent” term in the L1.

¹⁶⁷ A term coined by García (2009) which indicates the fluidity of language (Heugh, 2013).

Although during some lessons a bit of explanation was done in isiZulu, for the majority of the time it was used for discipline and giving instructions so the benefits of codeswitching (by the teacher) to access the curriculum was not readily observable except for Maths B where the teacher explained balancing equations to the class. The benefit of code-switching was most notable in the peer interactions where there was joint knowledge construction. This is seen in both the Maths A and Maths B classes. However, as we have seen in the Maths B class the LPT is ridiculed for not being able to explain the example in English and so the status of English once again is illustrated:

28. S4: *KhulumaiEnglish, shuthawyaziiEnglish* ‘Speak English, you mean you can’t speak English?’

From this interaction it can clearly be seen that although the L1 of the learners was very useful in joint knowledge construction, it is still discounted because of the underlying ideological positioning of English as the superior language South Africa. English has been positioned “as the avenue towards what Bourdieu (1991) might term symbolic and material capital” at the expense of African (L1) languages (Heugh, 2013, p.218). As a result of the legacy of apartheid and the way L1 instruction was used as a divisive mechanism, there exists an underlying “suspicion” and “devaluing of the use of mother tongue” that pervades society (King & Chetty, 2014, p.47).

The hegemonic influence of English is evident in both the learners’ and the principals’ sentiments. The following is the principal’s views on English as the medium of instruction and the issue on code-switching:

I, P:

10. P: The teachers are doing but it is not allowed. It is only isiZulu that is allowed to be taught in isiZulu. But teachers are doing that

11. I: ok- so it’s not part of the policy? And it’s decided by the school governing body?

12. P: Yes

13. I: And did they give reasons why it should be English in classrooms or?

14. P: It is to expose learners in the world. To express themselves in isiZulu I mean English although we know there are many languages. It is training - we are well equipping the learners to face the changing world to be exposed to English.

The principal explained that the policy of this school is to use English as a medium of instruction and it is clear that both he and the school governing body espoused a monoglossic¹⁶⁸ policy regarding LOLT when he asserts (in turn 10 above) that codeswitching is “not allowed.” Since codeswitching, translanguaging and transliteration are all part of what Plüddemann (2015) refers to as heteroglossic practices, there appears to be a disconnection between school policy and school practice when teachers and learners engage in such practices. This disconnection is a common occurrence in South Africa. Heugh (2013, p.221) observes that what schools report their LOLT policies to be is “largely inaccurate” as learners are taught using heteroglossic “practices in the spoken communication, but expected to read and write in English.”

The above observation describes quite accurately the situation within this particular school. There is this disjuncture in terms of what is done and what school authorities expect. The teachers engaged in code-switching constantly and transliteration periodically. There was also a disjuncture between what is done and what learners’ expressed preferences with regard to LOLT. Learners spoke isiZulu and used English only when necessary.

6.4.2. Hegemony of English

The learners were quite vocal about their desire to be taught in English with an overwhelming majority (76%) responding that they would prefer English as the language of teaching and learning in the questionnaire (Question 5). Only 9% indicated that they would prefer “mother tongue instruction only” and the rest indicated that they would like a dual medium of instruction. The questionnaire¹⁶⁹ revealed several reasons for this overwhelming preference for English as the LOLT.

¹⁶⁸ Plüddemann (2015, p.186) uses the term monoglossic to refer to policies of LOLT that advocate a single language and in most schools within this country- this language is English.

¹⁶⁹ Learners’ responses to the following question was analysed: “5. What language do you think should be used for learning and teaching at school? Explain your answer”

Some of the common sentiments expressed by learners were that firstly, English was a common language to all races in South Africa and so it would be the best way to communicate. This was the most common sentiment:

-English because it is easy to communicate with English

-English because English is the most communicating language and it important to know it

-I think English should be used because it's the only language that you can use to communicate with other people, especially in SA because we are the rainbow nation

Some of these views represent themes that are currently part of the discourse on language in South Africa. For example, learners allude to the status of English as a lingua franca in South Africa (Khokhlova, 2015; King & Chetty, 2014). In a country with such a diversity of languages and 11 official languages there existed a need for a common language that could be used amongst the people of South Africa. The status of English as the people's preferential lingua franca has certainly increased post-apartheid (Khokhlova, 2015). However, this is not a new phenomenon as during the apartheid era, Bantu language speakers gravitated towards English as an act of resistance towards the oppressive Afrikaner government (Heugh, 2013).

Secondly learners expressed English would benefit them educationally:

-English- Because it is a basic language and you can't do anything without like colleges you meet many people talking different the only way you can communicate with is English

-English because at school we are very poor when it comes to talk English

Another interesting view of the learners was that English was a more suitable language for academic purposes. At the moment this is the case where English is the LOLT for most African learners as African languages have not been developed to the point at which it can be used past grade 4 as the LOLT. This is the view of the DBE as they initially intended to advocate for the use of African languages as LOLTs past grade 4 but subsequently backtracked on the idea in the "Incremental Implementation of African Languages (IIAL) draft policy, dated September 2013 (DBE 2013b)" (Plüddemann, 2015, p.191). In Plüddemann's (2015) assessment this was a safe

decision as he alludes to challenges such as securing qualified staff and appropriate teaching materials (both of which would have to be done as financially prudently as possible).

Thirdly, they expressed that English was a global medium and it would help them if they wanted to participate globally:

- English. Because as we are a people in the world, we are different in countries and places, and when we meet each other its difficult to talk so that why we must learn English
- English because it the common language that is used in many countries

Fourthly some learners expressed concerns about isiZulu as an academic language:

- English because some of the concepts in English are quite difficulty to be explained in Zulu language.
- English cause you understand better in English than isiZulu, isiZulu some words are difficult

And lastly, they expressed that English would have implications for future employment:

- English as usually, Because English is the language that we communicate with, even globally. And English is the language that we almost in interviews
- English because it will be easy to talk to other people and it will make our lives be easy and have more opportunities to find jobs

The third, fourth and fifth views are interrelated. Even though African languages may not currently be able to be used as LOLTs in the senior and FET phases of school, this does not mean that they cannot be used for such purposes in the future. King & Chetty (2014) offer Afrikaans as an example of how a conceptually poor language can be developed into a language that can be used for academic purposes. This development started in the 1950s and “scientific and otherwise technical or academic vocabularies were added to Afrikaans so that it more adequately responded to its new uses as an official language of the former government, of commerce, science, and education” (ibid,

46-47). For now speakers of African languages will have to continue to learn their L1 languages as a subject while simultaneously acquiring English as their first additional language which will serve as the LOLT in the post grade 4 stages of their schooling careers. This is a state of additive bilingualism¹⁷⁰ which is advocated by the language in education policy (LiEP) (Plüddemann, 2015).

6.4.3. LiEP versus Reality

Additive bilingualism may be the ideal state that is conceived of in the LiEP however the reality of the learners in this school is quite different. Upon interrogation of the learners' literacy history, it was reported in chapter five that subtractive bilingualism¹⁷¹ had taken place. One of the implications of subtractive bilingualism is that the L1 foundation has not been properly established (Mayike, 2013). This in turn signals that the effectiveness of the teaching and learning in the foundation phase might have been problematic. Subtractive bilingualism is counterproductive because neither language develops adequately to meet the demands of academia as learners progress in through the grades which results in poor educational outcomes.

Even though L1 for the learners is not the LOLT, the need for the proper development of L1 is of paramount importance. This is because L1 and L2 cognitive academic language proficiency (CALP) are interdependent (Cummins, 1981). When learners do not have enough time to cultivate their CALP in their L1, their L2 CALP suffers as consequence because L1 CALP is used as a resource for L2 CALP (Cummins, 1999).

¹⁷⁰ Refers to a state where both languages are learnt equally well without compromising the other.

¹⁷¹ Refers to a state where one language is compromised in favour of another. In this case the learners' L1 isiZulu, was weak.

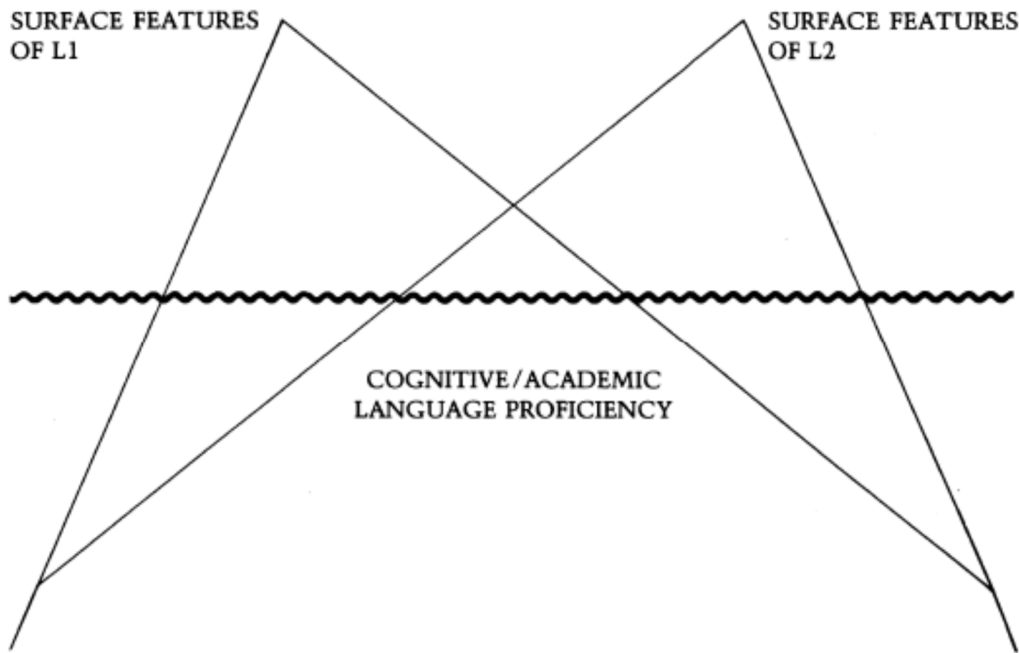


Figure 2. The "Dual-Iceberg" Representation of Bilingual Proficiency

Figure 9. Cummins' (1981, p.24) interdependence hypothesis

In South Africa, the current situation finds learners only having 4 years of instruction in their L1¹⁷² which is not enough time to develop CALP. They are then forced to make a drastic shift to English as the LOLT with their CALP in both the L1 and L2 underdeveloped (Wildsmith-Cromarty & Gordon, 2009). Once again the disparity between the ideals set out in the curriculum statements (i.e. additive bilingualism¹⁷³) and the classroom is quite marked. In fact the timing of the switch to English in grade 4 is actually two years too early according to the recommendations by Cummins (1981).

The overwhelming presence of subtractive bilingualism is probably due to the status of English as a universal language of communication (Al-Hammadi & Sidek, 2015). So many parents and teachers alike choose to promote English through the language policy at schools (Anthonissen, 2013). This is the case of this school as we have seen in the principal's comments. In South Africa, this situation is highly complex given the way language was used as a tool in the apartheid era to

¹⁷² DBE-EFAL-Grades 1-3

¹⁷³ DBE-EFAL-Grades 1-3 (2011, p.9) "This is what is called 'additive bilingualism' – developing a strong literacy foundation in the Home Language and building First Additional Language literacy onto this".

subjugate and divide different races. The apartheid ideology has deeply scarred the nations' psyche in terms of the ways in which it values English at the expense of African languages. This is seen in policies that prioritize English only language policies as we have seen in this particular school to the detriment of the learners who could benefit from additive bilingualism (Makoe & McKinney, 2014).

There is however an alternate perspective on the value of additive bilingualism. Dampier (2012) asserts that additive bilingualism may not be the best policy. The issue that Dampier takes with additive bilingualism is that it is not properly suited to South Africa. The FAL is English which is structurally different from African languages such as isiZulu. This makes the transfer of skills very difficult from L1 to L2. What Dampier suggests is for learners to take ownership of English by incorporating it into their identities. This he says will allow them to have a greater degree of mastery over it.

Dampier's (2012) notion is certainly something to think about as additive bilingualism has been part of policy since the inception of democracy and the level of attainment since then has not been good. The language issue is an emotionally charged one given the history of the country. Plüddemann (2015) describes the desire of government to keep and support culture by promoting African languages while simultaneously urging the development of English to ensure learners are able to compete on a global scale. It is clear that more thought and research needs to be done to chart the best way forward in terms of language policy. However, for now we need to ensure that teaching and learning involves maximum use of their linguistic resources available. One such resource is transliteration.

Transliteration was used to a great extent in the math and science classrooms. It was interesting to note, as we have seen in the Life Science lesson, that the use of transliteration only enhanced understanding when actions accompanied the transliterated word. This has implications for debates around creating a database of scientific terminology in vernacular languages. These efforts will only be fruitful if terminology is accompanied by practical means because meaning is socially constructed. Vygotsky (1978) postulates that intellectual development is birthed only when there

is a convergence of speech and practical activity. This view is also prevalent within the SFL tradition (Halliday, 2009, p.198):

“Meaning (acting semiotically) develops along with doing (acting materially) as interdependent modes of human behavior; and both depend on interaction with the physical and social environment.”

This means that the recommendation to standardize terminology in African languages for academic use in an effort to enhance performance is simply the first step (Chetty, 2013; Wildsmith-Cromarty & Gordon, 2009). Without resources to fund the practical aspects as well as equipping of teachers to firstly understand the process and successfully teach it, this idea of an academic dictionary or glossary¹⁷⁴ will likely be ineffective.

What is important to note is that linguistics resources such as codeswitching and translanguaging that have been discussed thus far are important linguistic resources that allow learners to gain epistemological access (Makalela, 2015; Kerfoot & Simon-Vandenberg, 2015). Liccardo et al. (2015) argue that there are two distinct levels of epistemological access. The first is theoretical knowledge (“knowledge-that”) and the second is practical knowledge (“knowledge-how”) (ibid, p.376). Complete epistemological access requires learners to have both ‘knowledge that’ and ‘knowledge how’. Therefore, ensuring that learners have access to established academic knowledge (knowledge how) is only the first step. The second step is to teach them how to apply and ultimately create this knowledge (ibid). This is best accomplished through genre pedagogy (Kerfoot & Simon-Vandenberg, 2015). Genre pedagogy detailed later in this chapter.

6.5. Factors related to poor STEM outcomes

The World Economic Forum (WEF) reports that South Africa places last on a list of 144 countries in terms of Maths and Science education standards (DuPont, 2015). In the previous chapter we are made aware of two major reasons for the poor maths and science education in this school. These

¹⁷⁴ Such as the UCT multilingual concept literacy glossaries which was designed to help students who were struggling with materials due to their language. It was envisioned that a glossary of academic concepts from various disciplines would aid understanding of content (Nkomo & Madiba, 2011).

were resources (both material and human resources) and pedagogy. As a result of the world becoming more dependent on ICTs (i.e. information and communication technologies), careers in these fields have become extremely lucrative (Liccardo et al., 2015). Access into these fields is gained through STEM subjects. Therefore, learners that are either denied the opportunity to study these subjects or are exposed to poor teaching and learning face rather large barriers to accessing lucrative job opportunities in the STEM fields of employment. In this study factors such as the lack of resources (both material and physical) as well poor pedagogy contributed to an environment that was not conducive to learning.

The lack of material resources at the school was very evident. The lack of proper science laboratories and materials was bemoaned by the learners (FGL, L244-285). This meant that learners were not engaged in any form of practical activity in either physical science or life science. A lack of practical literacy is an impediment to the development of scientific literacy (Ramnarain, 2014; Wright, 2008). The hallmark of STEM pedagogy is inquiry based learning (which ideally should take place in a laboratory) as it teaches learners to think and act like scientists (Crippen & Archambault, 2012; Ramnarain, 2014; Wright, 2008; Pearson et al., 2010). Appropriating the behaviour of a specific Discourse is, according to Gee (2008), one of the ways to master that Discourse. Therefore it is vital that learners are afforded opportunities to engage in inquiry based learning.

In order to be effective, this inquiry based pedagogy must be accompanied by “lab experiences closely tied to instruction (*integrated instructional units*) ...scaffolding from the teacher and the curriculum text...” (Wright, 2008, p.226). The trifecta of lab experiences, scaffolding pedagogy and appropriate texts are absent in this school. The general lack of textbooks and accessibility of appropriate scientific texts within this school has already been established at the beginning of the chapter.

The questionnaire revealed that there was a lack of exposure to a variety of texts. The kind of material that learners read (e.g. magazines)¹⁷⁵, showed their lack of exposure to different academic

¹⁷⁵ FGL:

42. S2: We read magazines sometimes other books

genres. Genre pedagogy falls within the ambit of the NLS theory as it based upon the premise that literacy is context dependent and that in order to apprentice students /learners into a discipline Discourse there is a need for maximum exposure to the genres that are specific to the Discourse (Lea & Street, 2006; Hyland, 2004; Hyland, 2007). So for example, the discipline of science would have its own Discourse (speaking, behaving and thinking in specific ways) and genres specific to that Discourse would be reports, laboratory notes etc. If (as has been established) learners are not exposed to the different genres in order to apprentice them into disciplinary Discourse, it can be said that learners are disadvantaged as they have been denied epistemological access.

There are for example different genres of science to which learners of science need to be exposed in order to gain full access into scientific Discourse and become powerful participants in the areas of science (Parkinson et al., 2007). The genres range from journal articles in popular science magazines, academic journals to media reports. None of which feature as part of the repertoire that the learners were exposed to. According to Yore, Bisanz & Hand (2003, p.706) to be scientifically literate today means more than having knowledge of established scientific knowledge, rather “reading, comprehending, and evaluating media reports and diverse forms of scientific writing are part of the collection of abilities...that individuals need to be scientifically literate in the fundamental sense.” The learners in this school cannot therefore be classified as fundamentally scientifically literate.

This however is not unique to this school. It appears that learners in South Africa were at a distinct disadvantage to their counterparts globally in terms of scientific literacy. Globally learners are exposed to a variety of materials giving them greater epistemological access¹⁷⁶ than their South African counterparts. However, this is not relegated to the poor communities but from the results of international tests such as TIMSS and PIRLS it seems to apply to the overwhelming majority of learners in South Africa (i.e. across the racial lines) (Bloch, 2009)¹⁷⁷.

Questionnaire:

10.1. What did you read? Explain

-I read magazines Because I understand Better whe I see pictures

¹⁷⁶ Discussed earlier on in this chapter.

¹⁷⁷ “Only 10% of SA students match the top 75% in literacy. This falls to 6% for both maths and science. This means that from a labour market point of view, South Africa lies far behind global counterparts” (Bloch, 2009, p.66).

What was observed about the science subjects of Biology and Physics was that teachers did not appreciate the highly specialized nature of the language of science choosing to focus teaching and learning on “knowledge-that”¹⁷⁸ rather than “knowledge-how”¹⁷⁹.

6.6. Theorization on levels of epistemological access

The distinction between knowledge-that and knowledge-how made by Liccardo et al. (2015) is useful in establishing where learners are experiencing problems. However, it does not explain why learners grapple with knowledge-how. Whilst I agree that knowledge-that is established, knowledge that precedes practical application and is learned in a relatively uncomplicated manner, the definition of knowledge-how is somewhat deficient. Liccardo et al. (2015) describe knowledge-how as a single process which involves both reasoning and practical application of that reasoning. “Practical reason (phronesis) and technical skill here represent one action (knowledge-how), not the joining of two disparate acts, namely, doing and thinking” (Liccardo et al., 2015, p.377). In arguing for the aggregation of these two processes (i.e. practical reason and technical skill), the importance of practical/analytical reasoning is obfuscated. I would argue that there needs to be a distinction between the doing and thinking processes given the findings of this study on the lack of success experienced by learners in demonstrating knowledge-how mainly because this academic literacy was not sufficiently developed. It is my contention that analytical reasoning has to first be developed before it is practically demonstrated. I therefore argue for three types of knowledge in order of occurrence:

- (1) Theoretical knowledge (Knowledge-that)
- (2) Analytical Knowledge (Knowledge-why)
- (3) Practical Knowledge (Knowledge-how)

The usefulness of this theory in explaining why learners struggle with knowledge-how even though they possess knowledge-that can be seen in the ensuing examples (both written in the test and oral in the classroom). In chapter 5, evidence that learners were struggling with knowledge-how was presented in the form of the Physics test (Figure 3). The learner clearly understood knowledge-

¹⁷⁸ Factual knowledge or content knowledge (Liccardo et al., 2015)

¹⁷⁹ Practical knowledge (Liccardo et al., 2015)

that as described in chapter 5. However, there seemed to be a chasm between these two forms of knowledge. In terms of the above theory it can be argued that the learner's analytical knowledge had not been developed to the point where s/he was able to successfully demonstrate knowledge-how. In order to understand why this is so, we turn to the Physics lesson also presented in chapter 5. In that lesson the topic of electric field lines was taught and the teacher asked learners to take out a worksheet that he had given them in a previous lesson which happened to be the previous day. He intended to review answers to the questions on the worksheet.

From turns 90 to 95 it is quite clear from the responses that the learners were conversant with the theoretical knowledge of the topic. However, when learners were required to engage in applying this knowledge, (in turn 96 Mr Masondo asks 'why?') they were unable to do so (evidenced by no response in turn 97). After a brief silence (approximately 5 to 10 seconds) the teacher proceeds to give the class the answer.

It is clear from the lack of response from the learners that they had not spent any time analysing the questions in the worksheet. If they had then they would have been able to, at the very least, attempt to answer the questions that the teacher was reviewing. This example shows that knowledge-why or analytical knowledge is not transferred or taught in the same manner as knowledge-that. It requires the learner to engage with the question him/herself (Eisner, 2002 as cited in Liccardo et al., 2015). This assertion resonates with the NLS theory on Discourse acquisition which ultimately is what learners successfully acquire (i.e. Discourse) once they finally have access to all three knowledge types. Gee (2008, p.169) affirms "Acquisition is a process of acquiring something (usually sub-consciously) by exposure to models, a process of trial and error, and practice..., without formal teaching." It is an internal process which can be modelled in the way Mr Masondo has in turn 98 but it cannot be acquired solely through modelling, it requires active engagement by the learner by him/herself and it appears that none of the learners had done this.

The possible reasons for a lack of engagement are firstly, because the learners were given the worksheet the previous day¹⁸⁰ and they possibly not have enough time to go through it. Secondly,

¹⁸⁰ Physics:

during the IRF interaction described above, the learners were not given enough time to think and respond as the teacher chose to quickly answer the question himself after approximately five to ten seconds. This particular teacher was known to move quite fast through the lessons as he had the added demand of being the principal.¹⁸¹ Teachers often felt overwhelmed by the amount of work that had to be covered and the need to produce good results in tests so they proceeded very quickly through the lesson. During the lessons teachers made several references to upcoming tests/exams¹⁸². The teachers were aware that this fast pace has negative repercussions for learners however, they felt that they had no choice but to move fast¹⁸³. This is the cost of chasing the curriculum (detailed later on in this chapter). Also related to Mr Masondo's quick response is that he, like the other teachers at the school, had low expectations of learners (expressed in the focus group interviews¹⁸⁴). He did not wait or probe the learners for an answer. Smit (2012, p.372) argues "that deficit thinking disguises lowered teacher expectations and impacts on teaching practice." The third possible reason for non-engagement is perhaps due to learners perceiving that teachers have lowered expectations of them and so they are subject to a self-fulfilling prophecy and do not attempt to engage in any meaningful way with their work (Smit, 2012; Engelbrecht, Nel, Nel & Tlale, 2015). They were perhaps also aware that the teacher would give them the answer as this was characteristic of his teaching.

6.7. Absence of genre pedagogy

Genre pedagogy has been shown to be particularly useful in certain gatekeeping subjects like science. Science has distinctive features such as vocabulary, sentence structure as well as grammar.

39. Mr M: Repulsion. I think that the question the question that number 10. Let see this worksheet- number 10. Now you'll be able to answer number 10. Remember the worksheet I gave you **yesterday**?

¹⁸¹ FGL:

180. S1: In Physics the teacher who is teaching us is very fast and she's or he's always busy all the time cos he's the principal of the school. He don't get time to teach us properly his class and he's faster we don't really get- get him exactly it's where the classes are getting affected.

¹⁸² see EFAL –turn 50; Geog A-turn 33; and Maths A- turn 50

¹⁸³ FGT:

32. LO: ...If three out of ten has grasped the idea then you go on. Ya, a lot of them are left behind. .. and then you can't do anything about it because you have taught so much

¹⁸⁴ FGT:

52. G: ...it's just **the quality that we don't have**. Some of the better children are going to other schools.

...

75. LO: ...**The kids are lazy**. They don't even want to work they are just lazy. You give 2-3 pages that you have to read first- they don't want to do that.

This is further complicated by the fact that within the different scientific disciplines (i.e. chemistry, biology, physics etc.), there are further marked differences. Familiarizing learners with the different variations promotes epistemological access. As has been established in chapter five, the opportunities to use genre pedagogy were not taken for example in the Physics lesson where learners were given a research task. Halliday & Martin (1993) (as cited in de Oliveira & Lan 2014, p.24) describe the complexities of scientific writing in terms of syntax and organizational features and because school science although “a recontextualized version” shares the same kinds of complexity, this needs explicit teaching.

The task of teaching effective reading then should be the duty of all teachers and cannot be placed solely on the shoulders of the language teacher which is the case at this school. The understanding of the importance of reading for entering into any discipline-specific Discourse has gained momentum and been thoroughly established in the past three decades especially in disciplines like science (Yore et al., 2003). This understanding is even reflected in current Life Sciences and Physical Sciences curriculum in sections titled “Developing Language Skills: Reading and Writing” as seen below:

“Teachers of Life Sciences should be aware that they are also engaged in teaching language across the curriculum. This is particularly important for learners for whom the Language of Learning and Teaching (LoLT) is not their home language. It is important to provide learners with opportunities to develop and improve their language skills in the context of learning Life Sciences. It will therefore be critical to afford learners opportunities to read scientific texts and to write reports, paragraphs and short essays as part of the assessment, especially in (but not limited to) the informal assessments **for** learning’ (DBE-CAPS- Life Sciences, 2011, p.19).

“Teachers of Physical Sciences should be aware that they are also engaged in teaching language across the curriculum. This is particularly important for learners for whom the Language of Learning and Teaching (LoLT) is not their home language. It is important to provide learners with opportunities to develop and improve their language skills in the context of learning Physical Sciences. It will therefore be critical to afford learners

opportunities to read scientific texts, to write reports, paragraphs and short essays as part of the assessment, especially (but not only) in the informal assessments **for learning**” (DBE-CAPS- Physical Sciences, 2011, p.14).

6.8. Disjuncture between curriculum statements and classroom reality

Once again, there is a noticeable disjuncture between the intention of the curriculum statements and the reality in the classroom. The data regarding the general lack of access to books attests to the reality of learners’ lack of access to discipline specific texts as recommended by the CAPS above. The other point of disjuncture between the curriculum and the reality in the classroom is that learners were not taught the different genres (reports, essays etc.) of their disciplines. Rather learners’ writing experiences for their science subjects was relegated to superficial writing tasks such as downloading information off the internet (for Physics) and filling in information on a table (for Life Science-see below).

	Structure	Body form	layers	Coelom	Skeleton
Phylum annelida					
arthropoda					
ordata					

Figure 10. Life Sciences exercise

The teachers of science subjects seemed ill-equipped to meet the demands of this new curriculum. This is in keeping with what was found Ramnarain & Fortus (2013, p.13) where teachers reported that they were not confident in both their content and pedagogical knowledge and that they needed more support¹⁸⁵:

¹⁸⁵ The issue of support from the DBE is an issue that is discussed more in depth later in this chapter.

“The deficit in content knowledge as perceived by teachers in this study invokes the need for a professional development programme that is tailored to the particular needs of teachers. The traditional ‘one-shot’ approaches to professional development have been inadequate and inappropriate in addressing the developmental needs of teachers...”

The Mathematics Curriculum statement is not as explicit on language teaching as the Life Sciences and Physical Sciences statements. The Mathematics Curriculum and Policy Statement merely mentions language and is probably misleading in terms of the literacy of reading that is required. It can be easy for a reader to misconstrue the relationship between language competence and mathematics in the following lines:

“**Mathematics** is a language that makes use of symbols and notations for describing numerical, geometric and graphical relationships” (CAPS Mathematics, 2011, p.8).

The symbols on the page still require interpretation to make meaning of them and that requires good command of the language of teaching and learning in the discipline of Mathematics. Therefore, the use of symbols does not make the discipline somehow more accessible to learner who experience difficulty with LOLT. On the contrary, studies have shown that there is a strong relationship between language ability and mathematics (Howie, 2003; Howie et al., 2008). Another important factor is that the mathematics tests and exams are very language intensive therefore it is very superficial to refer to mathematics as a language of symbols.

6.9. Inadequate physical and human resources

At this school the lack of resources also serves to disadvantage learners (both physical and human resources). Ramnarain (2011) found that the inequalities of the apartheid era educational policies were being perpetuated by the lack of resources in schools that were previously designated for Africans. And while the school under study is not a former DET school, it still exhibits the same characteristics of a previously disadvantaged school. The lack of computer studies at the school is twofold. The first is that there were security concerns (which are discussed later in the chapter). The second is that there was no computer literacy teacher available as established by the principal in his interview (I, P, L26).

In terms of Physics, the principal was the only teacher that was qualified to teach the subject at the school. There was no other teacher who was able to relieve him if his duties as principal took him away from his duties as a teacher (which according to the learners was often):

FGL:

180. S1: In Physics the teacher who is **teaching us is very fast and she's or he's always busy all the time** cos he's the principal of the school. He don't get time to teach us properly his class and he's faster we don't really get- get him exactly it's where the classes are getting affected

Not only was he away for long periods of time but when he did teach the learners he rushed through the lessons. One could infer that he rushed through the lessons so that he could get to his other duties. His focus was split between his duties as the principal and as a teacher. Although learners seemed somewhat sympathetic towards his situation they did feel that they were being disadvantaged

FGL:

191. S1: **He makes sure that he comes to the class** to say maybe he have to go to the other meeting then he get a phone call that he have to go as a principal so he stop like that and leave us.

...

194. I: He makes up for it.

195. S5: **I don't think it's effective** because let's say he leave the class before the break. He try to recover the time by saying stay after school but half the class is not happy with that. If you in class studying and not interested in what is being said to you I don't think that you would get in your mind.

...

199. S1: I think we should **get another teacher**

200. I: Mhmm

201. S1: Who is gonna teach us the way we want. Who we as learners can understand him what he's saying. I think it's that one. **We must get a good teacher who will have time** and I think it's that.

Learners took issue with Mr Masondo's absence from class, his lack of availability as well as the speed with which he taught them. Thus the learners did not perceive him to be a "good teacher" because he did not have adequate time to spend with them. Mr Masondo's severe time constraints meant that he was absent from class often. Although, the reasons for his absence may be justified, it is teacher absenteeism nonetheless and is just as detrimental regardless of the reason.

When the school did get another Physics teacher, the situation did not improve. The new teacher was frequently absent and at the time of the interview conducted with the principal, a disciplinary process was being initiated. This meant Mr Masondo's partial relief from his teaching responsibilities was very brief. He related that this was a big setback for the school as Physical Science teachers were difficult to find. I then proceeded to ask him if at any point learners' choices of subjects were impacted by the shortage of teachers. This was his response in the interview conducted with him:

I, P:

18. P: Yes. Particularly the physical science there is a challenge...

19. I: So that resources of not having a teacher has impacted on

20. P: A great impact- Because the kids are left behind about a chapter now I'm currently taking those classes. So the human resources in physical science is a challenge

Maringe et al., (2015) observe that frequent absenteeism is a distinctive feature of schools in what they term "multiple deprived communities." Absenteeism has many repercussions for learners who lack continuity and often sit for exams not having been taught large chunks of the syllabus. Schools in such communities are subjected to many other equally disadvantaging factors. These factors are pursued in the next section.

6.10. Toxic teaching and learning environments

Studies have shown that a good learning environment improves educational outcomes such as the development of school based literacy practices (Godfrey et al., 2012; Spaul, 2012). “Literacy acquisition and use takes place in context and unless we take into account the influences of context on literacy practices, we are ignoring an important dimension for the understanding of literacy” (Baynham, 1995, p.3).

The context in which literacy learning and acquisition takes place in this study entails several factors which serve to retard teaching and learning. These range from intrinsic motivation of learners to departmental support for teachers. They all come together to form a toxic mix (Bloch, 2009). Maringe et al. (2015) observe that even though schools that face multiple deprivation factors may have increased funding that impact positively on attendance for example; they are still at a distinct disadvantage compared to those schools which do not face multiple deprivation factors. Some of the deprivation factors faced by the learners are compromised nutrition, violence, crime, low teacher expectations, low teacher morale, and stereotyping (each of these factors faced by learners at the school is discussed at length below).

As described in chapter four, the school in the study is situated in a township. The learners’ environment can best be described as being of a low socio-economic status. They live in low income households and in a community with high unemployment, crime and violence rates. The effects of a low socio-economic status on educational outcomes (especially literacy levels) have been detailed in several studies (Heaton et al., 2014; Smith, 2011; Bloch, 2009; Spaul, 2012; Pienaar & McKay, 2014).

6.10.1. Compromised nutrition

The reality of learners from poor communities being subjected to hunger is brought to light by the learners who pointed this out in the focus group interview (FGL, L326). The principal also picks up on this fact when asked if they need a feeding scheme he responds (I, P):

40. P: 100% yes. Kids are coming to school on an empty stomach- desperately, desperately need a feeding scheme

The level of employment in the community that the school is situated in is 30% according to 2011 census data 2011 therefore there are many learners who have less than optimal levels of nutrition. Learners who are hungry generally have difficulty paying attention (FGT):

70. G: Most of our children are coming having nothing to eat at all and they minds are not functioning

Bloch (2009, p.770) states that malnutrition is a major problem in South Africa. He asserts that some of its effects are poor concentration, “learning difficulties and disabilities.” Poor nutrition has a statistically significant correlation to both numeracy and literacy levels (Spaull, 2013). The learners however, face another level of disadvantage as the quintile ranking of the school precludes them from participating in the DBE feeding scheme. Quintile rankings are assigned according to the level of poverty of the community in which the school is located (Wildeman, 2010). The poorest schools are assigned a ranking of 1 and as the level of poverty reduces the ranking goes up. The ranking of this particular school at the time of the study was 5. The principal and the SGB have since been engaged in a battle to try and overturn the quintile ranking from a 5 to a 3. The principal relates that he and some governing body members drove to Pietermaritzburg to try and plead their case¹⁸⁶. He states that a lower ranking means that they would be able to get a slightly larger subsidy as well as other benefits like a feeding scheme.

The quintile ranking system has been a point of contention in the country. Many have highlighted that the method used to arrive at the quintiles are flawed (Smith, 2011; Reschovsky, 2006). Smith (2011, p.81) criticizes the system used to determine the rankings by arguing that it does not take into account “actual poverty levels within the school intake.” This is deeply problematic and is clearly seen in this example where the proximity of this township school to a more affluent area that neighbours this township influences the quintile ranking to the detriment of the school.

6.10.2. Crime and violence

The disadvantage of living in an area that is characterized by crime has a profound effect on the literacy levels of learners who wish to acquire computer literacy. As mentioned in chapter five and

¹⁸⁶ At the time of writing up this thesis, they had not as yet received an answer.

the previous section, many learners bemoaned the fact that there was no computer literacy given. The issue of security was one of the reasons given by the principal as to why the computers that they did have was not in use:

I, P:

24. P: ...**So I can't just take the computers and store them in a room that is unsecured.**
But they are interested for computer.

There is a fear that the computers will be stolen if learners have access to them sans security. The other issue that affects learners gaining computer literacy discussed in chapter five is copper cable theft that cuts off the electricity supply and the telephone lines.

There is also the element of violence that characterizes the school. This is an environment that is not conducive to learning as learners felt unsafe:

FGL:

299. I: Security- what about security?

300. S4: Middle of last month one of the boys they fought and stabbed each other and () they brought in ((knives)) they would not have if there was a security there.

301. I: Do you feel unsafe?

302. S1: Yes

I continued to probe this issue and learned that because there was no security guard at the gate that anyone was likely to come onto the school premises. Learners confided that this lack of security made them feel extremely unsafe and related an incident that happened the previous week:

FGL:

310. S2: ... I think- when? I think last week 2 boys stab each other with knives. I don't know where they got it- it's not safe cos there's no one searching us if we have knives in our bags ().

This issue of the psychological effects of living in a socio-economically disadvantaged, violent community is picked up by the teachers in the focus group who point out that they need help to counsel the learners. Teachers feel overwhelmed with the weight of all the psycho-social problems of the learners. One of the teachers describes some of the learners as “sick” emotionally.

The violence and crime that affects the school is a reflection of the culture that currently prevails in South Africa (Godfrey, et al., 2012). In fact “violence is endemic” in our schools especially township schools (Chikoko et al., 2015, p.545). Therefore attempts to rectify such environments in school prove particularly difficult but nevertheless something has to be done about it because it clearly has a negative impact on teaching and learning (Kapp et al, 2014; Bloch, 2009).

6.10.3. “...a lot of them are left behind”

Teachers were overwhelmed with the amount of work and the sheer number of learners in the class so they simply chose to work at a pace which, at times, meant certain learners were not on par with the rest of the class. Teachers tend to form a connection with learners who are motivated and work with these particular learners (Kapp, 2004). This is a particularly prevalent trend in township schools. “This notion of teachers “moving with the movers” is a common refrain in the townships alongside the refrain that “teachers go with the students who are going” (Kapp et al., 2014).

The attitude of ‘moving with the movers’ was definitely present in this school. Mr Pillay expressed this desire to move to his geography class “...I’m moving with them because they are ready to work. You guys are on a go-slow...” Teachers felt hard pressed to move on with the lessons even though they were aware that there were some learners who were lagging behind as evidenced by the comment made in the focus group discussion with the teachers:

32. LO: ...If three out of ten has grasped the idea then you go on. Ya, a lot of them are **left behind**. .. and then you can’t do anything about it because you have taught so much

This finding is contrary to findings in studies of South African primary schools (Hoadley, 2003; Ensor et al., 2009; Schollar, 2008 as cited in Hoadley, 2012) which showed that teachers generally “worked at the pace of the slowest learners” (Hoadley, 2012, p.193). This is an interesting

phenomenon as it signals that at some point in the 12 years of schooling there is a dynamic shift in the way lessons are paced.

Teachers often take their cue to carry on when they ask the class questions that would elicit a response as to whether they were all on par for example questions that end with “ok?”. This would elicit either a ‘yes’ or ‘no’ response. A loud ‘yes’ would signal to the teacher that it was ok to move on. These responses to the teacher took the form of a chorus. A chorus (as discussed in chapter five) is a unified response to a teacher inquiry. Chorusing behaviour coined by Chick (1996) is said to have various purposes such as masking the limited content knowledge of both learners and teachers during the apartheid era. Pérez-Milans (2012) argues that Chicks original analysis of this classroom discourse feature may be too narrow for application in global classroom situations. Instead he argues for a context specific analysis of the feature. Therefore, my analysis of the feature in the context of this study, showed that the purposes of this behaviour was to signal to the teacher that s/he could continue. A consequence of chorusing is that it privileges “the collective” which means that individual learners are not heard so if they do not understand then they are “left behind” (Hoadley, 2012, p.198).

6.10.3.1. The costs of chasing the CAPS curriculum

It is interesting to note that teachers were aware that there were learners who were left behind and they consequently had “gaps” in their knowledge. However, they choose to move forward because there is a curriculum that needs to be followed and tests¹⁸⁷ that need to be written. The gaps of knowledge build over time and essentially become so big that the knowledge that learners have is no longer grade¹⁸⁸ appropriate. This can be considered to be a form of articulation¹⁸⁹ gap.

Powering on with just the few learners and not addressing issues as they occur leaves learners with knowledge gaps that not only disadvantage them within the basic education system but if they gain access into a HEI they experience articulation gap which leads to high drop-out rates at many HEIs

¹⁸⁷ During the lessons teachers made several references to upcoming tests/exams (see EFAL –turn 50; Geog A-turn 33; and Maths A- turn 50).

¹⁸⁸ FGT:

8. LS: There’s gaps also maybe build the gaps between the grades you see.

¹⁸⁹ Articulation gap “can be characterised by what happens at the interface between the two levels of education...i.e. the articulation between the two courses or stages in education” (Rollnick, 2010, p.91)

(Smit, 2012; Liccardo et al., 2015). This inevitably means that they are unable to graduate or gain employment and so they continue in their cycle of disadvantage.

In their attempt to get through the syllabus and knowing that there were gaps in learner knowledge, a teacher-directed stance was an inevitable consequence. Teachers were keenly aware that they had adopted a teacher-directed stance but justified it by saying that learners competency levels were “not so good” so they admitted to “doing everything” for the learners.

Chick (1996) uses a socio-linguistic theory in an attempt to rationalize teacher-directed stance. He proposes that this is something that is peculiar to the Zulu culture. He uses the terminology “volubility” to describe the quantity of talking done by the teacher and “taciturnity” to describe the “avoidance of talking” by the learners and concludes that it is the respect for authority figures and an issue of politeness that drives this particular pattern of teacher-dominated/teacher-directed stance in KwaZulu-Natal classrooms¹⁹⁰. However, in this case study, the cultural aspect was not the only factor that influenced the interaction patterns.

To attribute the general lack of cognitively demanding questions and the absence of dialogic space given to learners solely to a particular “culture” would not be an accurate representation the politics of the classroom in this case study. As we have seen, the teacher directed-stance was more for pragmatic reasons. This assessment of the situation is strengthened by findings that the teacher-directed stance was an overwhelmingly common feature in schools throughout South Africa (Hoadley, 2012). This finding implies that there are reasons for this feature which transcend both cultural and provincial boundaries¹⁹¹.

¹⁹⁰“...I identified putative culturally- specific Zulu-English interactional styles. These styles are characterized, amongst other things, by the preference by higher status speakers in asymmetrical encounters (i.e. those in which there are marked differences in the relative status of the participants) for what Scollon and Scollon (1983) term solidarity politeness, including the politeness or face-preserving strategy of volubility (much talking), and by lower status speakers for what they term deference politeness, including the strategy of taciturnity (avoidance of talking)” (Chick, 1996, p.22)

¹⁹¹ In contradiction to Chick’s (1996) assertion that this is a feature that is uniquely Zulu (cultural) in KwaZulu-Natal (provincial).

6.10.4. Inadequate teacher training

Teachers felt ill-equipped to deal with the challenges of implementing yet another curriculum change which is the result of a government that is constantly trying to address the inequalities created by the past regime (Mnguni, 2013). Teachers expressed their concerns regarding the implementation of the current CAPS system. They bemoaned the lack of adequate training as well as what they perceived to be as the general lack of support by the DBE. Their concerns are understandable as there have been three different sets of curricula since 1994 (Manik, 2016; Blignaut & Au, 2014; Mouton et al., 2013; Maodzwa-Taruvunga & Cross, 2012).

At the dawn of democracy in South Africa (1994), the priority of curriculum reform was to ensure educational quality of all citizens in the country (Ramatlapana & Makonye, 2012). This resulted in the introduction of C2005 which was dramatically different from apartheid era curricula in that it shifted focus “from content-based teaching and learning to outcomes-based practices” (Blignaut & Au, 2014, p.396). This new curriculum was met with enthusiasm but after a few years it was clear it was not achieving what it set out to achieve and so a review was done and one of the main reasons cited for its failure was that teachers were ill-prepared (despite training) to implement it (Pillay et al., 2013). Therefore the curriculum was subsequently revised and the Revised National Curriculum Statement was implemented (Msibi & Mchunu, 2013). This revised curriculum was once again reviewed and overhauled in favour of the current CAPS system (ibid).

As described in the previous section, teachers still feel that they are not given enough support by the DBE with regards to the current CAPS curriculum.

FGT:

36. LO: From the department at first and when it comes to management I mean they can't do anything if they don't get support themselves. They can't be supportive if they are not supported. I think it's a departmental issue. We don't get enough support- we just left here. And workshops are far apart. Sometimes we go for 3 days and then we are on our own. Sometimes we do the whole years work. Is it NCS that's coming out?

37. G: Ya

38. LO: We might go for 3 days and come back and they will just expect us to know everything

39. I: So do you know what's happening with all these changes and stuff?

40. LO: No! we are just told that NSC is going out and the books that we have now will be phased out and the new books will be coming in. SO this year we are not adding on whatever books we have because we are expecting that next year it will be phased out. You know like when there was like OBE books and then now there is another type of books. Ya, so we don't know how much change is coming and how to carry that. Ya, we don't know what to anticipate

This is especially worrying since there have been so many changes to the curriculum. Teachers feel as though they are trying to keep up. In the above excerpt from the focus group interview with the teachers it can be seen that there is a level of confusion regarding the changing curriculum. They also spoke to the quality of the training available which is somewhat of a common perspective amongst teachers. Dass (as cited in Ramnarain & Fortus (2013, p.13) argues that “the traditional ‘one-shot’ approaches to professional development have been inadequate and inappropriate in addressing the developmental needs of teachers.”

They suggest that training should actually be a more sustained and more intensive than what is currently being offered. Lundgren et al (2015, p.4) suggest that “teacher development should be grounded in action, not just in various in-service training programmes provided by governmental initiatives.” If levels of training are not effective it leads to a lack of confidence within teachers which adversely affects teaching (Maringe et al., 2015).

6.10.5. Disadvantage and deficit thinking

Deficit thinking appeared to be common amongst the teachers of the school. This thinking was evident in both the classroom discourse and the opinions expressed by the teachers in the focus group discussion. It appears that this deficit thinking precipitated low expectations. These low expectations of teachers were illuminated the classroom discourse as seen below:

Geog A:

33. Mr P: ... You know that huh half of you are going to fail? Ask some of our friends sitting here. They was last year 11D and 11B this year we got one class together 12B and D together. Because they not serious. You don't wanna work you must stay at home...

This sentiment that learners were lazy was reiterated by the teachers:

FGT:

75. LO: ...The kids are lazy. They don't even want to work they are just lazy. You give 2-3 pages that you have to read first- they don't want to do that.

The perception that learners were lazy and incapable creates an environment of low expectations. Learners are told as much directly as in the Geog A lesson and indirectly as seen in the level of engagement that teachers have with them. In chapter five, it was noted that the kinds of questions that learners were exposed to was of a cognitively undemanding nature. Taylor (2008) illustrates that there is a wealth of literature on the effects of low expectations and their detrimental effects on learning. These low expectations are the result of underlying deficit thinking¹⁹² which is made clearer in the discussion of the term disadvantage.

The following is an example of a deficit view of learners as is expressed by a teacher in the focus group discussion:

FGT:

52. G: **We are sitting with the disadvantaged children they are in our school so so when it comes to quality.** You know the department always stress about quality I tell them you know what the better quality is leaving our school and going to other areas. It's impacting on us. See because every time the department mark our performance through results and we tell them you know what it's not the fault of the teachers not doing work,

¹⁹² According to Smit (2012, p.372), "Garcia and Guerra (2004) point out that deficit thinking disguises lowered teacher expectations and impacts on teaching practice."

it's just the quality that we don't have. Some of the better children are going to other schools. Now these are all factors.

The teacher conflates the poorer children with poor “quality” meaning that they are deficient in some way:

FGT:

67. I: What do you think the problems are with these not so good quality students?

68. G: Definitely socio-economic

This conflation is in keeping is consistent deficit thinking. According to Valencia (1997, p.9) “Deficit thinking is a person-centred explanation of school failure among individuals as linked to group membership (typically, the combination of racial/ethnic minority status and economic” disadvantage. Deficit thinking is quite prevalent in South African schools and it is a destructive ideology as it blames the victims of poor socio-economic situation for the circumstances in which they find themselves (Maringe, 2015). “Educators with such a deficit mentality towards learners become complicit in perpetuating rather than disrupting underperformance of schools in multiply (sic) deprived contexts” (ibid, 378).

Deficit thinking has direct impact on pedagogy as teachers refrain from regulative practices i.e. practices that they use when teaching children who are not labelled disadvantaged. This according to culminates in negative outcomes for children who are perceived as disadvantaged which only serves to reinforce the stereotype (Smit, 2012; Engelbrecht et al., 2015). This deficit ideology pervades all areas of the South African education landscape including higher education (Kapp et al., 2014; Smit, 2012; Marshall & Case, 2010).

According to Smit (2012) within the higher education sector those students who seen as non-traditional students are usually those students who are usually have lower socio-economic status, part of a lower class and have probably attended a high poverty school than traditional students. “Many have not yet acquired the necessary literacy, numeracy and academic skills crucial to succeeding in higher education” (ibid, p.370). Universities then run programmes that operate to address these perceived deficits. The term most commonly used to describe students in these

programmes is ‘disadvantaged’ (Marshall & Case, 2010). The term disadvantage (undergirded by deficit ideology) functions as an “umbrella term to cover a wide array of perceived shortcomings and has not been clearly conceptualised” (Smit, 2012, p.370).

The discourse around the term ‘disadvantage’ in the current study is particularly interesting as it gives insight into the differences in ways of thinking between the teachers and the learners. This issue was probed in both focus group discussions (i.e. with the teachers and the learners). The principal who was not at the focus group discussion spoke about the term in the interview. His opinion was that it was an appropriate label as the school lacked financial resources and serviced a poor community. He was also keenly aware that if the DBE labelled the school disadvantaged (thereby ranking it at a lower level) then it would lead to a higher subsidy for the school. I think that this factor influenced his opinion greatly.

There seemed to be ambivalence toward this term disadvantage amongst the teachers. Teachers expressed reservations about the term and the stigma attached to it. There was a strong sense of condemnation for the use of the term. However, at a different juncture in the discussion there was a completely different sentiment. Teachers acceded to the term disadvantaged being used to describe the learners in the school. This, they rationalized, was because the learners were from a poor community. They then proceeded to do the very thing that they condemned i.e. stigmatize the learners:

FGT:

51. LO: What happens is that we sit with kids who are from a disadvantaged community and the things that they would do here they will be thinking of their being disadvantaged like stealing things and vandalising certain stuff and also being hungry for the whole day and also doing drugs and all the negative things that you bring into the school so its even if the buildings can look fine it's the community that we service can bring the school backward

The learners on the other hand seem to have a vastly different perspective. They only concede to the use term ‘disadvantage’ when it related to the human and material resources in the school.

Aside from this, they rejected the use of the term in describing them or their fellow learners arguing that being poor did not make one disadvantaged. They were of the opinion that they could overcome poverty with hard work and were therefore not disadvantaged:

FGL:

337. S2: Ay, it's not right. You choose what you want to be in life. Because you poor you can't say that I'm nobody. There a lot of people that are poor today they are business men.

338. S1: And it's poor people are more successful they know what they want in life. So you don't have to say poor people have to fail or do something wrong.

339. S2: It's up to you what you want to do- what you want to change in life. It's not because you poor- no one has the right to be saying that.

340. S3: If I say don't fail me because I'm poor- it's unfair to other students who that pass clearly. You are failing but pass because you are poor – not fair.

341. S5: I think that being poor should be the thing that drives you to success because you know like so I saw my parents maybe poor I know how hard it was for them to get me to school ()

342. I: Ya. So you are all very motivated?

343. S4: Ya. That's what makes us () some students who are poor have made it to university.

Here we see that the learners' perception of disadvantage was more consistent than that of the teachers. Whereas the teachers seemed to have conflicting views the learners did not. Perhaps this could be explained by the generation gap and the fact that these learners were not exposed to the level of apartheid ideology that the teachers were. While deficit thinking is certainly not unique to South Africa, one could say that South Africa was exposed to an especially concentrated form that continues to have after-effects long after liberation from apartheid. This is a particularly interesting conversation with the learners as they felt poverty of the community was not a disadvantage factor but rather the school and resources that made this a disadvantaged school. This extract also illustrates the learners' rejection of the label of disadvantage and their determination not to become victims of their circumstance. This is a trend evident in many studies on youth identity and is described by Kapp et al. (2014, p.56) as a "can do" attitude.

Kapp et al. (2014) studied successful students from townships and the ways in which they overcame their toxic community and school environments to enter into tertiary institutions (and in some cases be the first of their generation). These environments described by the article have much in common with the learners' environments in this study. What the participants of both studies also share is a strong sense of intrinsic motivation. Kapp et al. (2014, p.52) refer to this as individual agency and cite it as a determining factor in the success of the students where "agency is understood as an individual's capacity to make conscious choices and to act and improvise in response to particular situations..."

6. 11. An Ecological theory of literacy development

This section endeavours to answer why literacy is affected by disadvantage in the ways in which it is evident in this study. The ecological theory aids understanding of literacy development as being context dependent and therefore more susceptible to influence from situational factors at different levels.

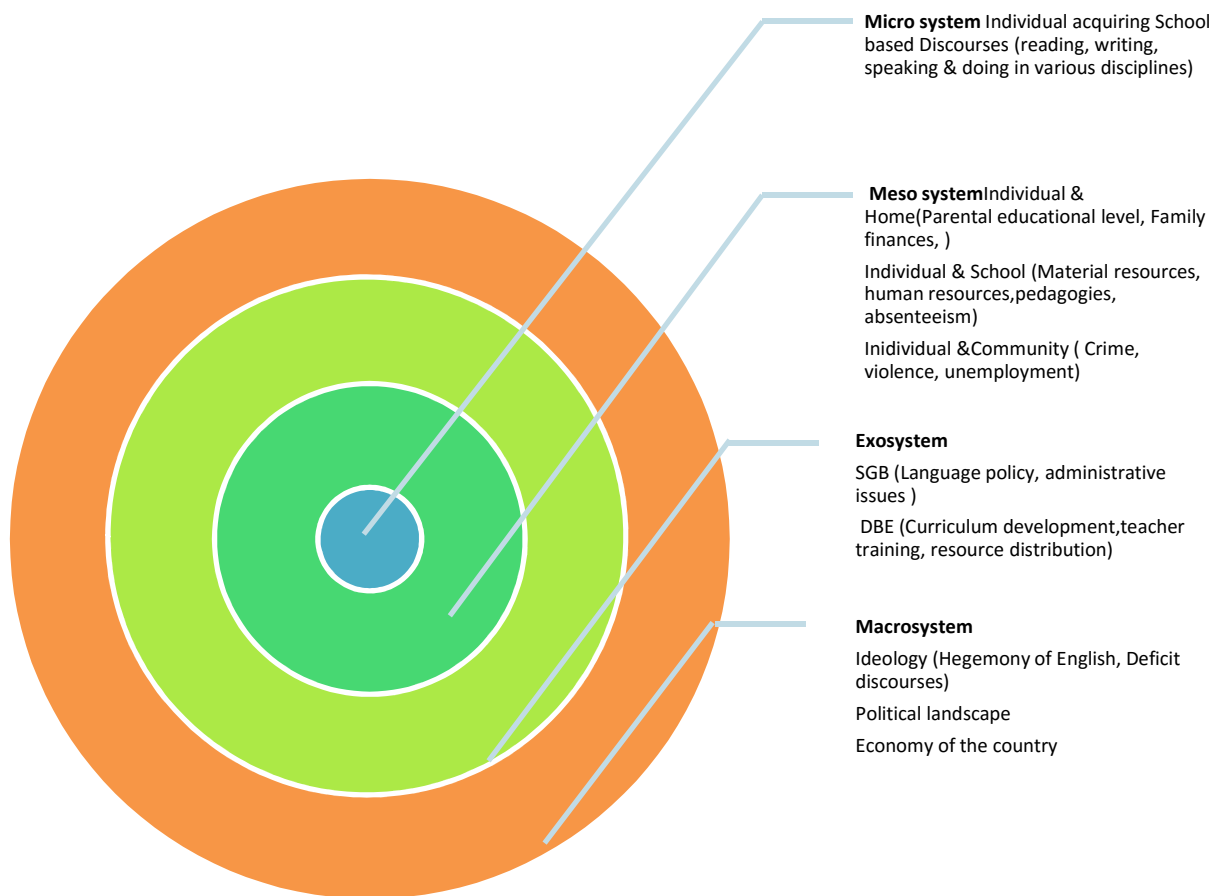


Figure 11. Ecological theory for literacy development

6.11.1. Microsystem

The ecology of human development model (1979) defines the microsystem in the following manner:

“A microsystem is a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics” (Bronfenbrenner, 1979, p.22).

I have adapted this definition to read as follows drawing from the findings of the study : *A microsystem comprises of the individual within whom a range of literacies(reading, writing, speaking and doing in various disciplines) are developing in a given setting with particular physical and material characteristics.* In this particular study, within this system is the individual that is developing a range of literacies that constitute the dominant schooling Discourse such as reading, writing, speaking, scientific literacy and quantitative literacies. It is here that we see how the different literacies may be influenced by each other. There is an intimate connection between reading, writing and speaking and doing.

Since reading is the “strongest predictor of literacy development” it will be our point of departure in the explanation of the relationships within the microsystem (Krashen, 2008, p.4). “In order for these learners to master speaking, listening and writing, they first had to possess sufficient reading strategies” (Chaka, 2015, p.1). The study revealed that the learners were not fluent readers, did not value free voluntary reading and had no culture of reading either at school or at home. Therefore, it was concluded that the learners had poor reading literacy. According to Grabe & Zhang (2013) there is a large body of evidence that asserts good writing is the result of good reading. Therefore, the poor reading would influence learners writing. This was evident in Figure 3 that showed the learners struggle with expressing themselves using academic conventions. Learners in the study had poor writing literacy as evidenced by their inability to respond adequately in the exams as well as their poor matric pass rates (see table 2). Writing however, also improves reading. It has been shown that strategies such as comprehension questions and summarization of texts improve reading (Ness, 2007).

The level of discourse in the classroom can also be considered a result of poor reading literacy. Although oral discourse dominated the classroom interactions, these were largely teacher dominated. When the discourse was evaluated it was clear that teachers used cognitively undemanding questions in these interactions. They were usually recall questions and the teacher often cued single word responses. Bridges (2014, p.25) argues that “rich dialogic discussion” is the result of reading. Therefore, it is evident that the lack of a reading culture directly influenced the oral literacy practices within the classroom.

The compound effect of poor reading, writing and speaking literacies are evident in scientific and quantitative literacies. The responses on the questionnaire and the focus group discussion with the learners illustrated the struggle and frustration that learners experienced in the area of science and mathematics. Studies have shown how robust class discussions both with the teacher and amongst peers led to improvement in writing science (Osborn, 2010). The discussions in class aimed at the acquisition of factual knowledge or content knowledge. Liccardo et al. (2015, p.376) argue that this is the basis of epistemic knowledge and refer to it as “knowledge-that”. This was aided successfully through code switching and transliteration in the class discussions. Writing exercises given to learners in Life Sciences for example (see Figure 10) also aided in acquisition in ‘knowledge-that’. However, the learners’ knowledge-why and knowledge-how which are analytical knowledge and practical knowledge respectively, were not developed. This is was as a result of the lack of engagement by learners in cognitively demanding questions as well as a lack of practical/inquiry-based learning in the school. Knowledge-that, knowledge-why and knowledge-how work together for complete epistemological access.

Poor reading literacy also affected learners’ development of CALP. It was noted that learners L1 was not sufficiently developed (as evidenced by learners’ inability to read isiZulu adequately). Learners had experienced subtractive bilingualism. This does not bode well for L2 CALP development as L1 and L2 CALP development are interdependent (Cummins, 1981). The difficulty that learners had in writing science was due to the poor development of CALP. Factors such as reading appropriate texts, extended pieces of writing, and problem solving ensure proper development of CALP (Krashen & Brown, 2007).

6.11.2. Mesosystem

“A mesosystem comprises the interrelations among two or more settings in which the developing person actively participates (such as, for a child, The relations among home, school and neighbourhood peer group; for an adult, among family, work, and social life),” (Bronfenbrenner, 1979, p. 25). I have altered this definition (given the findings in the present study) by replacing the words developing person with learner/student: *A mesosystem comprises the interrelations among two or more settings in which the learner/student actively participates (such as the relations among home, school/university, community, peers, work, and social life)*

Within the context of the current study the mesosystem interrelations are quite complex. Literacies of learners were impacted by home, school and the community. These three settings of which the learners actively participated converged to limit access to academic discourse that would allow them to have academic success.

The home setting affected reading because of the lack of reading culture at home. Learners were not exposed to writing at home either. Parental involvement in learners’ academic work was also minimal. Learners came from low SES homes so they were unable to afford textbooks. Low household income also contributed to learners attending a school that was not particularly well resourced. The effect of home setting was also evident as the learners grew up in homes that did not support the dominant literacy practices of school. Learners were not exposed to reading or writing before starting formal schooling. Heath (1983) had established how this could be detrimental to the development of schooled literacies.

In terms of the school influence on literacy we have seen that there was a lack of accessibility and availability of both storybooks and textbooks at school. Poor pedagogical practices such as the lack of instruction and feedback adversely affected both reading and writing. Teachers’ pedagogical practices were also implicated in the poor writing literacies of learners. As evidenced from the classroom data and the focus group discussions with teachers, writing was not prioritized. Highly effective pedagogic strategies that have been proven to help learners acquire highly specialized academic language such as that used in science were not used. Inquiry-based learning was also not part of the pedagogic practices at school which can be attributed to both the teachers

and the lack of material resources at the school (lack of labs etc.). The level of classroom discourse and the strategies employed restricted learners' epistemological access.

The community also affected learners' accessibility and availability of books. This is evidenced by the theft of books by peers who were poor. The community also affected the learners in an indirect way in that it influenced the way in which teachers saw the learners of the school i.e. the learners' poor SES influenced the teachers to adopt a deficit view of them thereby influencing adversely pedagogic practices at home.

6.11.3. Exosystem

“An exosystem refers to one or more settings that do not involve the developing person as an active participant, but in which events occur that affect, or are affected by, what happens in the setting containing the developing person,” (Bronfenbrenner, 1979, p.25). For this system too I have replaced the “developing person” with learner/student: *An exosystem refers to one or more settings that do not involve the learner/student as an active participant, but in which events occur that affect, or are affected by, what happens in the setting containing the learner/student*

In this system the settings that do not involve the learners directly are considered. Decisions taken at government level or at managerial level of the school do have an effect on learners. Teachers receive directives from decision making bodies such as the SGB and the DBE. The SGB decides the language policy of the school. In this case the school policy was to use English as the only medium of instruction. The school also decides what the school fee will be and this affects learners who are unable to afford the fee.

The DBE also makes important decisions that ultimately affect learners. The DBE decided on the curriculum and it has been discussed in this chapter how this has had a detrimental effect on teaching and learning when the said curriculum is inappropriate for the South African schooling system. This study also revealed how the DBE's decision to rank this school as a quintile 5 school resulted in the lack of assistance in the form of a feeding scheme. The DBE also decides on the distribution of resources to schools. The stipend that the principal was given to run the school was used for basic amenities as opposed to the security for the computers which meant that computer

studies was not a viable course at the school. The DBE also makes it compulsory for the principal to have a teaching load. The learners have suffered because his administration duties greatly affected his ability to be an effective teacher.

6.11.4. Macrosystem

“The macrosystem refers to consistencies, in the form and content of lower-order systems (micro-, meso-, and exo-) that exist, or could exist at the level of subculture or the culture as a whole, along with any belief systems or ideology underlying such consistencies,” (Bronfenbrenner, 1979, p.26). This definition is suitable for the purpose of analyzing the present subject and therefore remains unchanged. One glaring example of this was the hegemonic influence of English. It pervaded every lower order system. Learners felt that it was their key to opening up doors in the national and international economies. This was also the sentiment expressed by principal. This sentiment was clearly also shared by the parents as the SGB established the language policy of the school which was that it would have English as the medium of instruction.

This ideology undermined the additive bilingualism language policy indicated by the DBE. According to The Language in Education Policy of South Africa (1997) “the Department’s position that an additive approach to bilingualism is to be seen as the normal orientation of our language-in-education policy” (DBE, 2015). Learners had no interest in reading in isiZulu. What compounded this was the fact that there is a lack of appropriate literature in isiZulu (Edwards, 2008; King & Chetty, 2014). Further confounding this subtractive bilingualism, is that African languages are not seen as languages of academia¹⁹³.

6.12. Conclusion

It can be concluded that disadvantage manifests in literacy practices in both obvious and subtle ways. The ways in which disadvantage manifested in the literacy practices also differed amongst the different literacy practices. For example, poor reading levels were clearly more affected by the elements of the microsystem. Bilingualism on the other hand was heavily affected by the exosystem and the macrosystem. The complex ways in which the different literacy practices

¹⁹³ The University of KwaZulu-Natal has English as a medium of instruction.

related to each other as well as the multifactorial disadvantages that manifest in them, illustrates the necessity of multipronged intervention strategies.

This discussion has also demonstrated the nuances of disadvantage especially when it is used in relation to education. It showed how diverse factors (poverty, ideology, pedagogy etc.) combine to form a barrier to acquiring school based discourses. The failure to acquire these discourses can therefore lead to a deficit view of learners that are consequently affected. However, the ecological theory of literacy development lays bare the inaccuracy of that deficit perspective by showing that the cause of low literacy levels is situational and not innate (i.e. cannot be ascribed to the individual). What the theory also does is that it prevents homogenizing of learners and inevitably pathologising a perspective of learners who come from poor communities and schools. It does this by showing that there are a plethora of dynamic factors and that these factors not only affect the different literacies in various forms but also that these factors may have differing effects on individual learners¹⁹⁴. It has also shown that disadvantage is more than socio-economic and that pro-poor¹⁹⁵ spending is actually only one step in trying to build an equitable education system.

¹⁹⁴ For example, the learner in the focus group who had good reading habits as he had access to books.

¹⁹⁵ According to Mestry & Naidoo (2009), in an attempt to redress apartheid era school spending (which meant that Black and White schools received dramatically different portions of the budget), the South African government now funds the poorest schools the largest portion of the budget. This is determined according to the quintile ranking system.

Chapter Seven: Conclusion

7.1. Introduction

This thesis began with a discussion of the crisis that the South African education system finds itself in and how the poor literacy levels were a vital indicator of this ‘crisis’. A brief overview of the literature revealed that there were factors of disadvantage that affect literacy such as the lack of resources; frequent curriculum overhaul; teachers’ inadequate pedagogical content knowledge; difficulties with the language of learning and teaching; impoverished school environments; and poor home environments. The literature showed that there were various applications of the concept disadvantage and that it was at times underscored by deficit thinking (which is essentially a victim blaming ideology that reinforces negative stereotypes) (Valencia, 1997). The current study confirmed these findings in addition to adding further dimensions to the term disadvantage. This study revealed that those on whom the term disadvantage is used, rejected its use on them personally and they rather felt that it was more appropriately used on institutions like their schools as there was a stigma attached to the word.

There was also an exploration of literacy and the various definitions that have evolved over time. This study used the NLS theory of literacy which postulates that there are different literacies that learners have to become conversant with which equated to what Gee (2008) referred to as the dominant discourse of school. NLS views literacies as a socially constructed phenomena. In keeping with this definition, the context in which literacies took place was the focus of the study in addition to all the myriad of unseen factors that influence literacy practices. In an endeavor to better understand literacies and the factors that affected learners’ mastery thereof, Bronfenbrenner’s ecological model was used as a framework through which to view the various interrelationships of learners’ contexts and literacies.

7.2. Critical questions answered

The research answered the following critical questions to establish the ways in which disadvantage manifested in the literacy practices of grade 11 learners:

1. What are the literacy practices within a grade 11 high school township classroom?
2. How does disadvantage manifest in literacy practices?
3. Why does disadvantage manifest in literacy practices?

In answering the first question the literacy practices in the classroom were observed and this data was triangulated with the data from other sources such as focus group discussions with learners, focus group discussions with teachers, learner questionnaires and an interview with the principal of the school. Some of the positive literacy practices that were observed was the way in which learning was facilitated by the teacher by selecting one learner who was referred to in this study as of the LPT. A bilingual learner was nominated by a teacher (who was unable to adequately speak isiZulu) to explain certain calculation processes in the Mathematics classroom. This facilitation was necessary as the medium of instruction of the school was English (not the learners' first language). This intervention proved to be successful. There were also instances in the Mathematics lesson where scaffolding was successfully used to take learners to a stage where they were successfully able to perform tasks that they were unable to perform at the beginning of the lesson.

The poor literacy practices were numerous. According to the findings these poor practices started before learners even entered the formal schooling environment and merely had a snowball effect over the ensuing years. These included a lack of a reading culture which was characterized by the lack of motivation to read; poor attitudes towards reading by learners and the absence of accessibility and availability of books in the both the school and home environments. There was also a marked lack of writing that occurred in class. Writing was relegated to note-taking. There was no interaction with literacy props (i.e. textbooks). There was also a lack of any inquiry based learning in the science based subjects which the literature revealed to be valuable for learning (Ramnarain, 2014; Wright, 2008; Pearson et al., 2010). There was a considerable amount of transliteration and code switching which occurred in class which was for the most part a very positive practice. In order to access content knowledge, teachers and learners made use of their linguistic resources. Code switching added to the flow of the lesson whereas transliteration combined with some form of concrete demonstration facilitated understanding. The negative issue arose when there appeared to be no development of CALP which was the logical progression from

facilitating understanding. The learners needed to know how to express this new knowledge using acceptable academic vocabulary and discipline specific conventions. This is only possible when learners are exposed to a wide variety of texts and read frequently as well as when there is explicit instruction from teachers of these conventions. The level of discourse in class is an equally important contributor to CALP development. However, in this study there were cognitively undemanding questions which meant that learners only made use of their recall skills and their analytical abilities were largely undeveloped. Answers to these low cognitive level questions were most often met by a chorused answer. This is because the questions usually required one word and teachers used cued elicitations in those instances. Teacher volubility was also a feature which meant that all lessons were teacher directed.

Question 2 set out to answer how disadvantage manifested in the practices mentioned above and why these practices were shaped thus. It was found that several factors of disadvantage impacted upon the literacy practices. The most obvious was that of the low SES of the learners and the community in which the school was situated. Learners had few resources that were available/accessible to them. Families had poor educational levels and many learners did not engage in literacy practices prior to entering into school. Within the school, teachers did not give explicit reading and writing instructions to learners.

The LOLT also presented challenges to dominant literacy development. It was noted that the CALP in neither L1 nor L2 was adequately developed. There were tensions between what the principal and SGB had intentioned with the school's language policy and what was actually happening in class. The issue of English as a LOLT is compounded by the ideology in this country. The hegemonic influence of English in the national and international market place makes it a desirable language (Anthonissen, 2013; Khokhlova, 2015).

Science and technology education suffered on many fronts. The first was that the lack of physical resources in the school. Second the threat of theft stopped the principal from making use of the resources he did have (i.e. the computers). There was also the theft and vandalism of current infrastructure (i.e. the telephone and electricity cables) which meant that the computers could not be powered nor could the internet be accessed. The third issue has to do with human resource

availability. In this school the lack of a suitably qualified teacher stopped learners from taking technology as an exam subject. The difficulty was also great difficulty in acquiring a suitably qualified physical science educator to relieve the principal when his administrative duties took him away from his teaching responsibilities. Learners also had to deal with a heightened sense of fear because of incidences of violence (such as fights and stabbing of a learner) that took place on the school property.

Another finding that illuminated how disadvantage manifested in the literacy practices of learners was that classroom practices seemed to lack articulation with the curriculum. At times this was attributable to the lack of resources in school. For example the absence of inquiry based learning was in part due to the lack of laboratories and equipment. The frequent overhaul of the curriculum was the second factor that contributed to a widening of the disjuncture between curriculum and classroom practice. The multiple changes to the curriculum have left many teachers feeling inadequately prepared to implement these changes in the class. In keeping with findings from Maringe et al., (2015) it was found that these feelings of inadequacy have led to a lack of confidence which has ultimately translated to ineffective teaching in class.

Critical question 3 asked why disadvantage manifests in literacy practices in this way. The research showed that literacies are shaped by a range of environmental factors and that not all these factors had an equal effect on literacy development. This is as a result of individual agency or a “can do attitude” that was at times able to withstand the forces of the environment. The use of the ecological theory of literacy development helped to provide an understanding of the literacy practices evident in this context. It laid bare that it is not only the environmental factors that affected literacy development but also that different literacies (such as oral and written literacies) affected each other and so there was a compounding effect for the learners.

7.3. Recommendations arising from the conclusion of this study

There are a few recommendations that may be put forth in response to the insights from this study for this specific context. In terms of redress, channeling more money into this school certainly is one of the options but it cannot be the only option. The ways in which that money is used also needs to be addressed. The issue of disadvantage is not a simple one nor is money the solution to

it. In terms of the situation in SA, recommendations cannot be made from one case study however, a larger sample of schools should be studied in order to identify the multitude of factors that contribute to learners being disadvantaged. The ways in which this situation is addressed is of course on multiple levels. Therefore merely throwing money at the problem is not going to eradicate it overnight. “For the poorest pupils it seems that other factors counteract the advantages of attending well equipped schools”, (Smith 2011, p.84). A multiple-pronged approach that addresses the issue holistically is vital. Therefore, areas of socio-economic status of the community in which the child lives, resources of the particular school, teacher training, curriculum and underlying ideologies all need to be dealt with concurrently.

In order to effect change in the classroom the first suggestion is to advocate for an academic literacies approach to teaching and learning as opposed to the autonomous model that is currently espoused in the curriculum and that has been since the apartheid era. It clearly is not working in fostering any deep level of understanding in learners whose literacies are not supported at home. According to Lea & Street (2006, p.227-228):

“*academic literacies*; is concerned with meaning making, identity, power and authority and foregrounds the institutional nature of what “counts” as knowledge in any particular academic context. It is similar in many ways to the academic socialization model except that it views the processes involved in acquiring appropriate and effective uses of literacy as more complex, dynamic, nuanced, situated, and involving both epistemological issues and social processes including power relations among people and institutions, and social identities.”

This means that all subjects must adopt an approach that makes learners explicitly aware of the conventions of that particular discipline. The best way to achieve that is to utilize genre based pedagogy because it appears that genre pedagogy is one of the most effective methods of enabling learner epistemological access. It is also necessary that academic language and vocabulary is taught across the curriculum. That means the responsibility of teaching language should no longer be the sole duty of the language teacher. This is especially important since as evidenced by the

literature and this study, learners' CALP is not developed as a result of the lack of development of their L1 and consequently L2.

It is clear that there needs to be more robust engagement between the DBE and the teachers from schools that experience multiple levels of disadvantage. This is especially so when effecting any changes to curriculum. At several points in the study it was seen that there was a disjuncture between the DBE blueprint curriculum and the curriculum as it unfolds in the classroom practices. The DBE can hold shorter more frequent workshops to equip educators with the tools to identify unique challenges within their schools and the ability to tailor interventions specific to their own needs.

Related to the issue of curriculum reform is the need for regular, in-depth teacher training to help improve pedagogical practices. Teachers and subject specialists at universities need to partner in order to discuss best practice strategies. As part of community engagement, academic staff at universities could partner with certain schools that are faced with multifarious disadvantage factors and perhaps engage in action research that will benefit both staff and learners at these schools. An example of this was the ACE programme where teachers with low qualifications were trained at universities in weekend lectures to reach specific levels of qualifications.

More needs to be done to raise awareness of literacies as they are the foundation for learning in all subjects. At the moment there is much that has been written and spoken about regarding BICs, science and mathematics education. The importance of well-developed CALP in order to excel in these subjects needs to be underscored. Ways in which this can be done is if learners are exposed to cognitively demanding questions and are given more time to engage with them both orally and in written form. Reducing the syllabus would aid in this endeavor as teachers would spend less time 'chasing the curriculum' and would have more time to cultivate learners' analytical reasoning.

The issue of subtractive bilingualism needs to be considered as well. The ultimate agenda of the DBE is for learners to exhibit additive bilingualism. The issues pertaining to whether the structure of both the African language (in this case isiZulu because the study was located in the province of KwaZulu-Natal where isiZulu is the predominant language) and the LOLT (in this case English)

are able to support one another is important to consider. If indeed this is the case, then it is recommended that bilingual instruction be extended to at least grade 6. Cummins (1981) suggests that it takes approximately that long to adequately establish CALP. Since L1 and L2 CALP are interdependent, this would improve learners' English CALP.

7.4. Scope for further research

-In a case study the ability to make broad generalizations is limited. Therefore, it is proposed that a study consisting a larger sampling of schools is done using the ecological theory of literacy development.

-It is proposed that a pilot study be done to ascertain the effectiveness of the academic literacies model at FET level. This model has been successful when used at university level. For example the Communication in Science module at the University of KwaZulu-Natal effectively uses this model to apprentice students into the Discourse of science by employing genre as well as inquiry based pedagogy. It makes those discipline specific conventions¹⁹⁶ explicit.

-It is proposed that a study be undertaken to determine the frequency and uniformity of the use of particular transliterated terminologies specific to each of the African languages. The most frequently occurring terminologies can then be standardized with the intention of building capacity in these languages to eventually become academic languages. This will enable learners to be educated from primary school to post-graduate level in their first language.

7.5. Final Thoughts

Whilst the word disadvantage is deficit in itself, it is evident that there are an overwhelming number of disadvantaging factors that learners face in South Africa which consequently affect their levels of literacy and this must be addressed. Taking aim at one or two of these factors will not be the most effective way to address them. It is necessary to devise strategies that take into consideration that educational strategies alone such as the improvement of pedagogy or curriculum overhaul may not bring about the desired change. It is important to consider the abject poverty that people live in as KwaZulu-Natal is one of the poorest provinces in South Africa and the way it

¹⁹⁶ Discipline lectures take for granted that students are conversant with these conventions.

affects their accessibility to materials and resources. It is also important to consider that although apartheid is no longer legislated, certain ideologies have survived. Some of these ideologies pertain to the use of language which legitimizes the hegemony of English while simultaneously undervaluing African languages. Therefore, psychological aspects of this phenomenon of disadvantage need to be considered. It is thus clear that the relationship between disadvantage and literacy is characterised by complexity and nuance as literacy is a product of the individual and the multiple influences within his/her environment (i.e. microsystem, mesosystem, exosystem and macrosystem).

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Appendix 1

Semi-structured interview schedule with Principal

Principle interview schedule

1. What is the language policy of your school?
2. What are some of the reasons for implementing this language policy?
3. What are your thoughts on code-switching?
4. Describe the situation regarding laboratory spaces and equipment?
5. Is there an adequate number of teachers and subject specialists?
6. What issues other than human resources impact the subject choices of learners?
7. What are your views on the quintile ranking of your school and how does it affect the school?
8. Is there a feeding scheme at the school?

Appendix 2

Learner focus group discussion schedule

Learner focus group discussion schedule

1. How long have you been attending this school?
2. What are your general thoughts in this school?
3. Describe your use of language at home.
4. Describe your use of language in class and your preferences.
5. Describe your reading habits currently.
6. What is your language of preference for reading?
7. What is your opinion on the use of worksheets and textbooks in class?
8. How do you feel about the teaching in this school?
9. Do you have lots of discussions and help each other in class?
10. What do you think will improve learning for you in this school?
11. Many learners are from poor homes, do you think this makes them disadvantaged?

Appendix 3

Teacher focus group discussion schedule

Teacher focus group discussion schedule

1. Generally, what are the language practices in class e.g. codeswitching etc.?
2. What are some of the obstacles to teaching and learning in this school?
3. As a teacher do you feel supported by management at the school and at the departmental level?
4. How you feel about the use of the word disadvantaged to describe the school?
5. Do you think that there are adequate resources in the school?

Appendix 4

Questionnaire

Questionnaire for learners

(Remember that we will treat everything you write confidentially)

Section A

1. What language do you use at home?

2. How often do you speak in English?

3. What language/s are you taught in?

4. Do teachers sometimes explain concepts to you in your mother tongue? Yes No

5. What language do you think should be used for learning and teaching at school?
Explain your answer.

Section B (Early reading)

6. What was your earliest experience of reading?

7. Did parents read to you? Yes No

8. What was your earliest experience of reading on your own?

9. As a child in primary school where did you read? at home at school both

10. What did you read?

Story books magazines religious books (e.g. Bible) newspapers
school books

11. Was all reading school-related or did you read just for your own pleasure?

12.1 Did you have access to a library at school/outside of school? Yes No

12.2 If yes, did you use the library and for what purpose did you use the library?

Section C (High school)

13. Where do you read in high school? at home at school both

14. What do you read?

Story books magazines religious books (e.g. Bible) newspapers
school books

15. Are all reading activities school-related or do you read just for your own pleasure?

16.1. Do you have access to a library at school/outside of school? Yes No

16.2 If yes, what kinds of activities do you do there?

17. Do you have access to textbooks in class? Yes No

18. Are you allowed to take textbooks home? Yes No

Section D (Primary school- Writing)

19. What is your first memory of writing? Describe this experience in terms of your age, where it occurred and in what language.

20. Describe what you remember of your experiences of writing in early grades of primary school.

21. Did you experience any problems with learning to write?

22. Describe what you remember of writing in later grades of primary school

23. During primary school what kinds of writing took place at home? school work
own writing for pleasure writing for others (e.g. shopping lists and filling in forms for
elders)

24. How did you feel about writing at primary school?
very enjoyable moderately enjoyable not enjoyable

Section E (High school- Writing)

25. Describe your experiences of writing at high school. Are they positive or negative?

26. What are the different kinds of writing you do in high school?
creative writing answering questions factual essays projects
copying notes from board making notes from written texts

27. What kinds of writing take place at home? school work writing for others
own writing for pleasure

28. Do you engage in any personal writing such as journal writing, letters, short stories
etc?

Yes No Specify _____

29. Do you ever use a computer for writing? Yes No Specify (e.g. at home, at
school etc.) _____

30. How do you feel about writing at high school?
very enjoyable moderately enjoyable not enjoyable

Appendix 5

Life Science worksheet

BIODIVERSITY AND CLASSIFICATION

Characteristics of the Phylum Cœlenterata

- No vertebral column
- Some species are sedentary while others are floating
- Most species have tentacles with stinging cells
- Most species are built in a circular plan in such a way that if the organism is cut in any vertical plane through the centre, it will give identical halves. We say that the organisms show radial symmetry
- Has a single digestive opening which serves to take in food as well as to get rid off undigested material and waste

Phylum Platyhelminthes

Characteristics of the Phylum Platyhelminthes

- No vertebral column
- Flattened from top-to-bottom
- Some species are free-living in water; others are parasitic
- Built in such a way that the organism can be cut in one plane only to give identical halves; this plane runs from the middle of the upper side to the middle of the lower side; we say that such organisms show bilateral symmetry.
- Non-parasitic forms have a single digestive opening which serves to take in food as well as to get rid off undigested material and waste

HABITAT
aquatic, FRESH WATER / MARINE, DAMP TERRESTRIAL ENVIRONMENT

liver fluke

planarian

tapeworm - Vertebrate

Fig. 4.1.22 Examples of platyhelminths

BIODIVERSITY AND CLASSIFICATION

Phylum Nematoda

hookworm

roundworm

Fig. 4.1.23 Examples of nematodes

Characteristics of the Phylum Nematoda

- No vertebral column
- The worms are round in cross-section
- Some species are free-living in water; others are parasitic
- Bilaterally symmetrical

Phylum Annelida

HABITAT
AQUATIC, FRESH WATER AND MARINE

leech

earthworm

Fig. 4.1.24 Examples of annelids

Characteristics of the Phylum Annelida

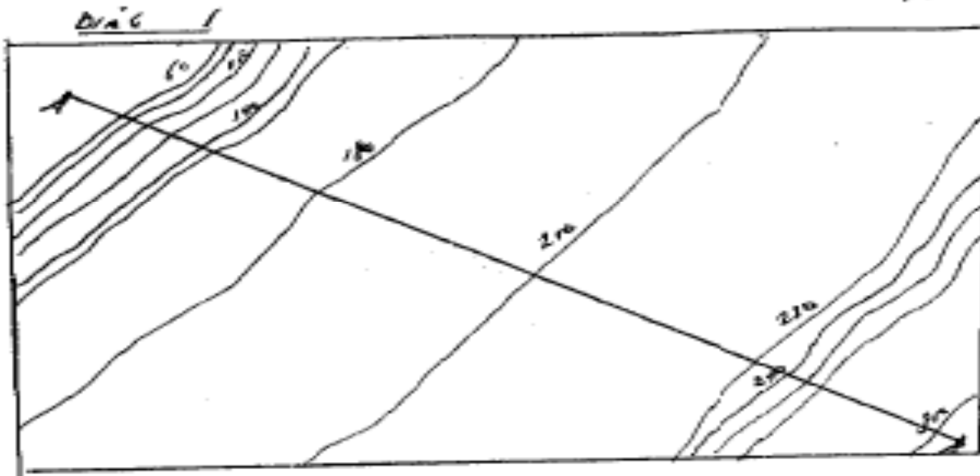
- No vertebral column
- The body of the worm is divided into segments
- Free-living in water or land
- Body has tiny hair-like bristles
- Has two digestive openings: a mouth and an anus
- Bilaterally symmetrical

Appendix 6

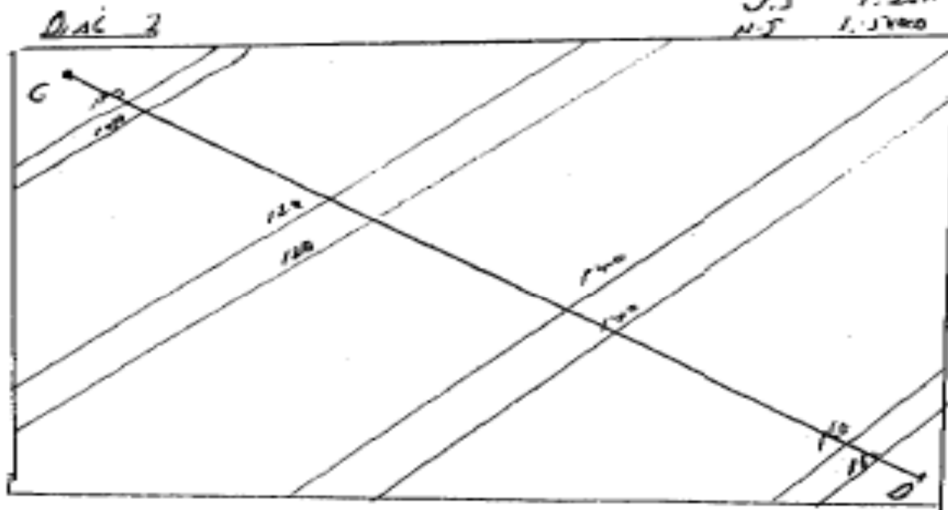
Geography worksheet

CROSS SECTION

V.S 1:2000
H.S 1:5000



V.S 1:2000
H.S 1:5000



Appendix 7

Mathematics worksheet

1. GIVEN THE FOLLOWING DATA:

15 ; 24 ; 19 ; 31 ; 22

1.1) DETERMINE MEAN \bar{x}

$$\bar{x} = \frac{\sum x}{n} = \frac{15 + \dots}{5}$$

1.2) STD DEVIATION σ

$$\sigma = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

$$= \sqrt{\frac{(15 - \bar{x})^2 + (24 - \bar{x})^2 + \dots}{5}}$$

1.3) DETERMINE WHICH DATA LIE WITHIN ONE STD DEVIATION OF THE MEAN

$$\bar{x} + \sigma \quad ; \quad \bar{x} - \sigma$$

1.4) WHAT % IS THIS OF TOTAL DATA

17/04 / STD DEVIATION (DATA HANDLING)

2. THE FOLLOWING DATA IS MADE OF EIGHT DIFFERENT CANS OF SOUP.
400g ; 435g ; 450g ; 420g ; 440g ; 460g ; 410g ; 430g

2.1) FREQUENCY TABLE

MASS	FREQ	f.x
400	3	1200
410		
TOTAL	n =	$\sum f.x =$

2.2) MEAN \bar{x}

$$\bar{x} = \frac{\sum f.x}{n}$$

2.3) STD. DEVIATION $\sigma = \sqrt{\frac{\sum f.(x - \bar{x})^2}{n}}$

$$\sigma = \sqrt{\frac{3(400 - \bar{x})^2 + 1(\dots)^2 + \dots}{n}}$$

2.4) WHAT % OF CANS LIE WITHIN ONE STD DEVIATION OF THE MEAN

STATS MODE: [MODE] [2:STAT] [1:1-VAR]

ENTER DATA: [15=] ; [24=] ; ...

MEAN [SHIFT] [1:STAT] [5:VAR] [2: \bar{x} =]

STD DEV: [SHIFT] [1:STAT] [5:VAR] [3: σ =]

5 900 5 900 5 300 10 600 15 000 15 000 15 100 15 800 17 100

Calculate the mean of the above data.

Calculate the standard deviation for the data.

The company runs the sales staff according to the amount of commission earned. A salesperson whose commission is more than one standard deviation above the mean receives a rating of 'good'. How many salespersons will receive a rating of 'good' for this month?

1. STATS MODE: [MODE] [2:STAT] [1:1-VAR]

2. FREQ TABLE: [SHIFT] [SET UP] SCROLL DOWN & ANGLE [3:STAT] [1:ON]

3. ENTER DATA [400=] ; [435=] ; ... FIRST COLUMN

4. ENTER DATA [3=] ; [1=] ; ... SECOND COLUMN

[AC]

5. MEAN [SHIFT] [1:STAT] [5:VAR] [2: \bar{x} =]

6. STD DEV: [SHIFT] [1:STAT] [5:VAR] [3: σ =]

Appendix 8

English First Additional Language worksheet

Exercise: Language and Editing

Correct the mistakes. Change the word(s) in [square brackets] if necessary.

1. I enjoy [listening] music while [study] English.
2. When he [arrive] at the hotel yesterday, he [sign] the guestbook.
3. There are some [bird] in the cage.
4. His [cars] does not seem to be [bad] damaged.
5. George can [driving] very [good].
6. Do you ever [playing] the guitar while [chew] gum?
7. My mother bought a new pair of [glove] last week.
8. My vacation will [start] [in] Monday.
9. The post office is two [kilometer] from our house.
10. He [have] already [starting].

Appendix 9

UKZN Ethical clearance



14 May 2010

Ms D Haricharan
185 Queenspark Crescent
Shastri Park
PHOENIX
4068

Dear Ms Haricharan

PROTOCOL: An ethnographic investigation and critical analysis of literacy practices in a disadvantaged South African classroom
ETHICAL APPROVAL NUMBER: HSS/0229/2010 D: Faculty of Humanities, Development and Social Sciences

In response to your application dated 10 May 2010, Student Number: 9802382 the Humanities & Social Sciences Ethics Committee has considered the abovementioned application and the protocol has been given **FULL APPROVAL**.

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully



Professor Steve Collings (Chair)
HUMANITIES & SOCIAL SCIENCES ETHICS COMMITTEE

SC/sn

cc: Dr. L.J Jackson
cc: Dr. J Parkinson
cc: Ms S van der Westhuizen

Appendix 10

Department of Education permission to conduct research

	kzn education Department: Education KWAZULU-NATAL
MS D HARICHARAN 185 QUEENSPARK CRESCENT SHASTRI PARK PHOENIX 4068	Enquiries: Sibusiso Atwar Date: 01/06/2010 Reference: 0042/2010
PERMISSION TO INTERVIEW LEARNERS AND EDUCATORS	
The above matter refers.	
Permission is hereby granted to interview Departmental Officials, learners and educators in selected schools of the Province of KwaZulu-Natal subject to the following conditions:	
<ol style="list-style-type: none">1. You make all the arrangements concerning your interviews.2. Educators' programmes are not interrupted.3. Interviews are not conducted during the time of writing examinations in schools.4. Learners, educators and schools are not identifiable in any way from the results of the interviews.5. Your interviews are limited only to targeted schools.6. A brief summary of the interview content, findings and recommendations is provided to my office.7. A copy of this letter is submitted to District Managers and principals of schools where the intended interviews are to be conducted.	
The KZN Department of education fully supports your commitment to research: An ethnographic investigation and critical analysis of literacy practices in a disadvantaged South African classroom.	
It is hoped that you will find the above in order.	
Best Wishes	
 R Cassius Lubisi, (PhD) Superintendent-General	
...dedicated to service and performance beyond the call of duty.	
KWAZULU-NATAL DEPARTMENT OF EDUCATION POSTAL: P.O. Box 9457, Pietermaritzburg, 6001, KwaZulu-Natal, Republic of South Africa BUREAU: P.O. Box 255, Pietermaritzburg, 6001, Pietermaritzburg, Pietermaritzburg, 6001 TEL: 031 262 3411/031 262 3411 Fax: 031 262 3411 Email: info@kznedu.gov.za	

Appendix 11

Learner consent document- isiZulu

Mfundi

Igama lami ngingu Nkosazana D Haricharan. Ngifundela izifundo zami zobuDokela. Ezifundweni zami ngizobe ngibuka izinhlobo eziningi ze “literacy events” (izindlela zokufunda, ukubhala kanye nokukhuluma) okwenzeka ezindaweni zenu zokufundela. Ngiyathemba imiphumela yocwaningo izokwenza ushintsho olukhulu mayelana nendlela okufundiswa ngayo nangendlela okufundwa ngayo ezikoleni kulelizwe. Isikole sakho sikhethiwe ukuba sibe inxhenye yalolucwaningo ngoba asinazo izinsizakufunda ezanele kanti futhi kuseduzane kimina ukufinyelela kusona.

Kulolucwaningo, ngizosebezisa isiqophamazwi ukuqoqa lonke ulwazi engilutholayo, ngiphenyisise kabanzi, ngenzise nama interviews. Awuphoqiwe ukukwenza loku (uzozikhethela ukuthi uyathanda ukukwenza loku noma cha). Uma ukhetha ukungabi inxhenye yocwaningo, kuyilungele lakho, naloko kusavumelekile futhi. Lonke ukwazi enizosinika lona luzoba imfihlo. Angeke uziveze ukuthi ungabanu, wakuphi (awuzukwaziwa umuntu). Imiphumela yalolucwaningo ayizukuba namthelela omubi esimweni sezimali zesikoleni sakho noma kuwena esikoleni. Uma ngabe imiphumela iveza ulwazi olungaba usizo esikoleni sakho, uwena kuphela ozokwaziswa ngaleyomiphumela.

Loluhlelo lwenzelwa ukuphuthula izifundo zami zobuDokotela eNyuvesi yaKwaZulu – Natal. Uma ufuna ukwazi kabanzi ngalolucwaningo ungangithinta kulenombolo 031 – 2608203 noma ungithumelele I email ku haricharand@ukzn.ac.za. Ungaxhumana futhi no supervisor wami u Dr Leonara Jackson kulenamba 031 – 2607703 noma umthumelele I email ku Jacksonl@ukzn.ac.za

Yimina ozithobayo
D. Haricharan (Nksz)

(Sika lapha bese uyayigcwalisa uyibuyise).....

Ngicela ungigcwalisele loku:

Mina.....(Amagama omfundi aphelele) Ngiyavuma ukuthi ngiyifundile lencwadi ngayizwisisa kahle nenjongo yocwaningo, ngiyavuma ukuba yinxhenye lalo.

Ngizwile futhi ukuthi ngivumelekile ukungalibambi iqhaza uma ngingathandi.

I SIGNITURE YOMFUNDI

USUKU

.....

Appendix 12

Parental consent document- isiZulu

Mzali

Igama lami ngingu Nkosazana D Haricharan. Ngifundela izifundo zami zobuDokela. Ezifundweni zami ngizobe ngibuka izinhlobo eziningi ze “literacy events” (izindlela zokufunda, ukubhala kanye nokukhuluma) okwenzeka ebantwaneni bethu ezindaweni zabo zokufundela. Ngiyathemba lolucwaningo lwami luzokwenza ushintsho ohukhulu mayelana nendlela okufundiswa ngayo nangendlela okufundwa ngayo ezikoleni kutelizwe. Isikole sengane yakho sikhethiwe ukuba sibe inxhenye yalolucwaningo ngoba asinazo izinsizakufunda ezanele kanti futhi kuseduzane kimina ukufinyelela kusona.

Kulolucwaningo, ngizosebezisa isiqophamazwi ukuqoqa lonke ulwazi engilutholayo ebantwaneni, ngiphenyisise kabanzi, ngenzise nama interviews. Umtwana akaphoqiwe ukukwenza loku (uzozikhethela ukuthi uyathanda ukukwenza loku noma cha). Uma ekhetha ukungakwenzi, kuyilungele lakhe, naloko kusavumelekile futhi. Lonke ukwazi esinikwa lona luzoba imfihlo. Akhekho umtwana ozozisho ukuthi ungubani, wakuphi (akazukwaziwa umuntu). Imiphumela yalolucwaningo ayizukuba namthelela omubi esimweni sezimali zesikoleni noma sengane yakho esikoleni. Uma imiphumela yocwaningo iveza ulwayi olungaba usizo enganeni noma esikoleni sengane. Ingane yakho kuphela ezokwaziswa ngemiphumela, nesikole sizokwaziswa kodwa akuzuphathwa gama lamuntu.

Loluhlelo lwenzelwa ukuphothula izifundo zami zobuDokotela eNyuvesi yaKwaZulu – Natal. Uma ufuna ukwazi kabanzi ngalolucwaningo ungangithinta kulenombolo 031 – 2608203 noma ungithumelele I email ku haricharand@ukzn.ac.za. Ungaxhumana futhi no supervisor wami u Dr Leonara Jackson kulenamba 031 – 2607703 noma umthumelele I email ku Jacksonl@ukzn.ac.za

Yimina ozithobayo
D. Haricharan (Nksz)

(Sika lapha bese uyayigcwalisa uyibuyise).....

Ngicela ungigcwalisele loku:

Mina.....(Amagama omzali aphelele) Ngiyavuma ukuthi ngiyifundile lencwadi ngayizwisisa kahle nenjongo yocwaningo, ngiyavuma ukuba yinxhenye lalo.

Ngizwile futhi ukuthi umtwana wami unelungelo lokungalibambi iqhaza uma ngathandi.

I SIGNITURE YO MZALI/ NOMA OMGADAYO

USUKU

.....

Appendix 13

Learner consent document- English

Dear Learner,

My name is Ms D. Haricharan and I am currently doing my doctoral degree. For my degree I will be looking at the different literacy events (instances of reading, writing and talking) that take place in your classroom. I hope that the findings of this study will make a positive change in the way teaching and learning occurs in schools in this country. Your school has been chosen to be a part of this study because it does not have many resources and because it is easy for me to travel to it.

I will gather information by making digital recordings, observations and doing interviews. Please note that your participation in this study is totally voluntary (it is your choice whether to take part or not). If you choose not to participate, there will not be any negative consequences. All information will be treated confidentially. No one will be able to identify you in any way from this study (you will remain anonymous). The findings of this study will in no way have negative financial or other consequences for you or your school. If the study produces results that are useful to you and your school those results will be communicated to you without identifying any individuals.

This project is being conducted to obtain my PhD degree at the University of KwaZulu-Natal. For further information you can contact me on 031-2608203 or e-mail me at haricharand@ukzn.ac.za. You may also contact my supervisor, Dr Leonora Jackson at 031 – 2607703 or jacksonl@ukzn.ac.za.

Kind regards,
D. Haricharan (Ms)

(cut here and return)-----

Please fill in the following:

I.....(full name/s and surname of learner) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at free to withdraw from the project at any time, should I so desire.

SIGNATURE OF LEARNER

DATE

.....

Appendix 14

Parental consent document- English

Dear Parent,

My name is Ms D. Haricharan and I am currently doing my doctoral degree. For my degree I will be looking at the different literacy events (instances of reading, writing and talking) that take place in your child's classroom. I hope that the findings of this study will make a positive change in the way teaching and learning occurs in schools in this country. Your child's school has been chosen to be a part of this study because it does not have many resources and because it is easy for me to travel to it.

I will gather information by making digital recordings, observations and doing interviews. Please note that your child's participation in this study is totally voluntary (it is his/her choice whether to take part or not). If s/he chooses not to participate, there will not be any negative consequences. All information will be treated confidentially. No one will be able to identify hi/her in any way from this study (s/he will remain anonymous). The findings of this study will in no way have negative financial or other consequences for your child or his/her school. If the study produces results that are useful to your child and his/her school, those results will be communicated to your child and the school without identifying any individuals.

This project is being conducted to obtain my PhD degree at the University of KwaZulu-Natal. For further information you can contact me on 031-2608203 or e-mail me at haricharand@ukzn.ac.za. You may also contact my supervisor, Dr Leonora Jackson at 031 – 2607703 or jacksonl@ukzn.ac.za.

Kind regards,
D. Haricharan (Ms)

(cut here and return)-----

Please fill in the following:

I.....(full name/s and surname of parent) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that my child is free to withdraw from the project at any time, should s/he so desire.

SIGNATURE OF PARENT/GUARDIAN

DATE

.....

Appendix 15

Teacher consent document

Dear Participant,

My name is Ms D. Haricharan and I am currently doing my doctoral degree. For my degree I will be looking at the different literacy events (instances of reading, writing and talking) that take place in your classroom. I hope that the findings of this study will make a positive change in the way teaching and learning occurs in schools in this country. Your school has been chosen to be part of this study because it does not have many resources and because it is easy for me to travel to it.

I will gather information by making digital recordings, observations and doing interviews. Please note that your participation in this study is totally voluntary (it is your choice whether to take part or not). If you choose not to participate, there will not be any negative consequences. All information will be treated confidentially. No one will be able to identify you in any way from this study (you will remain anonymous). The findings of this study will in no way have negative financial or other consequences for you or the school. If the study produces results that are useful to you and your school those results will be communicated to you without identifying individuals.

This project is being conducted to obtain my PhD degree at the University of KwaZulu-Natal. For further information you can contact me on 031-2608203 or e-mail me at haricharand@ukzn.ac.za. You may also contact my supervisor, Dr Leonora Jackson at 031-2607703 or jacksonl@ukzn.ac.za.

Kind regards,

D. Haricharan (Ms)

(cut here and return)-----

Please fill in the following:

I (full name/s) and surname of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am free to withdraw from the project at any time, should I so desire.

Signature of participant

Date

Appendix 16

EFAL A

1. Mrs D: Ok. We are marking the summaries heh. I just want to check if you have it on your exercise books. [Mrs Dlamini walks into class holding worksheet. Students take out worksheets]. Ok (.) the question says: The following article appeared in a magazine. The life-orientation teacher wants to send a memo to parents to suggest ways to counteract bullying and actions that can be taken based on this article. We are asked to write down 7 points on what parents can do to stop bullying from happening at school. Ok, so what are we going to summarise here? What is the best way to summarize? [Students continue to shuffle and mumble while teacher reads this. She reads it very quickly and without much expression. To me it sounds a little like she is uninterested. When question is asked- there is no intelligible response from class- just a lot of mumbling].
2. E: () [mumbling].
3. Mrs D: *Ya?* What parents...[writing on board] SO this is what you will be summarizing. And then the instructions: the first one is list 7 points in sentences using not more than 70 words. So your summary must not exceed 70 words. Number your sentences from 1 to 7 so no roman figures, no letters, no stars no bullets just numbers. Write only one point per line. Use your own words. Indicate the number of words you used at the end of your summary in brackets. So those are your instructions. Ok? [Doesn't wait for any other responses- turns and starts to write the question on the board: "What can parents do to stop bullying from happening at schools?"]. Let's get somebody who is going to read the passage for us (.) [looks around- no volunteers]. Goodness, where are you? Where is Goodness? Ok, read for us.
4. S1: [Giggles then starts to read- quite expressionless] "Bullying in schools. Bullying is common in schools where there are large groups of children. Teachers may not always maintain close supervision on the playgrounds. It take various forms from beating children up to other types such as such as pinching, tripping, poking teasing and even stealing. Bullies are not always boys, girls bully other girls and can also be violent but only their bullying is more psychological. Like spreading stories and r...r...raining another girl's rep reputation. Often children don't like to () about being bullied because they have already been shamed and humiliated. Parents must be seni...sensitive to any changes in their children's behaviour. The best way for parents to protect children against bullying is to teach them self-confidence. Children who lack confidence are more likely to become victims of bullies. Parents can help children who lack social skills by enrolling them in activities outside of school. Children who display () are less likely to be intimi...intimidated by bullies at school. Parents should also listen to their children when they complain about bullying. If they see that something is wrong and they children don't talk about it they should they should keep on asking until they find out. Parents should talk to other parents about the bullying. If one child if one child is being bullied it is likely that other children are also being bullied. If they school see anything wrong () they should insist on an investigation."
5. Mrs D: Ok, thank you. Ok you are going to read it only once cause you have already read it before. Ok so now what you have to do is underline those points the main points the ones that we going to use in our summaries. Some of you have done it but others have not. So we underline our main points we going to include in our summary. So what is it that parents can do? [The only one learner it seems has read it. But she says "you have already read it" because this was homework. One young boy has his head on the desk. Many looking around quite bored. Mrs Masangu walks around the class while the class underline etc. She to individual students. This goes on for Minutes

-]. () *Haibo!* I'm not asking for this! It's not a passage- it's a summary. [Chides an individual learner]. Ok, ok, let's proceed. Looking at paragraph one, are there any suggestions given in paragraph one for parents?
6. E: No [Chorus- style].
7. Mrs D: Ok, so there is none there. Paragraph two?
8. E: No [Chorus- style].
9. Mrs D: Right. Three?
10. SS: Yes [Mumbling. Some are reading out the sentence but it is quite incomprehensible].
11. Mrs D: Ok, what is the point?
12. E: () [lots of mumbling].
13. Mrs D: That's correct. But then because it said do not quote you mustn't quote the sentence as it is from the passage. You'll need to use your own words cause instructions () instruction *laphayana ithini?* 'What is the instruction saying'. So use your //own words
14. SS: //Own words!
15. Mrs D: So parents must look out for () behaviour in the child. [Proceeds to write the paraphrased sentence on the board]. Ok, the second point? T
16. SS: ().
17. Mrs D: Yes, that's the first sentence fourth paragraph whereby parents must teach their children self-confidence...And the third one? [Writes on board].
18. SS: (). [Lots of mumbling. In general the majority of the class looks disinterested].
19. Mrs D: Yes, parents can help children who lack social skills by enrolling them in activities outside school...They must enrol their children in extra-murial activities [reads out as she writes this on the board]...and then the fourth point? [Continues writing on the board].
20. S2: ().
21. Mrs D: They must listen to their children. Mmm? What else can parents do? [Writes this on board].
22. S: ().
23. Mrs D: *Ya*, if they see something is wrong what must they do? [writes on board].
24. S: ().
25. Mrs D: Point number six?
26. S: ().
27. Mrs D: Mmm? Point number six?
28. SS: () [Different answers being shouted out at the same time].
29. Mrs D: Yes, they must speak to other parents about bullying...And the last point? [Proceeds to write on the board].
30. S: ().
31. Mrs D: *Angizwa* 'I don't hear'
32. E: Parents should insist on investigation [Sing-song chorus style].
33. Mrs D: Parents should insist that the school do investigations...So these are the seven points. So you finished the summary. So what's next to do now? [Proceeds to write on board].
34. S: Count the words
35. Mrs D: Count the number of words that you have used. Ok, count them.
36. SS: 1,2,3,4...61 [In a sing-song chorus style. Many start giggling].
37. Mrs D: Sixty?
38. SS: Sixty one
39. Mrs D: Ok then, where do we put the number of words? In brackets at //the end of the summary.

40. SS: // the end. [A lot of mumbling/shuffling].
41. Mrs D: So your summary is now completed.
42. S: ((We must mark))
43. Mrs D: No don't mark it! Don't mark it, please. You just check- check your points and then if you feel that you have to copy that and write it as your corrections, please write it down. There are so many things to consider when marking a summary so you cannot mark it yourself. There are no quotations and some people have too many quotes and if I mark I have to check how many quotations you have and I have to penalize you for that. I have to check the number of words, if it exceeds 70, I have to penalize you for that. I have to check grammar everything, spelling all that so I have to mark it myself.
44. S: (). [Students looking around and chatting while she is talking].
45. Mrs D: Ok then, do you have any questions concerning summary writing? Anything that is not clear? *Uclear? so njengoba nizobhala nje* 'Clear? So when you start writing' you will get 10 out of 10.
46. E: Yes [sing-song chorus style].
47. Mrs D: Are you sure? [Walks around].
48. SS: //Ya //Nooo [Shouts of both yes and no].
49. S: *Mam, siqala nini ukubhala?* 'When are we writing' [Student asking about the test].
50. Mrs D: I'm not sure ... *Wena kufanele ube ready* 'U need to get ready' We'll be writing only one paper. *Niyaz ukuth i English inamaphepha amangaki ?* 'Do we know how many English papers we are writing?' We'll be writing paper 1. So *upaper 1 siyawazi angithi ukuthi unani ?* 'Do we know what paper 1 has'? Comprehension passage, summary, grammar. So it has 3 sections. Section A has a comprehension passage which will be out of 30 marks, and then section B summary out of 10, and then section C is grammar which is out of 30. The total of this paper will be 70 marks. [She walks around and the class mumbles out what they know about the content of the exam].
51. S: [Whistles].
52. Mrs D: So be prepared. Go back to your work and revise it. Cartoons will be there, uh reading and editing will be there (). Don't fail your first paper! *U revise ke umsebenzi wakho* 'Revise all your work'. Ok need to check *manje abantu aba absent* 'people who are absent'. [Takes register].
53. (). [Students names called out and they respond present or absent. Lots of laughing and joking by saying upstairs instead of absent. Everything is very sing-song].
54. Mrs D: Ok, see you tomorrow
55. E: Byyye

Appendix 17

EFAL B

1. Mrs D: Right attention please! Ey, ey, ey! Ok, we need to do uh orals. We need to do our orals and finish that. It has taken us too long so we need to finish that today. All that people who have not finished make sure that you indicate to me that you have not done them. [Class extremely rowdy and learners moving about. After announcement about orals learners begin to move around and talk loudly again after being relatively quiet for a while]. Ok Buleleka number one. Ok quiet please, please quiet! [Mrs Dlamini places her chair at the front of the class and starts calling out names of different students and tells them which passage to read. She calls Buleleka as her first learner].

2. S1: () [This learner reads very softly and I cannot hear what she is reading. Reads with little finger in her mouth. Uses her finger on the other hand to keep place on the page- **finger pointing**].
“What to do now?” [this is a question in the text but it is not phrased as a question, instead the reading is monotone and flat- **monotonous plodding**]

'Like most of us,' looking up straight into her eyes, 'beat the road early mornings just when the boss's breakfast is settling nicely in the stomach. No work, no government papers, no papers, no work, then out of town.' [Does not differentiate between the direct and reported speech in tone. Everything is read in a staccato fashion- **word by word**]

'It's hard [repeats 'it's hard'- **back-tracking**] for everybody, I guess.'

'Ja.' [Omits this word]

'I know. When you feel hungry and don't have money, come past here and [repeats 'and'- **back-tracking**] I'll give you coffee and pancake.' [Does not pause at full stops and commas- **monotonous plodding**]

'Thanks, er [omits this word]-- let me call you Pinkie, shall I?' [Monotone, no pauses and no intonation in asking the question rather question read as a statement- **monotonous plodding**]

'Hm,' [long 'hmmmm' and then laughs] she nodded automatically.

He shook her hand (.)'Grow as big [adds extra words to text 'as you'] as an elephant for your goodness, as we say in our idiom [omits entire phrase 'as we say in our idiom']. He shuffled off. For a long time, until he disappeared, she didn't take her eyes off the stooping [mispronounced as stopping] figure, which she felt [mispronounced as left] might set any place on fire. Strange man Pinkie thought idly [mispronounced] as she washed up.” **Monotonous plodding** all the way through].

3. Mrs D: Ok thanks, Uh next one, Slindile. [I wonder how she could have possibly heard this learner].

4. SS: ((Absent)).

5. Mrs D: She's absent? Ok Nomfundo, read number 2 Nomfundo?

6. S2: () [Starts to read passage. This is also inaudible].

7. Mrs D: [Interrupts the learner and asks her to increase the volume of her voice]. Raise your voice a bit, Nomfundo.

8. S2: (). [Continues to read inaudibly. The other learners are very disruptive].

9. Mrs D: *Haai! eye, eye yey!* [Teacher interrupts the learner once again to chide the some learners as there are several boys dragging their chairs across the floor and creating a ruckus].

10. S2: (). [Completes the paragraph].

11. Mrs D: Ok, Wandile? Kabelo? Sanele? [As she calls out the names, the class tells her whether these students are present or not]. Ok start at number three.
12. S3: (). [The class is very rowdy. They are louder than the reader. Wondering how Mrs Dlamini can possibly hear these students. It seems to me that she is merely going through the motions. Also reads staccato- **word by word**].
13. Mrs D: That chappies (). I can't hear the words it's because of that chappies. [Chappies is a brand of chewing gum but is often used as a synonym for any type of gum].
14. S3: (). [Continues reading after teacher reprimands him about chewing gum. The impression I have is that he is reading with no understanding because of the lack of expression- **monotonous plodding & word by word**]
15. Mrs D: Ok Simphiwe?
16. S4: (). [Also inaudible like the others].
17. Mrs D: *Ey! Haibo!* [Reprimands class again. Tries to quieten down class who are now so loud you cannot hear S4].
18. S4: (). [Continues reading while rest of the class looks disinterested and looks around. **Monotonous plodding & word by word**- reading in a staccato fashion.]. "Pinkie and China panicked [mispronounced as picked] at the thought of a love affair and remained dumb [repeats 'remain dumb, remain dumb'- **back-tracking**].
'Pinkie, I've got a job at last!' [no expression- read flat **monotonous plodding**]
'I'm happy for you, China!'
'You'll get a present, first money I get. Ach, but I shouldn't have told you. I wanted to surprise you.' He was genuinely [mispronounced] sorry.
'Don't worry, China, I'll just pretend I'm surprised really, you'll see.' They laughed. [Does not pause for any of the punctuations **monotonous plodding & word by word**]
Friday came.
'Come, Pinkie, let's go.' [no differentiation between the speakers- **monotonous plodding**]
'Where to?'
'I'll show you.' He led her to the cheapjack [mispronounced] down the street.
'Mister [mispronounced], I want her to choose anything she wants.'
The cheapjack [mispronounced] immediately sprang up and in voluble [mispronounced] cataracts [mispronounced] began to sing praises[mispronounced] upon his articles.
19. Mrs D: Ok Njabulo? Ok class, class keep the noise down please
20. S5: [read in monotones and staccato- **monotonous plodding & word by word**]. 'All right, mister [mispronounced], let me choose.' Pinkie picked [mispronounced] up one article after another, inspected [mispronounced] it, and at last she selected a beautiful long bodkin[mispronounced], a brooch[mispronounced], and a pair of bangles[mispronounced]. Naidoo, the cheapjack, went off into rhapsodies [omits] again on Pinkie's looks when China put the things on her himself, pinning [mispronounced as penning] the bodkin [mispronounced] on her берет[mispronounced]. He bought himself a knife, dangling from a fashionable chain. They went back to the coffee-cart. From this day onwards, Naidoo became a frequent [mispronounced] customer [mispronounced] at pinkie's coffee-cart. He often praised her cakes and coffee." [barked at the text throughout the reading- **word by word**].
21. Mrs D: Ok thank you. Sibusiso?...Sibusiso you start at number 6
22. S6: ().
23. Mrs D: Shshshshsh ey keep quiet! Give him a chance [Interrupts S6 to try to get learners to be quiet.

24. S6: (). [completely inaudible].

25. Mrs D: Sh. Is there reading or what? Cause I can't hear anything!

26. S6: ().

27. Mrs D: Sorry? Haibo it's not done like that! What's your problem? Ok you can come and sit here. [Tells S6 to come and sit at the front of the class].

28. S6: ().[continues mumbling].

29. Mrs D: Go stand there by the wall. [Despite effort to bring him to the front- he is still inaudible. Some of the class are now jeering and laughing at him].

30. S6: ().

31. Mrs D: What is this? [directed at S6]. I can't even hear you. [Class's rowdiness contributes to the problem of inaudibility].

32. S6: ().

33. Mrs D: Shhhh

33. S6: (). [S6 continues reading for the last time. Seems that Mrs Dlamini has given up on trying to hear him].

34. Mrs D: Wheres Nokolo? Ok hey eyeyey! Just behave [Nods to next learner to start].

35. S7: (). [Reads louder than anyone else].

'What to do now?' [Read as a statement not as a question- **monotonous plodding**]. [Walks fingers across the texts]

'Like most of us,' looking up straight into her eyes, 'beat the road early mornings just when the boss's breakfast is settling nicely in the stomach. No work, no government papers, no papers, no work, then out of town.' [every second or third word is repeated-- **back-tracking**]

'It's hard for everybody, I guess.'

'Ja.'

'I know. When you feel hungry and don't have money, come past here and I'll give you coffee and pancake.' [mispronounced]

'Thanks, er -- let me call you Pinkie, shall [mispronounced]I?'

'Hm,'[mispronounced as 'ummmm'] she nodded automatically[mispronounced].

He shook [mispronounced 'shaked'- reads what's not in the text] her hand. 'Grow as big as an elephant for your goodness, as we say in our idiom [mispronounced].' He shuffled [mispronounced as 'shifted'] off. For a long time, until he disappeared [**back-tracking** -stumbles at this word but manages to pronounce it], she didn't take her eyes off the stooping[mispronounced] figure[poses a problem for her so she looks at her classmate who tries to help her], which she felt might[mispronounced] set any place on fire. Strange man Pinkie thought idly as she washed up.”

36. Mrs D: *Hai eyey!* [Interrupts learner to reprimand the class again for being too rowdy then indicates to next learner that she should read].

37. S7: [Starts to read monotone as well] “China often paused at Pinkie's coffee-cart. But he wouldn't [says 'would never' instead of what is in the text] let her give him coffee and pancakes for nothing [**Monotonous plodding**].

'I'm no poorer than you,' he said. 'When I'm really in the drain pipes [repeats twice 'drain pump' **back-tracking**] you may come to my help.' As she got used to him and the idea of a tender playfellow [mispronounced] who is capable[mispronounced] of scratching[mispronounced] blood out of you, she felt heartily [mispronounced] sorry for him; and he detected[mispronounced] it, and resented [mispronounced] it and felt sorry for her in [says 'to' instead] turn.

'Right, Pinkie, I'll take it today.'

'You'll starve [mispronounced] to death in this cruel [mispronounced] city [mispronounced].'

'And then? Lots [mispronounced as 'lost'] of them starve; think of this mighty city Pinkie. What are we [repeats 'Pinky what are we' back-tracking], you and me? If we starved [mispronounced] and got sick and died, who'd miss you and me?'

Days when China didn't come, she missed him. And then she (.) [repeats 'she' back-tracking] was afraid of something; something mysterious [mispronounced] that crawls [mispronounced] into human relations, and before we know it it's there; and because it is frightening it does not know how to announce [mispronounced] itself without causing panic and possibly breaking down bonds of companionship [mispronounced then says 'whatever' under her breath].

38. Mrs D: ok thank you. Ok next one [signals to next learner].

39. S8: Days when China didn't come, she missed him. And then she was afraid of something; something mysterious that crawls [mispronounced] into human relations, and before we know it it's there; and because it is frightening it does not know how to announce [mispronounced] itself without causing panic and possibly breaking down bonds of companionship [mispronounced]. In his presence she tried to take refuge in an artless sisterly pity for him [mumbles through this whole sentence]. And although he resented it, he carried on a dumb show. Within, heaven and earth thundered and rocked [mispronounced], striving [mispronounced] to meet [mispronounced]; sunshine and rain mingled [mispronounced]; milk and gall pretended friendship; fire and water went hand in hand; tears and laughter hugged each other in a fit of hysterics [mispronounced]; the screeching [mispronounced] of the hang-bird [mispronounced] started off with the descant [mispronounced] of a dove's cooing; devils waved torches before a chorus of angels. Pinkie and China panicked [mispronounced] at the thought of a love affair and remained dumb.

40. Mrs D: Ok ok. Nxumalo Nelisiwe [learners do not answer- everyone looking around]

41. S9: 'Pinkie, I've got a job at last!' [Repeats several times back-tracking].

'I'm happy for you, China!' [picks up pace – slightly faster than other readers yet still does not correct intone at the punctuation marks- monotonous]

'You'll get a present, first money I get. Ach [mispronounced], but I shouldn't have told you. I wanted to surprise you.' He was genuinely [mispronounced] sorry.

'Don't worry, China, I'll just pretend I'm surprised really, you'll see.' They laughed.

Friday came.

'Come, Pinkie, let's go.'

'Where to?'

'I'll show you.' He led [mispronounced] her to the cheapjack [mispronounced] down the street.

'Mister, I want her to choose anything she wants.'

The cheapjack immediately [mispronounced] sprang up and in voluble catarracts [mispronounced] began to sing praises upon his articles.

'All right, mister, let me choose.' Pinkie picked up one [mispronounced] article after another, inspected it, and at last she selected a beautiful long bodkin, a brooch [mispronounced], and a pair of bangles [mispronounced]. Naidoo, the cheapjack, went off into rhapsodies [mispronounced] again on Pinkie's looks when China put the things on her herself, pinning [mispronounced] the bodkin on her beret [mispronounced]. He bought himself a knife, dangling from a fashionable chain [mispronounced]. They went back to the coffee-cart [mispronounced].

From this day onwards, Naidoo became [says 'become' instead] a frequent customer at pinkie's coffee-cart. He often praised her cakes and coffee. Twice at lunch-time China found him relating some anecdotes [mispronounced]. which sent Pinkie off into peals of laughter.

42. Mrs D: ok ok thank you. Nxumalo, Slindile. Ehh, Petunia?

43. S10: [Asks her classmate next to her what the word 'prend' is. The text is written to convey a thick Indian accent but she does not seem to be aware of this]. 'Where you work, my prend?' asked Naidoo one day. He was one of the many Indians who will say 'pore-pipty' for 'four fifty', 'pier fours' for 'five forms', 'werry wital' for 'very vital'.
 'Shoe factory, Main Street.' [Barking at text- **monotonous plodding** & **word by word**].
 'Good pay?'
 'Where do you find such a [says 'as' instead] thing in this city?'
 'Quite right, my prend. Look at me: I was wanted to be a grocer, and now I'm [says 'I am a I am a' **back-tracking**] a cheapjack.'
 'I'm hungry [mispronounced] today, Pinkie,' China said one day. He was clearly [repeats] elated over something.
 'It's so beautiful to see you happy, China, what's the news?'
 'Nothing. Hasn't a man the right to be jolly sometimes?'
 'Of course. Just wondered if anything special happened.' [Intoned as if asking a question]

44. Mrs D: Ok Sebonelo? ...one

45. S11: ().

46. Mrs D: Eheheheheh! [Reprimands class while S12 reads- they are very disruptive].

47. S12: 'Like most of us,' looking [said as 'loo (.) king' stumbles at and breaks words into syllables] up straight into her eyes, 'beat the road early mornings just when the boss's breakfast is settling nicely in the stomach. No work, no government papers, no papers, no work, then out of town.' [Reading is staccato and pauses for long times between each syllable- **monotonous plodding** & **word by word**].
 'It's hard for everybody, I guess.'
 'Ja.'
 'I know. When you feel hungry and don't have money, come past here [struggles with this word but eventually pronounces it **back-tracking**] and I'll give you coffee and pancake.'
 'Thanks, er -- let me call you Pinkie, shall I?'
 'Hm,' she nodded automatically.
 He shook [mispronounced] her hand. 'Grow as big as an elephant for your goodness[mispronounced], as we say in our idiom. [mispronounced- at this point classmates are trying to help him pronounce fairly simple words. One girl is shaking her head as he reads]' He shuffled off. For a long time, until he disappeared, she didn't take her eyes off the stooping [mispronounced- struggles greatly with this] figure, which she felt might set any place on fire. Strange man Pinkie thought //idly[struggles with this words and spends some time trying to pronounce but the teachers seems impatient and he is not allowed to finish the rest of the sentence which ends with "as she washed up". - **monotonous plodding** & **word by word** & **back-tracking**]

48. Mrs D: //(). Nkululeko?

49. S13: (). [Seems to be struggling to get through the reading. Cannot hear anything he reads as he seems to be mumbling through it. Can hear a learners yawn quite loudly].

50. Mrs D: (). [Reprimands class in isiZulu while S13 reading].

51. S13: ().

58. Mrs D: (). [Calls next student].

59. S14: "Days when China didn't come"

60. Mrs D: Eyeyeyeyey [Mrs D interrupts S14 to reprimand an ever increasingly rowdy class]

61. S14: [She continues after teacher's interruption] "Days when"

62. Mrs D: Hey! Shh! [interrupts again]

63. S14: [uses finger pointing throughout **finger pointing**] “Days when China didn’t come, she missed him. And then she was afraid of something; something mysterious [struggles at this word and it is mispronounced] that crawls into human relations, and before we know [emphasizes] it it's there; and because it [says of instead] is frightening it does not know how to announce [mispronounced] itself without causing panic and possibly breaking down bonds [omits] of companionship [struggles and it is mispronounced now reading is very staccato]. In his presence she tried to take refuge in an artless sisterly pity for him. And although he resented it, he carried on a dumb [mispronounced] show. Within, heaven and earth thundered [mispronounced] and rocked, striving to meet; sunshine and rain mingled [mispronounced]; milk [mispronounced] and gall [mispronounced] pretended friendship; fire and water went hand in hand; tears and laughter hugged each other in a fit of hysterics; the screeching [mispronounced] the hang-bird [mispronounced] started off with the descant [mispronounced] of a dove's cooing [mispronounced]; devils waved torches before a chorus of angels. Pinkie and China panicked at the thought of a love affair [mispronounced] and remained dumb [mispronounced]. [Barked at the text the entire reading- **monotonous plodding** & **word by word**]

64. Mrs D: Ok. Precious? Four.

65. S15: 'Pinkie, I've got a job at last!'

'I'm happy for you, China!'

'You'll [mispronounced] get a present, first money I get. Ach, but I shouldn't have told you. I wanted to surprise you.' He was genuinely [mispronounced] sorry. (.)[seems to be put off track with the word genuinely and is shaking her head].

'Don't worry, China, I'll just pretend I'm surprised really, you'll see.' They laughed. [Monotone- **monotonous plodding** & **word by word**]

Friday came [mispronounced **back-tracking**].

'Come, Pinkie, let's go.'

'Where to?'

'I'll show you.' He led her to the cheapjack [stumble and sounds out the syllables] down the street.

'Mister, I want her to choose anything she wants.'

The cheapjack [stumble again] immediately sprang up and ['in voluble cataracts began to sing praises upon his articles' is completely swallowed up as she struggles with the words immediately onwards].

'All right, mister, let me choose.' Pinkie picked up one. article after another, inspected it, and at last she selected a beautiful long bodkin, a brooch, and a pair of bangles. [Staccato and barks at the text- can barely hear as she swallows words **monotonous plodding** & **word by word**]

66. Mrs D: Precious, Precious, Precious- please raise your voice!

67. S15: Naidoo, the cheapjack, went off into rhapsodies again on Pinkie's looks when China put the things on her himself, pinning the bodkin on her beret. He bought himself a knife, dangling from a fashionable chain. They went back to the coffee-cart [mispronounced and still too soft]. [Meant to be reading the following but is inaudible: 'From this day onwards, Naidoo became a frequent customer at pinkie's coffee-cart. He often praised her cakes and coffee. Twice at lunch-time China found him relating some anecdotes which sent Pinkie off into peals of laughter.]

68. Mrs D: Ok, ok, ok Precious give it to Vilikazi ()...One [Copy of sheet gets passed to next student].

69. S16: 'What to do now?'

'Like most of us,' looking up straight into her eyes, 'beat the road early mornings just when the boss's breakfast is settling nicely in the stomach. No work, no government papers, no papers, no work, then out of town.' [Reads fairly fast but merely reading the words and no expression]

'It's hard for everybody, I guess.'

'Ja.'

'I know. When you feel hungry and don't have money, come past [omits] here and I'll give you coffee and pancake.'

'Thanks, er -- let me call you Pinkie, shall I?'

'Hm,' she nodded automatically.

He shook her hand. 'Grow as big as an elephant for your goodness, as we say in our idiom [mispronounced].' He shuffled [mispronounced] off. For a long time, until he disappeared, she didn't take her eyes off the stooping figure, which she felt might set any place on fire. Strange man Pinkie thought idly as she washed up. [No expression and seems to stumble at some words **monotonous plodding** & **word by word**].

70. Mrs D: Ok thank you. Nelisiwe. Number two.

71. S17: China often paused

72. Mrs D: Ey quiet now! {Reprimands class}

73. S17: China often paused at Pinkie's coffee-cart. But he wouldn't let her give him coffee and pancakes for nothing. [Faster and more fluent than all other readers. Also has expression].

'I'm no poorer than you,' he said. 'When I'm really in the drain pipes you may come to my help.' As she got used to him and the idea of a tender playfellow who is capable of scratching blood out of you, she felt heartily sorry for him; and he detected it, and resented it and felt sorry for her in turn.

'Right, Pinkie, I'll take it today.'

'You'll starve to death in this cruel city.'

'And then? Lots of them starve; think of this mighty city Pinkie. What are we, you and me? If we starved and got sick and died, who'd miss you and me?'

74. Mrs D: Ok. [Seems please with S17. Calls next student name] (...) Number three

75. S18: [Starts off very hesitant and continues throughout this way. Can barely understand the words he pronounces because each one is pronounced so badly and several times over **monotonous plodding** & **word by word** & **back-tracking**] "Days when China didn't come, she missed him. And then she was afraid of something; something mysterious that crawls into human relations, and before we know it it's there; and because it is frightening it does not know how to announce itself without causing panic and possibly breaking down bonds of companionship. In his presence she tried to take refuge in an artless sisterly pity for him. And although he resented it, he carried on a dumb show. Within, heaven and earth thundered and rocked, striving to meet; sunshine and rain mingled; milk and gall pretended friendship; fire and water went hand in hand; tears and laughter hugged each other in a fit of hysterics; the screeching of the hang-bird started off with the descant of a dove's cooing; devils waved torches before a chorus of angels. Pinkie and China panicked at the thought of a love affair and remained dumb." [Class gets increasingly rowdy].

76. Mrs D: Ok () [Starts calling out names only six people] ((...now we'll find time)) [Checks who has not had their turn doing the oral and dismisses the class].

[Seems to me that the teacher was merely going through the motions. No feedback was given whatsoever aside from chiding learners for reading too softly. Although the audio did not clearly pick up what the learners were reading I was making notes as they read and marking them according to how I would assess my students].

Appendix 18

Focus Group with Learners

1. I: Right, let's get to know you a little bit. Don't duck behind your friend there [one learner laughs]. Ok... um where do you guys stay?
2. S1: I stay in W***** in V*****
3. I: Ok
4. S2: I stay in W***** R***** drive
5. I: *****, ok and you?
6. S3: I stay in W***** R*****
7. S4: I stay in P*****
8. I: Mhmm
9. S5: I stay in W*****, phase two
10. I: Ok and er how long have you been going to this school?
11. E: 4 yrs
12. I: 4 yrs. From grade 8 you here, and what do you think of this school?
13. S3: (). [Mumbles].
14. S1: It lack equipment. Mostly it lack equipment
15. I: Ok – like what?
16. S1: Like computers, libraries, books and lack of technology.
17. I: What else do you think?
18. S5: Lack of building ((infrastructure needs to be developed))
19. I: ok, such as?
20. S5: Classes. We need to have more classes so we can have more space to enable us to have more opportunities when we leave school.
21. I: Did you find that you were restricted in what courses you chose? Did you want to do a particular subject and they weren't offering it or (...)?
22. S4: When we came here the classes were full so we had to choose what classes were not full
23. I: So you basically chose what was available to you?
24. S4: Yes
25. I: Ok, what did you want to do?
26. S4: It's not me but the others. They are complaining like maybe they wanted to be chartered accountant but the commerce class was full.
27. I: Ok, so space has made them choose a different... anyone sitting here is in a subject that they that they don't like to do?
28. S2: (). I used to do accounting and they don't mix subjects in this school. I didn't attend this school I came here last year I used to do accounting so I couldn't carry on with my accounting studies. I had to do life sciences because they don't do subjects I used to do. I didn't used to do commerce. I used to do physics and geography, accounting and the other subjects. I didn't attend for accounting so I had to replace accounting with life science.
29. I: At grade 11? Ok
30. S1: *Ya*
31. I: Ok and you happy with?
32. S1: *Ya*, I'm happy with my class
33. I: Tell me about your use of language at home. What do you normally speak at home?

34. S1: We speaking normally we speak at home isiZulu but sometimes we mix with at least isiXhosa. Some of my parents are speaking isiXhosa but I'm not speaking with them.
35. I: Ok and you guys?
36. S4: Speak Zulu
37. I: Just Zulu? Ok so like when you are with your friends maybe you mix in some English? No?
38. S4: No [shakes head]
39. I: Just speak Zulu all the time. So you prefer that? And in class? How does it go in class? When do you find yourself going into English?
40. S4: Like reading a speech in front of class. Yes, only when you have to..
41. I: So other than that you just prefer...what kinds of things do you read at home?
42. S2: We read magazines sometimes other books
43. I: How much of time do you spend reading?
44. S2: Not very much time. I'm spending time watching TV [laughs].
45. I: Ok
46. S2: I think it's about thirty-five minutes. It depend what I'm doing at home. When I'm bored I actually read.
47. I: Ok and you?
48. S1: Usually study sometimes but not every day. When I have time to read, I read.
49. I: Ok and the gentlemen here?
50. S4: Two hours at least
51. I: Two hours at least of novels?
52. S4: Of like novels but mostly encyclopaedias science encyclopaedias
53. I: You like reading science encyclopaedias?
54. S4: ((yes it is interesting)).
56. I: So what do you want to do after school?
57. S4: Be an astronomer
58. I: Astronomer? You like the stars and stuff and you?
59. S3: I don't really like reading
60. I: Mhmm
61. S3: I sometimes study.
62. I: Why do you think you don't usually read?
63. S3: Er
64. I: Is it time or is it boring or you do too much at school or what do you think it is?
65. S3: Time. I don't have time to read. But at times I read an article in newspaper.
66. I: In a newspaper. ok and you?
67. S5: I sometimes only read sports articles mainly soccer articles. Now and then I do read and do study but not usually
68. I: So you don't read like storybooks and things?
69. S5: No [smiling shaking head]
70. I: Not for pleasure. You just you just study?
71. S5: I read sports articles
72. I: Mhmm in the newspaper? What kind of newspaper you read?
73. S5: like this soccer rite newspaper. There only soccer in it.
74. I: And that's interesting for you?
75. S5: *Ya*, it is.
76. I: That's good. And how much of the stuff you read is in English and how much is in isiZulu?

77. S4: English

78. S5: That newspaper is only in English

79. I: That newspaper is only in English. And your books?

80. S4: Most of them are in English

81. I: English

82. S3: Bit of both (.) Some of the books they are in Zulu and some of them are in English.

83. I: Mhmm

84. S2: Mostly in English.

85. I: Mostly in English.

86. S2: I read English books- only English books most of the time because I can't read Zulu properly.

87. I: Is it because you can't read Zulu properly or that there is a lack of Zulu stuff to read?

88. S2: I think it's the lack of Zulu. It's cos I don't read Zulu properly after I can't even pronounce other words that's the problem.

89. I: Ok *ya* and writing? How much writing do you do at home except for homework?

90. S2: *Ey* [Shakes head].

91. I: Except for homework

92. S2: [laughs] I don't write

93. S1: [Smiles and shakes head] I don't write

94. I: Writing?

95. S3: I actually don't write but sometimes I write (my homeworks)

96. I: Mhmm

97. S4: I write letters for my mother at home

98. I: Who are the letters to?

99. S4: They are to my father

100. I: Ok

101. S4: ((No))

102. S5: ((No))

103. I: So tell me about your experiences like in childhood? Did your parents used to read to you like storybooks and stuff?

104. S4: No they just tell us stories- not books

105. I: So when did you start reading books – when you came to school or before?

106. S5: The minute I realized I had some kind of attraction to soccer then I start to wanna know more about soccer- that's when I start maybe I was like 7

107. I: When you started reading about soccer.

108. S3: I started reading at school grade R. My mom helped ((gave me to read))

109. I: Your mom helped you to read.

110. S1: I used to go to the library to read some books mostly storytelling books. Ya I love them.

111. I: You like stories?

112. S1: Yes

113. S2: I didn't usually read the novels that much but they helped me with my homework. When I want to read I just take a book and read. Anytime I want to read, I take a book and read.

114. I: So you didn't have like bedtime stories for example

115. S2: [Shaking head] No

116. I: They never used to read like fairy tales to you and stuff like that. None of that?

117. S2: [Laughs and shakes head]

118. I: No. K um so did u start writing in school or someone teach you before you went to grade R?
119. S2: I started writing when I started school in grade R
120. I: Mhmm
121. S2: Ya, that's when I started writing and giving me a chance to practice even when I'm writing when I'm going back home cos my mother used to tell me every time I come from school I have to do my home work first then go and play that's when I started writing.
122. I: Mhmm
123. S3: At school
124. I: At school
125. S4: [Smiles and nods in agreement].
126. S5: At school also
127. I: And tell me about the use of like worksheets and textbooks in class. What do you think of their use? Is it useful to have worksheets or textbooks or both? What do you feel you would like in class?
128. S4: Textbooks are useful because only the teacher have the book and has to write on the board so it's difficult. The worksheets are also useful because he don't need to write the notes on the board.
129. I: Mhmm
130. S5: I think writing it are ((an)) effective because as you copy it from the board you can just write it without reading it. As you reading it- it stay in your head. That's what I think.
131. I: Writing from the board is nice?
132. S5: *Ya*
133. I: Ok
134. S3: I think like textbooks
135. I: Why would you want textbooks?
136. S3: Cos like some some worksheets get wasted.
137. I: Ok
138. S3: Misplace them. Textbooks- all the papers are together and you can't easily misplace the book.
139. S1: I prefer textbooks because it has got more information than sheets. Some sheets very summarized so you can't get what you want exactly.
140. S2: [Nods head in agreement] *Ya* I also prefer textbooks
141. I: Do you get textbooks in all your subjects? Which subjects do you get textbooks for?
142. S5: Physical science
143. I: Physics and Math
144. S2: Yes
145. S1: And also life science.
146. I: So every single student will get a textbook?
147. S4: We share
148. I: How do you share them?
149. S4: How do you? [confused]
150. I: When I say get textbooks- do you take them home?
151. S3: ()
152. I: So how do you share them when you take them home?
153. S4: Like today I get the book then tomorrow the other one take it home.

154. S1: But life sciences you have to buy your own book and your own study guide.
155. I: You have to buy your own study guides?
156. S1: ()
157. I: You don't get a textbook for life science?
158. S1: //You have to buy it for study guide.
159. S2: //You have to buy it for study guide.
160. I: Ok how do you feel about that?
161. S3: Not so good cos some people don't have the money to buy
162. I: What if you don't have the money? What do you have to do?
163. S2: It's hard so you have to borrow sometimes- you have to borrow cos you don't have the textbook but it's hard cos the learners they steal it from us. You buy the textbook and the following day its get stolen. You don't know who stole it.
164. I: And now for the interesting part- what do you think about the way that teachers conduct their lessons in class?
165. E: [Nervous giggle]
166. I: What do you think about it? [long silence] Are you happy? Are you not happy? Do you think they can do things better? Or they doing a good job or...?
167. S4: They doing their best
168. I: They doing their best
169. S2: Cos it depends- a teacher they teach they don't have only have 1 class they have to teach many different classes cos there's not enough teachers here in school. So it depends on that class because most of the children don't understand everything together.
170. I: Mmm
171. S2: *Ya*, so it depends on them but they are trying their best.
172. I: You know your teachers are not going to get into trouble if you say anything different. Is there anything that they can do, do you think, that will help you more. Anything you wish that could happen in class that would make the lesson better.
173. S1: I think we do all we listen to the teachers we are easily getting information so there's nothing bad about them. They teach us very nice- we understand them we don't disturb or do while he is teaching us. It's better for them.
174. I: Ok. Maybe individual attention? Do you wish you had more individual attention? Like more time for each student? Like teachers could spend a little more time with you- with your problem?
175. S4: Most of the time in physics when I go down there to see him- he is always busy. So I wish we had a different science teacher because when I go to others they are telling me. But he is always busy.
176. I: Ok. So some teachers are actually too busy to answer the questions you ask. What about asking questions in class? Do you have a lot of time where you're allowed to ask about things you don't understand?
177. S5: The teachers do stop to ask "is everybody getting everything clearly?" Then everybody says "yes" and the lesson continues.
178. I: Has there ever been a time when you didn't understand but because of the lecture is almost going to end or because of the time you didn't ask?
179. S2: [Shakes head mouthing "no"]

180. S1: In Physics the teacher who is teaching us is very fast and she's or he's always busy all the time cos he's the principal of the school. He don't get time to teach us properly his class and he's faster we don't really get- get him exactly it's where the classes are getting affected.

181. I: So it's only like Physics cos the teacher is so busy.

182. S1: Yes, we wish we could get new teacher.

183. I: Is that affecting your marks?

184. S1: Of course

185. I: The way you perform.

186. S2: Most of the class they don't pass because we don't understand him properly and at the time he used to expect something and then he will jump to another thing then he'll explain it again. Then we get confused. He's telling us 2 different things at the same time.

187. I: Mmm

188. S2: And then he will tell us we not going home at half past 2 we have to home at 4 o'clock because we have to stay and understand it better. Then when we waiting for him sometimes he just go to the other class and explain and teaches the other class. He's very busy.

189. I: So he's so busy that sometimes he forgets that he has you guys?

190. S5: He make sure that he comes.

191. S1: He makes sure that he comes to the class to say maybe he have to go to the other meeting then he get a phone call that he have to go as a principal so he stop like that and leave us.

192. I: So, er does he make up for the lectures for time in class?

193. S2: [Nods head] Yes he do.

194. I: He makes up for it.

195. S5: I don't think it's effective because let's say he leave the class before the break. He try to recover the time by saying stay after school but half the class is not happy with that. If you in class studying and not interested in what is being said to you I don't think that you would get in your mind.

196. I: What would help you study better?

197. S1: Physics?

198. I: Physics other subjects also.

199. S1: I think we should get another teacher

200. I: Mhmm

201. S1: Who is gonna teach us the way we want. Who we as learners can understand him what he's saying. I think it's that one. We must get a good teacher who will have time and I think it's that.

202. S4: Studying ourselves

203. I: In what ways? Studying?

204. S4: Ourselves

205. I: On your own?

206. S4: ()

207. I: What? How is that gonna help you?

208. S4: Its things like maths one time you do it in class you forget if you go home and keep practising it stays

209. I: You think students are not doing that?

210. S4: Most of them are not

211. I: You think learners are not doing that? Why do you think they don't do that? 212. S1: I think in physics they don't know- they don't understand so you can read something you don't understand.

213. I: So you can't do the examples if you don't understand it. And in the other subjects?

214. S1: Assignment for Physics you can't do it because you don't understand . You have to understand the theory first before you do it or you will be able to practice yourself at home. I think it's that. That's why they don't understand the topic- have to make some examples of it.

215. S3: I think it's nice to open some study groups and study together.

216. I: You don't do that?

217. S3: I don't do it.

218. I: And in class- do you help each other a lot?

219. E: (Nod) Yes

220. I: You help each other a lot? So if you don't understand something- would you rather ask your teacher or would you rather ask your friend?

221. S5: I like friend.

222. I: Why?

223. S5: Cos the friend you talk to him and he understands where you coming from because he's in your age- u talk anyhow in between us but you still gonna get what you want.

224. S3: It depends- sometimes I ask a teacher sometimes a friend.

225. S2: I think you cos you get different knowledge from both of them. The teacher can explain it then you can understand it better from him or her than others cos the learners knows it not that very well.

226. S1: Teacher is good.

227. I: Teacher is better.

228. S1: (Nods) Cos she or he has got more information. Maybe we can go to the teacher and ask teacher for to help you so that you gonna get it more.

229. I: Ok

230. S1: More information

231. S4: Some teachers are better than others

232. I: Some teachers are?

233. S4: Some teachers are ((of them)) it's good to ask sometimes that (). There was a sum that I didn't understand. Then I asked the maths teacher grade 12. I did the sum and go to her and say this is how I did it. Then she tell me it's not like that. Then I go myself at home and do it then teacher was marking it was say correct.

234. I: Ok

235. S4: See some of () it's good to ask

236. S1: Some of the teachers are not good at explaining

237. I: Mmm

238. S1: And that also affect us

239. I: Like an example of that?

240. S1: Like I can say the principal. I can say he's not good at explain and making you clear of what he's doing- I think it's *ya*.

241. S4: ().

242. I: Ok. Any other things that you think will make learning better for you?

243. S5: Get more teachers. It will be more easier

244. S4: Maybe we should go into the lab more. In a test maybe they ask- they give you an apparatus that you don't know and ask what is this. You don't know cos you never used that before.

245. S1: Or ask you the colour of a chemical. What colour is a chemical so we don't know. You can't ask something that you will never ever see before.

246. I: So you don't go to the chemistry lab?

247. S1: No, no

248. I: There's no physics lab?

249. S2: There is but...

250. S1: [interrupts] But it is not done

251. S4: It's all old

252. I: It's old equipment?

253. S3: //Yes

254. S4://Yes

255. I: So you hardly go to the physics lab or do you go?

256. S3: The chemistry lab its done but we don't go

257. I: So you don't know what certain compounds look like?

258. E: [Nod heads] Yes

259. I: How do they expect you in a test to know what a compound is? Do they expect you to read the text book?

260. S1: Yes maybe they expect because the books are have all of them

261. I: So they tell you that magnesium is this colour and you have to know.

262. S2: Yes

263. I: Without having seen it? And you haven't done...Have you done any experiments?

264. E: [Shake heads] No.

265. S3: Only do theories

266. I: Only do theory?

267. S4: Teacher write on the board and tell us this and this...

268. SS: [Interrupt and laugh]

269. S4: It is not easy to understand because you not doing it yourself. You take them down and just forget them. You don't have a textbook- it was writing on the board and it was rubbed before you write it. You forgot it- forgot it.

270. I: Never seen a test tube?

271. S3: We have seen it

272. I: You've seen a test tube?

273. S1: Yes

274. I: The teacher brought it to class?

275. SS: No

276. I: Then when have you seen a test tube?

277. S5: In grade 9 science teacher bought them

278. I: Ok. They didn't do anything with it though?

279. S4: Just showed us this is a test tube

280. I: And all the other apparatus- pipettes and things like that?

281. E: [shake heads]

282. I: No? Haven't seen them? So actually having a lab will make things better for you? Doing the experiments for science and for biology. The biology part- have you seen specimens?

283. S1: Um biology even a microscope we haven't seen them

284. I: Never seen them? So there's no specimens here in school?
285. S1: But we know that there is a specimen and a microscope but we don't know how they look.
286. I: And you'll be tested on this stuff?
287. E: [Nod heads] Yes
288. I: In the exam?
289. E: [Nod heads] Yes.
290. I: Ok Anything else that would make it better? [Silence] Ok. This term disadvantage is used to describe your school right- do you think it's a fair term?
291. S4: Yes, it's a fair term. Because we don't have teachers and it's a poor school.
292. S5: This school needs to be shut down.
293. E: [laugh]
294. S5: Maybe parents should be given a 4 year advance notice to tell them that the school will be closed in the next 4 years t try and get another school
295. I: Is it the classrooms and stuff- you don't like them- they old?
296. S4: The desk shakes- in the test the desk dance.
297 .I: Oh ya! Ok. And what else about this school makes it disadvantaged? Except for the classrooms and what else?
298. S4: Security
299. I: Security- what about security?
300. S4: Middle of last month one of the boys they fought and stabbed each other and () they brought in ((knives)) they would not have if they was a security there.
301. I: Do you feel unsafe?
302. S1: Yes
303. I: Is anyone just allowed to come in and out of school?
304. S1: Anyone? No [shakes head].
305. I: Who controls who comes in and out of school?
306. S5: No one.
307. I: No one. So anyone can come in and out of school?
308. E: Yes
309. I: And how does that make you feel?
310. S2: Uncomfortable because we not safe at all. I think when I think last week 2 boys stab each other with knives. I don't know where they got it- it's not safe cos there's no one searching us if we have knives in our bags ().
311. I: Mmm. And the student er learner population in school do you think that most of them are from poor homes? [Silence]. Do you think that makes this a disadvantaged school also- the fact that the learners are from poor homes?
312. E: [shake heads]. No
313. I: That doesn't make it disadvantaged?
314. S4: That doesn't.
315. I: The fact that they come from poor homes and they don't have a lot of income?
316. S4: I don't think that
317. I: Why do you say that?
318. S4: Because that is something that is inside of you- if you want to achieve so being poor doesn't affect you there.
319. I: So you feel being poor is not an obstacle to being a successful learner?

320. S4: No
321. I: Do you agree with that?
322. S3: *Ya*. If you got a purpose and you got a destiny nothing can stop you to achieve it
323. I: So what about textbooks that you can't afford to buy? Is that not an obstacle?
324. S4: No. Because you got the library. You don't have to pay to use books. So you can use books from the library.
325. I: Ok. So what about the students that can't eat during the day- they can't concentrate? Does that not make them disadvantaged?
326. S2: No, at break time there are buns that are given.
327. I: They give them buns during break time?
328. S2: *Ya* [laughs]
329. I: So no one has any excuse?
330. S2: [shakes head] No
331. E: No
332. I: So you feel being poor is not an excuse for not succeeding?
333. S5: No [shakes head]
334. S3: Like if you are poor you don't wanna be poor forever. I rather change. Like I stay in a shack- I like one day to stay in a house. So if I want to stay in some house I have to work hard.
335. I: Yes. Ok . So what do you think of those people who say 'pass me even I failed because I'm poor'.
336. E: [Laugh].
337. S2: Ay, it's not right. You choose what you want to be in life. Because you poor you can't say that I'm nobody. There a lot of people that are poor today they are business men.
338. S1: And it's poor people are more successful they know what they want in life. So you don't have to say poor people have to fail or do something wrong.
339. S2: It's up to you what you want to do- what you want to change in life. It's not because you poor- no one has the right to be saying that.
340. S3: If I say don't fail me because I'm poor- it's unfair to other students who that pass clearly. You are failing but pass because you are poor – not fair.
341. S5: I think that being poor should be the thing that drives you to success because you know like so I saw my parents maybe poor I know how hard it was for them to get me to school ()
342. I: *Ya*. So you are all very motivated?
343. S4: *Ya*. That's what makes us () some students who are poor have made it to university.
344. I: So you don't agree with that term 'disadvantaged' for poor people?
345. S4: No
346. I: No. You don't agree? All of you? Ok. You feel strongly about that?
347. S2: Yes
348. I: Ok. Alright, guys anything else you want to talk about?
349. E: [All avert gaze and giggle].
350. I: About your subjects at school or about the new library they're building
351. S2: Today the teacher was showing us the physical science textbook they gonna have in library so ().
352. I: So when the library opens it's gonna be useful. You'll be there a lot.
353. E: Yes
354. S1: I think that mixing subjects in school can help learners in school. Because now we are more affected in doing hard in doing hard subjects. Like me I can say if you want to be a

climatologist, you have to study geography. And you can't do the some of the learning areas but you have to do the only hard subjects. Your purpose is to choose physics. You have to do also life science and geography when you know that you don't need them. So I think mixing subjects can achieve- the school get more better results in matric.

355. I: Do you know what the requirements are for going in that subject in university- for doing that career?

356. S1: [Shakes head] No

357. S4: I think computers- they are no computers there.

358. I: Did you want to do computer studies?

359. S4: Yes

360. I: And why did you not do computer studies

361. S4: There is no one ().

362. I: There's no computer teacher?

363. S4: No. () they share the same computer.

364. I: Do you know already what you want to do after school? Any of you?

365. S5: I'd like to be an architect.

366. I: And are you doing the subjects that will are going to get you in that course.

367. S5: Geography

368. I: Only geography?

369. S5: Life science, physical science

370. I: Technical drawing?

371. S1: No we lacking- we are also lacking of subjects here in school. *Ya*, I think so that's why our matric is failing like this. In other school you see in high school like in V***** high or M***** most learners in matric are passing cos they mixing subjects. They can also do physics, maths and also tourism and be able for them to go through. I think so that's how they do. Here in school it's bad for us. We have to choose only hard- only the hard subjects and we don't want some of them.

372. I: Cos that's the combination they giving you to choose from?

373. S4: The teachers need to inform us about areas because we be able to choose subjects- need them informing us about areas. Some of us choose subject and don't know what they want.

374. I: So the teachers need to do their job properly?

375. S4: Yes

376. I: Nothing else you want to say? Comments? Thank you for your time I really ap...(rec stops)

Appendix 19

Focus group with Teachers

1. I: Let's talk about code-switching in class. Do you do it? And when you do it
2. LO: Sometimes and also the meaning of instructions
3. I: The meaning of instructions?
4. LS: Sometimes like in life sciences the bigger words it's not easy to explain them
5. I: So, you're saying that it will be easier to have um a sort of vocabulary in the learners' first language for life sciences?
6. LS: That is a main issue. I'm not sure maybe they lack clarity whether the textbooks can be more clear. I don't know maybe sometimes if it's the textbooks or whether the questions are not understood.
7. I: So basically the language issue is for the life sciences
8. LS: There's gaps also maybe build the gaps between the grades you see.
9. I: Mm
10. LS: Like maybe in grade 11 maybe you find that there are gaps. We are moving away from the OBE so now they have just seen the thing for the first time. We expect maybe grade 10 and 11 that they have finished most of the concept
11. I: So what you basically doing in grade 11 is teaching for 3 years
12. LS: Yes
13. I: That's quite a mission for you to do
14. LS: //Mmmmm
15. LO: //Mmmmm
16. I: So, how do you overcome that?
17. LO: Extra time for you as a teacher. But you know the kids. Kids are kids. You give them the homework and finding out that they have not done any of it and he's left behind
18. I: Anyone else experiencing the same issues
19. G: I generally find that English secondary language learners- the examiners don't consider them. Simply why, there'll be questions asked in the examinations write about 5 or 6 lines on a question that carries 2-3 marks. Now by the time the learner comprehends that entire 5-6 lines he's lost. Rather than asking one short question the learner is ready to give the answer for but that question. So questions don't take into consideration the second language of the learners.
20. I: So you saying there's a fundamental way in which the matric exam
21. G: I'm sure. We brought this issue up with our examiners and our superiors too. But that's my subject department
22. I: Couldn't the people setting the exam then argue, why aren't you teaching the same question techniques in class. You know where you teach the answering of questions in such a convoluted sort of way.
23. G: You can't – you need to deal with the second language learners. The first language learners get away. But the second language learners are disadvantaged. They need to get the questions little bit more concise.
24. I: So it's not actually that the student is grappling with the content, they grappling with the question itself.
25. G: Right. They tell us- we knew this but we didn't understand the question

26. LO: Yes and also its very difficult to overcome that in class because of the big numbers. You need to focus on a small group to teach that particular technique and also a thing like maths lit- it's most word problems. So I'm wondering if there's a way of changing that. Because with the numbers we have in class, its waaay too, we have to monitor on a daily basis, individually and their paces will be different. Some will be on that level and others will be on another level so you need to intensify that individual attention so it's very difficult for us. The numbers are too big
27. I: What's your average class ratios?
28. LO: 50 and more
29. I: So as educators it's difficult to give that individual attention. So is it fair to say that there's no individual attention or there's some individual attention?
30. LO: You know how we do it, those that are interested, that want to learn stay and go to the teacher during the break. That's when you pick up that this one is really serious and wants to learn and really grasp this sort of thing so they would come to you and you will know exactly who to attend. But it doesn't happen all the time others wait for you and you end up not spending time. So there is varied individual attention.
31. I: So the ones that are shy to come and approach you, they will just sort of fall by the way side.
32. LO: Exactly. And also those that you pick up because you end up even cutting down on the activites that you give. So the ones that you would pick up or monitor their improvement you can't do that because this class is too big. One day you come and mark the left row. The other day you come and mark the right row. The other day you too tired you only mark 10 just to see that somebody has grasped. If three out of ten has grasped the idea then you go on. Ya, a lot of them are left behind. And then at the end of the month you concentrate all your marking. And what about those who didn't get it at the first of the month and then you can't do anything about it because you have taught so much.
33. I: Yes...ok any other obstacles you face?
34. LO: Support- there doesn't seem to be enough.
35. I: Support from what? From management?
36. LO: From the department at first and when it comes to management I mean they can't do anything if they don't get support themselves. They can't be supportive if they are not supported. I think it's a departmental issue. We don't get enough support- we just left here. And workshops are far apart. Sometimes we go for 3 days and then we are on our own. Sometimes we do the whole years work. Is it NCS that's coming out?
37. G: Ya
38. LO: We might go for 3 days and come back and they will just expect us to know everything
39. I: So do you know what's happening with all these changes and stuff?
40. LO: No! we are just told that NSC is going out and the books that we have now will be phased out and the new books will be coming in. SO this year we are not adding on whatever books we have because we are expecting that next year it will be phased out. You know like when there was like OBE books and then now there is another type of books. Ya, so we don't know how much change is coming and how to carry that. Ya, we don't know what to anticipate
41. I: So theres not enough support in implementing this new stuff
42. LO: No we haven't seen it yet. So its very difficult for our internal management to say ok come one lets support you 10'
43. I: Ok so one of the things I'm looking at is this whole concept of disadvantaged because universities are trying to move away from access for redress and more towards access for success. So basically they're saying well we've had so many years where we've tried to address this whole

situation. Now we want to take in students from disadvantaged areas but we want those learners who we think are really gonna make it you know in university. So I want to know what is it what does disadvantage mean to you as an educator who is in a school that is labelled disadvantaged because of the emis score and all of that. What do you think of that label of disadvantage? You think it's a fair reflection? What does it mean to you?

44. M: I think if you talking about some of the schools have not been built the disadvantage is still there

45. LO: But is disadvantaged the same as previously disadvantaged? Coz that's what we called now previously disadvantaged. We have to know where to draw the line and I think our schools are still disadvantaged. That's a good question!

46. I: You think its appropriate to call this school disadvantaged?

47. LO: It is. Although it has its negativities

48. M: I mean you got schools that haven't got toilets till this day. How you expect children to work in school. So, that disadvantage is still there and also we This is interesting because isn't having no toilet just as bad as having one that doesn't work

49. LO: Also if we are in a disadvantaged community I don't think that much that it would help to be advantaged in a disadvantaged community

50. LS: So what happens when you have building that look good but what happens

51. LO: What happens is that we sit with kids who are from a disadvantaged community and the things that they would do here they will be thinking of their being disadvantaged like stealing things and vandalising certain stuff and also being hungry for the whole day and also doing drugs and all the negative things that you bring into the school so its even if the buildings can look fine it's the community that we service can bring the school backward

52. G: Also taking it from that point some of the families from the community and households parents are not too bad off are actually sending their children to so called advantaged schools so what we are sitting with? We are sitting with the disadvantaged children they are in our school so so when it comes to quality. You know the department always stress about quality I tell them you know what they better quality is leaving our school and going to other areas. Its impacting on us. See because every time the department mark our performance through results and we tell them you know what it's not the fault of the teachers not doing work, it's just the quality that we don't have. Some of the better children are going to other schools. Now these are all factors

53. LO: And I think it's something that has gone on for too long. Telling the kids that they are disadvantaged and doing nothing about it. It becomes a a a...

54. I: You call yourself disadvantaged

55. LO: It becomes a a

56. G: Stigma

57. LO: Stigma yes yes You are disadvantaged so you can't do anything for yourself um you can't take yourself out of this situation they don't even know why they are disadvantaged so it just becomes a stigma that's there so they just think of themselves as disadvantaged and good for nothing

58. G: That's why you put the blame back onto the department straight back on the door of the department

59. LO: Mm that's right

60. G: I'm here 11 years, 11 years it takes the non-governmental organisations that sustain our school. The department has done absolutely nothing for the past 11 years only now they decide to

build another school. They should realise that we are in a disadvantaged community and we need a proper high school.

61. M: When we went there I thought what happened here. They scoring very good marks. All the best ones are going that side

62. LO: Also they get out of this mentality of being disadvantaged

63. I: You think if they came to this school, would they still be top performing students?

64. LO: We've had some top performing students who have not been affected by all of this. We had this one young man who went to ukzn and he's a geologist now. Some do survive not as much as we would like

65. I: But the critical mass doesn't

66. G: You see initially it was top students because when the school was built all the parents thought about was bringing their students here. Initially we were getting 80% 90% pass rate. So what has happened no progress has been made the department has not improved our surroundings, those better quality students are gone up. So we take in to sustain our numbers and we are getting the not so good quality students and now our results are going like that [gestures downward motion]. That's why I say the department didn't assist us to sustain our performance

67. I: What do you think the problems are with these not so good quality students?

68. G: Definitely socio-economic

69. LO: Ya

70. G: Most of our children are coming having nothing to eat at all and they minds are not functioning

71. M: You see they looking at it like this *Victory Secondary they look at a schools there and every year they getting like 90% and psychologically they think we rather go to a school like that so that's how you lose all the good ones

72. I: And in terms of resources, this is a new library. So the fact that you have a library does it improve the situation or the fact that there's hardly any books here

73. LO: Um this is quite new- no kid has been here to use the library so it's like we've never had a library before. And, and this is through our own efforts not the departments and we are still in the process of solicit more books to fill this library cos we don't want nonsense here we want books that work, quality books that kids can read. So that's why its delaying because sponsors are coming but not as fast as we want them to but we getting there on our own. I mean this is a lot

74. I: And things like labs

75. LO: We also have a sponsor for a computer science lab. It's there. And most importantly the counselling. Because most of the kids here are sick. I mean emotionally, psychologically. The socio-economic situations are not very good their backgrounds are not good so we need people to come and consult with them. Because sometimes it becomes too much for us. The kids are lazy. They don't even want to work they are just lazy. You give 2-3 pages that you have to read first- they don't want to do that.

76. LS: They don't have parents who can support them

77. LO: They don't have comprehension

78. I: So their reading speed n stuff is not so good. [Shakes head]. So you basically have to do everything for them in class.

79. LO: Yes

80. LS: Ya it looks like that actually

81. I: SO in terms of the peer learning and stuff. In some of the lessons I've observed there's a lot of peer interaction

82. Lo: //mm

83. LS: //mm

84. I: Which is quite good. So is there a lot of that in the class?

85. Lo: Ya there is a smaller number in the sciences classes. Because they have to admit a smaller number to cater for the science. But the other classes are too big. So you give them a chance to do that and it becomes bad. So even if you attempt to do that it's for a short while because you have to bring the class back to order so that you can do some work with them again. So you end up otting to dictate and just get out-((Which is never used btw))

86. I: Just tell them what to do and that's the lesson

87. Z: isiZulu Looks outside- time to go

88. I: If there are any other issues put it at the back of your questionnaire. Ok, thanks a lot

89. E: Thank you, bye!

Appendix 20

Geog A

1. Mr P: Erase the board- erase the board before you go. Make a note now on Wednesday you're writing a test. [Learners are given maps]. Share then if we are short. Sit next to her (.). Oh the professors are here now [addressing 2 learners who have entered the class. Class is very noisy and unsettled. Learners are walking around. Meanwhile the 2 latecomers stroll to their seats].
2. E: [Laughter].
3. Mr P: See here- see here. You're relaxing, like on holiday. Why you're didn't stay at home then? [Walks down one row and looks at learners books]. I won't start- I won't start... Lemme tell you, 11A- 11A I finished this section. They finished the next section on magnetic declination. They finished the magnetic bearing they are gone three-four sections ahead- 11A. I can't help it. I'm moving with them because they are ready to work. You guys are on a go-slow. [2 mins into the lesson].
4. SS: Go slow [laughter].
5. Mr P: Right come on, you gotta start to get serious now. You gonna write the test and there are sections in the test on Wednesday that you have to cover today and tomorrow.
6. S1: Ow sir, this Wednesday? True bearing.
7. Mr P: Yes, true bearing coming out. So if you don't watch it you gonna fail the test.
8. S2: Multiple choice it's ok.
9. Mr P: True bearing? What is true bearing? What is true bearing? ().
10. E: (). [All shout out different answers. Some read out from the worksheets].
11. Mr P: The angular distance- angular distance between ?
12. E: 12 points
13. Mr P: You got that? Right. Now listen when you get a question- all of you watching? Hey, hey what is that? The question will read (...). Now if you are talking now you gonna disturb me I 'm gonna take it as the section is completed and I'm gonna move on. Do you understand? Howa look there, look there! [pointing to a two disruptive learner]. Your Girlfriend and boyfriend problems, take outside not in the class. Now come on, right, right. Angular distance between? [Interrupts lesson several times for discipline issues. This in turn disrupts the flow of the lesson].
14. E: Two points
15. Mr P: Now that means you'll need to find 2 points. The question must give you 2 points. You must identify 2 points. K, now, did I give you the steps? The 4 steps or the 3 steps?
16. E: No [Mumbling].
17. Mr P: What's the first step?
18. E: Identify 2 points
19. Mr P: Identify?
20. E: Two points
21. Mr P: What's the second step?
22. E: (). [Mumble answers].
23. Mr P: Draw () from. So you draw a cross where it says from. Ok what's the third point?
24. E: Join the two points. [Mumble together].
25. Mr P: Join the two points. And then the last point is that?
26. E: Measure them.

27. Mr P: That is true bearing. 4 steps you learn, you got no problem. Ok, identify the two points, draw the cross where they say from, join the two points, then you measure your angle. Are you all ok?

28. E: Yes

29. Mr P: Now I'm gonna give you 2 points on the map. You gonna calculate for me true bearing, ok? Everybody write the question down. Watch here- watch here. I'll write this question down as an exercise. Ok I'll write this question down as an exercise. You must calculate the true bearing. Are you all with me?

30. E: Yes

31. Mr P: Are you all with me?

32. E: Yes

33. Mr P: Right, calculate number one. What's happening to all this chawks? Calculate true bearing of windmill K10 from reservoir. [Writing on the board while learners copy]. This is the question in the test. Assume you are writing a test- on Wednesday this is one of the questions- five marks. Five percent calculate true bearing of windmill from reservoir. Got it? Take this question down answer it (). Remember the steps. Hey, *howa* minister of education relaxing, relaxing! [Speaking to student who is not taking down the question] Hey (), how you gonna pass? I think mam is videoing the wrong class. I think you recording the wrong class [speaking to me]. Because this class and 11B we'll put together and make one grade 12 next year. You know that huh half of you are going to fail? Ask some of our friends sitting here. They was last year 11D and 11B this year we got one class together 12B and D together. Because they not serious. You don't wanna work you must stay at home. Don't waste your parents' money and come to school. Stay at home or find a job. .

34. S3: What job sir?

35. Mr P: Cleaning somebody's car or go sell in the market and make some money. Don't come here and waste your parent's money. You measured the angles? You identified the two points? Hey you found the two points? [Walks over to learners at the front of the class who is not doing her exercise but rather some other homework]. Hey, hey hey! See this- see this other work. [Takes pages from learner and proceeds to tear it up]. With other work we tear it up like this. [Then pulls worksheet from other subject away from students]. But see like this here- this is school property I rather keep it with me. See, see this? This is maths [proceeds to tear more pages from same student and takes all torn pages and throws into bin]. You don't wanna work- I told you, must stay outside. You don't wanna work must stay outside. Hey boy girl. You want your own? Why you can't share with them? Right listen when you drawing your cross- when you drawing your cross make sure (...) that's why you don't follow (). When you're drawing your cross, make sure your cross is perfectly straight. [Walks around class checking work]. Right, you got your cross good. Very good. Ok, you got the idea. It's gotta be straight. That's it. Good. Have you drawn the cross? Right for the last time all of you just watch here. [Claps hands for attention]. Watch here, right hey [claps again]. Right, shhh! Question is: identify step one. Identify- you found the two points?

36. E: Yes

37. Mr P: Step two: Draw your cross from there. You did that?

38. E: Yes

39. Mr P: Step three: you join the two points.

40. E: Yes

41. Mr P: You know what should be there?

42. E: Yes

43. Mr P: Right, let's see what answer you get. I caught you, you know why I caught you, because you'll find that the reservoir is the R in J9 and there's a F in J9 which represents a windfarm. And I'm sure many of you never think of that because the cross was already there. So you assume that is the place. There cross was already there ().

44. S5: Oh

45. Mr P: *Ya*, the cross is showing here [walks around checking work- looking at S5 work]. Let's see what you got 144 –the angle is 144. Listen. Oh ok. Good. See here hey- Windfarm- windmill one and the same thing. Ok. Your key doesn't show you windmill but windfarm. How's it going? [Starts walking around class checking more work]. Right good, good, good- you're making progress here. You're got your work done there?

46. S2: Yes

47. Mr P: Right, let's see you, let's see you. Yes good, good. Measure the angle now. Very good. [Class discussing what they have done except for four students at the front who are not. One of these students is the girl who was doing "other" work in class]. Right, ok settle down. If you said 144-145 we'll accept that answer. Right, let's go onto another one. Let's go to the other one. [Class doing example]. Right here is exercise number two. Calculate the true bearing of 464 FA from 459 E9. Now I want you to work this out and I want you to get me the correct answer. Now boys and girls watch here- watch here very carefully the board otherwise you gonna get lost. Right, just watch here. RA- you not gonna listen you not gonna cope. Ok, are you following? If the angle is on this side, this is east (...) that is west. If your angle is on this side you measure straight with the protractor to get the answer. But if the angle is in the west- if it's there or if it's there you gonna measure with the protractor in an angle. [Demonstrates by holding the map on the board]. K –the answer you get- whatever answer you get on this side you add 180 to your answer- 180° to your answer. Are you all with me? [Projector would have been helpful].

48. E: Yes

49. Mr P: Your angle is on west, you add whatever answer you measure- you add 180° to it. But if your angle is in the east, you don't add anything. Do you follow what I'm saying?

50. E: Yes

51. Mr P: Do you follow what I'm saying?

52. E: Yes

53. Mr P: Because your measurement is always taken from here. If you measure your angle from the west then you measure your angle and you add 180 but if it's from the east then your angle is very straight. K, work it out.

54. S6: (). [Asks question about previous exercise].

55. Mr P: I told you're but you're won't listen- but you won't listen. Right everyone pay attention now. I accepted 144-145. Accepted. Work the next one out. (Starts to walk around). Found the two points? (Addressing a learner). Step number two. What is step number two? [Asks entire class while walking to the front]. Draw a cross at the point where it says? From. Hey, is it saying from 464? What it says from?

56. E: 445

57. Mr P: Right ,why you drawing your cross there? Got it? Don't forget now- you draw your cross from. [Walks around again]. Yes, good girl, very good girl. You measured your angle? Right, now you just got to measure this angle. You gonna measure this angle now I'm gonna show you. Where's the protractor- 1 minute. You gonna measure this angle now right. Where's the angle east or west? [Speaking to S7].

58. S7: East

59. Mr P: This side is east. You don't even know directions how you came to grade 11? Must be straight, must be straight. [Shows her how to hold protractor]. Right this is west. What you must do?

60. S7: Plus

61. Mr P: Plus?

62. S7: 180

63. Mr P: Good. Alright- you measured the two points? You joined the two points? [Asking class]. Don't forget your steps please. Don't forget your steps. [Walks around class checks work]. Ah good , very good. [Claps]. Very good. Very good work [claps]. Very good! Aha! Ha! Sharp, sharp, sharp, sharp. Right. You measured the angle? What you got? Very good. [Students query about work]. Right let's see. What you got? The angle is on this side? *Ya*, very good [continues in this way with more students then goes to the front and claps hands for attention]. Right, shhh right. We doing true bearing when we calculating the angle from the top from the top from north. You understand? Are you following me? We calculating from the top from here we calculating the angle. Now I want you to look at the bottom of your map. Open your map and look at the bottom. You'll like you'll like own this school- one map each! [Addressing 2 students at the front of the class who are not sharing]. Look at this two – one map each hahahaha. And I must sit with the torn map! [A student then proceeds to take one map away from these 2 students as 4 students were sharing at the back].

64. SS: Sharp, sharp. [Some learners mock teacher laugh].

65. Mr P: Alright. All of you, let's look at the bottom. Are you all with me?

66. E: Yes

67. Mr P: Right. I'm gonna read through it and you gonna follow- watch here. The information that's here just above the index you know that index grid just above that [pointing on map while talking].

68. E: Yes

69. Mr P: It says "mean magnetic declination". Are you all with me? Are you all with me following?

70. E: Yes.

71. Mr P: Mean magnetic declination is $12^{\circ} 57'$ west of true north. West of true north. Now watch here [wakes up goes to board]. Watch here. We've calculating our angle- when we calculating our angles from now. All that we've been calculating is from this north line that is true north. Hey, hey, hey you piece of nonsense (). [Speaking to some rowdy learners]. Right now. You don't watch it you we gonna see you again. How many times now? 4th time? [talking to a learner who has repeated grade 11].

72. S8: Nah 2

73. Mr P: If you don't watch it, it will be three times. Please, please concentrate. Now. Mean magnetic declination(...). Are you following what I'm doing?

74. E: Yes, sir

75. Mr P: West of true north- west of true north. Can you see this is true north?

76. E: Yes

77. Mr P: West of it. Can you see that diagram there? One is true north and the other one is? The other one is what north?

78. E: (). [All mumble].

79. Mr P: The other one is mag north. Can you see there? It's called a Magnetic north. That's where we use the compass. You know the compass needle- the compass that needle is always to

an angle. Not straight up. That is a magnetic north. Now we need to calculate this angle. That's what we need to calculate. That angle is what we call magnetic declination. Magnetic decli?

80. S9: nation

81. Mr P: We coming up to something new. We coming up with some new concepts so just follow please. Ok, watch here now. That angle that you need to calculate. See professor again! Not interested! [The whole flow of the lesson is disrupted by chastising the one student who was not paying attention and fidgeting].

82. E: [Laughter].

83. Mr P: Maybe, maybe you'll never know- maybe his grandchildren I'll be teaching and he'll be sitting same place.

84. E: [Laughter].

85. Mr P: Now, the angle that we are calculating boys and girls, if you look at this angle we are talking about here this angle here this diagram here. That angle is called magnetic declination. That's the angle we are gonna learn now to calculate. You follow?

86. E: Yes

87. Mr P: Now there are certain steps we are going to use to calculate that angle. Are you all with me?

88. Yes

89. Mr P: Right, let's read on. What's the next statement? What's the next statement? Mean annual change is 7' westwards for the period 2000-2005. Now, what they talking about here? They talking about because of the rotation of the earth -now you gonna get lost cos you all looking glazed- you all looking like you all smoked

90. SS: How? [Protesting].

91. Mr P: You're concentrating?

92. E: Yes

93. Mr P: The angle that is 7' westwards. You know that 7' westwards there changes- because of the earth's rotation the magnetic field changes. Sometimes that angle it either gets smaller or it gets bigger. What I'm talking about gets smaller and getting bigger? See this angle here? If this thing goes- if this thing comes down that means it's coming this direction, westward. Is this angle getting bigger or smaller?

94. E: Bigger [mumbling].

95. Mr P: So when you read this information on the map calculate 7' westwards. When it tells you westward you must know this angle is getting bigger. So wherever you are doing calculations you are adding, you are adding information when it says west. If it says eastwards, it means the angle is getting what?

96. E: Small [mumbling]

97. Mr P: So what you gonna do? You gonna start subtracting. Are you all with me? That's the importance of the mean annual change that says a certain amount that's on the map 7' then we gotta calculate that angle. Now, let's do an example of how we gonna calculate that angle. Do we have time? You'll tell me I got no time now. I bet you. Right this is how the question will read: Calculate magnetic declination for 2005. [writing on board]. Calculate magnetic declination for 2005. Now boys and girls, to get marks you gonna use the information from the map. Step 1. Here's the formula this is the steps you gotta follow. You must take this down ok? But first listen. You gonna write the information on the map. You gonna write magnetic declination for 2002 because that's what they giving you. What they giving you? What's the magnetic declination for 2002? For 2002 what's the declination? 12°

98. E: 57
99. Mr P: How many minutes?
100. E: 57
101. Mr P: Good, good that is what they giving you. Annual change, what's your annual change?
102. E: 7° degrees
103. Mr P: Annual change?
104. E: 7'
105. Mr P: 7'. What direction?
106. E: Westward
107. Mr P: Westward. You got step number two? Can you see that? Now let's go back to the question. For which year you want?
108. E: 2005
109. Mr P: Which year was this?
110. E: 2002
111. Mr P: So you gotta work out the a difference. So we put down there difference in years. 2005 minus 2002. How many years?
112. S10: 3 years
113. Mr P: 3 years. Ey, you can subtract hah.
114. E: [laughter].
115. Mr P: Right, now we gotta find a total change. You'll put down total change equals. You'll take your annual change 7' you multiply it by difference in years- 3 years equals to 21'. That is your total change. Are you all with me?
116. E: Yes
117. Mr P: Right, thereafter we gotta work out magnetic declination for 2005. So MD 2005 equals to? you'll put down magnetic declination 12° 57 ' now comes the interesting part westwards. When it's westwards we?
118. E: Add
119. Mr P: We?
120. E: Add
121. Mr P: So we put down 12 57 plus 21. What you get? You'll get an answer 12 78. Can you see that? Can you all see that?
122. E: Yes.
123. Mr P: Right, but now comes the interesting part. Listen very, very carefully. How many seconds make one minute?
124. E: 60
125. Mr P: Yes. You all agree with that? 60 seconds give you one minute. How many minutes will make 1 degree?
126. S11: 60?
127. Mr P: 60. 60 minutes equals 1 degree. Ok, you remember when we did grid reference from one square to another was 1 minute was 60 seconds ok? So from 1 from 60 minutes you gonna get 1 degree. Can you take out 60 here? Can you take out 60 here? You can take out 60 here. There's 78 minutes. You can take out?
128. E: All
129. Mr P: 60. We if take out 60 we are taking out 1 degree. You can change this from 12 to?
130. E: 13

131. Mr P: To 13 and what we gonna be left with? [Class does not respond]. Now see here, we just took out 1 degree. 1 degree is 60 minutes so basically we took out the 60 minutes. Do you follow what I'm saying?

132. E: *Yebo*

133. Mr P: T 1 degree is equal to 60 minutes. If I take out 60 minutes- I'm taking out 1 degree because 1 degree is equal to? //60 minutes

134. E: //60 minutes.

135. Mr P: Are you all with me for the last time?

136. E: Yes [mumbling].

137. Mr P: 1 degree equals to 60 minutes so if I take out 60 minutes from my figure I'm taking out? //1 degree

138. E: //1 degree

139. Mr P: I'm taking out the 1 degree I'm adding it to 12 and I'm left with. What I'm left with?

140. E: (). [Mumbling].

141. Mr P: That is your angle thirteen degrees and eighteen minutes. That is your angle. The magnetic declination for the year that they asked you. Now please, take that down neatly. Ok. And step by step because guaranteed I'm gonna ask you in the test. [Learners chat amongst themselves as they take down the examples]. You see the ministers! Ok don't forget to bring your protractors on Wednesday cos I'm not gonna allow you to share- share amongst yourselves. Fold my maps please- fold my maps please. Please fold my maps.

Goes around collecting maps

142. S: No money sir

143. Mr P: Please fold my maps. Please fold my maps. [Walks around collecting maps].

144. Mr P: You gonna do work like that next time? [Speaks to girls in front].

145. S: Yes [Nods head].

146. S: Maybe sir. Sometimes. Because...

147. Mr P: Because what? [Walking away. Boy wakes up from seat]. Where you going? Oh you wanna go smoke? You gonna go smoke now huh? I bet you I'll find cigarette in your pocket! [Directed to group of 4 boys who continue to laugh. They walk out of the class].

148. Mr P: Don't forget test on Wednesday! Tomorrow I see you? [When group of 4 boys leaves- he give announcement].

Appendix 21

Physics

1. Mr M: Right the next chapter is here. [Mr Masondo enters class and proceeds to hand out worksheets. There is a learner at the board erasing writing with a tissue]. () [Starts to read the worksheet but is distracted by this learner's shenanigans].
2. E: [Laughter].
3. Mr M: Now we have to look at Colombes law and under this we, we learn about charged bodies. Let's look at the field around a charged body. How many charges do you know? A positive charge and? [Class is still quite noisy and Mr Masaondo speaks in a very low tone that is inaudible most of the time competing with the noise].
4. E: Negative charge
5. Mr M: Here is a body that is positively charged. How do we detect- how do we detect the direction of the field? Electric field lines around any charged body? We can have a negative charged body or a positive charged body – how do we detect what do we use to detect direction of the electric field? What will happen if we bring a positive charged body to a positively charged body? [Begins to draw the diagram on board].
6. S1: It will ().
7. Mr M: What will happen if we bring a positive charged body near a positively charged body?
8. S1: Repel
9. Mr M: It will repel. So that means if I place a small body here and one here [Gesturing]. It will move away and that will be the direction. Now what name is given to that small tes...? [Draws on board. Asks question but inadvertently answers it- he starts to smile].
10. S2: Tesla charge
11. Mr M: Tesla unit, ok. So when we bring a positively charged body to a positive charged body so what will happen this will gives us () this shows us the direction of the electric field lines around a positively charged body. Ok. The lines called electric field lines. Page? What's this page?
12. S1: 84
13. Mr M: 84. You got it, the information is there. So what, so these are called electric field lines and around the charged body we call that a field. It's a field around a charged body. So this here is a positively charged body. What will happen in case of a negative charged body? In which direction will the tesla charge move? It will move?
14. S: Outwards
15. Mr M: So the direction will be...As we move closer to the object, what can we say about the electric fieldlines? Are they closer to each other or are they further apart to each other? I'll repeat the question, as we move closer to a charged body what can we say about the "closelness" of the electric field lines? Electric field lines as we move closer to the charged body. Are the lines closer to each other or are they further to each other? [Draws on board].
16. S: Fur- further
17. Mr M: As we move closer to the charged body what can we say about the electric field lines? Are they closer to each other or are they further to each other?
18. S: Close
19. Mr M: The closeness of the electric field lines means what? Tells us what about the field? The closer the lines the, what the field?
20. S2: Stronger

21. Mr M: *Ya*, good! The closer the lines the stronger the field. And the further the lines?
22. S: The weaker the field
23. Mr M: That means that the further away that object will experience lesser force on it. Now once that body experiences less force, is that body in the field or out the field?
24. SS: Out! [Random shouts].
25. Mr M: It is? It is?
26. SS: Out
27. Mr M: You cannot play a ball when you are out of the soccer field. So you only play the ball when you are inside the soccer field. So the body will experience a force of repulsion nor attraction when it is inside the field. Now definition- what do we understand by electric field? Electric field? What do you understand by electric field from this now? Electric field, what do you understand about that?
28. S3: It is a region in space where a charged object experiences an attractive or repulsive force.
29. Mr M: It is a region where this body- this body is experiencing what type of force? Attraction or repulsion?
30. S: Attraction
31. Mr M: And what type this body here?
32. S: Repul(...)
33. Mr M: So we are going to cover the two cases. A field is a region- it's a region (...). [Starts to write definition on board].
34. S3: (...) of space
35. Mr M: Leave the space. Where a positively charged body- or let's say a positive test charge posi-tive test charge experience?
36. S3: Experience attraction
37. Mr M: Experience what? A force of attraction or?
38. S3: Repulsion
39. Mr M: Repulsion. I think that the question the question that number 10. Let see this worksheet- number 10. Now you'll be able to answer number 10. Remember the worksheet I gave you yesterday?
40. S: Yes
41. Mr M: Number 10 now. What was the question in number 10?
42. S: Describe electric field
43. Mr M: Describe an electric field. So we now be able to describe an electric field. [Points to the definition written on the board]. Now what can you see?
44. S4: Sir, can't see.
45. Mr M: Electric field is the region where a positive- positive test charge experiences a force of attraction or repulsion. So now you can go through that thing. I got some few questions for you on page eighty-four. What does q represents? [Now erases board and picks up worksheet].
46. S5: Charge
47. Mr M: That's q . Represents? Represents what?
48. S: Charge
49. Mr M: Charge. What do the lines in the diagram represents? The lines in the diagram. What does it represents?
50. SS: () [Mumbling].
51. Mr M: The lines- the lines- the lines represents?
52. S: Electric field

53. S3: Not the movement of charges?

54. Mr M: The lines represents the direction of the field. There is something that we use to give us the direction of the field. It's called the positive test charge. So the lines are called what?

55. S6: Electric field.

56. Mr M: Electric field but the question is what do the lines in the diagram represents. They represent the?

57. S3: Direction of the field

58. Mr M: The direction of the? The direction of the field on a positive test charge. This shows us that the test charge is moving around the body of the positively charged and it shows that when it's a negative test charge it's going to move in that direction which represents the field direction. Direction of the field when a positively charge is placed in it. What do the dotted lines represent? () now if we place a test charge at A right can you see in the diagram?

59. S: Yes

60. Mr M: If you place a test charge at A, will its field interfere with the field of Q? Explain your answer. You see where Q is?

61. S: Yes

62. Mr M: If you place a charge, a positive test charge at A and Q there (...). Now what- the arrows are telling of the charge of Q. The arrows are telling you what's the charge of Q?

63. S: ().

64. Mr M: No. Or you looking at A. Ok at A, what is it? What is the charge there? Positive. So what will that positive charge experience there? Mm?

65. S: Repulsion.

66. Mr M: And B?

67. S: Attraction.

68. Mr M: A force- a force of a?

69. S: traction.

70. Mr M: If we place a test charge q, that's small q at point C. You see the C on top?

71. S: Yes

72. Mr M: Will q experience a bigger or a smaller force than at point B? Look at C and B. Who is nearest?

73. S: C

74. Mr M: Take your ruler and measure from q to C and from q to B

75. SS: C [Random shouts].

76. Mr M: C is nearer than B. Now who's going to experience a greater force?

77. S: C

78. Mr M: C will experience a greater force. As you move closer to the charged body the lines get closer and the field is stronger. (.). Does the field stop at the end of the field lines we have drawn in the diagram? Give a reason for your answer. [Pauses for an answer but learners stare at him blankly]. Does it stop?

79. S5: No (tentative)

80. Mr M: What's the reason for not stopping?

81. SS: (). [Mumbling- learners seem confused].

82. Mr M: What's the reason for not stopping? Lines on the board everybody can see it? There are arrows at the end of each line. The arrows means what? The only thing that happens to the field - it gets weaker and weaker and weaker. Now let's look at- now we got single charged bodies there. Let's look at two positively charged test bodies. Now the question is draw electric field lines when

two positively charged bodies are together. That's A and B. Now how will the lines move here? How will it go? Will it go that way or away? [Goes to board].

83. S: Go away

84. Mr M: Away, right. What's going to happen here? Away. What's going to happen here? Away. And this side? Away. This side? Away. That side? Away. Just here- what's going to happen to the centre? This will repel it and this will repel it and the test charge will end up moving that way *neh?* [Continues to draw on board].

85. S: Yes

86. Mr M: And this side will move that way. Same thing will apply here too. It will move that way because the two bodies are repelling the test charge simultaneously. Ok, so that means it will experience a force that results that way. That's all. That's to show the electric field lines between 2 positively charged bodies. Let's look at a negative and a positive body how the lines move there? [Students busy writing after he explains but moves on to next question].

87. S7: Attract each other

88. Mr M: So they won't attract there won't be any attraction between the 2 bodies but the lines will move from which body to which body?

89. S: Positive to negative

90. Mr M: The lines will move from positive to negative. [While lesson going on much noise outside- some learners are loitering about]. What- and I can see this in a test. What can you say about the strength of the field around each of these bodies? I'll give you 2 words. Is it uniform or is it non-uniform? Is the field around each charged body uniform or non-uniform?

91. SS: Non-uniform

92. Mr M: Non-uniform. In other words it's not the same around the body so as you move further from the charge it gets bigger and bigger so it's non-uniform. The field- field strength it's a new word we going to get for field strength its field intensity. The field strength- its non-uniform for this here. Now let's look at two parallel planes/plates. This plate is here is positively charged- positively charged- positively charged and this one here is negatively charged. If a test charge is placed on a field which direction does the test charge move?

93. SS: Outwards

94. Mr M: It will be repelled and attracted. So the field lines will be from positive to negative. Positive to? [Pointing to the upper and lower planes respectively].

95. SS: Negative

96. Mr M: Uniformity, non-uniformity? What can you say about the field strength now? [Pauses for answer. No one answers]. So the force- if you have a charge there A, and you have a charge somewhere else here C, the force that will be experienced by A is the same as the force experienced by C. Why?

97. SS: (). [Mumbling].

98. Mr M: The reason is the field is uniform between parallel plates. Between parallel charged conductors. So the field is uniform between two parallel plates. Now we said q stands for the charge and q is the symbol and C stands for charge and what symbol we use for force () [answers the question quickly himself].

99. SS: P

100. Mr M: So there is a new symbol we going to look at for now E. The E stands for intensity. *Awumeke besenzani manje?* 'What, what were we doing?' Right, so E stands for intensity and this stands for force. And this charge [Someone at door interrupts and Mr Masondo speaks to them in isiZulu].

101. S8: And q
102. Mr M: q stands for charge. We said- how do we define pressure in grade 4? Pressure in grade 4? Pressure? How do you define pressure in grade 4? [Blank stares]. How do we define pressure in grade 4? Pressure . Or grade 5? Pressure? Pressure, pressure, pressure.
103. SS: (). [Mumbling].
104. Mr M: Grade four? Grade three?
105. SS (). [Louder mumbling].
106. Mr M: Pressure is what? Force over? So we said in grade 4- we said that pressure is force over?
107. S: Area
108. Mr M: Area. The heel of *ntombisane* 'girl' and the heel of a boy which one is painful if it press. The heel of a? [Shows hand].
109. S: Girl
110. Mr M: Why? Because of the area. The forces exerted on the smaller area and the pressure becomes greater and becomes more painful but the heel of my shoe will be less painful because of the area is small. Now I'm talking about the force that's being exerted on a charge. If you take a charge here the force that is exerted on a charge here is known as the field intensity. That's how tense how greater the charge is that is intensity. So intensity is given by $E=f/q$ and the units for intensity is newton per coulomb. Newton per coulomb the question is: Calculate the intensity. The intensity is f over q.
111. S9: (). [Asks teacher a question. Mr Masondo only addresses question only with her as he hands out more worksheets].
112. Mr M: Right, check page eighty-eight. Page eighty-eight - the pages I've given you now...right the application of the formula if you look at page eighty-eight: $E=f/q$ then $f = Eq$ do you see that?
113. S: Yes
114. Mr M: We making f the subject of the formula so $E=f/q$. Now if you make f the subject of the formula now f will be equal to qE . If ever you need calculate the force and they've given the charge from this formula from coulombs law (), this force is the same as that force. Now you take this equation qE you take it equal to qQ over r^2 . Calculate for E equal to q what is done on the left hand side is done on the right hand side. So your E is equal to kq all over r^2 . This is another formula that you have to calculate for intensity. First formula for intensity is $E=f/q$ and the second one is $E=kq/r^2$. There is one formula we have left now where we will calculate for the intensity between 2 parallel planes. Now let's look at the example. There the example. Calculate the strength intensity -is the synonym of strength- calculate the strength of an electric field that exerts a force of 16 IA. Now how do you calculate that? What are we given there? [Reads out question].
115. S11: Force. Force.
116. Mr M: We are given the?
117. S: Charge
118. Mr M: What are we looking for? Which formula we going to take- which formula we going to take out of these two formulas here?
119. S: $E=f/q$
120. Mr M: $E=f/q$ and then what is our f there? Our f is?
121. $6 \times 10^{-8} / q$ [(Mr Masondo writes this on board and says it while writing)]. What is our q?
122. S: 3×10^{-9}

123. Mr M: And our nano- and our nano is 9C and our answer will be in newtons. So 6 divided by 3 is 2 and 8 minus- minus 9.
124. S11: 1
125. Mr M: minus 8 plus 9. Oh you coming in, sorry mam! [Other teacher opens door. Period over]. So it's going to be what? 9 minus? what it's going to be? 10 newtons, right. You can go to example 2 and move to example 3. Now this is the electric field lines or the field intensity. From the field it's around the charged body. How strong the field is within parallel plates. Field intensity (). You were given field intensity. Right, my research how far with my research? Due date is on Monday
126. S: How! No, no, no. You said 2 weeks. [Shocked/protesting].
127. Mr M: *Ya*, that's this coming Monday. The information is available on the internet and Monday you submit
128. S: Sir!
129. Mr M: Monday. Anytime Monday
130. S11: After school
131. Mr M: Monday. It can be 7 o' clock in the morning or after school as long as it's Monday
132. SS: (). [Mumbling].
133. Mr M: You need to come before 12 o' clock () I want you to go to Spar.
134. S: Spar?
135. Mr M: *Yebo* 'Yes'. Internet. *Yebo*. () R5 per hour.
136. SS: (). [Students protesting this going to Spar request].
137. S12: *Haai!* R20 per hour
138. Mr M: Nooo five rand for thirty minutes. [This is the cost for the use of the internet] No, you won't spend more than fifteen minutes. Go to internet. After internet you go for google. You press in your question press enter and then you wait for it
139. S12: ().
140. Mr M: She did it yesterday, huh? She did it yesterday. It will take you less than fifteen minutes.
141. SS: (). [Still protesting about going to Spar].
142. Mr M: She did it yesterday and he did it. Now, shh! Shh! Now do me one favour [me emphasized – signaling that homework is to satisfy the teacher]. This homework I gave you- I want to give you some marks for that. Please write it neatly, it must be ready for marking on Monday. Number (). [Points to learner].
143. S: seven, eight, nine
144. Mr M: And today?
145. S: ten, eleven, twelve, thirteen.
146. Mr M: Monday, please neatly you'll get marks for it. So today I don't want to see you go home. But your going home means homework. [Walks out after last instruction].

Appendix 22

Maths B

1. Mrs D: Zama () ...Is it a he or a she? [Gives out books and asks about the names of students].
2. SS: He[Chorus-style].
3. Mrs D: Is this a he or a she? [Holding up the book].
4. SS: Sheeee [Shout out].
5. Mrs D: Ok, let us mark eh, last week's (...) and thereafter I'll mark the exercise books. So our exams won't start this Wednesday. It's only the grade twelves that are starting this Wednesday
6. SS: Yes, yes
7. Mrs D: You will start yours in the last week before we close
8. SS: Ohhh
9. Mrs D: That's good or bad news?
10. SS: //Good
11. SS: //Bad
12. Mrs D: Mmm good or bad? [Turns to board while asking this question].
13. SS: Bad, bad [Shouts out. Students are still walking in and out of class].
14. Mrs D: Bad? ...Can I have 5 of you who will come to the board?
15. S1: Yees
16. Mrs D: So the one I gave you on page 261, exercise 10.1, number 1, c and d.
17. SS: Yeah, yeah
18. Mrs D: () it's 10.11 [talking to herself as she writes. Writes the questions on the board which has been subdivided into 5 sections for each example. While she is writing on the board the learners are chatting and looking bored]. You see they don't have the textbooks so we tend to waste a lot of time writing by on the board....let us not make noise. Let us not make noise! [Turns towards me to explain why she's writing it all on the board. It is because there are no textbooks for the learners. Class is rowdy as she continues to write on the board so she reprimands them]. (.)And then number 2 I have given b and c? [Turns around from class to ask].
19. SS: //Yes
20. SS: //No[Still very unsettled, rowdy and moving around].
21. Mrs D: Ok, do the first one for us [Starts reading out the question. Mrs Duma has taken app 8 min to get to this point where the e.g. is actually being done. This is because she has been painstakingly writing four different problems on the board. A learner walks up to the board and starts to do the example]. We all know that a triangle has got 3 sides and 3 angles. Then the question asks determine the equation of the perpendicular bisector. Is it possible for you to explain while you are writing? [Speaks to learner who is at the board doing the example].
22. S2: Maam?
23. Mrs D: Is it possible for you to explain to them while you are writing?
24. S2: () *La sizo calculator I equation yalolayinosuka la ku B uza la ezansiozoba perpendicular ozohambakanje, ozohamba la.* 'Here we will calculate the equation for this line that start from B to here at the bottom, that will be perpendicular and that will go like this'. [Points to what he has done and explains entirely in isiZulu except for words like perpendicular].
25. S3: What () . [Some think it's funny and ask questions].
26. S2: () . [Proceeds to explain].
27. Mrs D: Shhh!Quiet!

28. S4: *KhulumaiEnglish, shuthawyziiEnglish* ‘Speak English, you mean you can’t speak English?’ [S2 continues to writes and explain in isiZulu but then writes without talking for a while].
29. SS: Haibo! [Exclaim indicating that what has been done is incorrect].
30. S2: Huh? [Begins to erase what he has written].
31. S4: (). [S5 gives S2 the correct information to use on the equation].
32. S2: *SqalangoY* ‘We will start with Y’ (). [Carries on with the equation and explaining in isiZulu].
33. S4: *O X njelabamfethu?* ‘These are X’s?’
34. S2: *Le i gradient yalolayini lo oshona le o perpendicular nalomasesiyimultiplayaizoknika u negative Imasiyimultiplayaizosinikaba? Shutheyalanakuzobauba?* ‘This is the gradient of the line that goes this side that is perpendicular to this one, then we multiply, it will give us -1, if we multiply it, what will it give us? Then what will be the answer to this?’
35. S4: *Kuzoba u 2* ‘the answer will be 2’
36. S2: *Besesisebenzisa le gradient le, nalamapointslawa, uktholainahamapointslawa, uktholai equation yalolayini. Usebenzisa I equation ethi $y=mx+2$* ‘Then we use this gradient, this one and these points to get these points to get the equation for this line. You use the equation $y=mx+2$ ’
37. S: *Uyitholileigradient* ‘You have found the gradient’
38. S2: *I gradient sesiyayaziukuthi iwu2. Sesizo substitute lama points lawaakwi multiplication ne gradient. U Y wethu u 3, M =?, $Y3+C$. $3=6+C$. $-3=C$. $Y=2X-3$. I equation yalolayini lo oshonaphansi* ‘Now we already know the gradient is =2. Now we are going to substitute these points, the ones on multiplication and a gradient. Our Y IS 3, M?, $y3+C$, $3=6+C$, $-3=C$, $Y=2X-3$ ’
39. S5: *iequationyalapho?* ‘Is that the equation?’
40. S2: *Le I perpendicular bisector asikwaziukucalculaor I midpoint* ‘This is a perpendicular bisector, we can’t calculate the midpoint’
41. S4: *Hhaysyakwazi* ‘No we can’
42. Mrs D: (). [reads out question again]. Now which 2 things you need to calculate? () to which (). [Speaks to whole class when S2 finishes on board].
43. SS: Each point [Chorus-style].
44. Mrs D: (). [Carries on with explanation].
45. S2: *Sikhonalesisokuqala mam isona o calculator I median ksona, I median ewu DM, usuka la uzakwi median, la kuthiwa I perpendicular bysector* ‘There is that one sum we did first where we calculated the median on. The median is DM from here to the median and where it is perpendicular to the bisector’. [Queries what she is doing].
46. Mrs D: Who told you that ()?
47. S2: Next point
48. Mrs D: How do you calculate that?
49. S2: () [Explaining the logic behind what he is doing].
50. Mrs D: So last time when we did that sum we calculated 2 things. One is the gradient and two is the midpoint of the perpendicular side. And then...*I gradient le oyicalcalathileewu – half, ozothiumausuyimultiplayangaleoyitholileiknike u -1* ‘The gradients the you calculate which is half, then you will multiply it with the one you have found , it will give you 1’
51. S2: *Bukake mam uyakwaziukuyicalculator ngo – half* ‘See mam, you can also calculate it using half’.
52. Mrs D: *Ya I correct* ‘Yes you are correct’, second one is correct
53. S2: *Uyakwazinokuyitholakanjalo* ‘You can also get it like that’

54. Mrs D: Then I'm worried about your 2 points. Where are the coordinates of your 2 points?[Speaks to S2].
55. S2: *Lana sizoyenzakanjanike mam ngobakhiwa u DM? Askwazukuyi calculator I perpendicular bisector* 'How are we going to do it here mam, because here it says DM? We can't calculate a perpendicular bisector'[Continues to explain].
56. S: *Isdomu, hhawemaaaaaaaaa* 'You are so dumb, it's unbelievable!'
57. Mrs D: That is another sum. Do it your own way. So at the end what was the equation? Ok so you all got y is equal to $2x-5$ except Mr Ntuli?
58. SS: Yeeees [Chorus-style and some laugh quite loudly at S2].
59. Mrs D: ()
60. SS: Yeeees [Chorus-style].
61. Mrs D: Ok, we need to go to the next one but to me we need to calculate the mean point and the gradient[Walks back to board].
62. SS: Yeeees[Chorus-style].
63. Mrs D: Ya, don't erase- don't erase it you gonna go back to it later[Talks to S2 still at b]
64. S2: *Sekmelesi calculateama points, ama points e median. Sesthathalentokesiya substitute sizosebenzisa lama pointslawaaphezulunomaungasebenzisamaphayikhoining* 'No we have to calculate points of the median. We take ((this)) substitute using points above. It doesn't really matter which one you use. There is absolutely no problem'. [Explains as he attempts the 2nd eg].
65. Mrs D: So are we all happy with the coordinates of point x?
66. SS: Yes [Very loud].
67. Mrs D: We all got 2 and -1?
68. SS: Yes [Very loud- sounds playful].
69. Mrs D: Ok, so how do we go about calculating the equation that line?Line ()?You get 4? 4over 1?
70. S2: (). [Continues to explain].
71. Mrs D: What about him? Are you finished?
72. S: Yes
73. Mrs D: Ok, let us go back. So the median for ()
74. S: Yes
75. Mrs D: Ok so let us go back to this one. Last time I told you f you can remember that if you determine the equation of the perpendicular bisector we calculate the gradient as well as the mean point. So, let us do it in that way. So he has calculated the meaning that the second gradient in order for us to get a product of - 1 to get a gradient of -1 the second must be positive 2 so if we calculate *AMA COORDINATE E MID POINT* 'Calculate the midpoint of the coordinate'. How do we get our coordinates point M? *u m uyicentreka AC* 'M is the centre of AC.[Goes back to the first e.g. that was on the board. As she explains on the board most of it is in isiZulu and each step she asks the class for the answer/numerical value of what she is writing. The response in a sing-song chorus but can't distinguish who is saying what]. Then how do we go about finding the equation? We use this *cordite eka m ne gradient yiphi, le ewutho, sizothi so x is?* 'We use M coordinate and which gradient to get the value of X?'
76. S: 2
77. Mrs D: Then $2x2$
78. S: 4
79. Mrs D: [Continues writing]. Then finally the value for c will be?
80. S: 5

81. Mrs D: 5 or -5?
82. S: -5
83. Mrs D: -5 therefore, our final equation is y is = to $x - 5$. Let's look at the answer at the back of our textbooks to see if this answer is correct or this one [Points at the S2's answer and then her answer and asks class to compare those two different answers with the answer given at the back of the textbook. Strange request since majority don't have textbooks]. Ok which answer is it?
84. S2: (). [Asks teacher to look at his textbook- queries].
85. Mrs D: You looked at the wrong number. This is the wrong number y is = to ()...ok number 2 you all got? [Goes to S2 and shows him which is the correct answer at the back of the book. He grins sheepishly].
86. S: Yes
87. Mrs D: Number 3 *uthi*() [reads out question]. So the first thing before we can find the coordinates of the point of intersection, we have to find the equations.
88. S: Yes
89. Mrs D: 2 equations using the given information. So how do we go about finding the first equation?
90. S3: ().
91. Mrs D: Which () do we use?
92. S: $Y = x + c$
93. Mrs D: Ok using this point our y is = to 2. M is X is?
94. S: -2
95. Mrs D: *Sesi substitute u s ngo c* 'We substitute S with C'(). [Explains but at each step she pauses to find out if they are with her and prompts answers].
96. S: ().
97. Mrs D: Then 0 times -2 is 0. Then finally the second equation is?
98. S4: $2x + 2$
99. Mrs D: $-2x + 2$ this equation 1. To get the second equation, we do the same thing. Y is= $mx + c$. Then you substitute y in this place by -2. [Learners shout out answers as she is explaining]. Our m is?
100. S: 2
101. Mrs D: Our x is?
102. S: 0
103. Mrs D: We want to find c therefore in this case is?
104. S: -2
105. Mrs D: Y is = $mx + ?$
106. S: 2
107. Mrs D: $+4 - 2$
108. S: Eh
109. Mrs D: (*angithithinasifunaama coordinates e point of intercection*...so what do we do with these?
110. S: Solve it simultaneously. [Sing-song chorus].
111. Mrs D: So if we solve these simultaneously. Ok can you give me the first equation?
112. S: $Y = ?2x - 2$
113. Mrs D: $Y = 2x - 2$. This is equal to 1. The second equation is also equal to 1. So this is equal to?
114. S: ().
115. Mrs D: So this is [continues with the example as learners call out answers].

116. SS: Yes, yes [Majority seem to understand].
117. Mrs D: Ok, can you see?
118. S: Yes
119. Mrs D: Is there anyone who would like to do number c for us?
120. S5: Yes
121. Mrs D: *Ufunauksenzela, hambauyoza* 'Do you want to try it in the board (solving the sum). Go ahead and try it'. [Extends hand with chalk in it towards S5].
122. S5: *Ngizozama* 'I will try'. [Begins drawing on the board].
123. Mrs D: *Usuqedile, simtholilesonke u half. angithisiyakhumbula last time laphayanaukuthingathiumaumba bona lento ethi* if The line through this point which is parallel to the y axis, *ubomaneuthi e qationyalaphoi $x = -4$ kuchazaukuthiuzothi $y = -2$ ngobalaphayakthiwe parallel to the x axis shuth e qationizothi $x = -4$, kahle kahle laphayanabekthiweni?* 'Are you done? Did we all get half? Remember that last time I mentioned that if you see this 'if the line through this point is parallel to the y axis', this is how you solve this equation is $x = -4$ and that means $y = -2$ because of the parallel line on x-axis and the equation will be $x = -4$ '. [Explains the entire example in isiZulu prompting class at certain points but has taken over completely from S5. Seems in a hurry to finish].
124. Mrs D: The next one, "show that the following lines intersect at one point and state the coordinates of that point." Show that the following lines intersect at one point, *sizobananjanikeukuthilabolayinibayaintecector* at one point? 'How are we going to work out? See that these lines intersect at one point'. [Silence]
125. S2: *Bazobukakmina* 'They will copy from me'.
126. Mrs D: Can I rub this? [Wants to erase what's on the board i.e. previous examples].
127. SS: //Yes
128. SS: // no, how? [Some say yes and some no].
129. Mrs D: So let us first solve the first 2 simultaneously (). We must solve the next two equations simultaneously (). So our first equation: $2x - 3y + 5$. This is our first equation. The second one we have: $x + 2y = 8$. This is our second equation. So what must we do to solve these 2 equations simultaneously? [Waits for answer. No response- blank stares]. So let us make, let us make use of the second equation by making x the subject of the formula. So if we make x the subject of the formula it means that we must transpose this 2y to the right hand side. So we end up getting x as a part of a -2y. Then we take this as our second equation. And then we substitute equation three or we substitute x is = to this in equation one *kuleya equation lakukhonakhona u x sibhala* 'instead of writing x you must write $x - 2y$ '. *Okeyakesimubhalenike* 'you must write' -2y. Ok so we are doing $2x - 3y + 5 = 0$. This is 2 open the bracket instead of writing write $8 - 2y$ close the bracket $-3y + 5 =$ so you see now we are finding one variable in this equation so it will be easy for us that way to find the value of y. Then we multiply out here $2x = 8$ is? [Some learners now beginning to participate. Mrs Duma writing on board and explaining as she is going along. At times the learners chime in in a sing-song way for obvious substitutions in the equation].
130. S: 16
131. Mrs D: $2x - 2y$?
132. S: 4y
133. Mrs D: $-3y + 5 =$?
134. S: 0
135. Mrs D: What is $-4y - 3y$?
136. S: ().

137. Mrs D: Then we take the constant terms to the other side. $U16+5$ is? [No answer]. //21.
138. SS: //21
139. Mrs D: Then if we take 21 into the right hand side it will become -21. And then we divide both sides by //7
140. SS: //7
141. Mrs D: Therefore the value of y is 3?
142. SS: ().
143. Mrs D: -21 over -7 the answer is?
144. S: 3
145. Mrs D: Then to find x, to find x let us use u equation 3, so *sizothi* 'we will say' $x=8-2y$. Then we substitute y by 3. Its 8-6 which is?
146. SS: 2
147. Mrs D: Therefore, *amacoordinateepoint* of intersection using the first two equation *kuzobaubani*? 'So coordinates of a point of intersection using the first two equations will be?'
148. S2: *Bazobukakimila* 'They will copy from me'. [Comments].
149. Mrs D: Ok, using the third, *laphaku* third equation, *sivumelanengokuthiu 8 ulinganano -2y* 'Do we all agree that using the third equation that 8 is equal to -2y?' Let us take this equation as our first equation and then the second one is $3y-4x=1$. Our second equation. Then! The second equation *ne* third equation .No instead of writing x you write?
150. S: $8-2y$
151. Mrs D: Then you multiply out. What is $-4x-8$? [No one gives the answer to this basic math question!] Is it not 32?
152. SS: Yes
153. Mrs D: $-4x-2$?
154. SS: 8
155. Mrs D: Then $8y+3y$?
156. S: 11y
157. Mrs D: Then ,*sithathe u -32 aye ngalebese kubaubani 32* 'we take -32 to the other side than it will become 32'
158. S: 33
159. Mrs D: 30?
160. S: 3
161. Mrs D: Then you divide by divide both sides by?
162. S: 11
163. Mrs D: () and then y will be = to?
164. S: 3
165. Mrs D: To learn x we substitute *angithiniyabonaayafananalana*, which means *lama lines womawu 3 a intercect at one point* 'do you see the lines are the same as these ones, which means that these three lines intersect at one point'.
166. S6: Therefore?
167. Mrs D: No therefore nothing!
168. SS: [Laughter].
169. Mrs D: So *ungashoukuthi* therefore 'So you can say therefore'
170. SS: [Laughter].
171. Mrs D: Ok, the three equations intersect at one point because we get the same point of intersection. *Sekuyi break yini?* 'is it break now?'. Where is my phone? Oh still go 13minutes

172. SS: How! 13?[Expressing displeasure at carrying on].

173. Mrs D: So for those who got any of these ones wrong, let me give you this time to write correction *abanyebezikimingizobamakela. Kadengagcinaukubamakelaabantu*. ‘Others can come to me for marking, let me mark for them, it’s been long since I marked the work’. [Chat amongst themselves and take down the examples].

174. S2: Therefore ().

175. Mrs D: *Kunezintoengizishiyilekule chapter, kumelenenzei transformation geometry kuqala* ‘There are things I left on this chapter, you need to transformation geometry first’ *ka Tomorrow* we are going to start a new chapter which is transformation dimension. Soon as we finish it we will go back to intersection *kunezibaloezithileengizishiyilelaphokemelenazii transformation kuqala before nikwazukzenza* ‘you need to know transformation first before you do these sums’ will be able to do those sums (). [Learners chat and write. Mrs Duma marks workbooks- not in much detail- just ticks. No memo etc.]. *I final answer uythola if isibalosokuqalasi correct*. ‘You must get the first sum correct to arrive at the right final answer’. [Only engages with S2 on what he has done in his workbook and is explaining where he went wrong. This kind of one to one is very rare. The mentoring goes on for about 5 minutes, Lesson ends and she leaves].

Appendix 23

Life Science

1. Mrs X: Boys and girls! We said under animal under kingdom Animalia, we have 2 divisions. What are those divisions? [A learner erases work on board from previous lesson].
2. SS: (). [Random shouting from class].
3. Mrs X: Hands up, please!
4. S1: Vertebrates and invertebrates
5. Mrs X: Vertebrates and invertebrates. We said how how are they different? How is vertebrate different from invertebrate?
6. SS: (). [Random shouting from class].
7. Mrs X: Hands up! keep quiet! hands up! [Few raise hands].
8. S1: Because they are ().
9. Mrs X: Shh! Can't hear. Ya? [Points to next student as she cannot hear/understand S1].
10. S2: ().
11. Mrs X: Vertebrates have backbone. Do you all agree?
12. E: Yees
13. Mrs X: What about invertebrate?
14. SS: They do not have backbone. [Random shouting].
15. Mrs X: They do not have a backbone. And then we said this invertebrates are divided into phyla. Do you still remember the phyla that makes the- that form the group of invertebrates?
16. SS: Yes [Chorus]
17. Mrs X: *Ya?* One?
18. S3: Phylum porifera
19. Mrs X: Phylum porifera. *Ya?*
20. S4: Phylum cnidarian.
21. Mrs X: Phylum cnidarian. *Ya?* Yes at the back there?
22. S5: Phylum annelida
23. Mrs X: Phylum annelida. *Ya?*
24. S6: Arthropoda
25. Mrs X: Phylum Arthropoda
26. S7: Chordata
27. Mrs X: Phylum Chordata. Is there any one remaining?
28. SS: Yes
29. Mrs X: Which one?
30. SS: (). [Random shouting].
31. Mrs X: Ey! Hands up- hands up- hands up!
32. S8: Mollusca
33. Mrs X: Phylum Mollusca. The other one?
34. S9: Platyhelminthes
35. Mrs X: Phylum Platyhelminthes. Ok, is there any one that we that is left behind?
36. SS: //Yes. //No
37. S10: Phylum ().
38. Mrs X: Eh? Eh?
39. S10: Phylum Nematoda

40. Mrs X: Phylum Nema
41. SS: Toda
42. Mrs X: Toda. All right. Ok, and then we said the scientists differentiate these er phyla using certain characteristics where we look at the body cavities and also make mention of what are the symmetries. Can you tell me the symmetries that help differentiate between these(.) between these uh animals which are invertebrates' symmetry? *Ya?*
43. S11: ().
44. Mrs X: *Ya?* Eh?
45. S11: ().
46. Mrs X: We have bilateral symmetry () that is you get two equal halves that is bilateral, ok? ()?
47. SS: (). [Random shouting].
48. Mrs X: I don't want a chorus please. *Ya?* [One learner raises a hand].
49. S12: Asymmetry
50. Mrs X: Asymmetry. What does the word asymmetry means?
51. S13: ().
52. Mrs X: () Oh no! What does it mean?
53. S14: Not easy to cut
54. Mrs X: Not easily, not easy to cut. Ok. () Otherwise if you cut it anywhere you cannot get it different parts. Any other type of symmetry?
55. S: Yes! Radial.
56. Mrs X: Radial //symmetry
57. SS: //Symmetry
58. Mrs X: What type of symmetry is that one?
59. SS: Cut (). [Random shouts].
60. Mrs X: Shhhh! *Ya?*
61. S2: ().
62. Mrs X: *Eish!* his voice is very bad. *Ya?* Who wants to speak aloud?
63. S12: Cut it any(...). [Motions with hands].
64. Mrs X: Cut it anywhere. Wherever you cut it, it give you the same thing. Why radiali symmetry I made exactly you can cut it any direction but it give you what? Same (). Alright, from the handout that I gave you yesterday, mm somebody borrow me. [Gets a handout from learner in the front row]. There if you look at the handout there are- there is a diagram. Ok, this diagram there it shows the triploblastic how the triploblastic of what of the body. What do I mean by this triploblastic? Of the animals what is this triploblastic diploblastic
65. S13: ().
66. Mrs X: Means 3 layers. Can you mention the 3 layers that form triploblastic?
67. SS: (). [Mumbling].
68. Mrs X: Endoderm, exoderm, mesoderm. [Some learners mumble this along with Mrs Xuma]. And then? Diploblastic? Two, its// two layers.
69. SS: Two layers.
70. Mrs X: Can you mention that layers that form diploblastic? [Points to learner].
71. S 14: Exoderm
72. Mrs X: Exoderm [Points to another learner].
73. S15: Endoderm.

74. Mrs X: Endoderm. Right, so those structures there shows us what the triploblastic layers and how they are so we are shown there coelomate and we also have b which shows eh pseudocoelomate and c which shows acoelomate . Ok?
75. Mrs X: What does the word coelo mean?
76. S16: False
77. Mrs X: Uh?
78. S16: False
79. Mrs X: What is a coelo? coelo? [No one answers].
80. Mrs X: That's is a body cavity found in a mesoderm (...) and then this mesoderm has what as a layer and then we said triploblastic. We have 3 layers which is ectoderm you find mesoderm, exoderm and endoderm. It's a body cavity it's found in what? A mesoderm. Alright so a body cavity has the following function. Other words, if we look at the word coelo we are saying it is a body cavity. If we are saying eh a organism ok is coelomate what do we mean by that? A coelomate? Eh? It means? [Writes on board and says "body cavity found in mesoderm"].
81. S: ().
82. Mrs X: It means it does have? It does have? A coelo or a body cavity alright?
83. S: Yes
84. Mrs X: Alright. If we are saying coelo coelomate what are we saying? pseudocoelomate. What do we mean by that? Eh? (Writes and says pseudosulomate).
85. SS: (). [Mumbles].
86. Mrs X: It has
87. S15: It may not have coelomate
88. Mrs X: They may not have coelomate. In other words, it's not easy to identify whether it's a coelomate or not or maybe they are not there at all. Ok?
89. S: Yes
90. Mrs X: And then we have coelomates, acoelomates and pseudocoelomates. Coelo, it has got what? If they eat their leaves, coelo (). What does the term acoelomates mean? [A learner walks into class to ask for dustboard eraser].
91. Mrs X: So what is acoelomate? Acoelomates?
92. S17: It doesn't have ().
93. Mrs X: It doesn't have the what? Asymmetry. So the body cavity has the following functions, if you look at the body cavity, we look at what? The hole in the mesoderm. it provides space for the development of the internal organs so the cavity that is there so that the internal organs can be kept what? Safe. It separates the guard wall from the body wall and they can function independently of each other so they can't they can function well. So they can function well if there is this what? Coelomate. These are what coelomates or coelo. The fluid within the cavity acts as a hydrostatic skeleton. What does the word hydrostatic means? What type of skeleton is hydrostatic skeleton?
94. SS: (). [Mumble].
95. Mrs X: What type of skeleton is hydrostatic?
96. S14: It have the water
97. Mrs X: Eh? What does the word hydro mean?
98. S: Water
99. Mrs X: It means water. So if you are saying and organism has got what? Hydrostatic skeleton what kind of skeleton is that?
100. S: (). [Mumbling].

101. Mrs X: It's just too quiet. *Ya?* It has got what? A *fluidi* skeleton. Can you give me an example of an animal with a fluid skeleton? Or with a watery skeleton?
102. S9: Earthworm
103. Mrs X: An earthworm. Any other?
104. S: Yes. ()
105. Mrs X: (). *Ya* and what else?
106. S: Snail
107. Mrs X: Yes, snail so if you cut the snail or cut the earthworm their skeleton is hydroskeleton. So the fluid also cushions the internal organs protecting them from injury right. So as they have the fluid there the fluid help them what? Help them to be to help them against, against what? Against injury because their bodies they may be desiccated if what is there is a shortage of water. Ok, then the development of a coelom separates the body wall from the gut wall and makes the fusion inadequate for the transport of gasses to and from the body wall in animals such as earthworms as the gaseous exchange takes place. Let me just go back a little bit. What does the term diffusion means? What does the term diffusion means? *Ya?*
108. S18: Taking substance from a higher region to a lower concentration
109. Mrs X: Can you please come again?
110. S18: It's a movement of any substance from a lower region to a higher concentration
111. Mrs X: From a lower region to a higher concentration. Is that it?
112. SS: No
113. S19: Diffusion is the movement of any substance from a region of higher to lower concentration until equilibrium is reached
114. Mrs X: Yes! From a region of higher concentration to a region of lower concentration until it's reaching equilibrium. Ok? That is how diffusion is. So as the body of the what? Of the animals like earthworm have this type of skeleton so these watery skeleton of these it help during what gaseous exchange? It also prevents the what? Desiccation of the body. It helps the bodies from what these animals from injury. Alright, ok. The transport of food from the gut wall to the body wall also the diffusion of what the transport of food from the gut wall to the body wall. It also help in the transport in the transport of nitrogenous waste from internal cells to the body surface. What do I mean by nitrogenous waste? What are these?
115. S19: Metabol
116. Mrs X: What are these?
117. S: Metabolic
118. Mrs X: These are metabolic wastes, ok? Can you give me an example of such metabolic waste?
119. S: Carbon dioxide [Mumbles].
120. Mrs X: Carbon dioxide because this is an animal, ok? So it takes in oxygen and gives off carbon dioxide which is a what? A metabolic waste. Is there any others?
121. S: (). [Mumbling].
122. Mrs X: Also egestion after the your food is digested so the remains are egested it will be excreted so the same thing applies in this type of what? Animal. A blast system evolve to resolve the first two problems an excretory system with nephilia to solve () we talk of the through gut. Some animals such as the annelida and free living have only one digestive opening which is used for both the ingestion of food and egestion of undigested material. So if we look at the through gut, we look at the animals who got the one opening which serve all purposes intake of food and also? Also for what for?

123. S: Egestion
124. Mrs X: So the guts of annelids molluscs, arthropods, invertebrates have to digestive openings that is the mouth and the //anus.
125. S: //anus
126. Mrs X: And it is therefore described as a?
127. SS: Through gut
128. Mrs X: It allow the what? The? Intake and also the outtake of what is not necessary of what is not needed by the body. So, I want us to look at this handout that I gave Thursday. At first we were looking at all types of animals, now we are looking at one of each phylum. Ok, let us look at the phylum porifera. So this is the structure those structure shows how this phylum porifera look like. So whats an example of porifera? Their structure it is? Spongy, ok? This is a spongy animal. (Some learners join in saying spongy). So the example of an animal that's spongy () which represents phylum porifera. Characteristics of phylum porifera? They have no vertebral column. Eh? Then the habitat they are found in the sedimentary or they are found in the what? Attached in rocks. And thick of cell, pores, canals and chambers through which water circulates. Ok, so since they are living in water what do you think they feed on? What is their nutrition? [Class is quiet all looking at the worksheet]. What is their nutrition?
129. S20: They feed on plants
130. Mrs X: They feed on plants is
131. S21: ().
132. Mrs X: T Yes they feed on water and the other smaller organisms found in the water. So and then what type of nutrition is it? Now we know they feed in water what type of nutrition is that? Are they heterotrophic or autotrophic subtropic. What type of nutrition is that?
133. S: (). [Mumble].
134. Mrs X: Are they heterotrophic, subtrophic or artotrophic? Heter heter...what does the term autotrophic mean? Can an animal produce its own food?
135. S: No
136. S17: Only plants
137. Mrs X: Only plants can produce its own food so the plants are autotrophic ok?
138. S: Yes
139. Mrs X: Then what does the word heterotroph- heterotrophic means?
140. S14: ().
141. Mrs X: They can manufacture but they depend on other organisms for food, ok? Then subtrophites? What type of nutrition is that?
142. S15: They obtain their food from dead matter.
143. Mrs X: They? They obtain their food from dead matter. Now what type of nutrition is exists in this porifera?
144. S: (). [Mumbling].
145. Mrs X: Eh? Eh? Be confident when you give me an answer cause you know now what is heterotroph, what is autotroph and what is subtroph?
146. S12: ().
147. Mrs X: They are subtrophites?
148. SS: No- no. heterotrophs.
149. Mrs X: They are? //Heterotrophs
150. SS: //Heterotrophs. They do not manufacture their own food but do not feed on dead organisms they rely on other organisms for food. Then coming to the phylum suritrayta, which is

phylum annedalia? So examples of phylum nedalia is the we have red coral, sea anemone, blue bottle another type of animalis not shown there is a hydra. Hydra which is which live in water. Ok, if we look at those animals that are there, what type of symmetry is existing there? (Learners are quiet). Sureterayta, what type of symmetry?

151. SS: (). [Mumble].

152. Mrs X: Eh? Eh?

153. SS: (). [Mumbles].

154. Mrs X: They are? Why don't you raise up your hands? What type of symmetry is that?

155. SS: (). [Random shouts].

156. S16: Asymmetry

157. Mrs X: Asymmetry. He says asymmetry do you all agree?

158. SS: //Yes //No

159. Mrs X: Why you say asymmetry?

160. S16: ().

161. Mrs X: Pardon?

162. S16: I think it's cause when we cut it ().

163. Mrs X: Do you all agree?

164. S: No

165. S13: *Radiali*

166. Mrs X: Somebody saying radial symmetry. You all agree?

167. SS: Yes

168. Mrs X: Why you say its radial symmetry?

169. S13: Because its round so it can ().

170. Mrs X: It's roundish so it can because of its round shape it can be cut in any part. Alright. So the *habitati* of the cnidaria these are aquatic animals. What do I mean if I say these animals are aquatic?

171. SS: It live in water. [Random shouts].

170. Mrs X: *Angiyfuni i chorus* 'I don't like chorus'. I don't- I don't like ichorus! [Reprimands them for shouting out the answers together].

171. S20: They are water animals

172. Mrs X: Eh?

173. S20: They live in water

174. Mrs X: They *livo* 'live' in water. So these animals they live in what?

175. SS: Water

176. Mrs X: Especially the what? They marine. Like the hydra they live in what? They live in fresh water therefore we are saying they are aquatic animals. Let's look at the characteristics of the phylum ((cnidara)). They have no visible color some species are sedimentary while others are floaty. Other words there are species of this ((cnidaria)) which are found in the rocks while others are just floating on air. Ok. Most species have tentacles with stinging cells. Tentacles. [Stops to observe he confused look on learners' faces]. What are tentacles? Most species they have the tentacles. What are tentacles? [Silence].

177. Mrs X: These tentacles with stinging cells. Is this a first time you come across the word tentacle?

178. SS: Yees

179. Mrs X: Amatentacles?

180. SS: (). [Mumbling].

181. Mrs X: Usually in insects like the locust. [Someone knocks on door]. They have these what? Outgrowths which are found in their head. [Puts her 2 fingers on head mimicking tentacles].
182. SS: Yes [Majority seem to grasp the concept, now].
183. Mrs X: Ok. So these type of animals they have tentacles, these outgrowths which are found on their head which these tentacles here they have what? They haveo they have what?
184. S: Stinging cells [Random shouts].
185. Mrs X: They have stinging cells. Alright stinging cells. [Learner in front row has now got head on desk]. Other words the stinging cells other words isiZulu they've got stings it can maybe it can use it for what for fighting. Or stinging cells maybe it can touch it can sting you. It can what?
186. S: Pinch you
187. Mrs X: It can what with this here? If you come across with one of those cells it may hurt you or may feel pain because the cell that are there they are stinging cells. [Two fingers on head again motioning tentacles].
188. SS: ().
189. Mrs X: Amatokoloshe 'Zombie'
- 190.E: [Laughter].
191. Mrs X: Most species are built in a circular such that if the organism is cut in any vertical plane through the center it will give you identical halves. We say that the organisms show radial symmetry. Has a single digestive opening which serves to take in food as well as to get rid of undigested material and waste. So, the way they are built, they are built such a way that they have 1 opening for taking in food and also for egestion of undigested material and also waste.
192. S: material and waste [echo].
193. Mrs X: The coming to phylum Platyhelminthes(...). [Knock on door again causes disturbance]. Characteristics of phylum Platyhelminthes? (). [Learners do not respond to question].
194. Mrs X: They have no veterbral column. They are flatten from the top to bottom. A good example of a Platyhelminthes is what? Is a tapeworm. You all know what a tapeworm is?
195. SS: //Yees //No
196. Mrs X: You don't know what a tapeworm is?
197. S8: I don't know
198. Mrs X: You don't know what a tapeworm is?
199. SS: (). [Random shouting].
200. Mrs X: Tapeworm?
201. SS: (). [Random shouting].
202. Mrs X: What is it? *Ya*? Ok. He wants to explain in it in Zulu. *Ya*? [Points to a learner with hand raised].
203. S16: *Ixoxo elincane* 'it's a small frog'
204. E: [Laughter].
205. Mrs X: That is a tadpole not a tapeworm! What is a tapeworm. [Points to learner in front].
206. S: ().
207. Mrs X: Yes, those are type of worms which lives in the host in the intestines of organisms living organisms. So a tapeworm is found inside a host, ok. It is a parasite. Type of nutrition in the tapeworm is parasitic because it feeds on? on what organism eat?
208. S: ().

209. Mrs X: Yes, those organisms do not benefit therefore it is what it is parasitic. Alright so the structure of that shows the tapeworm there. It also have the planadia and a liver cook?????/ All these ones are examples of Platyhelminthes. [Points to worksheet. I wonder if all can see].

210. Mrs X: Some species are free living in water. Others are parasitic, ok? In those- in those species are some are live in water and some are parasitic. Built in such a way that they organism can be cut into one plane as these organisms can be cut in ine plane. What kind of symmetry is existing there?

211. SS: (). [Random shouts].

212. Mrs X: Lati? Lati?

213. S19: Laterali symmetry

214. Mrs X: I don't want to hear a chorus. Bilateral symmetry. Ok, so this thing runs from the middle of the side of the middle of the lower side we say such organisms show bilateral symmetry. Non-parasitic forms have a single digestive opening which helps to take in food and which helps to get rid of undigested waste. So the habitats for these animals is quatic fresh water or marine others are found in damp terrestrial environments. Alright, yes.

215. S: Symmetry [echo].

216. S: [Yawns loudly]

217. Mrs X: So this is the habitat for these, eh animals. So I want you to do this activity. It's a class activity. We are going to- to tabulate the difference (...). [Goes to chalkboard "tabulate the differences between"]

218. S: (). [Tells teacher "differences" is spelled incorrectly].

219. Mrs X: Oh, differences, thank you. Thank you very much. [Continues writing on board after correcting mistake]. Tabulate differences between the phylum poriferia (...). Shh! Shh! Ok, so when you are comparing this you are going to look at the- the body plan you are going to look at the coelo -the coelo whether the coelo is coelo, acoelomate or pseudocoelomate. You are also going to look at the type of nutrition, you are also going to look at the symmetry that is existing. Just do it. [Getting quite rowdy].

220. SS: (). [Much mumbling and groaning about doing the work but they get down to it].

221. Mrs X: Write today's date... can you! just keep quiet! Can you! just keep quiet! The habitat, the body cavity, body plan, symmetry and type of nutrition. It is an individual activity. [Learner raises hand].

222. Mrs X: Is your hand up?

223. S14: ().

224. Mrs X: [Writes criteria on board]. *Haibo!* [Walks around class becoming rowdy]. I'm going to mark that work tomorrow. [Mrs X approaches me and asks about the time. Its 10:45 and the bell supposed to have rung. She tells me that their watch (school clock) has a problem. I ask what time the period is supposed to end. She responds 11. I say its quarter to 11.Looks outside and sees all S outside having a break. I ask for a worksheet. Then ask if they don't have a biology lab. She responds that they do but because of space it is being used as a classroom. So I ask about doing experiments. She says if she wants to do experiments she takes a tray to class and just make do there. No microscopes etc. Explains no textbooks too so have to make copies of textbook pages-very difficult. Also have to write notes on board which is time-consuming]

Appendix 24

Maths A

1. Mr T: Ok stop talking... I want you to go over this again. Take this worksheet out. [Enters class and tries to quieten them down and erases board. Proceeds to write on the board]. Now listen! I told you, you must do this here manually before we use a calculator. So let's go back and see. Some of you haven't done (...) please complete that now. I want you to finish that then I want you to check with the calculator. [Walks around class]. Hey! Hey, put that away! You finished it?
2. S1: Yes sir! Finished
3. Mr T: Right now listen, I see some of you¹ completed it. Now those of you who didn't I want you¹ to complete. Ey shhh! [Walks around some more checking work. Class is getting rowdy]. What's another word for mean anyone? Ey! What's another word for mean? [Mr Thamoo is back at the board].
4. S2: Err all
5. Mr T: What all? Ey! Ey! Ey! What is another word for mean? [No one answers but the class is very rowdy]. Anyone knows?
6. S: Yes, yes
7. Mr T: Put your hands up
8. S3: ().
9. Mr T: *Ya*, but there's another word. When you see the word average. Eyy! Average and mean are the same thing you understand? [Writes on board].
10. S4: Yes! [One very loud girl at the front shouts out a response].
11. Mr T: Right, now listen the difference between average and median or average, mean and median. What does median mean anyone?
12. S4: Median sir?
13. Mr T: Median is the middle of the (...) Now I want you to see this here. What is the median of this? [Points to example on the board].
14. S4: Nineteen degrees
15. Mr T: So the mean and the median are different at times. Sometimes they will be the same. Now how you work out the mean? What do ().
16. S: Add them
17. Mr T: Manually first and then we will check with the calculator. Now you've done this. Now you've added all these things now please those of you who haven't done this make sure you got this completed. It's not a difficult thing. Now what's the total number of scores here?
18. S: Five
19. Mr T: So what's the answer?
20. S: Twenty-two
21. Mr T: Now you have to calculate the standard deviation. Now I explained to you how to calculate but I'll explain to you one more time. Standard deviation -standard deviation. Right the formula is what? You have to take each score and subtract what? [Writes on board].
22. S4: Mean, mean.
23. Mr T: So you write the formula like this H minus the mean you square everything and divide by your number of scores .
24. S4: Oh 5
25. Mr T: And then you have to take the?

26. S4: Square root
27. Mr T: Square root. Now there's one more thing here before we do the standard deviation – if we didn't have standard deviation, what we call this here?
28. S4: Variance
29. Mr T: Variance, ok just write this down there. This is called variance.
30. S4: Variance
31. Mr T: Ok, without this square root sign we call it the
32. E: Variance
33. Mr T: And then if you have to find the standard deviation,
34. S4: You put the square root
35. Mr T: You take the square root. Now this is the symbol for standard deviation, huh?
36. S: Yes
37. Mr T: This symbol. Now I want you to do this the long way ok? You have to take each score. You take fifteen minus your mean. What's your mean there?
38. S: Twenty-two
39. Mr T: Right good. Square it and then you gotta add (...)?
40. S: Twenty-three minus twenty-two
41. Mr T: After you done this, you carry on right until the end here. Right, divide all that by what?
42. S: Five
43. Mr T: And what was your answer?
44. S4: 5,2
45. S: 5.29
46. Mr T: Five comma?
47. S: 29
48. Mr T: Now I want you to use the calculator and do it properly and I want somebody to come in the front. You see all the rules are here -see here? So when you get this in examination, you must learn this as well because if I give you a question and if you don't know how this works then you will have difficulty. Now when somebody comes in the front here and show the (...) Sizwe, will you do this? Explain this how- you gonna use your calculator to get your mean and your standard deviation. Ok ey! Some of you don't know how to do it. Just follow it. It's written there all the rules are written there. Right, can you just tell us explain how
49. Sizwe: Must I show them how to use this?
50. Mr T: Yes, show them how gonna enter those scores on the calculator because in the examination(...) listen! Hey! if you haven't got a calculator then you have to do it like this. And then if you haven't got- if you got the older type of calculator then you have to do it (). I see all of you! got the Fx 82. Alright, carry on explain to them. The rules are there. Just pay attention now.
51. Sizwe: Ok now first of all *upresa u munwe la, then pressa u 2*. 'Ok now first of all you press your finger here, and then press 2' [Explains what to do using the calculator demonstrating to them].
52. Mr T: Ey! Ey! Ey! Please follow there. [While Sizwe is explaining, the class gets rowdy as they seem to disagree with something but Mr Thamoo quietens them].
53. Sizwe: *Siyahambisana?* 'Are we following each other?' [Continues to explain with some agreeing as he goes along].
54. S5: *Qala phansi* 'Start afresh'
55. Mr T: Ey! Shhh! Ey please, please follow there. [Says this while Sizwe continues explaining].

56. Sizwe: *Ngiqale phansi?* ‘Start afresh?’
57. SS: Yes, yebo. [Some learners begin protesting seems they don’t agree with something Sizwe has said].
58. Mr T: Wait [a plea to allow Siwe to finish].
59. Sizwe: *icalculator yakho ikanje manje angithi? I casio le engikhuluma ngayo. Presa umode, then u 2, then mase u pres u 1 ufake u 15 = 23* ‘Your calculator is like this? I am talking about casio, press mode, then 2, then you press 1, put 15 = 23’
60. S6: *Ayfani neyami eyakho* ‘Yours is not the same as mine’.
61. Sizwe: *Kuyafana* ‘It’s the same’. *Lelelani, lalelani* ‘Listen, listen’.
62. S6: *Kuno zero* ‘mine has zero’
63. Sizwe: Then *shaya umode* ‘hit mode’.
64. S6: *Kyafana, kyavela* ‘It’s the same, its coming’.
65. Sizwe: *Shaya u mode, bese ushaya u 2 sis sithathe, kusele izinto eziningi kabi. Ushaye u 1, angithi uyabona? Sekuvele kanje? Neyakho i right, qhubeka ufake. Bese uyayvalake. Emva kwalokhoke bese ufaka ama scores bese ushaya u =, ufake u 15=,23 =,19=,21=, 25. Mase kukanje into okmele uyenze, into oyenzayo upresa u shift and then press AC. No no no no (...)* ‘Hit mode, then 2, there are lots of things left. Press 1, can you see, now it’s showing like this. Yours is also right, continue and enter, then you close. Then after that you put scores then but =, put 15=23=21=25. When it’s like this what you need to do, what you do you press shift and then press AC. No, no, no(...)’
66. S6: *Weeeeeeeeeeeeeeeeeeeeeee, kuhluleka icalculator, uthisha obhedayo.* Practice makes perfect too, *batshela* ‘Weeeeeeeeeeeeeee, the calculator is failing, the teacher is misleading. Practice makes perfect too, tell them’
67. Sizwe: *Mase usuqedileke ushaya ama scores akho ke, ushaya u AC, AC is next, kzosuka yonke into, mese sishaya manje u shift, bese ushaya u 1, kuzovela kanje, mese ushaya u4, u5* ‘When you are done with your scores, press AC, and your calculator will be clear. Press shift then 1 and press 4 and 5’.
68. S6: *Awukho u 4* ‘There is number 4’.
69. SS: *Qhubeka* ‘Continue’.
70. Mr T: Now some calculators are different just be careful huh
71. SS: Yes
72. Mr T: Check your calculators what number is yours. Yours is 4. Some calculators will have 5. Hey where’s your calculator? How you gonna learn like that? How you got 2 tables here that means you pressed the wrong one. Ok just follow- just check. Ok how many of yourl get it right? How many of yourl got it wrong? Ok now listen. You see the root here watch here. Listen, look there on your worksheet. You can see there press mode. Are you following, follow the worksheet. The 2 there the y is variance. Right have you reached 1 there?
73. S: Yes
74. Mr T: Then enter data you can’t () enter data what’s your data? 15 equals 23 equals and you carry on up till what?
75. S: 22
76. Mr T: 22 equals now after you have 22 equals where it stops then you have to find mean. Hey! Share. What’s going on there?
77. S3: Nothing sir nothing

78. Mr T: You concentrating on the calculator? You press here. And then five variance. Now just be careful his calculator doesn't have 5 variance it has 4 variance. Right, then you press 2 which is the mean right and then you press equals to. Now what is your answer?

79. S4: 22

80. Mr T: Twenty?

81. SS: Two

82. Mr T: Right, now hey is that ok with you?

83. S: Yes

84. Mr T: Right, now let's see the second part. You want standard deviation. Hey! You want the standard deviation you press again shift are you following?

85. S: Yes

86. Mr T: 1 you got that?

87. S: Yes

88. Mr T: *Ya*, 1 that you can see on the calculator then 5 which is variance. Standard deviation is the button 3. Ok standard deviation is 3 on your calculator. Number3?

89. S: Yes

90. Mr T: Hey! Now have you got there 3 equals to?

91. S: Yes

92. Mr T: Now what's your standard deviation?

93. Sizwe: 4

94. S: 5

95. S: Two nine

96. Mr T: Five comma?

97. S: Two nine

98. Mr T: Now listen I told you, you do it the longer way if you don't have a calculator, you do it like this. Now in the examination for 3 marks this is gonna take quite a long time you understand?

99. S: Yes

100. Mr T: When you punching these things you must be very careful. Listen, sometimes when you punch these scores you might miss one score so you must be very careful, you must check the score you punched in scroll it back to see you got all the scores there. And then for 3 marks this is not difficult. It's difficult?

101. S: No

102. Mr T: Now just to explain this idea- yesterday we talked about it- hey! Hey listen here! Right, this is what you must understand. You doing all this thing nicely here with the calculator. It's not that difficult but you need to understand what's going on here.

103. S: Yes

104. Mr T: Now when you talking about variance, standard deviation ok mean you know what mean is. Right, when you talk about variance and standard deviation. Let me explain to you look at this on the board. Ey! Ey! shh! Can you see the set of scores here all are what?

105. SS: () [Mumbling].

106. Mr T: All are same isn't it so? All the numbers are the same. Is there any variation?

107. SS: Noo [chorus-style].

108. Mr T: So what you think this variance is equal to?

109. S: 0

110. Mr T: Ok, and what do you think the standard deviation will be?

111. S: 0

112. Mr T: Tell me basically what you are doing? You are looking at basically how the scores are spread. Take the second one here. Look at these scores here you want to know are they far apart or are they close together?

113. S: Close

114. Mr T: Now you will get a variance here and you will get a standard deviation because the numbers are all different you understand?

115. S: Yes

116. Mr T: Now that variance, do you think that will be a small number or a big number?

117. S: Small

118. Mr T: It will be a small number. Ok, and the standard deviation will also be a smaller number.

119. S: Yes

120. Mr T: But look at the last set of scores there, what can you say about the scores? Are they close together or further apart?

121. S: Apart

122. T: Now if you look at the variance- variance means how the scores are spread, you understand?

123. S: Yes

124. Mr T: Now you work out variance here you'll find you get a big number.

125. S: Yes

126. Mr T: Ok, and the standard deviation will be big. Ok, does that explain the thing to you?

127. S: Yes

128. Mr T: Now one more thing here, suppose- hey! Are you listening to me?

129. S: Yes, sir

130. Mr T: (...)they give you, you are able to find the standard deviation you understand? I want you to go back and find the variance. They gave you this- can anyone tell us how to find the variance?

131. S: (). Mumbling

132. Mr T: I said you going backwards. You got the standard deviation of a set of scores you wanna know what the variance is. Can anyone tell us how you do that?

133. S4: You must put the square root, sir.

134. Mr T: Where did this come from?

135. S4: From variance

136. Mr T: It came from the square root of the variance, so if I want the variance what must I do? [A learner from a different class walks in looking for a chalkboard eraser disrupting the class].

137. S4: You must cancel the square root sign

138. Mr T: Ok, now you going backwards what you gonna do? Somebody said cancel the square root sign. How you gonna cancel the square root sign? How you gonna cancel the square root sign?

139. S: Mumbling

140. Mr T: You said cancel the square root sign. Fine, how you gonna cancel it? You square it. You square the (...)

141. S: You square [mimicking the teacher. He begins to laugh].

142. Mr T: You square here and here. Understand what I'm saying?

143. SS: //Yes, sir //No, sir

144. Mr T: It goes like this, look here hey! hey! I got the number 4 right. Ok, let's see number 2. If I take the square root of 4 what do I get? 2 isn't that so?

145. S: Yes

146. Mr T: Now if I'm going backwards you gotta square this 2 and you get? 4
147. S: Oh
148. Mr T: You see how it works now? I want you to look at the bottom can you see the table. Right at the bottom, you can see those score there?
149. S: Yes, sir
150. Mr T: Right. With those scores there I want you to do that now. With the calculator you don't have to do it the long way. Right what are your scores there? 3900,5700
151. SS: (). [Reads out numbers with teacher].
152. Mr T: Let's finish the top part the first part ok. Determine which data lies first. Determine which data lies between 1 standard deviation. They want the data between 1 standard deviation. Right.
153. S4: Standard deviation
154. Mr T: Right, now must watch hey! hey this is very important cause this are marks here you can get. These are six marks hey! And you get zero
155. SS: (). [Some laughing and rowdiness].
156. Mr T: I'm warning you. I'm telling you nicely...Right you want the data within 1 standard deviation now this is how it works ey! Stop talking! Within 1 standard deviation you take your mean. Now listen, I put the plus there standard deviation- ok it doesn't matter you take your mean and you subtract your standard deviation. Actually this one supposed to be there but it doesn't matter but if you work it out you gotta switch it around normally this one over here will be first, you understand?
157. S: Yes
158. Mr T: Right because I made a mistake with that worksheet- it doesn't matter. You take your mean now, what is your mean?
159. S: 22
160. Mr T: And you add the standard deviation. What's the standard deviation?
161. S: 5.29
162. Mr T: Right, and this one here you take your mean subtract the standard deviation. Now work this out quickly with the calculator. [S4 keeps saying 29 in background].
163. S4: 27.29
164. Mr T: 27,?
165. S: 29
166. Mr T: Right and this one gives you?
167. S4: 16,71
168. Mr T: 16 comma?
169. S4: 71
170. S: It's 17!
171. S: 17 *haibo!*
172. Mr T: Hey you got a calculator? Subtract here is that correct?
173. S4: Yes, sir
174. Mr T: Right now, put the small number first you see there 16,71 and then the bigger number was what?
175. S4: 27
176. Mr T: What you going to do? You want the data within 1 standard deviation, this is what it means. You gotta look at your numbers it's like- hey! Between 16,71 don't start at 16 because its

16,71 You supposed to start with 17 you understand and you go up to 27. Now see which numbers lie between 17 and 27. Ok let's see right ().

177. S4: 23,19 and 21

178. Mr T: 23, 19 and?

179. S: 22

180. Mr T: So how many data lie there?

181. S: 3

182. Mr T: Ok you see the number of data is 3. Now they want the percentage. What percentage of the data is this here?

183. S4: 60

184. Mr T: Now how you work out percentage, you take this number of data over the total, multiply by what 100? Will be by 100 Percentage is multiply by 100 you understand? Which is 60%. So 60% of data lies between 1 standard deviation. Now listen, if we said 2 standard deviations are you listening hey! //If its 1 standard deviation you got one there do you understand? if they say 2 what you'll put here?

185. S4: //Divide by 5 [competing with teacher's voice]

186. S: 2

187. Mr T: 2 times the standard deviation and then you'll put what there?

188. S: 2

189. Mr T: And then 3?

190. S: 3 times

191. Mr T: We'll go as far as three. One standard deviation, two standard and three standard deviations. Is that ok?

192. S: Yes, sir

193. Mr T: Now I want you to look at the question there answer the question I'll give you ten minutes -right all of you? The one right in the bottom. Right let's see if you're able to do it

194. S4: Which one sir? [Interrupts while teacher explains].

195. Mr T: Using the calculator- the one right in the bottom. You got a calculator? I'll give you 10 minutes try and finish it now and then we'll get on with the table. *Ya*, because all you have to do is punch in the calculator [Answers S4 enquiry].

196. S 10 min 5 min Get rowdy when they turn to their work

197. Mr T: Hey! hey! *Ya* 10 min cause all you have to do is punch it in the calculator. (.) You don't know why you getting zero? [Learners are very rowdy]. Hey! Do the last one quickly. Hey you the last one here. Just use the calculator punch the scores in there. Where are you looking, look at this girl! Doing the wrong work!

198. SS: () [laughing at learner who is doing the wrong example].

199. Mr T: Right, shh! Right, you finished? Ey ey ! 5 min for 3 marks you can't take half an hour huh. [Shouts at learner trying to take another worksheet].

200. S3: Ok

201. Mr T: Alright, if somebody can write the answer on the board. Huh? *Ya*, 3800. [Learner asks T something as he walks around]. Where are you doing? What you doing? You see you doing the last question? [talks to learners as he walks around]. Ey! Ey! Ey! I said put it in the calculator. We want the answer in 5 min time. Where's your calculator? [Carries on walking about and asks learners for their calculators].

202. Mr T: Right, just put those things in the calculator and give me quickly now

203. S4: 113,447

204. Mr T: Go and write the answer on the board. Now I hope you got it right. *Ya*, ok good. This is the mean. Write the mean and the standard deviation [speaking to S4].

205. S4: Sir, write the whole?

206. Mr T: No, no, no we not doing it the long way we doing (...) Use your calculators. Eyyyy where are you man? See this fellow! We here now. [Speaks to learner seated at front of the class. S4 is busy writing on the board]. What's wrong?

207. S: Sir

208. Mr T: What's this eleven three hundred is that correct?

209. SS: //Yes//No [Very loud no's]

210. Mr T: Supposed to be a comma here isn't that?

211. S4: No, sir

212. S: It is wrong

213. Mr T: Gimme where's yours? Eleven thousand three hundred and forty-four COMMA! [Takes calculators from learner].

214. S: Yes!

215. Mr T: Comma go there- ok?

216. S4: Ey sir!

217. S: It's wrong

218. Mr T: It's wrong?

219. S4: No sir.

220. S: It is

221. Mr T: No, no that's your standard deviation. How many of you got the top one? [Walks over to see what S4 is talking about].

222. S: It's right

223. S: Correct

224. S: Yes

225. Mr T: I think you entered the wrong figure there [Talks to S4]. VLG

226. S: No, she's clever sir! [The girl next to S4 defends her].

227. Mr T: Ok, right now. What's the next question there in the bottom?

228. S4: Compare the standard deviation

229. Mr T: Ok, ey shhh!. What's your name again?

230. S: Bongikile

231. Mr T: Bongikile, right Bongikile read the last one. [Points to worksheet]. *Ya* last question, read that thing out. I want you to look there she going to read it out and we'll see what the answer is.

232. Bongikile: (). [Reads out question].

233. Mr T: Now listen

234. S4: I don't understand the question sir

235. Mr T: Now you see the following that's missing here you see heyyyy! The company rates the sales staff according to the amount of commission ey! [Class is very rowdy while he is trying to explain. They quieten down and then he proceeds to read the question again].

236. S: Continue, sir

237. Mr T: Please listen. Ey! You talking? [Points finger to boy at back]. Right. The company rates- you see again! [Boy at back talking again]. Right, the company rates the sale staff according to the amount of commission earned. A sales person whose commission is more than 1 standard deviation- now listen you see all this figures- hey!... all those figures are the commission earned

by the sales people. Now what they saying is there if a person receives above 1 standard deviation above 1 standard deviation above the mean then he's rated as good. Now what you got to work out is there a 1 standard deviation. There is 2 standard deviation one is above and one is? [Stops to scold boy at back mid-explanation].

238. S: Below

239. Mr T: Below. You see this one here, that is above 1 standard deviation. Ok, must take note of this when they say above that means you gotta take the mean and add the standard deviation. Ok, so when you see the word above there take your mean

240. S4: And add

241. Mr T: And add it. And if they say below, then you gotta take your mean and what?

242. S4: Subtract

243. Mr T: Subtract, ok? So if they say above one standard deviation- there's your mean- there's your standard deviation. What we gonna do?

244. S4: Add

245. Mr T: Add that quickly. You got a calculator? [Writes the figures on the board. Learners work out the example]. Ok, what's the answer there?

246. S: It's one eight zero five comma four

247. Mr T: One? One five eight zero five comma four. Now you got figures there? Can you see there? They want above. Now look at your figures there and tell me which one is above there? How many figures are above there?

248. S: None

249. Mr T: (). What's the first one?

250. S: ().

251. Mr T: Is that thing above?

252. S: No

253. Mr T: Which one is above? Hey, hey! Fifty thousand is bigger than that? [Points to board].

254. S: No

255. Mr T: And is fifteen thousand eight hundred bigger than that?

256. S: No

257. Mr T: So there's only one there, which is it?

258. S: (). [Mumbling].

259. Mr T: Right, then there'll only be one person that is rated as good. You see how it works?

260. S4: Sir?

261. Mr T: Look at your figures there and look at look at the number. Is it bigger than this?

262. S4: ().

263. Mr T: Ya right, now that is the only person that will be rated as good. Now you can see this is a simple example of statistics.

264. S4: (). [Explaining to class in isiZulu who seem confused- Mr Thamoo did not ask her to do this. Takes this upon herself to do this].

265. Mr T: Hey, what you doing now? No, no, no they ask you- you don't have to worry about percentage and all. They asking you which number is bigger than this here.

266. S: ()

267. Mr T: They not asking for percentage so don't () there's only one person that is rated as good and that is the person who's rated 17000. We don't worry about percentage here

268. S4: No sir, I ask what to write 1 person

269. Mr T: No, no percentage

270. S4: Ask to write one person. [Person is pronounced the same way as percentage].

271. Mr T: Person? Ok, *ya*. Right, good. I thought you said percentage. Ok, there's definitely only one person who is rated as good. Now, just put down the figure which is 17000. Now listen, this thing is not a difficult thing I'm gonna give you more problems based on this thing here right. Ok, get on with the next one there you see the table, the frequency table?

272. S: Yes

273. Mr T: Where you turning over? Right, many of you completed that thing yesterday. Now what you gonna do here today is use the calculator to check if you got the correct answer. Right. [Asks learner in front who is flipping his worksheet]. (). Right, did you complete that thing? You remember the frequency table you had? [Erases board].

274. S4: Yes

275. Mr T: Ok, you have the mass there, frequency and then you have your frequency times x now listen. Now I gave you all the data ok. First one is four hundred, then below that two hundred and ten. You know where we got our data from? [Very loud yawn in the middle of this explanation by a learner].

276. S: Yes, yes, sir

277. Mr T: Right, all the data written on the top there. So you count now how many four hundreds how many four hundreds did you get? How many four hundreds there?

278. S: Three!

279. Mr T: Right now how do you get this 1200

280. S4: Four times three

281. Mr T: Four hundred times three is twelve hundred ok. Now, how many two hundred and tens here?

282. S: One!

283. Mr T: So now you must what? You must multiply

284. S4: 420

285. S: 425, 1 [Chorus-style].

286. Mr T: Ok, ok don't start singing now ok. Right four hundred and forty?

287. S4: Five

288. Mr T: And four hundred and?

289. S4: 457

290. Mr T: Four fifty seven [Shouting out the numbers]. Right, I think you have completed that. Now listen shh! Here too you got to know to do this here. Are you listening to me? You have to know to do it like this besides using the calculator because when they give you a problem where you don't know how to do it like this then you gonna have a problem ok, so you need to know how to do it like this. Ok, because you can just put it in the calculator and get the answer. Right, now what will the n will be equal to here?

291. SS: (). [All shouting random answers].

292. Mr T: 2055. What are you doing? You didn't even complete this thing here. Then you have to find for b . You take your f of x . Your f times x like that over the total number now listen you take this 3355 and you divide it by 8

293. S4: It's 419

294. Mr T: What is your answer?

295. S: 419

296. T: Right you rounded it off huh?

297. S: 419

298. Mr T: Hey, you have to work out the standard deviation now listen, here again you have to work out the variance you divide by standard deviation you understand

299. S: Yes

300. Mr T: Now we did it the long way and I want you to do it the long way before you use the calculator.

301. S4: It's 19,75

302. Mr T: Let's just see here, now what did you do? You took the frequency. You took 3 like this and multiplied by 400 and you subtract it from 419.

303. SS:

304. Mr T: And you have to square it huh?

305. S4: Yes

306. Mr T: Now how many you add $1 \times 1x$?

307. S4: 12

308. Mr T: Minus?

309. S4: 419

310. Mr T: Right you carry on like that to the last one

311. S4: 450

312. Mr T: Now when you add the 450, remember where the 2 is from

313. S: Yes

314. Mr T: Write 2times 450 like that minus?

315. S4: 419

316. Mr T: All squared. Right, then you have to divide all that by? S say squared with T

317. S: 8

318. Mr T: Right, now what kind of answer did you get?

319. S4: It's 19,75

320. Mr T: 19 comma?

321. S: Seven five

322. Mr T: Now what we did we found the standard deviation. Fine, right if they ask you for the variance, what you gonna do?

323. S4: Square root, square root

324. Mr T: Ok, remember that huh?

325. S: Yes sir!

326. Mr T: Right now, the next question there was what? Ok before we do the next question, we need to put this in the calculator and see if it's correct. Right the rules are there, can you see the rules?

327. S: Yes

328. Mr T: Must I explain it to you or are you able to follow the rules?

329. S4: We will be able to follow the rules.

330. Mr T: Right follow the rules and let's see if you can get those answers. Or must I get someone to come in front who wants to come and explain. Now please just follow. Hey, hey, hey where's the calculator? [Student proceeds to front of class].

331. S4: () 9Tell class something in isiZulu. Holds up calculator to show S what he is talking about).

332. Mr T: Ok, just follow the rules here, ok. I want you to follow the rules all of you right now eyyyy! You must get 2 columns on the calculator. Yes? Yes, you must get 2 columns on the calculator. Now if you don't get 2 columns on the calculator that means you not following the

rules properly. [Learner in front picks hand up and shows teacher the calculator]. Where's your calculator? [Ask other boy in front? Has a short conversation with him]. Right, right listen here. Hey, ey, ey!

333. S5: Ok guys, () ... 300 [This is boy in front. He explains step by step and asks them if they understand].

334. SS: What?! *Haibo* 400

335. Mr T: Hey, alright now listen. Just hold on a minute, you know what's happening here, you are not please- you are not getting 2 tables there simply because I want you to look at the rules there all of you and follow those rules. Right let's just follow the rules there. Ey,ey right. Let's start ok have you all got ok.

336. SS: Yes

337. Mr T: There are 2 steps ok. You have a one variant you want frequency you press shift. Have you pressed shift?

338. SS: Yes [Chorus]

339. Mr T: Right then set-up. Have you got set up? Right, now scroll down now can you see where the table. The arrow, you know which arrow is scroll down? You know how to scroll down huh?

340. SS: Yes [Chorus]

341. Mr T: You scroll down and go to 3 stag. Go to 3 stag now watch out for your calculator sometimes the 3a look like a 3. Now have you got 3 stag there?

342. S: Yes [Chorus]

343. Mr T: EY! Have you got 3 stag there ey! Right then you press 1 alt. Have you pressed 1 alt?

344. SS: Yes! [Chorus]

345. Mr T: Right now, did you get 2 tables?

346. S: Yes!

347. Mr T: Right, have you got 2 tables on the calculator

348. S: Yes

349. T: Then you enter your data now listen, you see the data, the left hand column. There's 2 columns here, right. Your left hand column enter all these data. Right, you press 400 equals right.410 equals. Then you reach the last one. Till you reach the last column. Now when you reach the last column- last column you got here last number? (Points to data on board).

350. S: 420

351. Mr T: Then you scroll across. Are you listening? Yu scroll across. Now you don't start putting the frequency straight away. You move this thing back to the top. Because when you move down and up everything will go off beat. So when you go across move up and then start punching all these here. Right, till you reach the bottom. Your frequency will be 31112, right?

352. S: Yes

353. Mr T: Right have you reached the bottom?

354. S: Yes

355. Mr T: Ok, now look at your this thing there book you've done number 2 right Second column press the ac button right everything will disappear

356. S: Yes

357. Mr T: Now you find the mean, ok. When you press shift right 5 which is variance. Have you pressed shift?

358. S: Yes

359. Mr T: Then you have to press 1

360. S: Confer with one another

361. Mr T: Ok, right this is not a difficult thing? [Walks around checking].

362. S: Yes [I see students doing other homework while this is carrying on while others are actually doing the work].

363. Mr T: Now please try and check with your calculators

364. S4: Sir

365. Mr T: And see if you get the same answer. [Walks around checking up on work all the while class gets rowdier].

366. Mr T: Ok, before I go I want you to go over- try and do the calculations [Learners doing work on their own Mr Thamoo checks that they are doing it correctly. Many have managed to do so].

Appendix 25

Geog B

1. Mr P: Right, come take this worksheet out. Take this worksheet out. Go to (). [Goes to a student and instructs him to go to fetch something from another class. Starts giving out worksheets]. *Ya*, that's ok. Relax. You only want the TV now- that's all. Right, are we all settled? Did I send the right fellow or the wrong fellow? I asked him to fetch something. Ok right, the section we starting off today (...). Now you gotta follow, ok. Otherwise you gonna get lost is called a cross-section. [All the while students are still moving around the class]. Hey baba! Right is called a cross-section. Hey, hey, hey come take one- take one [addressing some students who have come late and need worksheets]. Hey what you looking for?

2. S1: Protractor

3. Mr P: What you looking for protractor? I never ask for protractor? Right, are you all with me? What is a cross-section? [Class is still very rowdy- no answer]. Basically boys and girls, listen otherwise you gonna get lost and I'm not gonna worry after that. Leave all your boyfriend and girlfriend stories for after. Leave your weekend stories for after school. Right listen up! What is a cross-section? Anybody knows what is a cross-section? Anybody? [No answer- still unsettled]. It's simple- just merely a side view- a side view of a relief feature (). Now a hill- you find a hill that's a relief feature. Now you looking at a side view of the hill. The hill may have different shape . You understand what I'm saying?

4. S2: *Ya*

5. Mr P: The hill may be shaped in a way like this [starts to draw on board]. Ok, or it may be like this- steep and then going gentle. Or it may be like this- gentle then going steep. (). So basically, what we saying is that a cross-section shows us a side-view of a relief feature. That is a cross-section. Now what we need to do in this section is to learn how to draw a [Mr Pillay walks to door and speaks to students outside of class. Student walks in]. You holding your head and walking like you got so much worries [turns to student outside trying to enter]. Now you bring the shit and coming to my class [holding mud on cardboard- an assignment for another subject]. Right now come, come. [Latecomers dragging chairs about]. Hey you come late ...you sit on the floor! [speaking to a late arrival].

6. E: [Laughter].

7. Mr P: So what did we say is a cross-section? A side view of a relief feature. Now you'll find that with a cross-section we have to use scale ok? Map scale topographical scale and we have to use vertical scale. Now let's see what we talking about in terms of scale. You know in the map I gave you- the topographical scale- what's the scale there? 1 is to?

8. E: Three thousand

9. Mr P: That is what we call a horizontal scale. Ok, use the horizontal scale which is 1 is to 50 000. Ok on the x axis. You know what's the x and y axis. When you draw a graph x-axis y axis [shows them on board]. You got it?

10. E: Yes

11. Mr P: Ok, so you got x axis y axis. Now the horizontal scale will be on the x axis- The 1 is to 50 000. Then you have what you call- leave her hair alone man heyyyyy! [Shouting at learner playing with another learners hair]. Then you have the vertical scale- vertical scale- which is VS. Your vertical scale is what you find on the map – see there [pointing to disruptive students]. He's not serious see? Now we have an idea -we have an idea- we already talking about it we said that

this class here there'll be like 12 that'll go to grade 12 and the other class down there gonna be like 18 so there'll be 30 in grade 12 like what they did this year. So no problem- no problem. Ask my friends some of them are sitting here. They know they went through it. I am keeping an eye of who's serious and who is not. [Class very noisy]. Right, watch here. Vertical scale working from here we use the map. Working for scale- you use the map you'll find contour interval. You know the contour interval in the map? Ok, it show the difference in the contour lines. That is what we call your vertical scale which is reflected on your Y-axis [writes on board]. Ok, so you have a x-axis you have a y-axis to draw your cross section. Ok now let's go about drawing a cross-section. Let's make you a little bit wiser. I want you all to take out this worksheet- you got it in front of you- look at it. Ok, are you all looking at this worksheet? [Takes one and holds against the board].

12. E: Yes

13. Mr P: Now you'll find that when I give you a topographical map. When I give you your topographical map- when I give you your topographical map you'll see brown lines on the map. What are the brown lines called?

14. E: (). [All mumbling].

15. S1: ().

16. Mr P: *Ya*, Yes, correct. Tell them what are the brown lines called?

17. S2: Contour lines

18. Mr P: Contour lines- good! Contour lines tell you what? Now, I've taken part of the contour line. One part- one quarter and I drew it here on the top. Can you see the black lines here? Those were brown lines on the map so are were contour lines.

19. E: Yes

20. Mr P: The brown lines are contour lines but this diagram on the top tells you a certain shape- gives you a certain shape- we are gonna work out what that shape is. That's the idea of cross-section for you to identify the type of shape. Are you all with me?

21. E: Yes.

22. Mr P: Right let's go step-by-step. We have to draw a cross-section. We have to draw a cross-section of this contour lines. You all can see here?

23. E: Yes

24. Mr P: You got the line here. The cross-section is going to be there. What I want you to do now- what I want you to do(...). All of you follow step by step. I want you to take another piece of paper. Get another piece of paper and put it across- put it across the line from A to B [showing them on board with his worksheet and paper] come quickly now! Small piece small piece- as long as you got the line A to B covered. Hey, hey, hey, hey, hey, leave that bag and get on with your work man. How?! *Hey lo shaiya manje!* [Shouts at individual student]. [All busy doing the example on worksheet]. Come on now. Not the ruler- paper *gudhoo* [Speaking to individual].

25. E: [Laughter].

26. Mr P: Now you put it across this line, A B. The first step I want you to mark off(...) all of you watching? I want you to mark off the point A then mark off the point B. Mark it off. Don't move the paper, ok? Keep it firm and mark off point A point B. Hey! Follow, follow, follow! You're marked it off?

27. E: Yes.

28. Mr P: You sure? I'm coming round to check the diagrams you gonna give me. Right mark it off. Right, got it? All with me? Then we gonna go the first line to touch the paper [shows on board]. Put a mark- put a mark. First line to touch the paper. First line to touch the paper put a mark. Now what's the height of that line? What's the height of that line?

29. E: () [All mumble One thousand two hundred].

30. Mr P: One?

31. E: One thousand two hundred.

32. Mr P: One? Check the figure properly. One thousand two hundred. Below that put down One thousand two hundred. Are you all with me there? So you put the first mark where this line cuts the paper. You put a mark there and you put down the height One thousand two hundred. Are you all with me here? Right, next point. Where it touch the next line where it touch. The second line- put a mark. And what's the height of this mark?

33. E: [All mumble].

34. Mr P: One thousand two hundred?

35. E: Twenty-three

36. Mr P: One thousand two hundred and twenty-three. Put a mark. Are you all with me there?

37. E: Yes

38. Mr P: Next mark -the next mark One thousand two hundred and twenty. Make sure the paper does not move, ok? Right, so you mark the next one- one thousand two hundred and twenty. Ok. The next line it marks is what?

39. E: (). [All mumble].

40. Mr P: One thousand two hundred and forty. Put a mark there One thousand two hundred and forty. Don't worry about the road line- don't worry about the road line. We looking at the contour lines. Have you marked that? All of you marked that?

41. E: Yes.

42. Mr P: All of you marked that?

43. E: Yes

44. Mr P: The next line is what?

45. E: [Learners mumble] One thousand two hundred and sixty.

46. Mr P: One thousand two hundred and sixty. Mark it off. [Cleaner comes to door asking to count desks and chairs & teacher obliges]. Right, you marked that One thousand two hundred and sixty? You got the next line? Marking there in the center- what's that measurement?

47. E: One thousand two hundred and eighty.

48. Mr P: One thousand two hundred and eighty. Good! You marked it off?

49. E: Yes

50. Mr P: Right, let's mark the other lines off. The next line that passes through is what? [No response]. Say it? One thousand two hundred and eighty. Can you see that? Then the next line is? Mark it off.

51. E: One thousand two hundred and sixty.

52. Mr P: Good. One thousand two hundred and sixty. And the next line is?

53. E: One thousand two hundred and forty.

54. Mr P: One thousand two hundred and forty. Good. One thousand two hundred and forty. Next one?

55. E: One thousand two hundred and twenty.

56. Mr P: One thousand two hundred and forty. Good! Last one?

57. E: (). [Mumbling].

58. Mr P: Right, you got them there? That markings is important- the markings that you got there. Right all of you, this is what we gonna do. We gonna use the x-axis and the y-axis. You gonna draw an x-axis and you gonna draw a y-axis. () you gonna learn to draw the axis. During the course of the week we gonna learn to draw the axis. But I've given you a diagram already. I've

drawn the axis for you. There's it here- at the bottom of your worksheet. Can you see at the bottom of your worksheet?

59. E: [Looking at worksheets] *Ya*.

60. Mr P: Can you see there? Horizontal scale x-axis 1:50000. Your vertical interval 1cm represents 20 meters- that's your y-axis. Can you see that? Next to that, the measurement has been done for you. This is what I want you to do boys and girls, your next step(...). You know the markings that you made? The markings that you made- take A point- point A and place it at the corner where the x and the y meet- at the corner. Are you all with me?

61. E: Yes.

62. Mr P: At the corner, at that corner place A. Are you all there?

63. E: Yes.

64. Mr P: Are you all there? Right, let's go step by step. All of you follow me. First marking One thousand two hundred. You go straight up where One thousand two hundred is put a dot [students busy on worksheet]. You plotting your points now, ok. You got that one?

65. E: Yes.

66. Mr P: Your next line-one thousand two hundred and twenty. Go straight up to one thousand two hundred and twenty and put a dot. Your third point, one thousand two hundred and forty- go straight up- go put your point. Your next point is one thousand two hundred and sixty- go straight up put a point. [Waits for students as they plot their points]. And the last point one thousand two hundred and eighty. Got that?

67. E: Yes.

68. Mr P: You got that point? Now you go straight across now further down next point one thousand two hundred and eighty. The next one, one thousand two hundred and sixty. Can you see that? As you plot your points- as you plot your points, eventually you find you have something like this when you join the dots [demonstrates on board. You go straight through, join all the dots and you'll find that you have a hill like that. Can you see that? You join all the dots and you'll have this kind of shape. Then you shade this- shade this to tell you the type of hill that you have. This is a relief feature you'll find there. But using the contour lines you are able to draw a relief feature. Ok, let's see your relief feature now. Join the dots [speaking to a student] Join it that's it! [Walks around class points out errors and corrects them. Picks up a student's work and shows the rest of the class]. What you've done- you now able to draw a cross-section of a feature that you find. You are able to see now what type of feature is this. Here's it here, here's the feature here. Ok, so basically you are learning to draw cross-sections. Using the contour lines identify features on the maps. Are you all with me?

69. E: Yes

70. Mr P: I have given you the x and y axis on your worksheet. From tomorrow I'm not gonna give you this x and y axis, you gonna draw this x and y axis. Use this as an example and you draw your axis. Every cm will equal to 20m. 1cm represents 20m. 1cm, 1cm, 1cm, can you see these gaps on your x axis- they are 1cm apart. Then you'll be able to draw your cross-section. All of you understand this now? [No response]. Ok, see you tomorrow and we'll give you some examples. Anybody got any problems so far? Talk quick. Want to make sure that you plot perfectly. (). [Now goes around class once again looking at individual students work. Some learners are still working on the worksheet even though the lesson has ended and are asking teacher questions as he walks around. Some have put their books away while others have their heads on the desk. Some are even doing work for other subjects]. Alright, got it? All of you got it? Good. Next time I see you next period. Ok, before I go, hey hey, hey, before I go one more thing one more thing on cross-section.

Take this down in your notebooks now all of you take it down. Otherwise you gonna forget. Take this down now, write down there cross-section and take this information down. Come on come you gotta take this thing down. [Learners take out notebooks and copy information on board]. Right, got the idea? All of you? Ok bye, bye see yourl!

Appendix 26

Interview with principal

1. I: I just wanted to ask about your um the language policy in the school. What is the language policy of the school? Is it dual medium of instruction?
2. P: The medium of instruction is English
3. I: Ok
4. P: With the exception of the isiZulu
5. I: And there is – you allow code-switching in class?
6. P: We allow?
7. I: Codeswitching
8. P: What is that? (Seems confused)
9. I: Codeswitching- where the teacher will explain and then explain in isiZulu.
10. P: The teachers are doing but it is not allowed. It is only isiZulu that is allowed to be taught in isiZulu. But teachers are doing that
11. I: ok- so it's not part of the policy? And it's decided by the school governing body?
12. P: Yes
13. I: And did they give reasons why it should be English in classrooms or?
14. P: It is to expose learners in the world. To express themselves in isiZul I mean English although we know there are many languages. It is training- we are well equipping the learners to face the changing world to be exposed to English
15. I: For the exposure in English. And ok fine that's the language policy. And about laboratories and equipment there's a lack of laboratories and equipment. So does this stop leaners from taking physical science or life science
16. P: No
17. I: Did the number of teachers offering a particular subject stop learners from taking subjects
18. P: Yes. Particularly the physical science there is a challenge. We are currently having a problem with a teacher who has been absent for months now and there is a legal process. Concurrently preparing the documents to submit to the department. Currently I am teaching the Physical science
19. I: So that resources of not having a teacher has impacted on
20. P: A great impact- Because the kids are left behind about a chapter now I'm currently taking those classes. So the human resources in physical science is a challenge
21. I: That stops learners from wanting to take physics or yourl have a certain number that yourl cap it?
22. P: They have already decided to take the physical science because they decided to do take physical science in grade 9 ya subject choice is done in grade 9 for grade 10. So there's no change the figure that we have in grade 10 is the one that we have now with the exception of two learners who left. One has been transferred and one got pregnant
23. I: Ok. So are there any other subjects like computers that learners would want to take but they can't?
24. P: They want to take computers but we do have computers, we do have the lab but the challenging part is the safety of the computers. So currently we just battling with our finance. I'm sitting with 51000 balance today and that available funds we are using it specially for the exams. So it's the lab that's available the computers are available its only security. So I can't just take the computers and store them in a room that is unsecured. But they are interested for computer
25. I: Ok and is there a teacher

26. P: No there's no teacher

27. I: So that's a human resource issue as well

28. P: Yes so it's the human resource issue and the security. So the security is due to insufficient funds

29. I: And who would replenish those funds, would it be the parents who would have to raise up the money or would the department give you something for that

30. P: Uh this should be the baby of the GB who will play the role in terms of fundraising

31. I: Ok. Um I was just looking at the quintile rating of the school it is rated at quintile 5. How do you feel about that?

32. P: Frustrated- financially frustrated we went to an extent with the GB to drive to Pietermaritzburg and our request for reduction from quintile 5 to quintile 3 we presented our learners we presented our parents who are unable to pay the school fees. The team came down to investigate and spoke to some of our learners in terms of their family background and we were promised and told to wait till the end of September. So we are praying and hoping that by the end of September there will be a change and they will rezone the school and if there is finances then we will be ranked us as quintile 3 because the governing body even drove to them submitted the letter

33. I: Yay a, because the socio-economic situation of the people around here

34. P: It's not good. We waiting for the department to respond to that in terms of the quintile. But the parents I don't get any joy from the parents they only come with R500 then another R150, 20 it doesn't work

35. I: The school fees comes in drips and drabs

36. P: Um do you have a feeding scheme in this school?

37. I: No

38. P: We just get now and then from spar who are donating. But we don't have a feeding scheme. We only qualify for a feeding scheme if we are quintile 3. All secondary schools in quintile 3 qualify for feeding scheme

39. I: And the community around here, there's like no one around her doing community service by providing.. do you think you need a feeding scheme?

40. P: 100% yes. Kids are coming to school on an empty stomach- desperately, desperately need a feeding scheme

41. I: There aren't any churches or anything around here that reach out? There aren't any churches or organizations religious organizations that have come

42. P: Uh they came in because we wrote letters to them. Divine life . We were given a certificate of poverty and they only take a sample of learners they take the leaners to *Victor town and feed those leaners and come back

43. I: Oh so it's not on a continuous basis?

44. P: They just take those like 15-20 learners and have that lunch and come back. We need to have like continuous support. We went to the extent to let out the class to some religious people to get some funds. Now we got about 8 churches that are using our classes so now we getting uh R300 a month cos if we charge them more they just quit they run away

45. I: Ya

46. P: Ya so we said let's keep it lower. We looking at the primary school how much they charging them and we keep it the same. That's the only source of income we are having. And we are thinking of having a tuckshop here. We are trying to squeeze a tuckshop here- so we are trying to fundraise. We do have a tuckshop here but that thing is used by a committee member but he problem is that

we are getting insufficient funds about R1200 from there so we just supplementing so at least we can get about R3000 extra for funds

47. I: Ya and other resources like textbooks are you getting them regularly?

48. P: Um we are getting from the department it's our allocation but it's not sufficient although we getting it's not enough because our allocation is limited I think we get.. We ((receive)) 51 -we owing the electricity. We are owing 92000. But we will pay R23000 that's from the allocation from the department. Now we can't pay but we have to pay something. I ended up making an agreement with the municipality that maybe I can give them maybe R1000 a month plus I have to make a plan for that R23000.

49. I: Sure

50. P: So it's challenging. So I'm sitting with this 51 and I'm keeping this 51 for the September exams so that my kids can write the exam. I cannot chase them away because they have not paid school fees.

51. I: Ya, so what cost goes into writing the exam?

52. P: What we used to do, we just buy for the whole year writing material the lined papers writing material, toner, stencils. Just now we've just ordered lined paper for 18000 that's 36000

53. I: Right

54. P: That we've just ordered and we owing those people. They carry us until next year. So they carry us there's one guy we have to pay 80000 by this year. So that stuff carries us till the end of September having in mind that our matriculants out of our 1500 learners our matriculants are not gonna be part of the September because the department provides writing material question papers so we save in terms of running question papers

55. I: So these here you run (Pointing at the question paper on the desk)

56. P: Yes we save on the side of question papers but not all subjects. Its only subjects that are called scarce subjects like physical science, mathematics life sciences and geog. These are the only subjects where we get the full number of question papers but the other subjects (door creaks open admin person interrupts interview and we have to end because there is something urgent the principal needs to attend to)