

**The pedagogical content knowledge of teachers and
its effect on enliterating grade three and four
learners**

KJ Steinke



orcid.org/0000-0002-9964-3676

Thesis accepted in fulfilment of the requirements for the degree
Doctor of Philosophy in Education at the North West University

Promoter: Prof R Cromarty

Graduation: November 2019

Student number: 26797720

DECLARATION / VERKLARING

I the undersigned, hereby declare that the work contained in this dissertation / thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

A handwritten signature in black ink, appearing to read 'A. J. J. J.', written over a horizontal line.

Signature / Handtekening

Date / Datum 10th November 2018

ACKNOWLEDGEMENTS

It is no cliché to say that this project could never have been undertaken without the care, encouragement and support of others. Firstly, to my Study Supervisor and mentor, Professor Rosemary Wildsmith-Cromarty, where do I start? Your ability to find ways around the impossible when we couldn't go through it? The way in which you managed to give me tasks that always end up taking me further than I thought I could go? River-rafting was just one, I think Vygotsky would be proud. Your infectious energy and creativity? Or just the solid support and back-up? "Thank you" seems way too small. Secondly, my husband and children, who sacrificed so much during these years without complaint. Again, words are too simplistic, I love you. There were many others, friends and colleagues who have shared or walked this journey with me. A big "thank you"! And last but never least, my precious Lord and Saviour, Jesus Christ. I pray you would use this for Your glory.

ABSTRACT

This study examines the pedagogical content knowledge (PCK) and reading teaching practices of four Grade 3 and four Grade 4 teachers at two schools in the KZN Midlands area between 2015 and 2017. The researcher proposes that PCK is strongly influenced by the attitudes and beliefs of the teacher and becomes realized through classroom interaction which takes place via language. A classroom instrument called the Facilitative Orientation to Reading Teaching or FORT was developed by the researcher and consists of two parts: PCK and reading teaching and forms of classroom interaction. Each category on the FORT was based on current evidence of ‘best practice’ in reading teaching. The purpose was to capture *what* teachers do when they teach reading that either helps or hinders literacy acquisition. Qualitative data, such as semi-structured interviews and classroom observations were added to provide evidence of the *why* and *how* of teacher practice and pre- and post-reading assessments were conducted with participating students. The FORT data were graphically represented in the form of two groups: teachers who use additional reading approaches with the current South African Department of Basic Education curriculum, known as Curriculum Policy Assessment Statements (CAPS) and those who use only CAPS. In addition, two participating teachers provided lessons in both isiZulu and English to allow for comparison of teaching styles in the two languages. Findings show that although the additionally trained teachers were generally using a greater range of beneficial teaching strategies, all the lessons recorded remain effectively teacher led. Therefore, although additional reading teaching training is necessary, it may not be sufficient to change entrenched teaching styles. It is suggested that teachers may benefit further from on-going coaching, as suggested in the Early Grade Reading Study, or EGRS report.

Keywords: pedagogical content knowledge; literacy; grade three; grade four; subject content knowledge; teacher dialogue; reading teaching; Reading to Learn; scaffolding.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADD/s	-	Teachers Using Additional Training
ANAs	-	Annual National Assessments
B.Ed.	-	Bachelor of Education
CALP	-	Cognitive Academic Language Proficiency
CAPS	-	Curriculum Assessment Policy Statements
CPD	-	Continuous Professional Development
COLT	-	Communicative Orientation to Language Teaching
DBE	-	Department Of Basic Education
DIBELS	-	Dynamic Indicators of Basic Early Literacy Skills
ECD	-	Early Childhood Development
EGRA	-	Early Grade Reading Assessment
ESL	-	English Second Language
FAL	-	First Additional Language
FORT	-	Facilitative Orientation to Reading Teaching
HL	-	Home Language
IRF	-	Initiation-Response-Feedback Cycle
ITE	-	Initial Teacher Education
KZN	-	Kwa-Zulu Natal
L1	-	First Language
LiEP	-	Language in Education Policy
LoLT	-	Language of Learning and Teaching
MOI	-	Medium of Instruction
NA/s	-	Teachers Not Using Additional Training
NCS	-	National Curriculum Statement
NEEDU	-	National Education Evaluation & Development Unit
NMMU	-	Nelson Mandela Metropolitan University

OBE	-	Outcomes Based Education
ORF	-	Oral Fluency
PCK	-	Pedagogical Content Knowledge
PD	-	Pedagogic Device
PGCE	-	Post-Graduate Certification in Education
PIRLS	-	Progress in International Reading Literacy Study
POPI	-	Protection of Personal Information Act 2013
R2L	-	Learning To Read: Reading To Learn
RNCS	-	Revised National Curriculum Statement
READ	-	Read Education Trust
SA	-	South Africa
SACE	-	South African Council of Educators
SACMEQ	-	Southern African Consortium for Monitoring Educational Quality
SFG	-	Systemic Functional Grammar
SIC	-	Scaffolding Interaction Cycle
S1(E)	-	School One English Medium Of Instruction
S2(Z)	-	School Two IsiZulu Medium Of Instruction
T1	-	Teacher One
T2	-	Teacher Two
T3	-	Teacher Three
T4	-	Teacher Four
T5	-	Teacher Five
T6	-	Teacher Six
T7	-	Teacher Seven
T8	-	Teacher Eight
UNICEF	-	United Nations Children’s Fund
UNESCO	-	United Nations Scientific, Educational & Cultural Organization

- WPCM - Words Pronounced Correctly Per Minute
- ZPD - Zone of Proximal Development

CHAPTER 1: INTRODUCTION

1.1 Reading skills in South Africa

Past research has highlighted the correlation between reading skills and academic success yet there continues to be an under-emphasis on the development of reading skills at the earlier grade levels in South Africa (Pretorius & Machet, 2004a; Atmore, 2013). In 1990, the Threshold Project revealed that Grade 5s were reading at Grade 3 level (Macdonald, 1990). Unfortunately, this has continued well into post-1994 democratic South Africa. Despite the stated intentions of the South African curriculum to enable learners to be effective readers who communicate clearly and make use of critical and creative thinking (Department of Education, 2011b), this is not happening. Instead, there remains a lack of reading culture amongst the poorer socio-economic population (Klapwijk, 2015; Ramadiro, 2014) and a serious reading skills deficit (Mulgrew, 2012; Ntuli & Pretorius, 2005). This chapter begins with a discussion of the aim and context of the study, followed by the problem statement and rationale for the study; research focus and objectives; research instruments and data collection; and research questions. Finally, it will conclude with an outline of the chapters to follow.

1.2 Research aim and context

The aim of the study was to examine teachers' reading PCK to observe what facilitates and what hinders literacy acquisition at foundation and intermediate grade reading skills. The data collection was conducted at two primary schools, School 1 English (S1E) and School 2 (S2Z), in the Natal Midlands between 2016 and 2018. At the time of the study, School 1 (S1(E)) was registered as a quintile 4 school, while S2(Z) was a quintile 2 school. Quintiles range from 1 to 5 and are categories that the South African government uses to allocate funding to schools. Schools that are ranked lower receive greater funding and those ranked higher receive less. However, both schools in the current study were located in poorer socio-economic areas and drew the majority of their learners from the local informal settlements. In addition, both schools had severe financial budgetary constraints. For example, during this study, teachers at S1(E) could not use the only photocopy machine as the school could not afford to for it to be fixed, while S2(Z) went the better

part of a year with no telephone service for the same reason. A total of four Grade 3 and four Grade 4 teachers, as well as the learners in their respective classes, participated in the study (see table 5-1). A description of the research instruments and data collection process follows.

1.3 Research instruments and data collection method

Data was collected by means of 35 recorded video lessons of language and reading teaching, mainly in English, but some were in isiZulu; semi-structured interviews with all eight teachers; observations of teaching activities and strategies; personal journal notes; and pre- and post-reading assessments (4.5). The research questions are below, followed by a discussion of the problem statement and study rationale.

1.4 Research questions, problem statement and study rationale

In light of the study focus, which is to explore the PCK of reading teachers, the following main research question was asked, followed by four sub-questions.

What do teachers do when they teach reading that moves learners from decoding to comprehension?

- What do they do that hinders the learning of effective reading skills?
- What do they do that helps the learning of effective reading skills?
- Do what teachers believe they do when they teach correspond to what they actually do in the classroom?
- Does additional training in reading teaching assist teachers to be more effective at teaching literacy skills?

The problem statement follows and rationale for the study is outlined below.

In 2002, 10 years after the initial Threshold Report mentioned in the introduction (MacDonald, 1990), MacDonald revisited the literacy skills levels of South Africa's poorest (mainly black) school learners, only to find that the new curriculum, then Outcomes-Based Education (OBE), was still failing to provide the basic levels of literacy and numeracy development in both the foundation and intermediate phases of education (Macdonald, 2002). In 2007, the KwaZulu-Natal Department of Education published a report outlining an evaluation of Grade 6 learners in that province. The report indicated that 75% of the learners were below the required benchmark for literacy competence, and as many as 88% had a deficit in the required mathematical skills level (Department of Education, 2007; Wildsmith-Cromarty, 2012).

Furthermore, the most recent results of the Progress in International Reading Literacy Study (PIRLS) from 2011 and 2016 showed that South African learners continue to perform poorly in terms of international benchmark scores for literacy and numeracy (Howie et al., 2012; Van Staden & Howie, 2010; Van Staden & Zimmerman, 2017). The PIRLS consists of an international comparative reading assessment for Grade 4 learners and has been administered globally every five years since 2001 (IES: National Centre for Education Statistics, 2011). Despite the relatively large budget allocated to basic education by the South African government, literacy results, such as those highlighted by the PIRLS, point to serious weaknesses still inherent in the current education system (Van Staden & Zimmerman, 2017).

The first of these weaknesses is the post-1994 closure of the pre-service teacher training colleges and the current ineffectiveness of university courses to produce adequately trained teachers (see 3.6). A major effect of this lack of teacher training is teacher absenteeism (Rule, 2017; Sapa, 2013). Secondly is the lack of access to print experienced by learners from poorer socio-economic backgrounds, both in South Africa and globally in countries such as Australia, Sweden, and the USA (Nel, 2011; Ntuli & Pretorius, 2005; Martin & Rose, 2005; Bernstein, 1990; Gambrell et al., 2011a; Acevedo, 2010). It is now generally accepted that children who have the advantage of being able to read at home before they start formal education tend to be more successful in school, and it is estimated that children in literate, middle-class families reportedly spend up to 1000 hours in parent-child reading before they even begin formal schooling (Rose, 2011b; Adams, 1990). This means that poorer learners enter school with a severe disadvantage. In addition, other issues are prevalent in South Africa, such as poor teacher training (Walton et al., 2009), poor learner

nutrition, a lack of both proper infrastructure and/or resources for schools, as well as difficulties with the language used as language of learning and teaching (Ramadiro, 2014; Atmore et al., 2012; Klapwijk, 2015). As a result, learners do not develop effective reading skills in their foundation grades.

Unfortunately, children who do not learn to read well in the early grades are unlikely to make up the deficit if they have not achieved adequate reading levels by age nine (Griffin et al., 1998; Rose, 2004; Pretorius & Mampuru, 2007). This, in turn, highlights the importance of seeking solutions to address the root of the problem, namely the foundation level. The current study aims to make a contribution to this (Gruhn & Weideman, 2017). It is generally accepted within schools that the teaching of reading is the responsibility of foundation phase teachers. Few teachers continue to teach reading per se after Grade 3, even though children at the intermediate level are expected to learn from reading. Therefore, if they have not achieved the required literacy skills by Grade 4, these learners are effectively set up for academic failure (Klapwijk, 2015; Rose, 2004; Pretorius, 2002). In addition, where reading continues to be taught, it is believed to be the domain of English teachers alone and not the responsibility of other subject content teachers (Klapwijk, 2015). I have had the benefit of several years of experience of working with the academic literacy challenges of students at tertiary level and have encountered the results of the lack of effective literacy teaching at the primary level (Steinke, 2012; Wildsmith-Cromarty & Steinke, 2014). As Bernstein points out, it is vital that learners learn to read early to be prepared for academic success, for beyond the book lies the textbook (Bernstein, 1990) and *“you can’t learn much from books you can’t read”* (Allington, 2002:16).

Ultimately, the challenges that teachers experience in teaching literacy and numeracy to learners contribute to the overall poor functioning of the education system in South Africa (Nel, 2011). In addition, while there is an alarmingly high attrition rate before Grade 12 (Rademeyer, 2014), currently, tertiary institutions are left to cope with the lack of learner academic literacy skills (Pretorius, 2002; Steinke, 2012; Wildsmith-Cromarty & Steinke, 2014). The issues of mother-tongue education, as well as the disconnection between government policy and practice, are discussed below.

1.4.1 Constitutional rights and mother-tongue education

Another issue facing South African education is the current situation with the language of learning and teaching (LoLT). The Constitution protects the status of official languages in the country and the right of all to receive education in the official language(s) of their choice in public schools (Department of Education, 2010; Lomofsky and Lazarus, 2001), as does the South African Government's "Language in Education Policy" (LiEP) (Department of Education, 2002a). In reality this does not happen for the majority of learners. Speakers of indigenous languages are encouraged to learn in their mother-tongue but this option is available only until the end of the foundation phase (Grade 3). From Grade 4 onwards they are required to use either English or Afrikaans as LoLT. This is despite the fact that research clearly shows the value of learning in the mother-tongue (Wildsmith-Cromarty, 2012; Wildsmith-Cromarty & Gordon, 2009; Cummins, 2001; Batibo, 2009; Brock-Utne & Hopson, 2005).

Particularly for rural children, where exposure to languages other than the mother-tongue is rare, the switch to the use of English or Afrikaans as LoLT may often be a difficult and even traumatic experience (Heugh, 2002; Macdonald, 1990; Taylor & Vinjevold, 1999). One may tend to find that code-switching occurs in these situations where teachers themselves may have difficulty understanding and explaining certain concepts – such as those found in mathematics, science, or language – due to their unfamiliarity with English, for example (Taylor & Vinjevold 1999; Probyn 2002). Though some people regard switching as beneficial (Plüddemann, 2015), there has been some indication that it may be detrimental to learning if used excessively in classrooms (Henning, 2012). The lack of understanding of the required LoLT may also lead teachers to resort to a 'rote-rhythm' form of teaching (Macdonald 1990; Taylor & Vinjevold 1999), which leads to superficial learning of the subject matter on the learners' part, usually via usually rote-memorisation. Conteh (2003:119) defines bilingualism as "*the ability to operate in more than one language domain without necessarily being proficient in any of them.*" Many children in South Africa become bilingual, but due to inadequate teacher development, most children find themselves with little creativity in the classroom and an over-reliance on rote learning and textbooks (Conteh, 2003). Another potential pitfall is that, if teachers themselves do not have an adequate grasp of language-related concepts in the LoLT, they may transfer errors or misconceptions to learners (Wildsmith-Cromarty, 2012; Sanders, 1993; Theron & Nel, 2005).

1.4.2 Constitutional values and Curriculum Assessment Policy Statements (CAPS) - specified outcomes

Some of the language rights the Constitution provides for are as follows (Constitutional Assembly, 1996; Department of Education, 2002b):

- Ensuring equity and social justice;
- The creation of confident, independent learners, able to critically evaluate information and to develop to their maximum ability;
- Teachers who are qualified, competent, dedicated, and caring.

In 1998, Curriculum 2005, South Africa's first OBE curriculum, was implemented (Department of Education, 1997). However, OBE terminology often caused confusion for teachers; there was a lack of effective school resources; and teachers were overloaded with administration tasks (Hofmeyer, 2010; Jansen, 1998; Le Clercq, 2014). In 2003, the Revised National Curriculum Statement (RNCS) was released, which focused on critical engagement and knowledge instead of the previous emphasis on rote learning, which was an improvement, but not sufficient, to deal with the problems (Department of Education, 2002b). The curriculum was finally repackaged into a more teacher-supportive version called the CAPS (Department of Education, 2016b). In the CAPS, every grade has been allocated a specific Curriculum and Assessment Policy Statement to provide details on what teachers ought to teach and assess (Hofmeyer, 2010; Pretorius & Klapwijk, 2016). However, although the term 'Outcomes-Based Education' has been removed from the CAPS documents, the education system is still founded on OBE and the outcomes envisaged for learners of reading remain the same. (Department of Education, 1997; Department of Education, 2016b).

In this statement, learners must ultimately be able to:

- collect, analyse, organise and critically evaluate information;
- read for both information and enjoyment;
- be able to select and interpret information for necessary purposes;
- use science and technology effectively and critically; and
- solve problems effectively.

The expected outcomes for foundation and intermediate phase learners are discussed in more detail below. According to the DBE, the National Curriculum and Assessment Policy Statement, or CAPS, is a comprehensive policy document for Grades R to 12 that aims to provide a clear outline of what is to be taught and assessed on a term-by-term basis (DBE, 2011b). The outcomes are taken from CAPS statement for English Home Language as, according to Bikitsha and Katz (2013), the indigenous language curriculum statements have been translated originally from the English version. The first set of requirements outlined are for Grade 3, Term 1.

For the first term, the DBE requires the integration of language elements and writing into reading teaching, as well as the use of increasingly extended text. This includes the correct use of punctuation, spelling and grammar, such as tenses and prepositions. The CAPS for English First Language, Foundation Phase (DBE, 2011b) lists the five main components that form the focus for reading teaching as phonemic awareness; word recognition; comprehension; vocabulary; and fluency. In addition, the CAPS document calls for the explicit teaching and practice of reading elements and learners must have a firm grasp of sound/letter correspondence.

Furthermore, different reading strategies are required such as reading environmental print; shared reading; teacher reading-loud; paired or independent reading; and group guided reading. Learners must be able to write at least one paragraph of eight sentences such as their own news; a creative story; or a description of an incident or an experiment.

By end of 4th term, and therefore the beginning of Grade 4, the Grade 3s must, amongst others, be able to do the following:

- Use terminology such as subject; verb; object; synonyms; and antonyms when discussing texts;
- Answer open questions;
- Express their feelings and opinions about a text;
- Build words and spell correctly using their phonics skills;
- Read extended text such as fiction and non-fiction;
- Engage in shared reading with the teacher and/or the whole class;
- Use visual cues in graphical texts and analyse for attitudes or assumptions, for example in advertisements;

- Answer inferential questions;
- Use a dictionary to find new words;
- Use a variety of different reading strategies, such as guide group reading or silent reading;
- Read with increasing fluency, speed and expression;
- Use decoding and comprehension skills to make meaning
- Monitor their own reading and use self-correcting strategies;
- Sequence information;
- Write a variety of different texts in context;
- Read their own and other learners' texts;
- Read independently for meaning;
- Be able to use both simple and complex sentences;
- Make use of capital letters and full stops;
- Use a wide range of vocabulary related to the relevant topic
- Identify parts of speech, such as nouns and verbs;
- Relate a text to their own life;
- Be able to draft, revise and edit a text;
- Grasp the main message of a text;
- Understanding text structure;
- Read from a textbook in order to learn.

By the end of Grade 4, learners are expected to be able to do the following:

- Links sentences and paragraphs cohesively;
- Write short stories; advertisements; and personal diaries;
- Understand the use of metaphors, similes and proverbs.

In addition, Grade 4 learners are expected to have a vocabulary range in their home language of 1700 – 2500 words in the first term. This is expected to increase to between 3500 and 4000 words in the 4th term. They should be able to write between 2 and 3 paragraphs of 5 to 6 sentences each. Whereas the CAPS statement indicates that Grade 4 learners should be able to intensively read between 150-200 words at the end of Term 4, they also state that they can provide no expected

length (benchmark?) of an extended reading text for Grade 4, as this will vary according to the type of text and reading skill of the individual learner (DBE, 2011a; 2011b).

In general, despite the statements made by the DBE in the CAPS documents (DBE, 2011a; South Africa. Department of Basic Education, 2011b), the expected outcomes are not being realised. As Wildsmith-Cromarty (2012:158-159) states, “*teachers need to explicitly teach these skills to learners but access to appropriate pedagogy, tasks, activities and resources in the home language of the learners is missing.*” This is not to say that no gains have been made in the education system. A discussion of CAPS and government documents follows.

1.4.3 The CAPS and government documents

The Department of Basic Education’s Country Progress Report (2014) states that South Africa can claim to have achieved universal primary education as of 2013 as 99% of primary school learners were attending educational institutions. However, the DBE does acknowledge that poor learning outcomes are a weakness in the system (Department of Education, 2014) and has accordingly established a turnaround plan referred to as “Action Plan 2019: Towards the Realisation of Schooling 2030” to improve the quality of education (UNICEF South Africa, 2013; Department of Education, 2015).

In its report on the “Status of LoLT in South African Public Schools”, the DBE (2010) also recognises the social, cognitive and academic advantages of mother-tongue education as a sustainable goal for learners and that the use of learners’ first language as the LoLT would be in line with the UNESCO Education for All Goals plan (UNESCO, 2015). The report enthusiastically states that between 1998 and 2007, there was a significant increase in the percentage of foundation phase learners who learned in their home language, such that the total stood at 80% (Department of Education, 2010). However, an important finding of the report is that, although the number of learners who were able to receive instruction in their L1 had risen some 25% from 1998 to 2007, there appeared to be no corresponding improvement in learning (Department of Education, 2010). This is not the result one would expect to find given the amount of research on the beneficial relationship between L1 instruction and academic success, as was mentioned earlier in this chapter.

This is particularly noticeable at Grade 3 level and is very relevant to this study. The report suggests that an inquiry into the reasons for this phenomenon is necessary and that there may well be other factors that have a greater influence on learning outcomes than L1 instruction alone (Department of Education, 2010).

Returning to the DBE's (2010) stated figure of 80% of learners who were able to learn in their L1, it is prudent to note that the remaining 20% who did not learn in their home language comprised of 600,000 learners (Department of Education, 2016a) while only 27% of learners could be taught in their home language from Grade 4 onwards (Department of Education, 2010). The implications are that a large percentage of learners enter into Grade 4 with little or no knowledge of the LoLT and are certainly not anywhere near the attainment levels set out in the goals and outcomes specified in the NCS (Department of Education, 2016b; Department of Education, 2010). In addition, the specifications of the DBE regarding Language in Education Policy are not being met.

1.4.4 Department of Education Language in Education Policy (LiEP)

The current LiEP in South Africa (Department of Education, 2002) specifies an additive approach to multilingualism, which means that learners should initially receive schooling in their mother-tongue. There is some confusion over exactly when the additional language should be introduced: the National Curriculum Statement (NCS) (Department of Education, 2016b) states that it should be introduced in Grade 1, whereas the official LiEP still states that it must be introduced in Grade 2 (Department of Education, 2010). Either way, the intention of the DBE in choosing this approach to multilingualism is that the learner should be well-equipped upon reaching intermediate level to conduct all subject learning, with the exception of the home language, in this additional language which is usually English (Department of Education, 1997). It may be prudent to examine the DBE's official policy, standards and expectations for reading for foundation and intermediate phase learners. As it is the intention of the NCS (Department of Education, 2011a) to assist teachers in their role as educators, it is therefore important to consider what is said, or not said, in these guidelines, along with the current lack of benchmarks for indigenous languages. While the above serves to illustrate the disparity between language policy and implementation in education, the following section discusses issues related to the CAPS and reading benchmarks for indigenous South African languages.

1.4.5 The Curriculum Assessment Policy Statements (CAPS) and reading benchmarks

While CAPS has good intentions in its desire that learners be developed into effective readers and lists the individual components of reading (3.2) that must be taught to learners, it stops short of a specific definition of reading and shows little awareness of the linguistic aspects of learning to read. Bikitsha and Katz (2013) and Ngema (2011) have highlighted the inconsistencies contained in the Nguni home-language documents (isiXhosa and isiZulu respectively) for the foundation phase. For example, they state specifically that the documents have been translated (as opposed to versioned), directly from the English CAPS document without due consideration for either differences in language type or structures, and sometimes contain inappropriate or misspelled words (Bikitsha & Katz, 2013). Moreover, there are currently no official benchmarks for reading in indigenous languages in South Africa, and existing benchmarks are taken from English L1 assessments (Wildsmith, 2015). There are also currently no specific benchmarks in indigenous languages with which to measure the reading rate of First Additional Language (FAL) English learners (Ngema, 2011). Fortunately, some work has begun in this area: the Early Grade Reading Assessment (EGRA) has provided an isiZulu version of their Grade 3 test (see 4.5.5) which allows for 43 wpm, as opposed to the English version which allows for 71 words pronounced correctly per minute, or wcpm (USAID, 2004; USAID, 2009). In addition, Pretorius and Spaul, are involved in ongoing research (Pretorius, 2015; Pretorius & Spaul, 2016; Spaul & Pretorius, 2015) that indicates that the threshold for English FAL readers is around 70 words correctly pronounced per minute (wcpm), whereas the threshold for English L1 readers is 90 wcpm at Grade 5 level – a 20 wpm difference. As both benchmarks in English and (the lack of) benchmarks in isiZulu are relevant for the current study, the existing English reading benchmarks provided are given first (Hasbrouck & Tindal, 2006), while the proposed isiZulu equivalent is provided second (USAID, 2004; USAID, 2009):

- By end of Grade 1, the benchmark is 53 wcpm for English and 25 wcpm for isiZulu;
- By end of Grade 2, the benchmark is 89 wcpm for English and 61 wcpm for isiZulu;
- By end of Grade 3, the benchmark is 107 wcpm for English and 79 wcpm for isiZulu; and

- By the end of Grade 5, learners should be at 139 wcpm for English and 111 wcpm for isiZulu.

However, there is considerable variation with oral fluency (ORF), differing by 80-100 wcpm within a grade (Hasbrouck & Tindal as cited in Pretorius, 2015:5, *author's personal copy*). Also, benchmarks are largely lacking for FAL readers in South Africa, although some work has been done in English. In a survey conducted to test 4,697 Grade 5 learners from 214 schools across rural areas in all 9 provinces in South Africa, Spaul and Pretorius (2015) selected a subsample of 1,772 learners for an ORF test. They sought to model the relationship between English reading comprehension and fluency in ESL learners in the light of a dearth of qualitative research on oral reading fluency in L2 learners in developing countries. Their findings indicate a threshold of 70 wcpm for second-language readers, as opposed to 90 wcpm for English first language readers. A brief introduction to the Read to Learn (R2L) approach and READ programme follows.

1.4.6 A description of READ & Read to Learn as related to CAPS

READ is an initiative supported and funded by the DBE while R2L was originally developed in Australia to assist marginalised, aboriginal learners with literacy. Both are based on Vygotsky's social constructivism (Vygotsky, 1978), scaffolding theory and use a balanced approach to literacy, i.e. use of top-down and bottom-up approaches. However, READ is based on natural approaches and is therefore more compatible with CAPS, which is still outcomes (OBE) based.

Natural approaches preclude explicit teaching. Comprehension is taught via extensive reading and the use of a number of reading strategies, such as individual reading, reading out loud and group reading. Learners must have access to a large variety of reading materials of different types as well as be encouraged to read and write for different purposes and in different social contexts.

R2L, on the other hand, utilises explicit teaching and is designed to continue actively teaching reading at any Grade level, including tertiary. It is based on the ideas of, amongst others Bernstein (1990); and Halliday (1976). Comprehension is taught via an interaction-feedback cycle (Rose, 2004; 2005). This cycle runs almost as that of a parent who reads a story to a young child. The child is assisted in a non-threatening environment as they read together. The child gives feedback

to the adult's initial engagement, and the adult then gauges where the child is and elaborates to extend learning (Christie, 2005).

1.5 Summary of chapter 1

This chapter contained an introduction and context for the study as well as the research questions. In addition, it has provided an explanation for the current problem with reading skills in South Africa. This serious situation has its foundations in the early years of schooling, particularly affecting learners from poorer socio-economic areas, as a lack of reading culture, coupled with a dysfunctional education system, hinders these learners from academic success. A major reason for the dysfunction is the lack of effective teacher training and its subsequent demoralisation of teachers (The Conversation, 2019). The chapter has also discussed the required literacy outcomes for learners in Grade 3 and 4, as stated by the Department of Basic Education. Unfortunately, the expected outcomes are still not taking place. Several reasons for this were discussed, including a disconnection between the constitutional and government-stated expectations for reading and the reality that learners face. Chapter 2 provides a literature review and contextualises this study, while chapter 3 discusses the theoretical foundations. Chapter 4 describes the methodology and design, while chapter 5 discusses the findings that emerged from this study. A discussion and conclusion will follow in chapter 6.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

A low level of literacy skills is a global problem (Allington, 2002; Scarcella, 2003; Washburn et al., 2011a; Washburn et al., 2011b). However, in South Africa – a developing country with a dark Apartheid past – little classroom research was conducted before 1994 (Chick, 1996; Heugh, 2002; Hoadley, 2012). The country therefore has its own particular set of challenges that include a continued emphasis on rote learning. This often results in learners who end up only able to “bark at print” (Pretorius, 2002:92) because of a lack of concern for meaning or comprehension (Klapwijk, 2015; Pretorius, 2002). Other challenges include a scarcity of resources and proper infrastructure; poor learner nutrition (Atmore et al., 2012); lack of effective teacher training (Ramadiro, 2014; Taylor, 2002); the failure of Outcomes-Based Education (Jansen, 1998; Reeves & Muller, 2005) and the mandatory use of English as medium of instruction from Grade 4 (Chick, 1996; Henning, 2012; Pretorius & Machet, 2004a; Wildsmith, 1992; Wildsmith-Cromarty, 1997). Despite the recent curriculum revision by the Revised National Curriculum Statement (RNCS) (Chisholm, 2004; Vandeyar & Killen, 2003) and the CAPS (Department of Education, 2011b; Mather & Land, 2014), the fact remains that in South Africa both teachers *and* learners continue to struggle with literacy in both their mother-tongue and English (Bloch, 2005; Bloch et al., 2009; Mather & Land, 2014; Pretorius & Machet, 2004a; Taylor, 2007; Taylor & Vinjevold, 1999). The following section will contain a brief comparison of early grade reading outcomes (EGR) in South Africa to other countries, followed by relevant literacy studies from Grades 1 to 6 both international and local.

2.2 EGR in South Africa and abroad

Initially, this discussion will begin with a series of assessments in reading and mathematics by the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ). This involves two large-scale, cross-national studies into the quality of education across 15 education systems. South Africa took part both in 2000 and again in 2007. The study involved Grade 6

learners and use of the National Language of instruction, which in the case of South Africa is English, out of concern for the fact that the learners would soon be exiting primary school and would need this language for a successful transition to Grade 8. The reading tests were developed from official school curricula, syllabi and textbooks used in South Africa (Southern & Eastern African Consortium for Monitoring Educational Quality, 2011). Results showed poor results in reading in both sets of assessments, with little improvement between 2000 and 2007. For example, the 2000, results showed that 66% of learners could not read successfully in reading levels 1 to 4, whilst in 2007, the percentage was 63%, a minor increase in reading skills. This minimal increase is believed to be a result of poor teacher practice, teacher development and use of resources.

Another major range of assessments that occur on a global scale are the latest PIRLS. Results from 2016 continue to show that South African learners are not acquiring effective literacy skills (Mullis *et al.*, 2017) The PIRLS includes some 50 countries, most of which are higher-income countries, such as the USA and UK. However, there are also middle-income countries represented, such as Iran, Chile, Morocco, and Oman. According to the 2016 PIRLS literacy assessments, 78% of Grade 4 learners in South Africa could not reach the lowest benchmark, i.e. they were unable to locate and retrieve explicitly stated information or even make straightforward inferences from the text. Simply put, they cannot read for meaning. This is compared to 4% in the USA, 3% in the UK; 35% in Iran; and 13% in Chile. In addition, South African Grade 4 learners scored *last* out of the 50 countries in 2016.

In addition, South Africa has a large gender gap, with girls performing higher than boys in reading. This gender gap is the 2nd highest in the world with only Saudi Arabia being higher. The rate of reading skills of SA Grade 4 learners appears to be falling, as in 2011, 3% of learners could attain the highest benchmark in the PIRLS whereas in 2016, only 2% could reach the same level. The PIRLS report states that sample taken for the 2016 PIRLS is nationally representative and therefore can be generalized to the whole of SA (Mullis *et al.*, 2017). A discussion of relevant international research literature follows.

2.3 International literature

The first international study involves a large-scale investigation into teacher preparation for reading and maths teaching (Akyeampong *et al.*, 2013) across six countries: Ghana, Kenya, Mali, Senegal, Tanzania and Uganda. Participants consisted of tutors from four colleges from each country. Data was collected between March and November 2010 and instruments used were a quantitative questionnaire to ascertain teachers understanding of teaching and learning and qualitative data, gained from analysing documentation and interviews of trainee focus group discussions. In addition, observations of sessions and video recordings were made of trainee, in-depth interviews on the views of the teachers on the observed session and on the training course as a whole. This enabled the researchers to see how the differences between how the curricula was initially prescribed and how it was being translated in the colleges (Pryor *et al.*, 2012).

It was found that initial teacher education has the strongest impact on trainee teachers but tends to produce teacher-led approaches. Furthermore, it appeared that initial training had very firm grip on teachers' practice and, as a result, the structure and sequencing of their lessons tend to follow the patterns originally set in the colleges. In addition, reading teaching training was more focused more on subject content than on teaching methods. Generally, the pedagogical content knowledge of teachers seemed to contain a 'gap' in that teachers tended to focus on textbook teaching approaches. In other words, the teachers lacked the agency to adapt what they had been taught in the colleges to their particular country's needs and challenges. In addition, assessment did not correspond well with the constructivist approaches set out by the curriculum. Teachers also lacked understanding of the need for comprehension and tended to focus on decoding, drills and repetition. Teachers were without underlying language learning and reading theories to inform their teaching and struggled with issues around language of learning and teaching. Finally, in most of the countries, reading teaching formed only a small section of the college curriculum and did not prepare teachers adequately to teaching literacy and numeracy in the early grades. Accordingly the researchers call for more effective literacy and numeracy training for teachers at the early grade levels (Akyeampong *et al.*, 2013).

The second international study involved teacher-talk and was conducted in the USA with one 4th Grade teacher. Coakley-Fields (2018) examined the ability of teacher's discourse on reading to shape the identities of learners as readers. The researcher was concerned that the use of 'biased' discourse in the classroom can influence the identity that learners form of themselves as readers. She calls for teachers to be reflective towards their own teacher-talk by recording and observing both their own practices and those of their students in differing social contexts, as well as for a more inclusive form of teacher-talk (Coakley-Fields, 2018). A discussion of recent local studies into literacy, teaching and PCK from foundation to intermediate level follows.

While the focus of this thesis is on Grade 3 and Grade 4, research involving insight into the understanding of and concepts around reading teaching by teachers is also included and thus, studies of earlier or higher grades may also be relevant. However, to begin with, I will include a condensed list of CAPS requirements for the relevant Grade level so that the study being discussed can be viewed in the light of the CAPS outcomes. The studies are discussed below in order of Grade.

2.4 Foundation level – Grade 1

At Grade 1 level, four relevant studies are discussed: Gains (2010), Verbeek (2010), Mhlongo (2012) and Wilsenach (2015). However, initially I will provide a brief outline of CAPS specifications for Grade 1 (DBE, 2011b). According to the CAPS document for foundation phase, Grade 1 learners should increasingly be able to do the following:

- Listen to a story;
- Understand the sequencing of stories;
- Distinguish between different sounds and recognize letters of the alphabet;
- Make short words out of letters;
- Develop a mental vocabulary;
- Recognise his/her own name;
- Understand the basic concepts of print and handle books correctly;

- Use punctuation, capital letters and full stops basic print concepts;
- Participate in shared reading;
- Read silently and out loud;
- Make predictions from pictures;
- Be able to write at least one sentence;
- Answer open and closed questions.

Below are several recent, relevant studies concerning Grade 1 level. These studies generally focus on teachers' attitudes, beliefs and practices and do not specifically address the outcomes required by the DBE above, except for some findings on decoding and phonics and vocabulary.

The first study was conducted across the foundation phase, namely Hoadley's (2017) analysis of the pedagogy of 8 teachers in the context of the CAPS curriculum reform. The teachers were teaching Foundation phase across 14 schools and were observed for three lessons in Mathematics, Home Language and First Additional Language. These teachers were assumed to have an 'ideal' pedagogy based on a Bernsteinian-based system of classification and framing (Hoadley, 2005). Each teacher was allocated a pedagogic score. Findings showed no correlation between 'ideal' teaching and student achievement (Taylor *et al.*, 2003). Her conclusions are that, while control is being brought back to classrooms via CAPS, power relations regarding knowledge is still restricted (Hoadley, 2017).

Secondly, Gains (2010), in a study of 27 teachers in four Grade 1 classrooms, investigated the link between teachers' own early experiences of reading and their reading practice and found that where teachers' own experiences with print were limited. There was little evidence of the understanding of the nature and development of literacy or of the importance of instilling a love of reading amongst young children. Furthermore, Verbeek (2010) investigated the attitudes and beliefs of Grade 1 teachers and how they served to influence reading teaching. Findings showed that there was an almost total lack of reading assessment in the foundation phase and a lack of understanding on the part of teachers as to the different components of reading and how literacy develops. The participating teachers relied almost exclusively on phonics and decoding because they did not perceive reading as being a meaningful process.

Mhlongo (2012) conducted a case study at a primary school in Durban to examine methods used by Grade 1 teachers to teach reading. Results indicated a lack of monitoring of learner performance as well as limited variation in teaching resources and methods in isiZulu (Mhlongo, 2012). Finally, Wilsenach (2015) explored the relationship between receptive vocabulary size and early literacy skills with emergent bilingual Northern Sotho-English children. Wilsenach is concerned that if vocabulary development is not specifically focused on in foundation phase schooling, learners from poorer areas who enter into Grade 1 with a word-deficit are unlikely to be successfully academically. In the study, two groups of Grade 1 learners were tested for their receptive vocabulary, in both English and in Northern Sotho, using the Peabody Picture Vocabulary Test. The study also tested letter knowledge; knowledge of phoneme-grapheme correspondences; and early writing. Findings indicated that vocabulary size can predict the development of literacy skills and can be used as a tool to identify learners that may be at risk. In addition, the study also found that mother-tongue instruction alone is not sufficient for effective literacy skills if the variables of socio-economic status and educational issues are not taken into account as well (Wilsenach, 2015).

2.5 Grades 2 and 3

Nkosi (2011) conducted a study of isiZulu reading across Grades 2 and 3. Her findings are discussed below but first, relevant CAPS expected outcomes for Grade 2 literacy are briefly outlined (DBE, 2011b). The outcomes for Grade 3 have already been discussed in detail (see 1.4.2). Grade 2 learners are expected to increasingly be able to:

- remember the sequence in a story;
- understand that a story has middle, beginning and end;
- recognise sounds such as consonants, blends, vowels, and digraphs;
- be able to read new words and sentences from phonic lessons;
- spell at least 10 new words a week;
- engage in shared and group guided reading;
- interpret pictures and photographs;

- be able to answer “WH” questions, such as “what if ...”
- read both silently and out loud;
- use rhyming words;
- increase their sight-word knowledge;
- increase their decoding and comprehension skills;
- read independently;
- read with increasing fluency and speed;
- read both fiction and non-fiction;
- write at least two paragraphs of 5 sentences each;
- answer higher order questions.

The reading study Nkosi (2011) conducted across Grades 2 and 3 level did not focus specifically on the above outcomes but rather on how teachers teach reading and why they choose certain methods. Her study confirmed the findings of Verbeek (2010) as it indicated that teachers lack adequate training in reading teaching and tend to rely almost exclusively on decoding. Nkosi (2011) investigated the teaching of isiZulu reading to Grades 2 and 3 learners at two schools, with a total of eight teachers, in Umlazi in urban KZN. She made use of similar research instruments utilised in the current study, namely: semi-structured interviews, observations (video and audio tape), and document analysis and found that the teachers were, very naturally, influenced by their beliefs. For example, they did not encourage reading in the learners’ home language (isiZulu) as they believed English to be a better choice. In addition, due to the lack of resources for reading in isiZulu, teachers had to rely on traditional teaching methods and resources (Nkosi, 2011).

2.6 Grade 3

As mentioned above, the CAPS required outcomes for Grade 3 learners have been discussed (see 1.4.2). At Grade 3 level, several recent studies have been carried out (e.g., De Sousa & Broom, 2012; Msimango, 2012; Mudzielwana, 2012; Ngema, 2011; Pretorius & Stoffelsma, 2017; Venter, 2012). The majority of these studies studied the teachers’ role in literacy teaching and the importance of language in the literacy acquisition process. There was, however, some focus on

phonological awareness, oral fluency, vocabulary building, decoding skills and reading comprehension. The studies are discussed below.

De Sousa and Broom (2012) sought to measure the quality of language and literacy support at four primary schools in Gauteng, with a total of approximately 200 learners. English was the mother-tongue of half of the learners, and the remaining half were isiZulu speakers. Findings from the above studies revealed that English-only classroom environments may not be able to bridge the gap between English as L1 and English as L2 regarding phonological awareness and reading skills (De Sousa & Broom, 2012).

In another study conducted in Durban at one public primary school, Msimango (2012) investigated how English Grade 3 teachers taught reading to Grade 3 learners in multilingual contexts. She found that adequate reading levels can only be attained if the teachers understand the value of reading (i.e. through adequate teacher training) and if they obtain sufficient support from the school (Msimango, 2012). So far, the research studies above appear to be focused more on macro-levels of reading, rather than the micro-elements, such as decoding skills and comprehension.

However, Venter (2012) conducted a study designed to measure the relationship between reading components such as phonological awareness, oral fluency plus vocabulary, and reading comprehension, with a sample of four Afrikaans LoLT primary schools in Potchefstroom. Her sample included a total of 120 Grade 3 learners. The findings again confirmed the low levels of skill in the individual reading components and comprehension amongst learners that is prevalent in the foundation phase (Draper & Spaul, 2015; Nkosi, 2011; Spaul, 2016; Venter, 2012; Verbeek, 2010). Furthermore, Venter (2012) highlighted the great diversity of reading skills found within each individual Grade 3 classroom unit and how it hampered the teachers' ability to teach reading effectively. One might argue that teachers who must cope with such a large diversity would have almost as much of a challenge as those who are in a multi-grade classroom where they must teach more than one grade simultaneously (Mazimela, 2012).

Importantly, information gained on a case study of outcomes-based education (Ngema, 2011) involving six primary schools and six Grade 3 teachers through classroom observations in KZN

showed that there were no accuracy or rate gains in the oral reading fluency of the learners by the end of Grade 3. This means that, as they progressed to Grade 4, the learners had failed to make the progression from learning to read to reading to learn (Pretorius, 2014). According to Ngema, reading development in primary school generally occurs three to four years below the required/expected proficiency levels. Again, this correlates with other evidence of low reading levels (Draper & Spaul, 2015; Ngema, 2011; Spaul, 2016; Venter, 2012). Ngema (2011) expressed her frustration with the current lack of benchmarks in isiZulu as it is not possible to accurately measure reading ability in their absence, although research in this area is currently being carried out (Pretorius & Spaul, 2016).

In a study that involves the PCK of teachers, Mudzielwana (2012) investigated *how* teachers understand and teach reading comprehension to Grade 3 Tshivenda-speaking learners in the Vhembe district of Limpopo. She placed herself in the position of a non-participant observer in order to establish whether what the teachers *said* in the audio-taped focus group interviews was borne out *in practice* in the classroom interactions. Findings indicated that teachers lacked understanding of how to use strategies, plan reading comprehension or reading for meaning (Mudzielwana, 2012).

Furthermore, Lebesse and Mtapuri (2014) investigated the conditions necessary for literacy in two languages, namely Sepedi and English, with foundation learners at Grade 3 level in one rural school in South Africa. All Grade 3 level teachers were involved and overall, 20 lessons were observed. The researchers actively observed lessons and interviewed teachers to investigate their views on what would specifically improve bi-literacy.

Findings were that although the language policy stated that English should be introduced as a second language in Grade 1, this school only introduced it in Grade 3. The dominant language in the school was Sepedi. Also, lesson times varied. The times were not set and depended on the teacher; no homework was given; classrooms were overcrowded; and learners were not given textbooks. The only form of reading that occurred was reading out aloud as a whole class. There were no other method(s) used and little or no learning aids on the walls. The teachers generally used Sepedi to teach English, which was contrary to what they said they were doing when they

taught, which was teaching both English and Sepedi. In addition, it was found that the “pass-one pass-all” policy, where learners get promoted to the next grade level automatically, was limiting teachers from effective teaching and there was a lack of funds. Learners were not developing literacy in their home language as they did not read in Sepedi. They were only exposed to the Sepedi of the teachers, not the academic register. They also did not get sufficient exposure to English as the teacher used Sepedi. Therefore, no language skills transfer was taking place (Lebesse & Mtapuri, 2014).

In a study that examined the English vocabulary of a group of Grade 3 learners in township schools in South Africa, (Pretorius & Stoffelsma, 2017) used the Woodcock-Munoz Language Survey to measure the active vocabularies of a total of 118 English Home Language learners (HL) in the Western Cape and English FAL learners in the Eastern Cape, both at the beginning and at the end of the school year. They also measured the receptive vocabulary levels of 284 learners from the same eight Grade 3 classes at the end of the year. The purpose of the test was to assess learners’ knowledge of the 60 most frequent words occurring in South African Grade 4 textbooks. Findings showed that, although HL learners had double the vocabulary of the FAL learners, both groups increased their vocabulary level by 9% throughout the year. In addition, the researchers found that learners who start school with low vocabulary levels tend to stay weak and that initial active vocabulary level is a strong predictor of further vocabulary development during the school year (Pretorius & Stoffelsma, 2017).

Finally, at foundation level, *The Early Grade Reading Study*, or EGRS (Taylor et al., 2017) was conducted over three years, from 2015 to 2017, with Grades 1 to 3. Three intervention models were introduced to improve the reading outcomes in the learners’ home language, Setswana. The project took place at 230 schools in the North West Province. A formal impact evaluation methodology known as a Randomised Control Trial was used, and the methodology comprised classroom observation and eight case studies. The first intervention consisted of a structured learning programme and centralised training for teachers. This consisted of lesson plans aligned to the CAPS (Grades R-12) and included reading materials and training at workshops bi-annually. The second intervention was a structured learning programme with on-site coaching. Finally, there was a parental intervention to improve learner home support. The results were that the

interventions assisted, amongst others, large classes and mid- to upper-range learners in urban schools the most. An important finding for this study was that the impact of teachers' teaching approaches was greater for those who received coaching and ongoing support than those who received training only (Taylor *et al.*, 2017).

2.7 Intermediate Level – Grade 4

The CAPS specifications for Grade 4 learners have previously been discussed in some detail (see 1.4.2). The following researchers, Mkhize (2013), Nehal (2013), Pretorius (2015), Mgijima and Malalela (2016), and Mkhize (2016) have conducted relevant studies at intermediate level. Most of the studies described below focused on language issues and the influence of the home environment on literacy development, although there was some focus on the need for teacher training in the area of teaching of comprehension strategies.

The first of these studies involves a descriptive survey, across the intermediate phase, to assess challenges that teachers face in teaching English reading to learners in a rural area of KwaZulu Natal (Makiwane-Mazinyo & Pillay, 2017). The sample consisted of 44 teachers and the resulting data was analysed using SPSS Version 2.4. Findings were that the learners were unable to read and there were problems of language of LoLT, as well as lack of support from both the DBE and parents. Overall, teachers seemed to lack efficient means to teach reading. The researchers call for more support for teachers in the areas of difficulty.

Furthermore, Mkhize (2013) investigated language and literacy learning in a cross-case comparison with a total of 41 participating learners, one Grade 4 classroom, and one teacher in KZN. The focus of the researcher was to examine what literacy and language practices occur in teaching English as FAL in Grade 4 in South Africa; how these learners performed in isiZulu and English assessments; and whether the social, cultural and political factors that influenced the learning and writing of the learners in the class could be identified. Using instruments such as observations and semi-structured interviews, Mkhize (2013) found that the teachers lacked knowledge of effective literacy teaching. In addition, their method of teaching limited the literacy acquisition of the learners as they, for example, focused mainly on activities such as reading texts aloud, reciting poems and repeating grammatical structures and writing practice exercises.

Nehal (2013) carried out a study of English reading assessment in Grade 4 classrooms at a rural primary school in KZN to determine teachers' knowledge, beliefs and actual practice of assessment. He worked with one Grade 4 teacher and the school principal and found that although teachers were aware of the need to use assessment, it was not practised and neither did they assess the level of the learners' comprehension. Nehal believes that teachers need effective training both in reading assessment and various types of strategies that can be used to develop learners' comprehension skills (Nehal, 2013).

Pretorius (2015) looked at implications for standards and training in education with Grade 4 learners in a township. The project became an intervention as initial testing showed very low levels of learner literacy. Classroom observations revealed that the learners were slow and had a strong oral orientation. There also appeared to be a gap between the teachers' lesson plans and classroom activity. Pretorius suggests that it is not language but literacy that is lacking in the schools. The evidence for this lies in the fact that many children across South Africa complete the first three years of schooling in their mother-tongue, yet the literacy rates are still low (Pretorius, 2015).

In addition, Mgijima and Makalela (2016) studied the effects of trans-linguaging on the biliterate inferencing strategies of fourth-grade learners at one rural, quintile 2 school in the Matatiele district, Eastern Cape. Sixty-one (61) Grade 4 learners aged 9 to 12, participated in the study. The purpose of the study was an intervention to investigate the effects of trans-linguaging in a Grade 4 classroom. The intention was to assist the understanding of inferences, or the use of inferencing as a strategy, by using relevant background knowledge of the learners. The researchers first used a quasi-experimental design where the learners were given pre-tests in the target language, English, and then they used an intervention using trans-linguaging techniques. The learners were then given post-tests in isiXhosa as mother-tongue and English as FAL. The pre- and post-tests were designed to measure learners' ability to draw inferences from text. The learners performed better in the post-tests than pre-tests, showing that trans-linguaging had a positive impact on the performance in the two languages. It also enhanced the learners' ability to use background knowledge and thus helped inferences (Mgijima & Makalela, 2016).

Further, Mkhize (2016) conducted a qualitative study on the home literacy practices of rural bilingual Grade 4 children as well as their families in KZN. She used interviews and limited artefacts to determine:

- What resources participants draw on when they engage in literacy in their homes;
- How participation in the literacy practices is mediated;
- How the resources and mediated participation shape the identities of the learners; and
- What schools can learn from the home literacy practices of their learners.

Data were collected over a six-month period and involved three rural bilingual learners and their families. All the learners attended the same public primary school and had isiZulu as LoLT up to Grade 4, when they switched to English. Mkhize investigated what learners read at home; what music and singers they liked; and their choice of TV programmes. Before and after the study, semi-structured interviews were conducted with the learners at school. All interviews were conducted in the interviewees' language of choice. In addition, semi-structured, informal interviews with parents were conducted during home visits pre- and post-test. Findings were that the deficit view of language (Street, 2005) is shown to be embedded in social contexts. Furthermore, these learners and their families engaged in multiple literacies such as oral storytelling and book reading, indicating multiple sources of knowledge from which the participants drew. By using different communication modes, such as visual images, learners were more easily able to enhance meaning-making and creativity. Mkhize (2016) calls for teachers to make use of these multiple methods in the classroom, as well as trans-languaging, as both can serve as a tool to assist in literacy acquisition and to reduce inequality.

Finally, Hoadley (2017) investigated how teacher pedagogy can contribute to differential outcomes in schools by observing teachers using CAPS at foundation level. These teachers were based at 14 schools from poor communities that were performing against demographic expectations (SPADE). The study formed a large scale research project that included 46 grade 3 teachers who were teaching learners both mathematics and first additional language. Based on an ideal pedagogic scale, the teachers were given a pedagogic score.

Findings were that there tended to be a strong surface adherence to policy but there was no clear relation between the pedagogic scores of the teachers and student achievement. They then took a further 8 teachers who had the highest pedagogic scores used coding scheme based on Bernstein framing and control (Hoadley 2005). Limitations of the study were that it was not cross sectional and did not take place over a longer time period. However, findings were that compliance to policy alone was not enough to assist learners to grasp the lesson, organise ideas or understand concepts. A curriculum alone is insufficient.

Again, in a similar vein, Hoadley and Gallant (2016) analysed Grade 3 mathematics and Home language English workbooks against their intended purpose by the DBE. They explored the viability of the workbooks as practice, assessment and a monitoring tool but also on the books as teaching tool. Whereas the books best provided a practice curriculum tool, the researchers found that they were unlikely to provide a monitoring or progress teaching tool for learners' progress and that they were insufficient to support weak teacher content knowledge.

2.8 Grades 4, 5 and 6

In addition to the above classroom research, relevant research has also been conducted across Grades 4, 5 and 6. The studies of Stols (2012), Mazimela (2012), and Pretorius and Klapwijk (2016) are discussed here. However, firstly the CAPS expected outcomes for Grades 5 and 6 (intermediate phase) will be briefly outlined first (DBE, 2011a). The specifications for Grade 5 outcomes are that learners should be able to:

- write between 3 and 5 paragraphs;
- use the correct format and appropriate content when writing different genres;
- use writing conventions such as alliteration; simile; metaphor and personification;
- have a wide variety of vocabulary at their disposal;
- write descriptive essays;
- read visual texts such as maps, charts and tables;
- make inferences and ask critical questions;

- write summaries and instructional texts.

The CAPS specifications for Grade 6 learners are that they should be able to:

- write between 4 and 6 paragraphs;
- correctly make use of language conventions such as phrases and clauses;
- create writing that is creative and imaginative;
- use a variety of reading strategies such as skimming and scanning;
- identify main ideas in texts;
- read and interpret poetry;
- make use of and understand the meaning of symbols; theme; metaphor; and onomatopoeia.

The above CAPS specifications require learners in both Grades 5 and 6 to engage with text at a deeper level (DBE, 2011a; 2011b). Whereas two of the researchers in the studies described below concentrated more on the importance of teacher training and attitudes and beliefs of teachers regarding teaching and comprehension, one researcher focused on comprehension strategies and how they can assist learners to engage with texts via inferencing, critical questioning and so forth, which is in line with the CAPS outcomes. The three studies conducted across Grades 4, 5 and 6 are discussed below.

Firstly, Stols (2012) examined the role of comprehension strategies in reading literacy achievement. She selected a school in South Africa where the highest PIRLS 2006 scores were obtained. This was an Afrikaans LoLT school in Gauteng. The intention was to determine what teachers in these successful classrooms do and what assessment and comprehension strategies they use. The Grade 4 class had 28 learners and the Grade 5 class contained 27 learners, making a total of 55 learners. Using the comprehension strategies outlined for comprehension processes in the PIRLS 2006, which were: identifying main ideas; making inferences; questioning; mental imagery; and summarising, Stols found that the use of these teacher strategies is essential as it serves to guide readers through the comprehension process and enable them to engage with text. Several of these strategies, such as inferencing, questioning and identifying main ideas, form part of the R2L scaffolding approach that some teachers in this current study used (see 3.13). These

findings confirm the benefits of the explicit teaching of comprehension and reading strategies (Klapwijk, 2015; Stols, 2012).

Secondly, in a study concerning teachers and PCK, Mazimela (2012) focused specifically on reading teachers and PCK and teaching of literacy in a multi-graded classroom in rural KZN. Mazimela investigated the teaching of isiZulu reading (L1) by using semi-structured interviews, classroom observations (audio-recorded), and document analysis, such as timetables and school calendars. Two teachers – one teaching Grades R and 1, and the other teaching Grades 2 and 3 – participated in the study. Findings showed that teachers tended to rely on traditional, teacher-fronted teaching methods as they failed to engage learners in self-study, peer-teaching or collaborative learning. In addition, the multi-grade teaching context was complicated and beyond teachers' abilities. Teachers needed more support from the DBE. They also need more effective training (Klapwijk, 2015; Mazimela, 2012) as they were largely left to find their own teaching strategies.

Finally, Pretorius and Klapwijk (2016) made use of a questionnaire survey to establish what teachers believed they were teaching regarding reading comprehension as well as their beliefs and attitudes towards the process. The survey involved a total of 159 respondents. Primary school teachers participated in this cross-sectional survey across 30 schools in Gauteng, the Western Cape, and Mpumalanga. The majority of these teachers were teaching Grades 4 to 6. The questionnaire included biographical information; teachers' assessment of learners' reading levels; how they taught reading at their schools; strategies for teaching; learners' access to reading materials; and how teachers saw themselves as readers. The researchers used a mixed-format with a Likert scale for some of the questions and data were captured and analysed using SPSS Version 22. Findings were that teachers in the lower quintile schools (1 to 3) seemed to read less and own fewer books than teachers in the higher quintiles (4 to 5). While all teachers at state schools felt that their learners struggled with reading, it did not appear to take precedence as a teaching focus in the classrooms. Pretorius and Klapwijk (2016) state that teachers need not only content knowledge, but also PCK in order to teach reading effectively. In addition, teachers need to be skilled readers themselves so that they can develop strong literacy habits in their learners. Recommendations were made to include explicit reading instruction strategies in teacher training

courses. The researchers also argue for effective comprehension intervention programmes in South African classrooms (Pretorius & Klapwijk, 2016).

In summary, the above South African studies at early and intermediate grade levels (as well as senior primary) are quite diverse but can be placed into two broad categories: studies investigating the underlying problems responsible for low literacy levels and studies that are seeking solutions to those problems. In addition, one must consider the vital role of the teacher that is highlighted in the literature discussed.

Teachers play a pivotal role in teaching. They can be ‘gatekeepers’ as they have control over the learners and the learning situation (Hoadley, 2017). Their ideas, beliefs and attitudes towards teaching and learning will influence what takes place in the classroom, for example, teachers who tend towards teaching in English, even when an indigenous language is encouraged or mandated (Nkosi, 2011). Teachers own experience of reading and literacy determines their approach to how they teach their learners to read, for example whether they perceive reading as central to the classroom (Gains, 2010; Verbeek, 2010). Simply put, teachers cannot give what they do not have. If their language skills are limited, then they will not be able to effectively teach literacy (Akyeampong, 2013; Makiwane-Manzinyo, 2017). If they do not have the necessary support and/or resources from the school and parents, they cannot produce their best efforts (Klapwijk, 2015). This points to the value and necessity of effective teacher training.

The problems are: poor teacher training; language problems; lack of understanding of teachers as to the value of reading; lack of support from both teachers and parents; learners with diverse skills in generally large classrooms; lack of reading assessment; teacher planning is often poor or not carried out; reading learning is not the focus of classrooms; the vocabulary of learners is generally low and their decoding and comprehension skills are weak; teachers lack strategies for effective reading teaching, especially in the area of comprehension; and teacher methods are outdated.

Studies looking at possible solutions have focused on the following listed below. As with the problem-focused studies, I have categorised the solution-seeking ones into specific research areas

in education, namely Teacher Training; Language Issues; Teaching improvement and Teacher Practice.

Firstly, Teacher Training contains studies on the beliefs and attitudes of teachers and how these can affect their teaching, as well as the motivation behind teachers teaching. Teacher Training also includes whether teachers are teaching as they believe they do and the importance of making use of learners' prior knowledge. Studies on Trans-languaging can be categorised under Language Issues, in recognition of the current challenges around LoLT in SA schools, while under Teaching Improvement falls the influence of the home on learners' academic progress. This also includes the value of explicit teaching, especially in the area of comprehension strategies. Hoadley's (2017) study on the effects of 'ideal' Bernsteinian pedagogy on learners in the foundation phase could be placed under Teaching Practice.

While the above studies have touched on the outcomes specified by CAPS for the relevant Grade, they tend to be diverse and seem somewhat scattered. In addition, they do not seek to capture detailed, active classroom practice. The current study makes use of the FORT to do this and places itself in the literature by pulling some of the divergent threads of previous studies together. A discussion of the current study in context follows.

2.9 The current study in context

In the current, solution-focused study, many elements in the above research are brought together. The study focuses on the following areas of reading across Grades 3 and 4: teacher PCK; the effects of teacher training and classroom practice (i.e., what teachers do when they teach); and teachers' attitudes and beliefs and how they may affect reading teaching.

Two most unique areas of contribution the study makes are as follows. Firstly, there is currently no research across Grades 3 and 4 that focuses either on the PCK of teachers and how they teach reading or examines the decoding to comprehension process in depth (Mkhize, 2013). Secondly, this study has resulted in the development of the FORT (see Appendices A-D), which is an

effective and useful instrument for capturing classroom-based reading teaching. The instrument is used to help answer the posed research questions (see 1.4).

The answers to these questions could influence reading teacher training in SA. If one can examine what teachers are actively doing or not doing in the classroom, then teacher training can be improved. If it can be seen that teacher beliefs are not in line with their teaching, then one could ask why and improve training. If one could describe the reading process across the Grades, one would have a clearer idea of the goal to aim for in terms of teacher training. If teacher training is not sufficient to improve practice, then additional support could be added. Thus, this study takes its place in the literature as a connection or link between divergent studies that ultimately have the same goal, i.e. to improve literacy levels in SA schools.

While the above is paramount, there are additional areas of discussion in the current study that add to the existing literature. These are the benefits of scaffolding and a scaffolded interaction cycle, as well as placing the focus on discourse and classroom interaction and its role in facilitating literacy. As with several studies in the review, the current study also made use of semi-structured interviews, classroom observations and audio recordings of lessons. However, it has gone further by using video recordings of reading lessons that allow the observer opportunities for repeated viewing and detailed, layered, analysis of teacher practice and learner responses. By using video recordings, I was able to obtain a deeper picture of what teachers say they do compared to what they really do when they teach (see 4.5.2). Furthermore, using the FORT brings together many of the CAPS specified outcomes for Grade 3 and 4 learners as it is built upon current theory of ‘best practice’ in reading teaching. For the sake of this study, best practice as defined as existing classroom practice that is already accepted as containing a high degree of effectiveness (Hargreaves & Fullan, 2015). In the light of READ and R2L (see 1.4.5), this would refer to practices such as scaffolding; use of a balanced approach; and, in the case of R2L, explicit teaching of comprehension strategies and an elaborated interaction cycle. In an extensive literature review incorporating learners between ages 3-13 years (up to Grade 8), practices such as explicit teaching of vocabulary and grammar (sentence construction), as well as comprehension strategies, have shown themselves to facilitate literacy acquisition in developing countries, while continued emphasis on rote learning tends to hamper this process (Nag *et al.*, 2014).

To accommodate the capturing of classroom-based, best practice, the FORT contains the following categories: integrated language teaching, such as punctuation, grammar and spelling; types of reading; decoding and comprehension; open and closed questions; and vocabulary, all of which are also required by CAPS (DBE, 2011a; 2011b). The previous section has placed the study within the existing literature. A summary of Chapter 2 now follows.

2.10 Summary of chapter 2

Chapter 2 has discussed relevant literature pertaining to foundation and intermediate phase reading teaching. It has outlined the CAPS specifications for Grades 1 to 6 and examined the studies and findings across these Grades in the light of the expected CAPS outcomes. In addition, it has placed the current study in context.

Whereas other researchers have investigated aspects of reading teaching, such as teacher attitudes and beliefs and teacher PCK, the current study brings all these varying strands together by examining teacher PCK, beliefs and the effects of teacher training across Grades 3 and 4. By investigating these areas in depth, the study can assist teacher training and classroom practice and thus provide a link between other research areas. In addition, through the use of classroom video-recordings of lessons and a focus on the scaffolding interaction cycle and the FORT, this study can provide a deeper view into classroom practice as well as examining the process of teaching and its relationship in moving learners from decoding to comprehension across Grades 3 and 4. In this way, the study fills an important research gap and takes its place amongst the existing literature. Chapter 3 will discuss the theoretical basis for the study.

CHAPTER 3: THEORETICAL FOUNDATION

3.1 Introduction

This chapter explores the theoretical foundation of the study. It will start with a definition of reading and a discussion of reading theory, followed by what reading teachers need to know. It will then go on to clarify what is meant by PCK. A discussion of current ‘best practice’ in language teaching follows as well as its relationship to an instrument that I developed to capture classroom teaching and interaction, the Facilitative Orientation to Reading Teaching, or FORT (see Appendices A to D). Firstly, a brief discussion of instrumentation used follows.

The goal of classroom observations is to help teachers improve practice, and thereby improve student outcomes (Kane, 2012). In order to capture legitimate classroom practice and/or dialogue, the use of reliable and valid instrumentation is vital (Van der Veen & Van Oers, 2017). There have been several instruments developed recently to capture various aspects of classroom practice, such as the Cambridge Oracy Assessment Toolkit, designed to measure the oral competence of students aged 11-12 over time (Mercer *et al.*, 2017); and, perhaps more relevant to this study, the Classroom Assessment Scoring System, or CLASS (Pianta *et al.*, 2008). The CLASS is an observation tool for assessing the quality of interaction processes from pre-school up to the fifth grade. The quality of interactions between teachers and children is assessed along 10 dimensions. These dimensions are grouped into the three domains: Emotional Support, Classroom Organization, and Instructional Support. Emotional Support describes the relationships between teacher to student and student to student; classroom organisation concerns the teaching/learning environment and available time for activities; while instructional support concerns the support for students learning and language development (Pianta *et al.*, 2008; Stuck *et al.*, 2016). The value of accurate classroom observations lies in the fact that any growth in effective teaching practice must begin with an honest assessment of teachers’ strengths and weaknesses, although no teacher should be assessed upon the strength of classroom observation/s alone (Stuck *et al.*, 2016).

The design of the FORT was based upon older classroom observation instrumentation. This was the original Communicative Orientation to Language Teaching, or COLT (Spada & Fröhlich, 1995) and aspects of from previous research studies concerning communicative teacher classroom

practice and the value of teacher-talk (Wildsmith 1992; Tough, 1977a). However, I redesigned and reconceptualised the FORT to create a tool that could accurately capture in-depth facilitative reading teaching practice in the classroom (see 3.9). In order to do this, I need to incorporate aspects of modern, best-practice reading teaching. For example, Hoadley's (2005) instrument was built around Bernstein's framing and classification (Bernstein, 1990; Hoadley, 2005), aspects of which needed to be included in the FORT, particularly in sequencing and pacing of the curriculum. Wildsmith-Cromarty's (1992) communitive versus traditional teaching wheel diagram was based on a binary model, as was the original COLT. The FORT needed to incorporate updated teaching practice that could also reflect a facilitative or eclectic paradigm. Whereas the FORT was initially based upon the COLT, there are substantial differences between the instruments. The similarities will be discussed first.

Firstly, like the FORT, the COLT consisted of two parts. These were part A, which consisted of classroom activities and episodes. The categories it contained were participant organisation; materials used and content skills practiced. Part B consisted of interaction from teacher to student and from student to teacher. The COLT collected quantitative data, and checks were made according to how many times an event occurred.

However, the COLT was designed to capture communicative versus traditional language teaching practice, not specifically reading teaching. Part B therefore contained language-teaching related categories such as information gap tasks and negotiated input; teacher response to message; and time spent focusing on form. In addition, unlike the FORT, the COLT did not use time as a unit of analysis but rather the episode within an activity (Allen, 1983; Gaynor, Dunn & Terdal, 1997; Spada & Fröhlich, 1995).

In a study of the classroom practice of 16 western-trained teachers in Japanese universities, some of the limitations of the COLT are discussed (Gaynor *et al.*, 1997). In addition to using the COLT, the language lessons were audio recorded and, as some students spoke softly, not all student-to-student interaction was captured so data captured on audio tended to be mainly teacher-fronted. In addition, the group work interaction was not adequately captured. The FORT video-taped and captured verbal interaction only from teacher to student and vice-versa, i.e. it did not capture student to student verbal interaction unless the student/s was speaking or reading in front of the

class. It did of course, capture what was occurring in group work sessions (activity and materials) and body language of learners (see 5.7.1 as an example).

As a purely qualitative data instrument, the COLT was capturing what happened in the classroom and how many times it occurred. However, the FORT needed to capture more. Gaynor *et al*, (1997) suggest that the COLT not be used alone to capture classroom data but would be more efficient if used along with interviews, field notes and such like. This found to be the case with the FORT as well. To add the how and why, the FORT not only included qualitative categories in the instrument itself, such as materials and activities, but was also combined with teacher semi-structured and informal interviews. The need to combine the FORT with other data such as the interviews could be seen as a limitation of the instrument, or perhaps any classroom observation instrument. Left to itself, it can tell the researcher what happened and in what context the event took place. However, it may not tell us what motivated the teacher/s to choose certain events and/or activities and not others. An invitation is offered here to other researchers to consider refining and adapting the FORT so that it can become more effective at capturing classroom practice as a stand-alone instrument.

The FORT was initially piloted using recorded classroom lessons not included in the final data to ascertain what aspects of teaching practice it could accurately capture and which categories may need to be included. The refinement of the instrument continued throughout the study, as categories that had not been originally included but were found to be valuable were subsequently included, such as open and closed questions. The video-recordings of the lessons were crucial here as they allowed me to observe and re-observe different aspects of teaching practice that may not have been originally included on the FORT but now needed to be included. A definition of reading follows.

3.2 Defining reading

In order to define ‘reading’, I utilise the contributions of several researchers (e.g., Hay, 2013; Klapwijk, 2015; Department of Basic Education [DBE], 2007, 2011; Edwards & Turner, 2009; Van Staden & Zimmerman, 2017; Leipzig, 2015; Pretorius et al., 2016), as well as an illustration of the reading process by Scarborough (2001).

Hay *et al.* (2013:165) define reading as “*a purposeful activity, one designed to acquire information from others separated by time and space.*” According to Klapwijk (2015), the ultimate goal of reading is comprehension or the ability to make meaning from written text. The National Curriculum Statements (CAPS) provided by the DBE for both foundation and intermediate phase concur with this goal (Department of Education, 2011b). Comprehension, in turn, results from an interaction between reader, text, context and reading strategies the reader brings to the text (Edwards & Turner, 2009). Similarly, reading can be regarded as a multifaceted process that involves word recognition, comprehension, fluency and motivation that readers integrate to make meaning from print (Van Staden & Zimmerman, 2017). So, effective readers make meaning when they read. However, certain requirements must be met before this can occur. These requirements involve knowledge of letters, letter sounds, phonemic awareness, and so forth, as well as general and background knowledge the reader must bring to reading. Readers should also be able to read rapidly and fluently enough to ensure that they can hold the beginning of a sentence in working memory long enough to remember it by the time they get to the end of it (Macdonald, 1990). Learners are expected to be able to have achieved this level of reading skill by the end of Grade 3 and to assist learners to attain this level of skill, teachers are expected to use a balanced approach to reading (Wildsmith-Cromarty & Gounden, 2006). This is specifically stated in CAPS (Department of Education, 2011b); but, unfortunately, many teachers are insufficiently trained to do this effectively (Pretorius *et al.*, 2016).

Moreover, Pretorius *et al.* (2016:14) define reading as “*more than sounding out the printed symbols on a page, and more than knowing the meanings of individual words in a text. Reading is a multifaceted process towards understanding connected text.*” They utilise Scarborough’s (2001:24) Reading Rope diagram, illustrated in Figure 3-1 below, to visually explain how

comprehension is the result of a skilful interaction between two sets of subskills, namely word recognition (bottom-up) and language comprehension (top-down) processes.

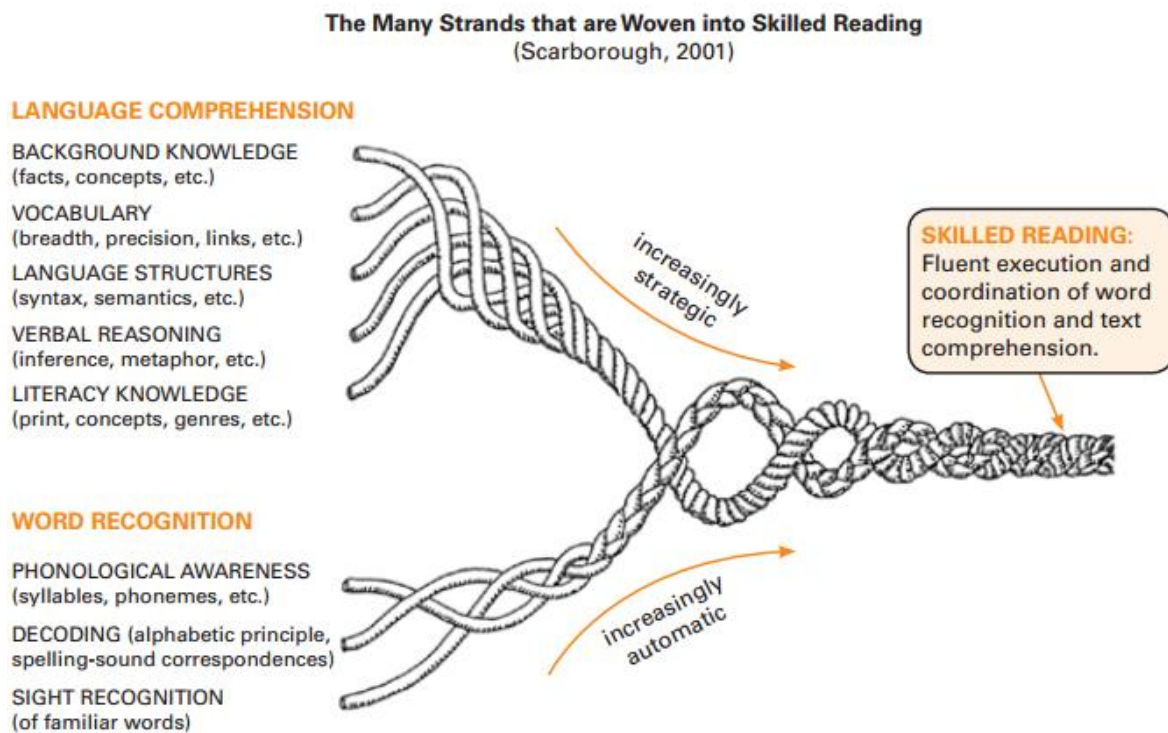


Figure 3-1: Illustration of the many strands that are woven together in skilled reading

Scarborough states that the process of reading can be seriously hindered by any “*weaknesses in the comprehension strands*” (Scarborough 2001:24). All of the above definitions share the belief that comprehension remains the end goal of reading and that this involves an intricate process that must take place rapidly and simultaneously. I would argue, in light of the focus of this thesis, that it is the pedagogical content knowledge of the teacher (in all its facets) that drives the acquisition of the skilled reading process and that the increasingly strategic and automatic processes that lead to comprehension are realised through practice. Children do not learn to read ‘naturally’; they must be taught and learn with some effort (Department of Education, 1997) and, herein, the teacher is central. A discussion of reading theory follows.

3.3 Reading theory

This research assumes that the final goal of reading teaching is comprehension. By comprehension, I refer to what Pretorius and Ribbens (2005:139) call “*the overall understanding process whereby meaning is assigned to the whole text.*” In addition, reading is taken to be the primary mode of learning in academic environments (Rose, 2011). It is difficult to state with certainty what makes for best practice in teaching. However, what a ‘good’ teacher can do is to choose from evidence-based best practice according to the needs of her learners at a given time (Gambrell et al., 2011a). The FORT was developed around the current theories of best practice, such as: scaffolding; the hidden curriculum and pedagogic discourse; functional grammar; the importance of effective writing in context; the value of teacher-talk; and explicit reading teaching (Bernstein, 1990; Halliday, 1994; Martin, 1999; Rose, 2005; Tough, 1977; Vygotsky, 1978). However, it is necessary to ask what a teacher needs to know before she can effectively teach reading.

3.4 What reading teachers should know

Both international and local studies point clearly to the value of early book reading and ‘book floods’ in building strong literacy skills (Cunningham & Stanovich, 1997; Pretorius & Machet, 2004a; Pretorius & Mokhwesana, 2009). Of interest to the current study is the research that sheds light on the importance of verbal dialogue in storybook reading, whether the story is read or told to the learners (Newman, 1999; Tough, 1977b; Tough, 2012; Wells, 1985; Wildsmith-Cromarty, 1997). Ultimately, however, teachers must assist learners to become skilled, independent readers who can learn *from* reading from Grade 4 onwards. Therefore, we need to ask what teachers need to *know* and what they need to *do* to effectively teach these skills.

Important activities that promote reading acquisition are phonemic awareness, phonics, fluency, vocabulary development, and reading comprehension (Department of Education, 2011a; Ehri et al., 2001; Matjila & Pretorius, 2004; Nel, 2011; Pretorius, 1998; Pretorius & Machet, 2004a; Pretorius & Ribbens, 2005). The two best known methods are either phonics or whole-word approaches (Nieman & Hugo, 2010). While both these methods are necessary for teaching reading (Pretorius & Machet, 2004a), there is an emphasis on decoding in classrooms, which is not

sufficient in itself to promote literacy acquisition (Pretorius, 2002; Verbeek, 2010). The necessity for and concept of comprehension in reading is poorly understood amongst teachers and is seemingly not a part of pre-service training (Hoadley, 2012; Klapwijk, 2015). Thus, teachers are not properly prepared to teach literacy, largely because of decontextualized preparation programmes (Nel, 2011). The mechanics of reading by themselves do not make a good reader, neither is a strong language ability necessarily an indicator that the learner will become a competent reader (Pretorius & Machet, 2004a). What is needed is strong comprehension and decoding skills (Pretorius & Mampuru, 2007; Pretorius & Ribbens, 2005). A level must be reached where teachers can teach and learners can learn effective comprehension skills.

In their study of the major influences on classroom reading acquisition in Grades 1 to 3, Hugo and Nieman (2010), list, amongst others, the home language of teachers and learners, reading methods used in the classroom, classroom practices, the experience level of the teachers, the teaching materials used, and the flexibility and training of the teachers involved. In particular, as many learners are not exposed to reading print at home, attention must be given to emergent literacy and pre-reading skills (Nieman & Hugo, 2010; Tough, 1977b). In instructional discourse, learners are largely evaluated and ranked on the basis of reading skills they have acquired *in previous stages* (Rose, 2004). This means that learners who enter foundation schooling without developed emergent literacy skills are already at a severe disadvantage. Teacher-talk, or dialogue, is an important instrument that teachers can utilise to assist the emergent literacy of young children (Tough, 1977b).

Tough (1977a, 1977b) defines 'dialogue' as what occurs when we make our talk definite and goal directed so that what we say carries meaning and assists others to achieve the same goal. Moreover, Henning (2012) argues that language, concept and literacy development are interrelated, and that effective classroom communication is vital in the early grades. Venkat and Naidoo (2012), in their analysis of conceptual learning in a Grade 2 numeracy lesson, noted the negative effects of unsystematic classroom communication between teacher and learner. In fact, the effect of the teacher's dialogue, activities, beliefs and attitudes towards both learners and learning on the knowledge acquisition of learners is well documented (Alexander & Bloch, 2004; Chick, 1996; Hoadley, 2005; Levine and Mann, 1985; Moje, 1995; Tough, 1977b; Wildsmith-

Cromarty, 1997). In addition, according to Tough (1977b), teacher-talk in the classroom is vital for influencing the learning process for young learners and promotes, amongst others, self-regulation and self-discipline, curiosity and interest, consideration for others, use of imagination and dialogue as well as literacy skills. Dialogue also plays an important role in realising the goal of Schulman's model of PCK (Schulman, 1986), which seeks to transform content into learning. Firstly, comprehension is assisted by dialogue itself as one makes meaning and receives feedback to clarify one's understanding. Talk is a way to transform content, forming a link via, for example, explicit teaching and evaluation (Freedman, 1993; Hoadley, 2005; Morais, 2002; Morais et al., 2001). Talk also enables the teacher to reflect on the process of teaching and learning through feedback from the learners, which can ultimately result in new comprehension and so the cycle can continue. If one looks to obtain the goals set out by Nel (2011) for effective teaching, which include proper monitoring and assessment, then teacher-talk can assist in identifying learners at risk, design an intervention, communicate explicit and meaningful goals, and monitor and evaluate the ongoing process. Through all this, dialogue assists in providing scaffolding and making assessment criteria explicit (Bernstein, 1990; Hoadley, 2005; Hoadley & Muller, 2010; Morais et al., 2004; Nel, 2011). Unfortunately, this important component of teacher-talk is also largely neglected in teacher service training (Edwards-Groves & Hoare, 2012; Tough, 1977b).

The deficiencies within early-grade classrooms have largely been identified and are well documented. What is urgently needed are solutions to the problems. Pretorius (2002) states emphatically that reading is not an additional tool for learning but rather, it forms the "*very process by which learning occurs*" (Pretorius 2002:100). She accordingly makes an urgent call for modules or reading courses to be introduced into mainstream or teacher training courses (Pretorius, 2002; Pretorius & Machet, 2004a). Atmore (2013) makes a call for both quality literacy ECD programmes as well as quality research that can assist in teachers' development.

This study makes the assumption that there are best practice or more facilitative methods for the teaching of literacy, as well as more restrictive practices. For example, although there are many classroom observation studies that have been conducted in South Africa, few have been based on an awareness of broader social structure and how the socio-economic status of learners affects their literacy acquisition (Hoadley, 2005; Hoadley, 2007). I aimed to take into account class

structure and how children from poorer socio-economic backgrounds are disadvantaged, as well as Bernstein's theory of schooling as a pedagogic device used by education systems worldwide to perpetuate the socio-economic inequalities in society (Rose, 2005; Rose, 2010).

In addition, the study looks at the use of 'WH' or interaction questions (who; when; where; why; what; and how) and the value of having a more experienced guide or teacher to assist learners to accelerate the pace of their learning and enable them to progress further in their learning than they would have been able to achieve alone (Bernstein, 1990; Rose, 2004; Tough, 1977b). This corresponds to Vygotsky's Zone of Proximal Development (ZPD). The theory of the ZPD is the metaphorical distance between what is known and unknown. A learner may only be able to proceed so far alone, yet with the assistance of a knowledgeable peer or teacher, the learner can progress further than he would have been able to by himself (Vygotsky, 1978). The aforementioned interaction questions also point to the importance of strategies for teacher-talk (Tough, 1977b; Vygotsky, 1978). For example, Vygotsky (1962) suggested that thinking develops into words via phases of development. Children move from imaging to inner speech to speech itself. Therefore, by tracing this process backwards – speech - inner speech - imaging, Vygotsky sees speech and talk as the representation of thinking (Moats, 2016; Vygotsky, 1962).

In this way, a visible pedagogy can be created that weakens the classification between social class and educational achievement, supporting all learners to equally and explicitly read independently and thus corresponding to Bernstein's Code theory (Bernstein, 1990; Martin & Rose, 2005; Rose, 2004). These skills are largely acquired through home and pre-school input, which means that learners from poorer socio-economic backgrounds are often at a disadvantage (see 3.12). Rose (2004) illustrates how such skills are acquired by identifying a typical home reading cycle of mother and child and the stages this interaction proceeds through. The mother can scaffold the child by means of a cycle of preparing, identifying and elaborating, all supported by positive interaction and affirmation from mother to child (Christie, 1999; Ninio & Bruner, 1978; Rose, 2004). As many children do not receive the necessary input from their home environments before they begin formal schooling, the role of teacher dialogue becomes imperative (Tough, 1977b).

Best practice would involve teachers providing an environment where they are able to evaluate and reflect on the teaching and learning process, make evaluation criteria explicit, and scaffold learners in the reading and writing of genres in context. In addition, these teachers would place the focus on both top-down and bottom-up processes involving both decoding and comprehension. In this context, the teacher becomes a vital tool for transforming learning. This is not the former teacher fronting of transmission teaching approaches (Wildsmith, 1992; Hoadley, 2005), but more in line with the concept of the ZPD and the scaffolded assistance of a more knowledgeable other (Vygotsky, 1978). Teacher-talk is a crucial element in this guiding and scaffolding process (Westbrook et al., 2013). As Pretorius (2014) states, what *happens* in the classroom has vital implications for the learning of reading (Pretorius, 2014). These ‘best practices’ should therefore be able to meet many of the current teaching and learning needs in our classrooms (Rose, 2006; Rose, 2011a). Together, the above elements form part of a teacher’s pedagogical content knowledge, or PCK - a definition of which follows.

3.5 Defining and clarifying pedagogical content knowledge (PCK)

It is important at the outset to problematize the concept of pedagogical content knowledge. In their research on PCK and Mathematics, Hill, Ball and Schilling (2008) state that there are difficulties in both clarifying the concept of and measuring PCK. They go on to say that, despite Schulman’s (1986) original formulation of the concept, it still is generally assumed that PCK exists, whilst there is actually very little evidence to state what PCK actually *is* or how it affects learners’ academic outcomes (Hill et al., 2008).

The term ‘pedagogical content knowledge’ encompasses at least two major domains of teacher knowledge, namely pedagogical knowledge and content knowledge (Banks et al., 2005; Schulman, 1986; Gess-Newsome, 1999). Pedagogical knowledge (PK) can be defined as a teacher’s knowledge of theories of teaching, curriculum, instruction and the ways in which formal instruction in schools is planned and delivered. Content knowledge, on the other hand, is the knowledge of the subject matter itself (Richards & Schmidt, 2002). In her study on PCK in *Science Teacher Education*, Gess-Newsome (1999) discusses how the different domains of knowledge above, such as pedagogical, subject and content (PCK) are intricately mixed. PCK also assumes

knowledge of educational norms and procedures, as well as a sound understanding of the subject content. Brophy and Good (1997) indicate links between teacher behaviour and learner achievement, such as the teacher's ability to structure new information, relate it to prior knowledge, monitor progress, and provide feedback. They also state that teachers with effective management skills, who keep momentum with pacing and sequencing of content and activities, who have high levels of learner involvement, who set learning difficulties within learners' range and who provide clear evaluation rules, show higher learner achievement rates (Brophy & Good, 1997; Emmer & Evertson, 1981). However, outcomes could vary with factors such as age and socio-economic and cultural background of the learners. A teacher's understanding of these possible factors could be seen as PCK. By sequencing and pacing is meant the following: sequencing is the order in which new pedagogic items are to be taught and is usually determined by the curriculum or syllabus; pacing, on the other hand, indicates the speed at which the material is to be covered in a lesson, or the way in which allotted class time is utilised (Richards & Schmidt, 2002).

Schulman (1987) formulated the term PCK under the imperative that teachers must have an in-depth understanding of their subject matter so as to provide a solid foundation for pedagogy: if subject content knowledge (SCK) is the '*what*' of teaching, then PCK is the '*how*'. Schulman's definition of PCK is that teachers must be able to take what they know and *transform* it so that *learning* becomes available and comprehensible to their learners. Perhaps the difficulty of defining PCK lies in the fact that it is essentially in the mind of the teacher. It is impossible to analyse all the thought processes that constitute best PCK practice; yet PCK can manifest itself and become visible in different ways within the teaching practice of the teacher. Hence the FORT is able to capture classroom practice. Another example of this is where Wildsmith-Cromarty (2012) discusses the creation of resource books for teachers that enable them to enhance their own understanding of *subject content*. However, these teachers appeared to be unable to use the resource books to mediate the information it contained via activities or tasks in the classroom (Wildsmith-Cromarty, 2012). Wildsmith-Cromarty further states that this could well indicate a lack of PCK, that is, the teacher's knowledge of her subject, specifically related to how to teach that subject.

Whereas researchers have investigated PCK in Mathematics and Science (Gess-Newsome, 1999; Hoadley, 2012), investigating PCK in the field of reading teaching or reading becomes even more problematic because, as Phelps and Schilling (2004:33) state, “*reading is not a discipline*”. What is to be known about reading as a subject is not clarified and it is not clear what qualifies as ‘content’ in reading. These difficulties are compounded by the fact that most teachers acquired their reading skills many years prior and few can remember exactly how they learned to read (Phelps & Schilling, 2004). Teachers need to have high levels of both content knowledge and PCK in order to know how to teach reading (Irvine-Niakaris & Kiely, 2015; Pretorius & Klapwijk, 2016). Furthermore, Love (2009) states that literacy teaching cannot be defined as a subject. Teachers of reading are required to have, amongst other forms of knowledge, (Love, 2009):

- cultural knowledge;
- knowledge of learning;
- knowledge of cognitive development; and
- knowledge of the reading process itself.

In addition to Love’s additional knowledge that teachers must possess, PCK is influenced by underlying theories as well as attitudes and beliefs that the teacher holds, such as Halliday’s language as a social semiotic (Halliday, 1978) or Bernstein’s Pedagogic Discourse (Bernstein, 1990). However, a caveat may be provided here by Risko *et al* (2008) in their literature review of 82 empirical studies in the USA on teacher preparation for reading instruction. Findings were that whereas training was shown to have effects on teachers content knowledge, knowledge and beliefs’, only a small number of studies have shown pedagogical content knowledge to ultimately have an effect on student learning outcomes. When this did occur, it was largely due to explicit teaching, guided practice and clear demonstration of lessons. In addition, teachers’ beliefs and attitudes about reading do not always affect learners positively. On the contrary, beliefs tend to be resistant to change and can even inhibit the taking on of new ideas. In addition, strong content knowledge is not necessarily shown to improve teaching, However, reflective thinking is shown to have some benefit, particularly guided practice (Pajares, 1992).

Furthermore, PCK is realised or channelled through language in the form of dialogue between teacher and learner, learner and teacher, and learner to learner (Tough, 1977b) or what Flanders defines as interaction (Arockiasamy, 2015; Flanders, 1964; Flanders, 1970). Thus, PCK, theories and/or beliefs and teacher-learner interaction are inextricably linked, as illustrated in Figure 3-2 below:

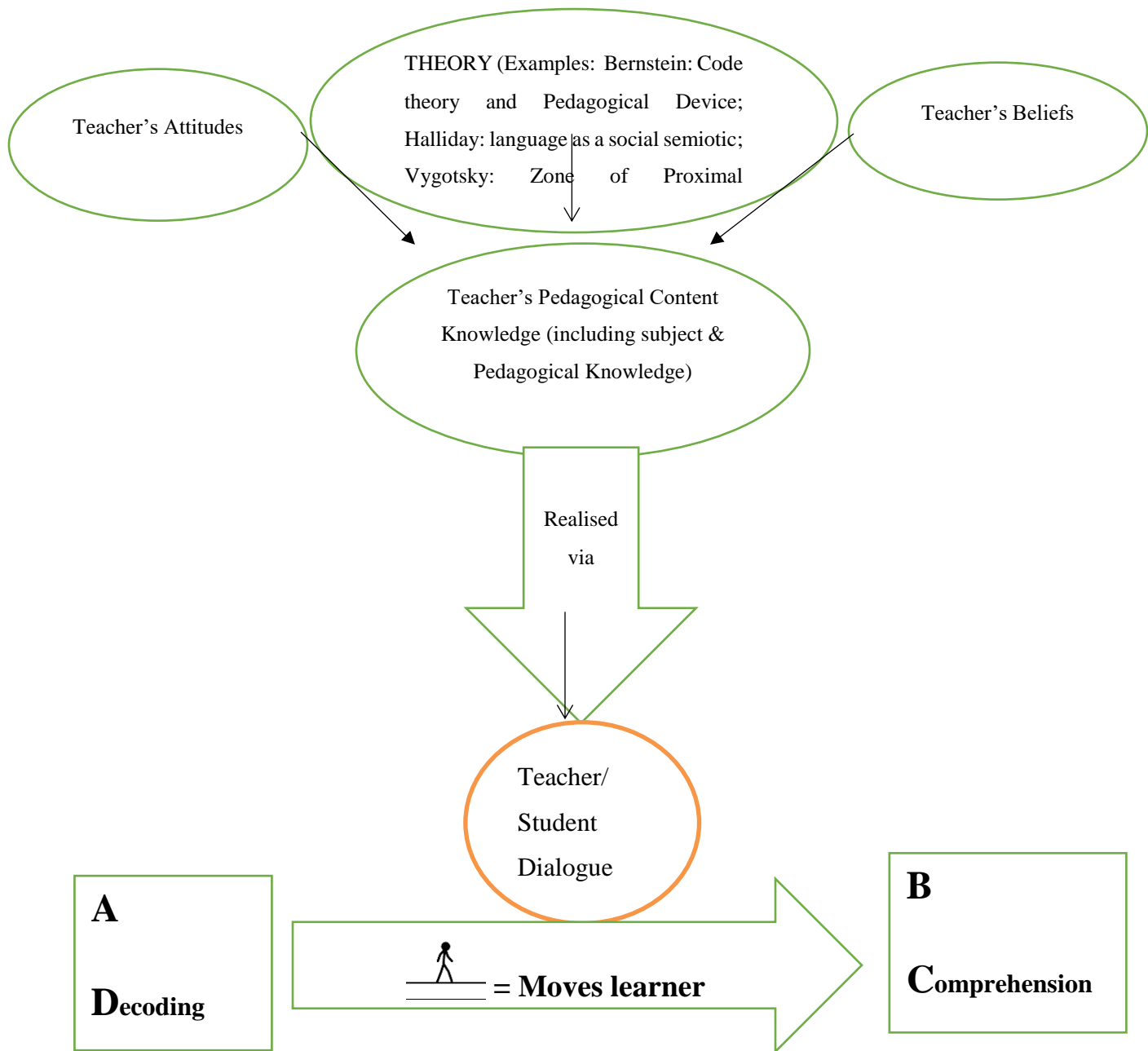


Figure 3-2: The link between language, theory, beliefs and attitudes of the teacher and PCK

Figure 3-2 illustrates how the attitudes and beliefs that the teacher holds, based on her theories of reading and teaching as well as her prior experience, will underpin her PCK. For example, her theoretical understanding combines with her understanding of how to teach, which is likely largely influenced by how she herself was taught. In addition, the teacher's own attitude to reading will influence her reading teaching. To this must be added the effect of mediation and the activities, tasks and materials used in the classroom.

So, ultimately, the teacher's PCK consists of her experience, training, content knowledge, her knowledge of how to teach and the subsequent tools she chooses to use in the classroom. Through the channel of language and dialogue, she communicates this to the learners and receives feedback in turn. This process facilitates the learners as they move from individual components of reading and decoding to reading for meaning. A discussion of initial teacher education (ITE) and continued professional development programmes (CPD) follows.

3.6 ITE & CPD Programmes in South Africa

The centrality of the teacher in reading education and its relation to teacher training has been mentioned. For the sake of this study, ITE in South Africa can be divided into the ideal and the reality. The ideal is that teachers teach so that CAPS outcomes and requirements are met by learners (see 1.4.2). According to the DBE website, the possibilities for teacher training in South Africa are as follows (Department of Basic Education, 2018). A student can either complete a four-year Bachelor of Education degree (B.Ed.); a three-or four-year Bachelor's degree, followed by a one-year Postgraduate Certificate in Education (PGCE). Once students have qualified, they must register with the South African Council for Educators (SACE). Prospective teachers can choose to teach varying school levels which are divided into clusters. These are:

- Foundation Phase: (± 5 – 9-year-olds): Grades R – 3
- Intermediate Phase: (± 10 – 12-year-olds): Grades 4 – 6
- Senior Phase: (± 13 – 15-year-olds): Grades 7 – 9
- Further Education and Training (FET) Phase: (± 16 – 18-year-olds): Grades 10 – 12.

In addition, a student can specialise in two consecutive phases and for the Intermediate, Senior and FET Phases, they may choose subjects that include languages, mathematics, the sciences, technology, business and management, and the humanities (Department of Basic Education, 2018). However, post-1994, it is the universities who are training the pre-service teachers, after the closure of the teacher training colleges (Sapa, 2013). According to Rule (2017), the universities are not teaching reading as a process that involves meaning but rather as mechanical skills.

The ineffectiveness of university ITE is borne out by statistics (The Conversation, 2019) and teacher quality appears to be at the helm of this situation. For example, approximately 10% of teachers in South African Government schools are absent from school each day. According to his report on aspects of initial teacher education curricula at five higher education institutions in South Africa, Taylor (2014) states that in-service teacher training programmes are not sufficient to remedy the situation that results from poor ITE training. For example, in his analysis of criteria specified in the teacher training rubrics of the five institutions investigated in his report, Taylor found that there tends to be a lack of focus on the importance of content knowledge, while PCK is largely watered-down to an ability to draw on a pedagogic knowledge base (Taylor, 2014).

Upon graduation, teachers continue to teach as they have been taught. This includes a focus on pronunciation, fluency and accuracy with memorisation and decoding. Learners read out loud in front of the class, or in groups. In other words, reading is seen as an oral activity. In order to address this deficit, the use of effective reading instruction programmes are recommended (Rule, 2017). Two CPD programmes using scaffolding are discussed in this study as they are used by several of the participating teachers. These programmes are R2L and READ. Both are based on Vygotsky's idea of social constructivism (Vygotsky, 1978) but have different theoretical bases.

3.7 R2L and scaffolded interaction

The R2L methodology was originally developed in Australia to assist marginalised Aboriginal learners to acquire academic skills. The approach claims to be effective across the curriculum, as

well as across grade and tertiary level, in the continued teaching of reading, with research conducted in Australia (Rose et al., 2007; Rose, 2006; Martin and Rose, 2005; Liu, 2011; Carbines et al., 2005; Rose, 2003; Culican, 2006; McRae et al., 2000; Rose and Martin, 2012), Sweden (Acevedo, 2010; Lovstedt, 2010), and South Africa (Rowlands, 2006; Kirkwood, 2007; Steinke, 2012; Wildsmith-Cromarty and Steinke, 2014). Reading to Learn (R2L) also claims that it can consistently increase the reading skills levels of all learners between two and four times the expected growth rates of learners (Culican, 2006; Rose et al., 2008). R2L's strongest connection in this study is in the construction of the interaction cycle in R2L that seeks to create 'meaningful interaction'.

a. Meaningful interaction

Tough (1977a; 1977b) believes that interaction between child and adult, teacher and child and vice versa, forms a vital cornerstone of teaching and learning. By 'meaningful interaction', is meant the initiation-response events that occur in the classroom that actually realise learning, as opposed to those where the learners chorus or chant responses that may not be facilitative. Tomasello refers to this as 'joint attention' (Rose, 2011b; Tomasello & Farrar, 1986). This joint attention is based on the premise that children develop a cultural mode of learning from an early age that forms the basis of their academic or classroom learning. As Rose (2011:8) states: "... *adults direct children's attention, or follow their attention to things and activities, then name them, evaluate, demonstrate, explain and so on. ... shared emotion is critical as adult and child exchange evaluations of things and actions.*" This classroom interaction is known as the 'Initiation-Response-Feedback cycle' (IRF).

b. The IRF cycle

The IRF cycle is generally started by the teacher asking a question. Similar to parent-child interaction, the move is there to prepare the learner for a task and to help him or her to successfully complete it. The successful completion is followed up by affirmative feedback from the teacher, which, in turn, prepares the learner to complete the next step and/or task. The teacher then elaborates on the task and thereby extends learning. Similar to the 'WH' or 'open' questions

suggested by Tough (1977a) as a strategy for reading teaching, Rose (2011) also suggests that the ‘WH’ questions can be used with children to extend learning. He gives the example of how a child’s drawing may be interpreted by the teacher through her identifying elements in the drawing or by asking the child to say *what* she has drawn.

Rose highlights the similarities between the teacher-learner relationship and the interactions between the parent and child in the shared reading cycle. He identifies four main cycles in this interaction – namely preparing, identifying, evaluating, and elaborating – which are illustrated in figure 3-5 below (Rose, 2011:12).

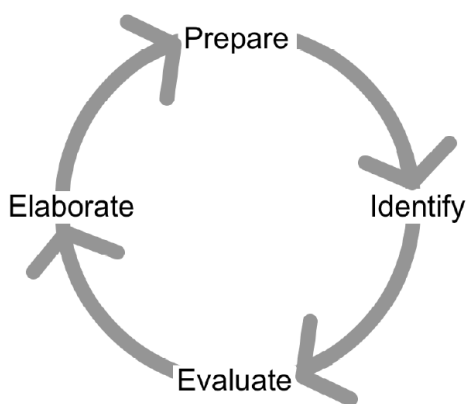


Figure 3-3: Scaffolding interaction cycles in parent-child reading

In the classroom context, the teacher provides direct, explicit instruction, directs the learners’ attention and models the expected response. The learner performs the task, the teacher evaluates and/or gives feedback, then elaborates, and so on. Reading to Learn (R2L) expresses this pattern of interaction as scaffolding interaction cycles (Rose 2004, 2007). As the teacher assists the learner to grasp meaning and provides a ‘bridge’ to understand implicit connections in the text, the boundaries between the ‘everyday’ discourse, or restricted code, and the specialised or elaborated code (Bernstein, 2000) is weakened. However, the boundary is then strengthened again as the teacher elaborates and thereby extends meaning for the learner. In figure 3-6, Rose illustrates this classroom-based cycle of interaction in the *Scaffolding Interaction Cycle* (Rose, 2004:97).

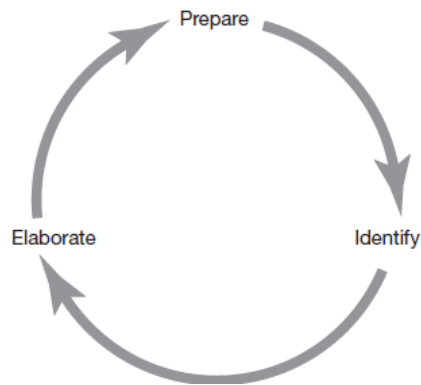


Figure 3-4: Scaffolding interaction Cycle

Figure 3-6 above illustrates how Reading to Learn (R2L) centralises the role of evaluation in classroom interactions (Bernstein, 1996; Rose, 2011). However, the learner response is typically obtained from stronger, more confident learners who are usually from financially stronger socio-economic levels of society. Disadvantaged learners tend to hold back. Thus, the interaction cycle of R2L is structured in such a way so as to create a space for these weaker learners to participate in responses. This structure is explained as follows: Firstly, it recognises the central role that the role reading plays in formal schooling, namely that learners are expected to learn from reading. As a result, R2L is designed in every facet to teach the skills for reading. Secondly, the activity of classroom learning is carefully structured to scaffold learners to be successful at the task(s) they are performing and is combined with affirmation and elaboration to provide learners with the preparation they need to succeed in each task. Thirdly, the social interaction in the classroom is designed to provide for all learners at all levels of ability and socio-economic background so that all learners can be successful at the given task level. This inspires confidence in the learners and encourages participation by the weaker learners (Rose, 2010; Rose, 2011b; Rose & Martin, 2012).

3.8 READ education trust and the balanced approach

In the current study, at least one participating teacher made use of the READ programme (specifically, T5 S1(E)/3, isiZulu) in the classroom in conjunction with the CAPS. It is therefore

necessary to discuss READ and the Balanced Approach in more detail. The READ Education Trust works closely with the DBE and is mainly involved with teacher training in literacy teaching (READ Educational Trust, 2015). Its main aim is to make classrooms more ‘workable’ and to improve teaching skills in English only, as many teachers find they have little choice but to work both with and in that dominant language.

According to Schollar (2001), READ consists of three main components: whole school training; ongoing monitoring and support; and supply of reading materials and books to facilitate reading. The teacher training component is further divided into: areas of teacher planning and organisation; how teachers can create and use their own materials; enhancing classroom group work; assistance with English language teaching; and helping teachers make full use of all their available project materials (Schollar, 2001). The teacher training component is based on the ‘balanced approach’, which is underpinned by constructivist theory that views literacy as a social construct, emphasising both the cognitive and critical thinking skills of learners. Constructivist theories are the same concepts that form the basis of Outcomes-Based Education (OBE) which has largely failed in South Africa. Although there is thus ‘good practice’ in the balanced approach, there are also valid criticisms consistent with such ‘natural’ approaches, such as the lack of explicit teaching (Jansen, 1998; Rose & Martin, 2012).

Gambrell *et al.* (2011:21) refer to balanced methods as “*comprehensive literacy instruction*”. This form of ‘best practice’ includes many of the evidence-based teaching elements previously discussed in this chapter. Comprehensive literacy teaching practice focuses on the use of scaffolded instruction in both whole language and phonics. Learners must be able to write effectively, using different genres and for differing social contexts, and must read extensively for various reasons, including pleasure, using a variety of reading genres. This includes reading aloud, guided and shared reading, as well as interactive and shared writing, whilst taking into account the prior knowledge that the learners bring to the classroom. Another important area of practice in a balanced approach is differentiated learning, where the teacher considers the needs of individual learners within the classroom setting when teaching and assessing and looks to create an environment in which all can benefit (Gambrell *et al.*, 2011a; Schollar, 2001; Nugent *et al.*, 2015).

Brief definitions of scaffolding and differentiation are given here. Although they are similar techniques and may at times be blended in the classroom, they are not the same. Scaffolding involves the breaking up of learning into discrete parts, then providing learners with the assistance they need to successfully complete the individual parts. The scaffolding is gradually withdrawn as the learners become more capable. Differentiating instruction, however, may involve allowing learners to work on different levels of reading that match their levels of ability (Hidden Curriculum, 2014).

However, despite these practices above, the balanced method's emphasis on individualism and leaving learners to discover reading and writing for themselves, has been shown to be insufficient, especially for disadvantaged learners (Rose, 2004; Rose, 2005). For effective literacy acquisition, children need explicit instruction and cannot be expected to independently discover the rules of written language by themselves (Nazaryan, 2014).

Finally, as Gambrell *et al.* (2011:29) state: *"No matter how well a particular practice is shown to be effective by research, optimal literacy teaching and learning can only be achieved when skilful, knowledgeable and dedicated teachers are given the freedom and latitude to use their professional judgement to make instructional decisions that enable learners to achieve their full literacy potential."* I believe that this statement manages to capture something of the essence of PCK.

The FORT, an instrument designed to capture classroom reading teaching practice, is a manifestation of the theories discussed above: reading; what teachers should know; and PCK. A discussion of the FORT instrument follows.

3.9 The FORT

The FORT is designed in two sections: part A, which contains reading teaching, PCK and management; and part B, which captures classroom interaction and discourse, both from learner to teacher and from teacher to learner. An overview is provided here, beginning with part A.

3.9.1 The FORT part A: Reading teaching, PCK and Management

While the FORT provides mainly quantitative data, it does contain some qualitative categories, such as Activity and Materials Used. It can also be used by a single researcher to capture classroom events and discourse. The categories on the FORT have been arranged in clusters using main and sub-categories and these will be explained in detail (see Appendix A). The first category in Part A of the FORT consists of Time, which is a measurement of five minutes, followed by Activity and Materials. This is followed by Participant Organisation, which involves who is speaking – the whole class, a group, or individual(s).

The next category is Reading Teaching. This is an extensive category that includes Modality with subcategories of language teaching elements, such as spelling, grammar, vocabulary and writing, as well as different types of reading the teacher may use with learners, such as Silent Reading and Reading Out Loud. Reading Teaching also includes Decoding and Comprehension. Decoding encompasses Oral Fluency, Non-Word Reading, Familiar Word Reading, and Phonemic Awareness, while Comprehension includes referential and inferential comprehension as well as open and closed questions. Another independent category is Activating or Presenting new knowledge, followed by Management. The research-based evidence for each category of the FORT is discussed below.

a. Planning, and choice of classroom activity and materials

The choice of meaningful, authentic materials to support learning is vital (National Council of Teachers of English, 2017). Furthermore, the *activity* the teacher selects plays a vital role in linking parts A and B of the FORT. For example, two different teachers in differing classroom lessons of the same time length can each have the same number of learner responses from the teacher's cue. However, what these responses by the learners really consist of and whether those responses are evidence of learning may be a different matter. In addition, whether the responses are indicative of learning is strongly connected to the activity in which those responses take place. Biggs (1999) highlights the importance of teacher planning and organizing in the learning context in such a way that it creates an 'alignment' of elements – such as activities that can help to create a learning environment – while Tough (1977a; 1977b) also supports the vital linking role of activity with interaction. I will refer to this as 'meaningful interaction' and explore the concept further in this chapter along with a discussion on Reading to Learn (see 3.15). Reading to Learn (R2L) plays a significant role in this study, firstly because of some participating teachers using it in conjunction with the CAPS and secondly, because of the central role that the scaffolding interaction cycle (SIC) plays in the approach.

More recent researchers, such as Loewenberg Ball and Forzani (2009) in their article on teaching practice and the challenges facing teacher education, also argue for the importance of teaching practice and classroom tasks and activities and suggest that these should be seen as the *centre* of classroom practice. They encourage interactional events, such as elaboration and explanation, which are subcategories of feedback and coaching and suggest how teachers can use explicit reminders to learners of work previously engaged in to stimulate memory and recall. An example of this in the current study would be during classroom observations. A teacher asks the learners questions about a story that they initially read the previous day. Then they proceed to read the story again. Along with interaction, elaboration forms one of the major components of R2L (Rose, 2011), as well as paraphrasing. Interaction, elaboration and paraphrasing play an important role in expanding learning (Loewenberg, Ball & Forzani, 2009; Kletzien, 2009; Rose, 2011b).

b. Participant organisation

Participant organisation can be conceptualised as ‘who does the talking’. Traditionally in South Africa, it has been, and still is, the teacher who generally controls most of the interaction (Macdonald, 1990; Wildsmith, 1992; Macdonald, 2002), similar to Freire’s (1972) concept of ‘banking’ (see 3.4). However, it is considered equally important in more modern teaching practices that learners also interact with teachers and their peers (Tough, 1977b). Effective classroom interaction will take varied forms, such as group work, learner-to-learner talk, and feedback and associated assessment (Tsui, 2001; The Commission on Reading of the National Council of Teachers of English, 2017). However, classroom talk is not necessarily effective if it is not guided. On the contrary, unstructured interaction may result in chaos and thus it requires skilled understanding on the part of the teacher to create a learning environment (Frey & Fisher, 2011). In this way, guided interaction forms part of greater classroom management.

c. Modality

Modality involves, amongst other elements, integrating aspects of language teaching, such as vocabulary, spelling, grammar and punctuation, and writing. The necessity of teaching vocabulary has been well documented, both through interaction with young children and parents, and through explicit classroom teaching (Nagy & Scott, 2000; Wilsenach, 2015). Nagy and Scott (2000) state that vocabulary is identified as one of the main five components in reading and highlight the value of specific teaching strategies to build learners’ vocabulary.

In addition, proficient spelling plays an important role in supporting reading skills (Reed, 2012; Moats, 2009). Just because a learner has weak spelling ability does not mean that he or she cannot read effectively (Berninger et al., 2002). However, accurate spelling requires the integration of phonological, orthographic and morphological knowledge and is an indicator of more advanced reading skills (Ehri, 2000; Reed, 2012). Along with spelling, knowing how to use punctuation correctly is vital for reading and writing as punctuation creates meaning (Baron, 2001; Jasmine & Weiner, 2007).

Whereas traditional teaching approaches concentrated on discrete, grammatical concepts, modern teaching approaches value the explicit teaching of grammar for function as ‘natural’ approaches proved insufficient to prepare learners for academic success (Larsen-Freeman, 2000; Fotos, 1994). It is therefore important that teachers are aware of issues such as language structure to effectively prepare their learners for effective learning (Halliday, 1985; Bromley, 2011; Moats, 2009; Benjamin et al., 2006). In addition, correct spelling and grammar contribute to fluency, which is a vital component of reading comprehension (Kuhn & Rasinski, 2011).

Modality also includes different types of reading the teacher may use with learners, such as silent reading and reading out loud. This can take the form of individual or group reading, all depending on the need the teacher perceives at a given time (Read Educational Trust, 2015; Gambrell et al., 2011b). Pretorius and Ribbens (2005) state that learners must have access to reading material as well as opportunities to read and that teachers need to take seriously the time allocation provided by the DBE in the CAPS curriculum that allows for daily, dedicated reading time for learners. Goudvis and Harvey (2013) offer evidence to support opportunities in the classroom for different forms of reading, such as silent and sustained reading and collaborative learning and dialogue. Comprehension strategies allow for deeper and richer collaborative learning amongst learners, particularly regarding dialogue (Harvey & Goudvis, 2007; Harvey & Goudvis, 2013; Johnson et al., 1994). In the same vein, paired reading is also effective in building oral fluency (Marr et al., 2011).

d. Direct and explicit instruction, decoding and comprehension

Direct instruction is related to a skills-based approach (Mandel-Morrow et al., 2011), and teachers provide instruction by focusing on specific reading skills and using a step-by-step approach. Direct instruction must be differentiated from ‘explicit instruction’ (see 3.9.2), which requires that teachers directly explain, model and then scaffold learners in learning and acquiring the essential literacy components (Reutzel, 2011).

Although controversial due to perceived weak research areas and its focus on limited areas of reading instruction (Gambrell et al., 2011a), the National Reading Panel (2000) reported on the improvement in reading skills brought about by using direct instruction to teach learners elements such as phonics and phonemic awareness. The report also found that guided, repeated oral reading instruction improved fluency and comprehension. In addition, increasing the volume of independent reading for learners assisted their literacy development, which relates to Modality above.

With regard to the current overemphasis on decoding in South African classrooms (Pretorius & Machet, 2004b; Pretorius & Ribbens, 2005), focus should be placed on both decoding and comprehension. This includes the individual components of reading that combine to create automaticity, such as familiar word reading and fluency (Ehri, 2011; Kuhn & Rasinski, 2011). Non-word reading is important for assessing whether the learner knows the sounds the letters represent as well as how those sounds become blended into words. Learners who cannot do this effectively, will have gaps in their phonic knowledge and/or poor blending skills (Phonic Books Ltd, 2011a).

Comprehension also requires the activation of prior knowledge (and presentation of new knowledge, where necessary), knowledge of genre and text structure, opportunities to use language in writing as well as inferencing and integrative skills to construct meaning (Pretorius & Ribbens, 2005; Harvey & Goudvis, 2007). It also requires strategies for referential and inferential comprehension (Howie et al., 2012). One can also mention here that reading and writing are interrelated skills that should be taught together and across the curriculum for effective comprehension (Flanagan, 1995). An important component of encouraging comprehension, or reading for meaning, is the use of open and closed questions. While both are necessary, the value of open or 'WH' questions in extending learning is well documented (Tough, 1977b; Rose, 2011b; Denton, 2007).

e. Classroom management

Classroom management is defined as the skills and techniques teachers use to keep their classrooms organised, attentive and focused in such a way as to facilitate learning (Great Schools Partnership, 2017). Effective management will create, amongst other things, positive teacher-learner and learner-peer relationships and maximise chances for learning in the classroom (Emmer & Stough, 2001). In addition, the ability of the teacher to effectively manage her classroom environment may play a vital role in preventing burnout (Brouwers & Tomic, 2000).

In addition, discipline, or the ability to control the learning environment and respond to learners who may have behavioural problems, forms an important component of classroom management. In addition, it serves to maximise on-task behaviour and creates a learning environment conducive to all, whereas discourse markers in the teacher's speech indicate the organisation of learning material and time. It is a verbal indication of the 'portioning off' of information or sequencing. It also forms a verbal signal to learners that one such section is completed and another is about to begin (Emmer & Stough, 2001).

In the same way, verbal prompting allows the teacher to assess when learners are not moving at the required pace, or when they are losing concentration or motivation. It indicates what the teacher wants the learners to do and provides encouragement. It controls speech – for example, it can indicate that a period of 'free' interaction is over and that the learners must continue with the learning. Cues or prompts assist in the learning process by reminding and reinforcing the ability of learners to achieve a particular learning goal. These prompts can be subtle but should be easy for learners to recognise (Government of Alberta: Education, 2017).

Discourse markers are utterances or phrases the teacher voices that serve to section off pieces of information or tasks such as 'right', 'okay', and 'now'. These vocal signals provide signals to the learners – either that sections of learning are over, or that new sections are beginning. It is an indicator of mental organisation the teacher has that serves to order the teaching process. In support of the importance of discourse markers, Wang and Ding (2015) argue that these create, amongst

others, a more informal learning environment where learners feel more at ease to participate (Fung & Carter, 2007; Wang & Ding, 2015).

Another aspect of classroom management is pacing and sequencing of the curriculum (see 3.5). These refer to the way in which formal school curriculum knowledge is sequenced so that section builds upon section, as well as the rate at which the material must be taught due to the size of the content. Understanding the importance and role of sequencing and pacing of the curriculum in advantaging or disadvantaging certain learners forms an important part of teacher management strategy. The rigid boundaries usually placed around sequencing and pacing means that teachers are unable to go back to former stages of learning learners may have missed. Pacing and sequencing form an important component of Bernstein's pedagogic device and his concern with the 'hidden curriculum' (Margolis et al., 2001; Bernstein, 1990). Scaffolding and R2L are designed to relax these boundaries to allow weaker learners to catch up (Bernstein, 1990; Rose, 2004; Rose & Martin, 2012). This is one of the areas on the FORT where one needs to link sections A and B closely so as to capture whether relaxing of these boundaries actually takes place.

3.9.2 FORT part B: Classroom interaction

The foundation for the focus on classroom interaction in this study is based originally upon the Communicative Orientation for Language Teaching, or COLT and Wildsmith's (1992) correlational study of teachers' attitudes and practices (Frohlich *et al.*, 1985; Spada & Fröhlich, 1995; Wildsmith, 1992) and secondly, on the value of teacher-talk by Joan Tough (1977a).

Simply put, 'good' teachers talk to their learners and provide space for learners to reciprocate (Tough, 1977a, 1977b). The importance of interaction, or teacher-talk, is not a new concept. Early research in support of Code theory by contemporaries of Tough and Bernstein also indicated that children who are talked to, both by parents and teachers, perform better academically (Ramey et al., 1979), while even earlier research by Vygotsky showed that a child's ability to talk will play a crucial role in his future academic achievement (Vygotsky, 1962). An important point highlighted by Ramey *et al.* (1979) is that, while the amount of talk is important, the *quality* of that talk ultimately supersedes the amount. This brings back into focus the importance of *activity*, because

teachers need to create activities that will enhance and encourage quality language use (Ramey *et al.*, 1979).

Furthermore, and in line with Tough's research, Sinclair and Brazil (1982) see "*initiation of conversation*", or discourse, by the teacher as the main instrument of education (Sinclair & Brazil, 1982:36) as the teacher uses this language as a tool to guide and control her class. However, Sinclair and Brazil state that this initiation by the teacher requires an open-choice response. This open-choice response is an important factor in the current study as it is generally understood that rote learning and choral responses are a typical feature of many South African classrooms (Macdonald, 1990; Macdonald, 2002). The mere fact that learners are responding does not indicate that they are learning. This conversation between teacher and learner contains feedback that serves to organise the dialogue between the participants, allows for correction, and can prevent error formation. It is also a vital tool in helping the teacher to identify potential difficulties which, in turn, can lead to more effective scaffolding (Sinclair & Brazil, 1982; Vygotsky, 1978; Baxter & Williams, 2010). Learner-to-learner dialogue and interaction is also an important factor in effective learning as, according to Hay *et al.* (2013:151), "... *peer-mediated instruction provides supervised practice for the lower achieving learner.*" This would include the aforementioned, paired reading (Marr *et al.*, 2011).

In the light of the importance of classroom interaction, based on the original idea that tasks are a resource to facilitate classroom interaction (Frohlich *et al.*, 1985; Spada & Fröhlich, 1995), Part B of the FORT lists the types of events that interaction can include, namely: code-switching; requesting; evaluation questions; feedback, explaining, elaborating, affirmation; correction; repetition; emotional response; and the category Other, which includes actions or additional things that either the teacher or learners may do during the teaching period – for example, learners raising their hands excitedly to respond to the teacher's question. Other events captured by the FORT can also be listed. For example, both the concerns and benefits of code-switching in assisting learners to grasp concepts that may otherwise be difficult for them to understand, are highlighted by Plüddeman (2015). Lovorn (2008) highlights the importance of laughter for learning, while Lyster (1998, 2002) gives evidence for the benefits of direct error correction in the form of recasts as well as clarification as negotiation of meaning. According to Nemours (2017), repetition as a teaching

tool supports learners in increasing reading speed, growing in confidence and developing cognitive connections, while grammar and correction assists with reading comprehension. Furthermore, writing helps reading learning by teaching learners, amongst other things, that sounds are represented in letters and words. Tough (1977a) supports the use of evaluation questions, requesting information and feedback for teachers as an important strategy to identify areas where learners may need assistance.

Hay *et al.* (2013) discuss the benefits of explicit instruction in terms of clear presentation and examples, scaffolding in the form of guided initial practices and then independent practice. They also advocate feedback and correction, along with a periodic review of both content and skills. Positive reinforcement, or affirmation, is shown to be more conducive to learning than its negative counterpart (Rose, 2004; Hay *et al.*, 2013). When the aforementioned practices are in place, they result in engaged readers and, even more importantly, are ultimately beneficial to the goal of comprehension (Hay *et al.*, 2013; Goeke, 2008; Rose, 2011a; Rose, 2011b). The criteria for evaluation of lessons in the current study were drawn from the FORT. The next section illustrates the teaching model that was created for this research project.

3.10 The restrictive-facilitative teaching model

The model the researcher proposes to use is the “Restrictive-Facilitative” teaching model, initially based upon the “Transmission-Generative” model developed by Wildsmith (1992). This original, binary model was created to measure the extent of communicative teaching practice within the classroom setting versus traditional teaching methods. However, as language teaching has evolved over the past two decades into a form that seeks to combine the best of traditional approaches – such as formal grammar teaching and explicit assessment criteria – with communicative approaches, an update is necessary. While keeping in mind the current move away from giving specific labels to methods and approaches towards principled eclecticism (Larsen-Freeman, 2000), a name was sought for an additional component to Wildsmith’s model that could illustrate the main aim and theoretical and teaching approaches utilised in this study. This new or third component is referred to as facilitative pedagogy, as illustrated in table 3-1 below:

Table 3-1: Restrictive-Facilitative pedagogical model

Restrictive Pedagogy		Facilitative Pedagogy	
Traditional Approaches	Communicative approaches	Emancipatory approach	
Behaviourism (Skinner, 1954).	Social reform, democracy, the relationship between knowledge and experience (Freire, 1972; Dewey, 1902).	Language as a functional, social semiotic (Halliday, 1994; Halliday, 1996; Halliday, 1978).	
Bloom’s Taxonomy of Educational Objectives (Bloom & Krathwohl, 1966; Krathwohl, 2002).		Scaffolding, and the zone of proximal development (ZPD) (Vygotsky, 1978).	
		Code theory; the Pedagogic Device; Classification and framing (Bernstein, 1990; Bernstein, 1999).	
		Genre and R2L approaches – explicit teaching of reading and writing via scaffolding (Rose & Martin, 2012; Martin, 1999; Martin & Rose, 2005).	
Rote learning	Natural approaches	Both deductive and inductive reasoning are necessary (Bowers & Kirby, 2010; Cumming & Elkins, 1999)	
Banking	Learner-centred	Learners bring their own experiences into the classroom environment (Rothery, 1996).	
Focus on discipline and teacher authority	Group work; learner construes meaning through experience; teacher is the ‘sage on the side’.	Guidance of teacher as well as peers are necessary in order for the learner to reach the ZPD (Vygotsky, 1978).	
Errors seen as ‘wrong’	Errors can facilitate the learning process	Some error correction necessary, depending on context (Bromley, 2011).	
Strong framing and classification	Weak classification and framing	Utilises both, depending on context (Bernstein, 1990).	
Bottom-up approach – decoding	Top-down approach – comprehension	Utilises both bottom-up and top-down approaches (Steinke, 2012)	
Focus on form	Focus on meaning	Both are utilised depending on context (Rose, 2004; Steinke, 2012).	

The above model seeks to move from traditional, teacher-led approaches, or what Freire (1972) referred to as banking, where teachers are the authority and learners merely a receptacle to absorb what is taught, without agency. Reading was taught via a process of decoding letters, and learning was largely rote, based on Skinner's theory of Behaviourism. Bloom's taxonomy divided learning into three main domains: the cognitive domain, which became the basis of much traditional education where curricula were structured into learning objectives; assessments; and activities (Bloom & Krathwohl, 1966; Krathwohl, 2002).

With the advent of communicative approaches, the pendulum swung in the opposite direction where the focus was on the learner and problem solving, based on the theories of Freire and Dewey (Dewey, 1902; Freire, 1972). Teachers became the 'sage on the side' and were removed as authoritarian figures; errors became part of the learning process; and a top-down approach to reading and language was adopted where the focus was not on decoding but on meaning. Natural approaches were adopted where it was believed that, given the correct environment and stimulus, the learner would acquire the necessary knowledge via inductive means (Rose & Martin, 2012).

However, communicative approaches alone proved to be inadequate, especially for learners that have already been disadvantaged through socio-economic conditions (Jansen, 1998; Pretorius, 2015). Based on the ideas of Habermas (1989) and Bernstein (1990), who see societal structures, such as education, as held in place by gatekeepers, the idea is to emancipate the learner by providing explicit knowledge in relation to the 'hidden curriculum' (Geuss, 1981; Bernstein, 1990). The pendulum has swung back somewhat with Halliday's idea of language as function; Vygotsky's idea that a teacher is necessary to take the learner further than he can go on his own; genre approaches that induct learners into expectations of written texts in society; and the added component of continued reading teaching by Rose (Halliday, 1994; Vygotsky, 1978; Rose, 2005). Both top-down and bottom-up approaches are now in use in reading teaching, where one moves between decoding and meaning, and both deductive and inductive reasoning are utilised in the classroom (Rose, 2005). Effective teachers can choose from a variety of strategies at their fingertips, depending on how they perceive the need of the learner at a given time (Gambrell et al., 2011b). It is believed that the Restrictive-Facilitative pedagogical model can serve to adequately describe the intentions and principles underlying the choices made by the researcher in her capacity

as both observer and teacher. A description of the main theories follows. These theories are: Systemic Functional Grammar; Code theory and Pedagogical Discourse; Scaffolding; Teacher-talk; Genre Approaches; and Reading to Learn.

3.11 Systemic functional grammar

In the creation of Systemic Functional Grammar (SFG), Halliday saw language as a system for making meaning, as opposed to a formal grammar system (Halliday, 1985; Halliday, 1996) and argued that language is inherently functional. In SFG, Halliday refers to the functions of language as meta-functions, of which the main three – namely the ideational, interpersonal, and textual (or *field*, *tenor* and *mode*) meta-functions – will be discussed briefly (Halliday, 1994). The ideational meta-function is how we construe reality and make sense of the world, relating to the *field* aspect of a text – the “what”. The interpersonal function refers to the aspect of the *tenor* of a text, the relationship between sender and receiver or the ‘who’, while the textual function is related to the *mode* of communication or the ‘how’ of interaction. There are some criticisms of SFG, namely that it is mainly a conceptual language theory and must be transformed before it can become of practical educational use (Hugo, 2010; Snow et al., 2009) as well as the fact that it requires both learners and teachers of subjects other than (English) language to involve themselves in the learning and acquisition of linguistic language and meta-language over and above their disciplinary subject content. However, one may argue that both Genre approaches and R2L have been able to assist in filling the gap between SFG as theoretical concept and its practical application (Martin, 2000; Rose & Martin, 2012). In his formulation of SFG, Halliday was strongly influenced by Basil Bernstein’s Code Theory, or how social class is linked to academic performance (Hoadley, 2005; Bernstein, 1990; Hoadley, 2007; Bertram, 2012; Bryan & Westbrook, 2000), as well as by the work of Vygotsky (1978) on the ZPD.

3.12 Code theory and pedagogic discourse

The idea of code theory is that the language environment of children at home shapes the interpretation likely to be placed on his/her experiences. This ultimately results in education systems that are unequal and serve to privilege children who come from more affluent backgrounds

(Bernstein, 1990; Wells, 1999; Vygotsky, 1978; Edwards et al., 2009; Ivanič et al., 2007). The relevance of code theory to reading learning and teaching lies within the idea that poorer children tend to come from homes where they only have access to the restricted code. This is a linguistic process, a way of transmitting knowledge and communication that is largely implicit and contextually bound. Middle-class children, on the other hand, have access to the elaborated code, which is the code of formal education, reading and learning. What is made available for learning through elaborated and restricted codes is radically different (Bernstein, 1971). Thus code theory indirectly affects reading acquisition in that it has to do with the privilege that children from more affluent homes have because of their likely access to print before they start formal schooling (Rose, 2011b). Code theory examines the transmitting of knowledge into pedagogic communication, and how ideology is constructed through the method of transmission, or relay. Cause (2010) argues that the relay of the curriculum, assessment and teaching within formal education systems can determine what is learnt, how it is learn and when it is learn, i.e. the content, sequencing and pacing. She states that is the nature of the relay that makes learning possible.

However, some strong criticism of code theory is that it implies that learners from disadvantaged socio-economic backgrounds have what amounts to a deficit in knowledge (Labov, 1972) and, as a result, they will never be able to learn what the privileged learn. In other words, they lack the capacity due to the initial influence of their home environments (Jones, 2013). In response, Bernstein has emphasised that, by use of the term 'code', he does not mean 'dialect', and that code theory was not intended to be denigrating nor condescending towards the language used by working-class people. Numerous studies have since been published supporting the theory of social class and educational outcomes (Hasan, 2002; Brice-Heath, 1990; Christie, 1999; Painter, 1999; Tough, 1969). These studies indicate that home interaction, particularly reading, is characterised by common-sense knowledge, weak classification and framing and context-embedded discourse, as opposed to the de-contextualised discourse of the classroom. Educational knowledge involves abstract, specialised, conscious teaching that follows a specific time-frame and sequence. So those who do not have access to the specialised code at home, which is largely acquired through access to print, are at risk of being at a disadvantage when they enter formal schooling (Bernstein, 1990). Code theory is not intended to indicate that no child from a poor socio-economic background is ever able to learn the specialised code or achieve academic success. To further understand this, it

is necessary to link code theory to Bernstein's theory of pedagogic discourse, which is concerned with how knowledge is transformed in the classroom by means of a 'pedagogic device' (PD).

The PD places the focus on the relay, or *way in which* the information is transmitted and not on *what* is being transmitted or relayed. Bernstein identifies three main rules involved in this device:

- distribution rules, in which knowledge is distributed unequally within the classroom;
- re-contextualisation rules, in which the pedagogical discourse is established via, for example, the type or register of language used, the classroom organisation, rituals;
- the use of timetables; and
- evaluation rules, which determine what constitutes 'success' for the learner in the classroom and ultimately, legitimise the type of knowledge that is being relayed (Robertson, 2007; Bertram, 2012).

The PD 'at work' can be viewed in the sequencing and pacing of the curriculum and the lack of explicitness in terms of what is required for learners to be successful in the academic system, or a 'hidden' curriculum. Bernstein realised this concept via 'classification and framing' (Bernstein, 1990; Bernstein, 1999; Collins, 2000; Liu, 2011; Rose, 2004; Hoadley, 2003). Simply put, classification refers to boundaries, for example, those between disciplines or physical areas of education, such as the freedom in which learners can move in and out of the classroom itself, whereas framing refers to control, such as the amount of control the teacher and/or learners have over the sequencing and pacing of the curriculum or over the evaluation rules, for example (Hoadley, 2005; Bertram, 2012). As Halliday was influenced by Bernstein, Bernstein was, in turn, influenced by the ideas of Vygotsky in the area of language and social cognition, particularly in his earlier works (Inghilleri, 2002). The ideas of Vygotsky and Bruner (Bruner, 1975; Vygotsky, 1978) may be seen as overlapping to an extent as both include strong aspects of scaffolding and the importance of the social/interactional element in language development.

3.13 Scaffolding

Vygotsky's ZPD has been extremely influential in developing the ideas of both Bernstein and Halliday (Xia, 2003). As mentioned, the ZPD refers to the distance between the actual development level the learner can reach independently and the level of potential development the learner has if he or she is assisted and guided by a more capable learner or adult (Vygotsky, 1978). This assistance by a more knowledgeable individual, or teacher, is what Bruner termed scaffolding (Bruner, 1971). A practical example of the ZPD can be seen in the interaction between caregiver or teacher and child during storybook reading (Williams, 1999). Williams emphasises that it is not in the reading of the stories alone that the child is encouraged in building emergent literacy skills, but rather in the interaction with the adult who mediates between the child and the text and helps the child to both understand meaning and shape his or her own meaning.

The main criticism of Vygotsky's work is that it may not apply equally across cultures (McLeod, 2007). For example, Rogoff (1990) believes that, because scaffolding is dependent on verbal instruction, it may not be equally useful in all cultures and for all types of learning. Indeed, in some instances, he believes observation and practice may be more effective ways of learning certain skills. However, to the extent that the research project under discussion includes scaffolding as a main component, verbal instruction is particularly salient (Rogoff, 1990).

From a slightly different angle, Bruner's idea of scaffolding shows the influence of Vygotsky in its emphasis on the importance of social context and shared social activities in the development of a child's language (Williams, 2004; Clibbens, 1993). Meaningful interaction with a familiar adult allows the young child to map linguistic input, particularly vocabulary and grammar, onto these shared activities. Bruner views this social environment as a support for what he sees as a natural predisposition of young children towards acquiring language through real-world events and interaction with and attention from familiar adults (Bruner, 1975; Clibbens, 1993). In a related vein, Tough (1977b, 1977a, 2012) continues with this concept in her seminal research on the importance of meaning, teacher-talk and dialogue in the education of pre- and early-school learners.

3.14 Teacher-talk

The concept of teacher-talk forms an important component of this study and focuses particularly on the importance of emergent literacy and how teachers can play a vital role in assisting in the development of young learners (Tough, 1977a). Teacher-talk has relevance for reading learning as follows. Firstly it affects vocabulary growth, which is vital for reading (Wilsenach, 2015). An average student needs between 50 000 and 60,000 words in their vocabulary to be able to comprehend language at tertiary level. Whereas parental language input has a great influence on the development of children's vocabulary growth, it may be that that input alone is insufficient to reach the necessary levels. Therefore, students benefit from teachers' verbal input as well (Moats, 2016). In addition, children must first learn words to make sense of their world before they develop writing. Learners who are not provided the opportunity to use words will fail to develop effective academic language and discourse skills (Fisher, Fryberg, Rothery, 2019; Vygotsky, 1962).

Joan Tough's early work, including her longitudinal study of the language development of nursery children in West Riding, England (Tough, 1969; Tough, 1973), assisted in highlighting how differences in home environment and socio-economic class can influence language and meaning for the child. This was in sharp contrast to the then current theories of Chomsky, which suggested the language that parents offer as input for their developing children tends to be largely degenerate and cannot accurately account for the acquisition of language by the child (Chomsky, 1965; Chomsky, 1972). As children from poorer economic households, as well as immigrants who use English as their L2, may not have access to the elaborated code necessary for formal learning environments, Tough (1977a) suggests a framework of strategies teachers can use to enable literacy learning, based on the idea that to become 'literate', learners must move through a complex process of learning stages. These stages begin with symbols, move from symbols to signs, and then from signs to reading.

The strategies Tough proposes are intended to foster the use of language in the classroom. In this process, the teacher makes use of 'WH' questions (what; when; why; where; who; and how) to enhance learning via dialogue (Tough, 1977a). Examples of this are where a teacher assists a learner to become independent of adult feedback by using such a question. A child may have drawn a picture and, instead of praising the child for the drawing, the teacher may instead ask the

child why he/she likes the picture. In this way, the teacher focuses on the effort rather than the product (Ramey *et al.*, 1979).

Tough (1977a) also foregrounds the importance of activities, guided by teacher-talk in teaching and learning, in building the previously mentioned learning stages of the young learner. For example, to help the child develop symbols, the teacher can make use of imaginative play with very young children, such as using Lego blocks, and activities to strengthen hand coordination, such as drawing or painting, all the while making use of ‘WH’ (or open) questions to plan and evaluate the learning process (Tough, 1977b; Tough, 1977a). The design of the FORT instrument, used to capture classroom interactions in the current study, has used Tough’s ideas on both the importance of meaningful activity and teacher-talk as a foundation. Next, I will discuss the role of Genre approaches and Reading to Learn.

3.15 Genre approaches

Writing for authentic purposes is crucial because, when bilingual learners write about issues that matter to them, they not only consolidate aspects of the academic language they have been reading, but they also express their identities through language and (hopefully) receive feedback from teachers and others that will affirm and further develop their expression of self (Cummins *et al.*, 2007). Writing techniques developed in the 1960s, such as the process approach, taught learners to work through stages of the writing process, while the focus was centred more on the nature of writing in various situations. In contrast, the genre approach focuses on models and key text features. As specific genres are introduced, learners are taught the relevant features and structures. Learners then rewrite the text jointly as a group and then independently. Thus, learners are scaffolded in the writing of a specific genre in context, allowing them to reach the ZPD (Vygostky, 1978). The genre approach sees Halliday’s functional model of language in context as well as Bernstein’s notion of pedagogic discourse as fundamental. Pedagogic discourse formed an important area of Bernstein’s later work and deals with how educational discourse functions and reproduces itself in society to maintain social structures of power. The aim is ultimately a social order based on equality (Bernstein, 1990; Martin & Rose, 2005; Cope & Kalantzis, 1993).

In the genre approach, there is a learning cycle comprising three stages, as illustrated in figure 3-3 below (Rothery, 1996:102). The first stage, “Modelling”, involves activating the learners’ background knowledge. The text is discussed and experiences around it are shared. In the second stage, “Joint Negotiation of Text”, the text is jointly rewritten by learners as a group so as to imitate the given text, and thus scaffolding them in learning to write the particular genre. In the third stage, “Independent Reconstruction of Text”, the learners independently write a similar, same-genre text.

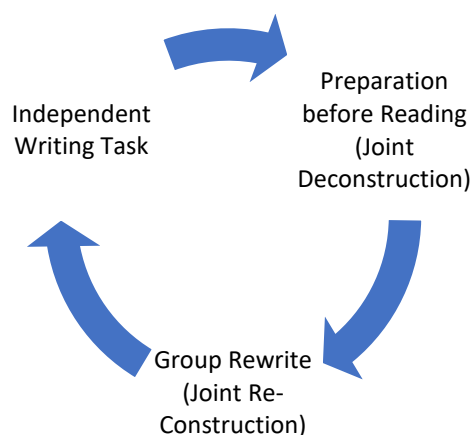


Figure 3-5: The Genre approach teaching cycle

Whereas the teaching of genres has been successful both internationally and locally (Kerfoot & Van Heerden, 2014; White *et al.*, 2015), there was concern that learners will struggle to write in context if they cannot read with comprehension. To facilitate reading, Rose (2005, 2009) added three extra stages to the learning cycle of the genre approach, which is known as the *Reading to Learn* approach (R2L). This is explained further below.

3.16 Linking of teacher-talk and genre approaches

Another well-known researcher, Jim Cummins (2008), links the concept of teacher-talk and the use of genre approaches. This link is facilitated through the scaffolding process, whether with peers or via the teacher. Talking about text assists learners to learn the academic language skills they

need and scaffolding also serves to improve their comprehension skills. Accordingly, he calls for a focus on creating instructional and learning environments that can maximise the language and literacy development of socially marginalised learners. Extensive, meaningful reading is a vital component of such an environment as academic language is found primarily in written texts (Cummins, 2008). This leads to a discussion of the Genre approach and R2L.

3.17 Genre approach and reading to learn

The intention of the Genre approach (Painter, 1998; Halliday, 1975; Rose & Martin, 2012; Martin & Rose, 2007) is to teach learners effective writing of texts in context. In turn, R2L is based on the Genre approach and first seeks to enable learners to read and then to write academic texts. As mentioned in the introduction, some of the participating teachers in the current study may have used the R2L approach, and hence a brief outline of the theories underlying the latter is provided here. It should be stated at the outset that, although an approach cannot cause learning, the inherent principles contained within a particular methodology or approach can, or are believed to, assist the learning process if the teacher is principled in his or her choice of teaching tools and knowledge. In this way, an approach, or its underlying way of thinking, will again influence the PCK of the teacher concerned. The additional cycles added to the genre approach are:

- detailed reading;
- preparing for writing by note-taking;
- joint board rewrite guided by the teacher.

The intention is to enable learners to read with comprehension as, with help from the teacher, they first deconstruct and then reconstruct the text. Furthermore, Rose (2004; 2005) calls for a strengthening of the link between explicit instruction and weakened framing over pacing and sequencing for disadvantaged pupils. Like Bernstein (1990) and Muller and Reeves (2005), Rose believes that some learners are disadvantaged because the sequencing and pacing of the school curriculum is designed for stronger learners. These learners are stronger academically because they have had access to books and book reading at home, resulting in reading levels that are advanced enough to maintain the pace. By relaxing the framing of sequencing and pacing in addition to

scaffolding, the framing between teacher and learner relations is also relaxed. Rose sees this as a form of invisible pedagogy where, although it remains essential to make the assessment criteria important to learners, this criterion is not always made explicit at the outset. Instead, learners are scaffolded by systematic ‘meaning’ (background knowledge activation), ‘position’ (locating key information in the text) and ‘preparation’ cues (helping learners to unpack meaning) to discover the criteria for themselves (Rose, 2004; Hoadley and Muller, 2010). These extra additional stages added to the R2L teaching cycle are illustrated in figure 3-5 below (Rose, 2005:147):

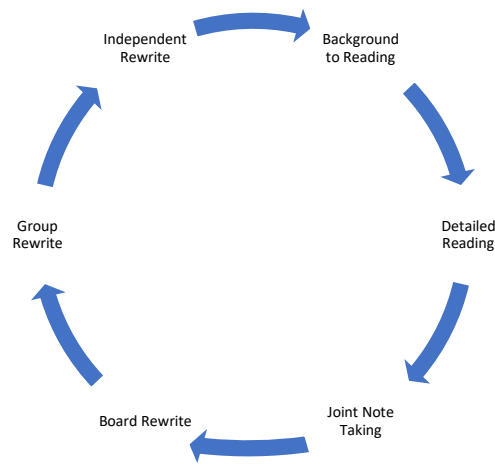


Figure 3-6: Reading to Learn six-stage cycle

Whereas figure 3-3 illustrates the original Genre Approach cycle of preparing for reading or ‘background to reading’, a ‘group rewrite’, and an ‘independent rewrite’, figure 3-4 above illustrates how Rose (2004; 2005) added three extra stages to facilitate reading: detailed reading; preparing for writing by note-taking; and joint board rewrite guided by the teacher. A summary of this chapter follows.

3.18 Summary of chapter 3

This chapter began with an introduction containing a brief outline of the FORT design. This was followed by a definition of reading and a discussion of reading theory and what effective reading

teachers need to know. This was followed by the problematisation of the term ‘PCK’ according to Hill, Ball and Schilling (2008). The chapter then investigated Schulman’s original concept of PCK and how it consists of three domains: pedagogical, content and subject knowledge. I proposed that PCK is a relationship between the theories of the teacher that underpin her teaching; her beliefs and attitude towards teaching; her content knowledge; and the language that she uses to communicate that teaching to her learners (see figure 3-2). There as a discussion around the ineffectiveness of existing ITE programmes and two CPD programmes relevant to this study, namely R2L (Rose, 2004) and READ (READ Educational Trust, 2015), were explained. Chapter 3 then went on to outline the FORT design, parts A and B in detail. The FORT is a manifestation of the reading theory and based upon best practice. This is an instrument originally based on the COLT (Spada & Fröhlich, 1995) and is designed to capture classroom practice (Gambrell et al., 2011b).

The Restrictive-Facilitative Model of Reading Teaching (see table 3-1) was explained, followed by a discussion of the major theories on which this research is based, namely: Systemic Functional Grammar (Halliday, 1996); Code Theory and Pedagogic Discourse (Bernstein, 1990); Scaffolding (Bruner, 1971; Vygotsky, 1978); Teacher-talk (Tough, 1977); Genre Approaches (Martin, 1999) and its link to teacher-talk (Cummins, 2008); Genre and Reading to Learn (Rose & Martin, 2012); the Scaffolded Interaction Cycle versus a regular Initiation-Feedback-Response cycle (Rose, 2004). The research methodology and design are discussed in chapter 4.

CHAPTER 4: METHODOLOGY AND DESIGN

4.1 Introduction

In ‘natural’ classroom-based research, the researcher can gain insight into factors such as interaction and classroom environment, which can all exert a great influence on teaching and learning outcomes (Gambrell et al., 2011a). This was the intention behind the methodology and design of this study. This chapter will first discuss the methodological approach and post-positivism, followed by epistemology and ontology. It will then explain the research design and mixed methods approach, followed by the rationale behind the choice of multiple case study. The research instruments are discussed, beginning with the FORT, followed by ethics, positionality and data analysis and synthesis. Finally, the chapter will conclude with a summary.

4.2 The methodological approach & post-positivism

Due to its considerable amount of qualitative data, this research study largely followed a post-positivist orientation, developed in the last half of the 20th century (Erikson, 2011). Whereas the positivists believed that the goal of science was to uncover ‘truth’, post-positivists believe that science is rather a matter of aiming for the goal of recording reality, even though we may not be able to fully achieve it (Denzin & Lincoln, 2011a).

4.2.1 Post-positivism and qualitative research

Whereas formerly, ‘experts’ conducted ‘research’, today the boundaries between researcher and participants are blurred or even erased – thus the idea of distance from research participants largely falls away (Erikson, 2011). For example, as Denzin and Lincoln (2011b) point out, as researchers, our field notes do not belong to ‘us’. Qualitative research becomes more than just investigation: it takes on a moral and ethical dimension (Denzin and Lincoln, 2011b). In this study, I made every effort to respect the participating teachers’ anonymity and privacy, keeping in mind that they are all qualified teachers with many years of teaching experience at foundation and/or intermediate level and that I was in their environment by invitation. Their opinions and views were sought

whenever possible. Some concerns with qualitative research are discussed below, the first being rigour.

4.2.2 Qualitative research and rigour

One of the major criticisms of qualitative research is that it lacks rigour due to it being less reliable than quantitative data. Again, this comes from the belief that qualitative research is fundamentally subjective and therefore prone to bias (Denzin & Lincoln, 2011a). In its most basic form, research is simply the process of gathering information that the researcher uses to answer questions. Obviously, one wishes the data to be as reliable and accurate as possible.

One of the issues confronting qualitative research is that it is subjective. Subjectivity was one of the limitations of this study as it was the researcher who recorded, observed and analysed the classroom lessons. I could have, for example, consciously or subconsciously favoured a particular teacher's methods over another. One method of offsetting such bias is to have a fellow researcher observe the same lesson(s) and provide their own analysis, which I did. However, according to Creswell (1998), this subjectivity should not be seen as a failure that needs to be removed, but rather what Stake (1995:45) refers to as an "*essential element of understanding*". To illustrate this, Creswell (1998:20) describes his own journey into qualitative research as becoming:

"... an insider by the consistent unobtrusiveness in my extensive observations in each classroom. My values were explained and monitored in this study considering my participatory position. I admit that the research is value laden and that biases are present and will openly discuss them in the narrative. We (re)present our data, partly based on participants' perspectives and partly based on our own interpretations, never clearly escaping our own personal stamp on the study."

This subjectivity does not mean that the qualitative researcher should not strive for rigour. On the contrary, it takes on an even more important role. To ensure that the scientific standards of rigour are met, Erikson (2011:54) provides a checklist of several steps that researchers should follow:

- develop a logical, evidence-based chain of reasoning;
- use methods that are appropriate to the research questions;
- use observational, experimental and instrument designs that provide reliable and, if possible, generalisable findings;
- make sure the data and analysis are adequate to support the findings;
- explain the procedures and results clearly and in detail;
- adhere to professional norms of peer review;
- disseminate findings that can contribute to scientific knowledge; and
- allow access to data for re-analysis, replication, and the opportunity to build on findings.

Care has been taken in this study to ensure that the above steps are followed, with the exception of generalising the findings due to the small participant sample (small samples are, unfortunately, often a feature of a doctoral thesis in that the researcher may be limited by both funding and time constraints). However, care has been taken with the construction of both instruments and design to ensure reliable results and to recognise the needs for ‘peer debriefing’ and ‘member checks’ (Lincoln & Guba as cited in Wildsmith-Cromarty, 1992:112). Member checks were carried out with each participating teacher after the initial video recordings had been made and analysed. A discussion of the use of quantitative data and a positivist paradigm follows.

4.2.3 Quantitative research and a positivist paradigm

Unlike qualitative data, quantitative research falls under a positivist paradigm (Bryman, 2004) and is based on the idea that truth can be discovered only through observation or experiment, also known as the ‘scientific method’. Moreover, in positivist studies, the researcher is regarded as independent from the study to maximise objectivity. In other words, quantitative researchers will maintain minimal interaction with participants when conducting research (Wilson, 2010).

Proponents of quantitative-only research base their rationale on the idea that there is some unbiased, objective truth to be discovered. Such researchers rarely clarify the bias in their own research, whether moral or political (Denzin and Lincoln, 2011a; Burton and Bartlett, 2009). Also, insistence upon quantitative research alone has severe limitations when it comes to seeking to

understand human behaviour (Zainal, 2007). These limitations were apparent in the formulation of this research project in that the FORT can tell the researcher what is happening and how often, while the reading tests can provide insight into the level of current reading ability of learners, yet neither can provide a rationale as to why these things may happen or how they take place (Leech and Onwuegbuzie, 2007). I felt that the advantage of including mixed methods, particularly through the use of case studies, would be that both the process and results of the research could be facilitated by means of observation, reconstruction, and analysis of the findings (Tellis, 1997; Zainal, 2007; Johnson and Onwuegbuzie, 2004). Next, the ontology, epistemological framework is explained.

4.2.4 Ontology, epistemology and methodology

According to Riaz and Candlin (2013), the concepts of ontology, epistemology, and methodology can be defined as follows. Ontology refers to the nature of reality, i.e. what is the object of the study and is there one truth or several truths? In this case, the context was teachers who were teaching Grade 3 and 4 reading, while the focus was on reading teachers and how they teach. It is unlikely, when conducting research with several human participants, that these individuals will each have 'one' truth (West, 2014). One needs to take into account and interpret the reality of each individual teacher, as teaching is a complex activity. This means considering the individual circumstances and challenges of each teacher from an empathetic and understanding viewpoint (Dudovskiy, 2019). In light of this, an interpretivist approach was best suited for this study. An interpretivist framework often employs multiple methods in order to reflect different aspects of an issue and uses data collection methods such as participant observation and interviews. The research does not begin with a fixed hypothesis but rather allows the meaning to emerge during the study process (Saunders *et al.*, 2012).

An interpretivist paradigm also tends to assume the subjectivity of the researcher's analysis, which forms a strong area of criticism. In addition, findings cannot be generalized due to the subjective nature of the research. However, the qualitative methods in interpretivism do allow for in-depth study of issues (Dudovskiy, 2019). In addition, in the current study, a mixed methods approach was employed to assist in offsetting any subjectivity in the qualitative data (Creswell, 2010).

Unlike a positivist approach, there is no rigid separation between research and participant. Whereas positivist paradigms might involve finding out how many people think and do something or have specific problems, interpretivism is more interactive and co-operative. It would therefore rather focus on what some people think and do, what kind of challenges they may be confronted with and how they manage these (Dudovskiy, 2019).

Epistemology, in contrast, has to do with the nature of knowledge and addresses questions such as what we know and how we know it. Through an interpretivist lens, meaning is not discovered but rather constructed or interpreted. The interpretivism paradigm works well for classroom-based research because it seeks to understand people rather than methods. Teachers are seen as reflective practitioners (West, 2014) who ask questions as to the nature of both their students and themselves (Taylor & Medina, 2013). According to West (2014), the interpretivist paradigm does not seek to emancipate, or cause change. However, I would argue that by investigating what is being done, the researcher can lay the groundwork for improving the practice (in this case, reading teaching). Also, according to Schwandt (1994), we can assess whether the data findings indicate that the situation is worthy of further enquiry (Schwandt, 1994).

Methodology involves combining ontology and epistemology into a conceptual framework. The term 'methodology' is different from 'method', as the latter refers to the tools and procedures used to answer the research questions (Riaz & Candlin, 2014). The methodology consisted of classroom-based observation in a natural setting, meaning that I sought to capture authentic teaching, not teaching contrived for an observer, and semi-structured interviews. Permission was obtained from all gatekeepers and participants (see Appendices F to N) and participating teachers were kept informed of the process and proceedings at all times. For example, teachers could view their classroom lesson recordings at any time, and the information obtained from the videos and semi-structured interviews was discussed with the teachers to check that the viewpoint perceived by the researcher was in fact correct. In addition, the teachers whose classes were tested for reading levels were provided with copies of the reading results for that class. The next section outlines the mixed-methods research design.

4.2.5 Creating a mixed-methods research design

This study was designed as a mixed-methods approach. The use of mixed methods has grown considerably over the past few decades and is today both respected and fully acceptable within the social sciences (Teddlie & Tashakkori, 2009). However, there continues to be some confusion regarding the difference between ‘mixed methods’ and ‘multi-methods’. It is not my intention to explore these differences in detail; rather I will use a relatively straightforward rationale provided by Creswell (2010:273) that we should be able to distinguish ‘multi-method’ studies – in which various types of qualitative *or* quantitative data are collected – from mixed methods studies that incorporate collecting both qualitative and quantitative data.” I felt that using mixed methods would provide a richer and more holistic picture of the research findings and allow for the triangulation of data, which has been shown to assist in the creation of a more robust research project (Burton and Bartlett, 2009). Triangulation means the observation of the research findings from at least two different points (Flick, 2004). The study further consisted of an explanatory, multiple case study (Stake, 1995) as eight Grade 3 and 4 teachers and their classrooms were observed to ascertain what teachers do when they teach reading. Each teacher and her learners formed one case study.

When undertaking a mixed-methods study and developing a research design, one must take into account the timing of data collection as well as the purpose. For example, the timing can be parallel, sequential, or consequential, and the purpose can be to integrate data, or to compare it (Guest, 2013). The data in this study were collected in a parallel fashion with the intention of integrating the data – thus it is a parallel-convergent design (Fetters et al., 2013). The quantitative instruments in this study are: the FORT (see Appendices A-D), which measures frequency of teachers’ PCK and reading teaching; management events; and interaction between teacher and learners, and vice versa; and the pre- and-post-study reading assessments. The FORT also contains some qualitative categories such as Activity and Materials. The qualitative instruments comprised semi-structured interviews (see Appendix E) with participating teachers; visual observations of video-recorded classroom lessons; informal interviews with teachers and principals; and my personal journal notes. The research design is illustrated in figure 4-1 below.

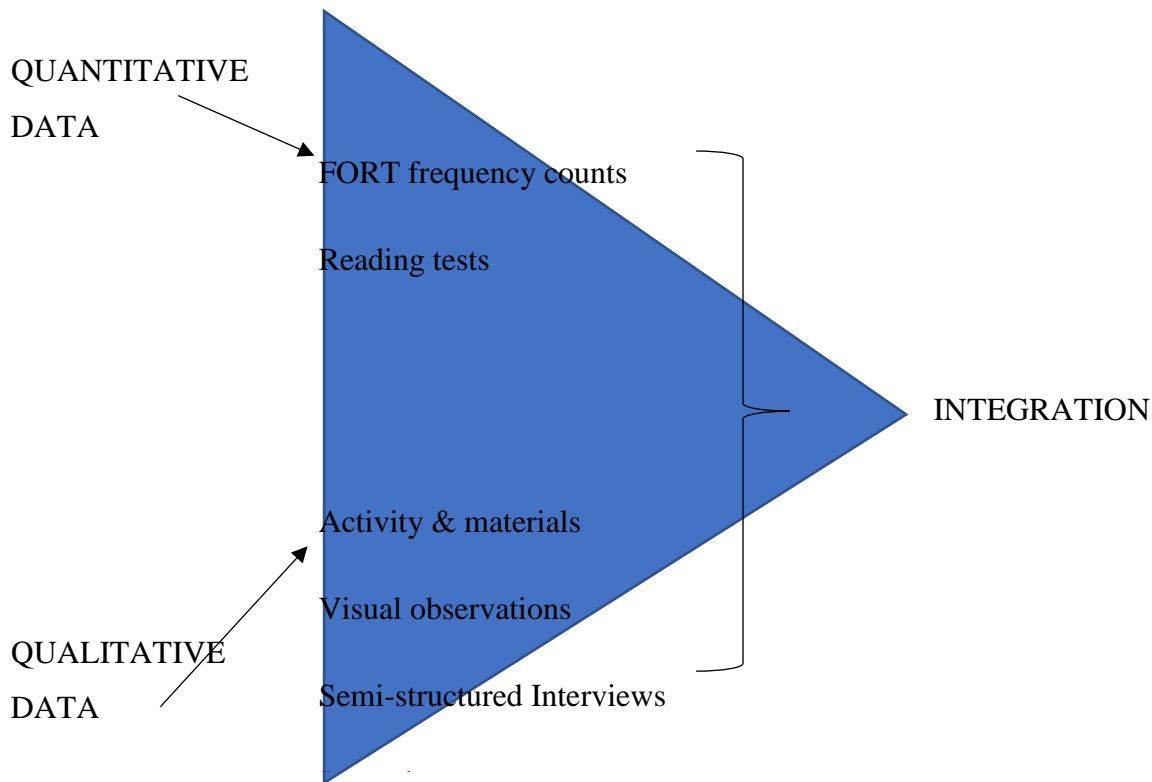


Figure 4-1: A parallel-convergent mixed-methods research design

The above illustration shows how the data for this study were collected in a parallel fashion. Each dataset was then separately analysed, after which both streams, quantitative and qualitative, were integrated (Fetters et al., 2013; Teddlie and Tashakkori, 2009). For example, the quantitative frequency data from the FORT were recorded numerically for each teacher and then averaged over the total of that teacher’s lessons. This provided a picture of what the teacher did and how many times. The semi-structured interview data were analysed to investigate the teacher’s attitudes and beliefs towards her teaching and whether she did what she believed she did when she teaches. By combining the first data stream of frequency and occurrence of events from the FORT with the second stream from the interviews, one could obtain a picture of underlying theory that drove the teaching process for that particular teacher and could also obtain an idea of whether she taught as she believed she taught. By allowing for different perspectives of the same phenomenon, I could obtain a deeper picture of classroom practice than would have been obtained had only one type of research data been collected. These two divergent data sources are ultimately brought together in

a parallel-convergent design, which allows for triangulation, or cross verification, of the data (Guetterman, 2017a). The rationale for the choice of a case study follows.

4.2.6 A multiple, explanatory case study

A case study investigates *why* or *how* a phenomenon occurs and may be the choice when, for example, the researcher is investigating a real-life context where she has limited control over the events (Yin, 2003a). Either quantitative or qualitative research methods can be used in case studies, providing the researcher follows the scientific method. With a large-scale sample, these hypotheses can ultimately create theory (Riazi and Candlin, 2014). A simple rationale for choosing an *explanatory* case study is that this type of case study not only describes phenomena under investigation but can also be used to explore them. In addition, an explanatory study can be used to explain causal relationships and develop theory (Denzin and Lincoln, 2011b).

Typically, quantitative data provide confirmation of a theory, whilst qualitative questions are more exploratory, that is, they can provide findings of phenomena we wish to investigate (Teddle & Tashakkori, 2009). The FORT answers *what* the participating teachers do and how often. It is a theory-based supposition in that the categories are already available and accepted as evidence-based, good practice – so the researcher is looking for confirmation as to what the teacher is or is not doing (Teddle and Tashakkori, 2009). However, it is necessary to explore beyond the given categories and beyond frequency to find the *how* and *why*. For example, what attitudes, beliefs and underlying theory may drive a teacher's practice and teaching and how the former and latter may influence the interaction between teacher and learner. I wished to uncover the teachers' perceptions of themselves versus the classroom reality. Finally, to find out whether the transition from decoding to comprehension did or did not occur, data could be provided not only through the quantitative FORT categories, but also through the qualitative data-collection instruments. All these differing facets can be viewed as a whole (Flick, 2004). The benefits of conducting a multiple case study is that it is regarded as being more reliable than a single case study, even if the researcher conducts only a two-case study (Herriot and Firestone, 1983; Yin, 2003b; Yin, 2003a).

Case studies are, of themselves, bounded entities (Flyvberg, 2011); so, a multiple case study allows for the study of each case in context. This study had a total of eight participating teachers. Each teacher and her classroom formed one case study. Each case was analysed separately, then compared with the other case studies (Tinkler, 2004; Elger, 2010; Stake, 1995).

According to Creswell (1998), the setting of a case may be physical, social, historical, or economic. In this case, the setting was both physical (that is, the classroom) and social (that is, the interaction between teachers and learners). As the researcher investigates the individual cases alongside each other, it leads to a series of data collection episodes, resulting in the triangulation of data, thereby increasing validity (Burton and Bartlett, 2009). By working outwards from one case study to another and creating a whole, patterns or themes can emerge and create an analytical framework from which one can reflect and organise data (Merriam, 1998).

The criticisms aimed at case studies are similar to those aimed at qualitative data, namely that they lack rigour and that findings cannot be generalised (Flyvberg, 2011; Yin, 2003b). Again, in the case of the former, the researcher needs to follow a systematic process of data collection and analysis. With regard to the latter, Yin (2003b) suggests that we do not aim to generalise to data bases but to principles or premises. The premise of this study is that there are certain things that teachers can do or say – ways of interacting with learners that can either help or hinder the process of learning to read. While each case will be different and unique, there will be sufficient similarities to make the findings from one study useful when seeking to understand others (Burton and Bartlett, 2009). The strength of a case study does not lie in generalisation but in the reliability of the findings (Bassey, 1990; Stake, 1995). The researcher may find similar or contrasting results from each case, even though the contexts of each one may differ. According to Bassey (1990), if one can find common conclusions under these differing contexts, then it may be possible to generalise the findings externally.

A case study must, however, be carefully designed (Zainal, 2007). It must be relevant to the research questions, follow a correct set of scientific procedures and be systematically recorded and stored, particularly when the main sources of data are interviews and direct observation by the researcher, as was the case in this study. Furthermore, the case study must be linked to a theoretical

framework (Tellis, 1997) and the researcher must clearly justify the research design (see 4.8.2) and define both the study boundaries and the unit of analysis (Flyvberg, 2011; Yin, 2003b). Ultimately, the criteria for judging the rigour of a research design are: construct validity; internal validity; external validity; and reliability. These four terms are briefly defined (Richards and Schmidt, 2002):

- **Construct validity** is the degree to which test items reflect the theory on which it is based. In the case of this study, the FORT was designed based on current ‘best practice’ teaching theory and has proved to be able to effectively capture what occurs in the classroom, such as interaction and discourse events. Video recordings of classroom practice allow for repeated viewings and inter-rater reliability, which also provide construct validity, as does member checking of the interviews.
- **Internal validity** refers to the extent to which the treatment that is given to participants is directly responsible for the recorded changes, as opposed to independent variables in operation. To ensure internal validity, the research was done rigorously and systematically. The data were properly collected, stored and entered into Excel databases for analysis. Where possible, variables were controlled, such as the area where the schools were located. The schools were selected to be within 5 km of each other to control the variable of environment. Both schools contained learners who came from local informal settlements and, despite one school being registered as quintile 2 and the other as quintile 4, both schools were poor and lacked financial resources.
- **External validity** is the extent to which the results of a study can be generalised to the larger population. In the case of this study, the small sample prevented this generalisation. However, when combined with other similar classroom-based research studies in the early grades in South African schools, the study can contribute to an overall picture of current reading teaching practice.
- **Reliability** is the degree to which an assessment tool produces consistent results, although in this case, Guba and Lincoln propose ‘confirmability’ to be a better measure of rigour (Guba and Lincoln, 1994). The FORT was based originally on classroom observation instruments of Hoadley (2005) and Wildsmith (1992) and reconceptualised to fit current best teaching practice and scaffolding. Repeated observations and analysis of the video-

recorded lessons that contain the FORT data, indicate that the instrument is consistent, and semi-structured interviews were subject to member checking to assure reliability.

The above section discussed the design of the study in some detail. This study was a post-positivist, mixed-method, multiple case study, designed to ensure construct validity, internal and external validity, and reliability. The next section discusses the study focus, objectives and research questions.

4.3 Focus, objectives and research questions

The focus of this study was on classroom-based observation of teachers as they teach reading. By video-recording lessons and conducting formal and informal interviews with teachers, the intention was to discover what teachers do when they teach reading. From this, the sub-question arises as to what these teachers were doing that was helping literacy acquisition and what they were doing that may have hindered the process. Implicit in the above is the role and importance of the teachers' PCK. As more than, yet including, knowledge of the subject, PCK is what a teacher knows of *how* to teach (Schulman, 1986).

In light of the challenges in teacher training in South African education (Nel, 2011), a further question I asked was whether what teachers said they do when they teach, actually corresponded with what they did in the classroom. In other words, are the participating teachers consciously aware of their own PCK, or *how*? Finally, the intention of the research was to attempt to describe the process of decoding to comprehension that must take place across Grades 3 and 4 if a learner is to achieve academic success. If these questions can be successfully answered, it can contribute to the betterment of teacher skills in reading teaching (see 1.2). This will mean more effective literacy skills for learners and may contribute to lowering the drop-out rate current in our government schools (Atmore, 2013; Macdonald, 2002). The next section outlines the research sites and study participants.

4.4 Research sites and participants

This research involved two schools, both situated in the poorer areas in the Midlands of KZN. Both principals prioritised reading and set a high standard for teaching and excellence at their respective schools. The first of these schools, referred to throughout this study as School 1 (S1(E)), is designated a quintile 4 school and the second school, referred to as School 2 (S2Z), is designated quintile 2 (see 1.4). The quintile system, which was introduced by the South African Government, places all government schools into one of 5 categories, with category 1 being the poorest, whilst category 5 would indicate the best-resourced school. These categories are assigned according to general income levels, rate of unemployment as well as illiteracy levels within the catchment area. In addition, the designation will affect the funding provided to the school, with lower quintiles receiving larger subsidies from the Government (Collingridge, 2013). The weaknesses inherent in this quintile rating system have been touched upon previously as learners from both schools in this study were drawn from local informal settlements and both schools suffered financial deprivation (see 1.2).

These two schools were selected for this study, firstly, because they were willing to provide access to the researcher to conduct the study and, secondly, because they were within a 5 km radius of each other, which allowed the variable of environment to be controlled. A total of eight teachers participated in the project and data collection took place from April 2016 to June 2017. My role was that of a limited participant-observer (Wildsmith-Cromarty, 1992:114) as I was present in the classroom but attempted to remain objective and aloof from the proceedings. However, on occasion, the teacher in question would ask me a question during the lesson or, for example, request me to check learners' books. Apart from this, I did not interfere with the teaching at all in order to avoid influencing the process, but I sought to build relationships with the teachers and the learners outside of the lessons (Burns, 1999). In recognition of the fact that being present in the classroom during the lessons I wished to record, as well as the presence of the camera itself, can play a role in influencing the behaviour of participants (Zohrabi, 2013), I initially sat in on classes over several weeks, from November 2015 to March 2016, without recording or making any notes so that both the teachers and learners could become more familiar with my presence, thereby reducing participant reactivity (Johnson and Turner, 2003). I believe that the fact that I am also a teacher with some 25 years of experience provided me with empathy and insight into the teacher's

role, and I was careful to emphasise that I was not in the classroom to play the role of a ‘judge’. In addition, to offset these concerns, the video segments used for data analysis were subjected to member checking of video data.

One of the difficulties in conducting classroom research is accessibility. It was initially difficult to gain access due to teachers feeling uncomfortable with the presence of a camera in the classroom. Permission had to be sought, not just from the teachers, but also from gatekeepers such as the principal. At S2 (Z), the principal kept a tight rein on the number of teachers I could record and interview. Again, as a teacher, I could identify with these concerns and sought to build relationships of trust and communication with the participating teachers and school principals over time. In addition, when dealing with human beings, research tends to be ‘messy’, meaning that it does not always take place in a neat, linear fashion (see 4.3.4). I conducted research at the schools when the teachers were available and when they felt sufficiently comfortable to allow me to record and observe. On average, I sat in on classes once a week at each school during the school terms from November 2015 to June 2017, or 19 months, excluding school holidays. During the data-collection period, it was necessary to make allowances for teachers being absent due to different reasons as well as revision and test times, such as the Annual National Assessments (ANAs), which are standardised national assessments consisting of languages and mathematics in the senior and intermediate phases and in literacy and numeracy for the foundation phase (Department of Basic Education, 2017).

During the recorded observations, the camera was placed at the back of the classroom so as to minimise its presence during the lesson and also to make sure that learners were only recorded from behind to reduce their exposure to the lens. Furthermore, placing the camera at the back of the room provided not only video footage of the movements of the teacher and the interaction between her and her learners, but also gave a good perspective of the classroom space itself and how it was utilised during the lesson, that is, how the seating was arranged for the learners and whether or not they were free to move around during the lessons.

It was my intention to record a minimum of four 20-minute lessons from each teacher and, on the whole, this was achieved. Some teachers, however, allowed more recordings, such as T1, who

provide five 20-minute lessons (see 4.3). The recording of the lessons allowed me repeat viewings at different times and intervals, thus providing a level of intra-observer reliability (Wildsmith, 1992). As part of the data-analyses process, inter-rater reliability observation was made of segments of these classroom recordings and a two-minute segment was selected and transcribed for each participating teacher.

In addition to the recordings and notes, a single, semi-structured interview was conducted with each participating teacher during March and November of 2016 and from January to June 2017. Further interviews were occasionally conducted with teachers, both as a form of member checking and to add any necessary additional information. Using semi-structured interviews allowed for a level of informality that is neither too restricted nor too open. Zohrabi (2013:256) describes this type of interview as the “most preferred type” due to its flexibility and ability to elicit a vast amount of information from the teacher being interviewed. There was no formal debriefing session held with teachers. Rather, follow-up interviews were conducted with individual teachers as the opportunity arose. This lack of formal debriefing was firstly due to time constraints on the part of the teachers and secondly, because the teachers’ video recordings and lessons were to remain private and their identities anonymous. Holding a session with all teachers simultaneously may have led to violation of this privacy and anonymity.

It should be noted that the main focus of the study was on teachers. The attitudes and actions of the learners were only focused on in the two-minute segments of each lesson that was selected and observed for each teacher in order to determine possible physical actions and non-verbal responses of the learners during the lesson. The rationale for obtaining these pictures of learner behaviour is that the behaviour of learners is important in the classroom in that it can influence a lesson via compliance, navigation, or negotiation (Alwright as cited in Wildsmith, 1992:117). However, as Wildsmith-Cromarty (1992:117) states, “... *the focus on the teacher in the present study was perceived as a necessary first step in identifying a relationship between attitudes and practices ...*”.

From May 2016, reading tests were conducted with participating classrooms across Grades 3 and 4 in both schools. Early Grade Reading Assessments (EGRA) reading tests were given to two Grade 3 classes in S1(E) and one Grade 3 class in S2(Z) (see 4.4.6). The participating Grade 4

learners in both schools were all given released passages from the PIRLS (2011) international tests (see 4.4.6). These tests were given to the learners again towards the end of 2016 to ascertain whether there had been any increase in reading skills across the period. I also obtained data from personal journal notes made whilst observing and recording classroom lessons as well as from informal interviews with teachers and principals during the study. Descriptions and information on the two schools follow.

4.4.1 School 1 (SE)

As mentioned, (see 1.2), this school was designated as quintile 4, although the learners mainly originated from very poor homes in the informal settlement. The school had reasonable infrastructure, although it needed repair. The school faced severe budget restraints. For example, there was one photocopier for the school, but it had not worked since the beginning of the 2017 school year as the school had no funds to repair the machine. In addition, the school could not afford to fix their telephone landline and had therefore been without a main phone line since the first term of 2017. In the participating classrooms, a greater number of learners on average depended upon the single meal per day provided by the school in comparison to those in the same grade classes in the quintile 2 school. The school also faced other challenges, such as the failure of the DBE to provide suitable teachers in cases where a teacher possibly fell ill. In some cases, this resulted in classes of up to 60 learners or more as another teacher made up the shortfall and amalgamated her own class with the class in need.

There were four participating teachers from this school. Two were Grade 3 teachers, one Grade 4 English teacher and one isiZulu Grade 3 teacher. The Grade 4 teacher was subject-specific, whereas Grade 3 teachers generally taught all subjects, with the exception of one Grade 3 teacher who was not a first-language isiZulu speaker, and therefore another Grade 3 teacher taught isiZulu to her class.

Only one teacher at S1(E) was using R2L (see table 4-1), although all teachers were encouraged to attend courses on reading teaching. Another teacher, the Grade 3 isiZulu teacher, had been trained in the READ method. The other teachers in the school made use of only the CAPS.

4.4.2 School 2 (SZ)

This school was quintile 2, and learners originated from the local, mainly poor community. Like S1(E), this school also had poor infrastructure and severe budgetary constraints (see 1.2). However, due to the assistance of a Canadian NGO, a community library had been built along with computer facilities for both the community and the school learners. The aforementioned NGO had also built a series of new classrooms for the Grade R teachers and learners, although the school still lacked paving and adequate shelter. During rainy periods, the school yard became very muddy and was therefore unsuitable for use by the children. In addition, the NGO planted vegetable gardens and grew beans to provide a supplement to the mainly starch-based school meals provided by the DBE. NGO volunteers reported incidents of harsh discipline towards learners by teachers at this school, such as hitting and smacking. However, I did not observe any of this taking place during the conducting of research or classroom observations.

All teachers at this school were R2L-trained and most, but not all, elected to make use of it. The participating Grade 3 teacher at this school made regular use of the approach, whereas the participating Grade 4 teacher claimed to use it only occasionally. The Grade 4 isiZulu teacher, however, made regular use of R2L (see 3.15) in addition to the CAPS and had done so for several years. All teachers in this school make use of the morning half-hour reading periods for learners.

There were four teachers at this school, although I only observed one Grade 3 teacher. This was due to the restrictions placed upon the scope of the data collection by the Principal of S2(Z). The other teachers were: one Grade 4 English teacher; one Grade 4 Mathematics teacher; and one Grade 4 isiZulu teacher, who also was the Head of Department for Intermediate Grade level. During this study, I worked mainly with the Grades 3 and 4 English teachers. Table 4-1 below provides the code names of the participating teachers in both schools and indicates whether they were trained in an additional reading teaching programme as well as the CAPS. It also indicates whether they actively used the additional training.

Table 4-1: Details of the participating schools and teachers

School 1 – Quintile 4 Average class Size - 35					School 2 - Quintile 2 Average Class size - 45				
Teacher No. of recorded lessons & language	Subjects taught	Trained in additional reading programme	Actively using the additional reading programme	Qualification	Teacher	Subjects taught	Trained in additional reading programme	Actively using the additional reading programme	Qualification
Grade 3					Grade 3				
T1/S1(E) Five Lessons English; Four Lessons isiZulu	All	Yes (Read to Learn)	Yes	Primary Teacher Diploma, Indumiso College of Education. She had been teaching for 17 years	T5/S2(Z) Four Lessons English; Two Lessons isiZulu	All	Yes (R2L)	Yes	33 years of teaching experience.
T2/S1(E) Four Lessons English	All, except isiZulu	No	-	Her mother-tongue was English, and she had 9 years teaching experience. BEd Degree (UKZN)					
T7/S1(E) Four Lessons isiZulu	isiZulu	Yes (READ)	Yes	She had 22 years of experience and trained at Mbombulo					

				College, Durban					
Grade 4				Grade 4					
T3/S1(E) Four Lessons English	English	No	-	At the time of this study, she had eight years teaching experience. She had BEd (UNISA)	T4/S2(Z) Maths Three Lessons English	No	-	21 years of teaching experience; Diploma (Azalea College, now NMMU)	
			-		T6/S2(Z) Four Lessons English	English	Yes (R2L)	No	17 years of teaching experience; Ed Diploma (Unisa HDE)
					T8/S2(Z) One lesson, isiZulu.	isiZulu	Yes (R2L)	Yes	28 years of teaching experience; Diploma (Eshowe College HDE) plus 3

The two schools had much in common. For example, both principals at the schools recognised the vital role and importance of academic literacy and reading and they encouraged and supported teachers in acquiring further teaching skills in the area of reading. Both schools reported that they lacked support from many parents at the school and that children with special needs were, more often than not, not catered for due to lack of parental concern and inability of the teachers to deal with such special-needs learners in a mainstream schooling situation. There were several children in the classrooms who had been promoted to the next grades, who were not able to learn anything during the previous school year (see 2.4). Finally, both S1(E) and S2(Z) had experienced serious incidents of violence perpetuated on the children, both inside and outside the school grounds. These last two issues concerning special needs and learner safety put teachers under a great amount of emotional strain and no doubt added to their teaching load. A discussion of the research instruments follows.

4.5 Research instruments

This section provides a detailed discussion of the data-collection instruments that were used in the study, followed by the method of analysis used in each case. A list of these instruments is tabulated in table 4-2, below.

Table 4-2: Data-collection instruments

<p>DATA-COLLECTION INSTRUMENTS</p> <p>QUANTITATIVE:</p> <p>The FORT – measures frequency</p> <p>Pre- and post-reading assessments</p> <p>QUALITATIVE</p> <p>Activity and related theory</p> <p>Semi-structured interviews to ascertain beliefs and attitudes of the teacher</p> <p>Visual observations of the lessons, inter-relator reliability established</p>

It should be mentioned that Activity is also a FORT category that can be measured for frequency over a specific unit of time, in this case five minutes, and is thus also quantitative. However, this Activity is classified above as a qualitative category because, when related to interaction and verbal or social behaviour, the analysis becomes qualitative. An explanation of each research instrument is provided below, beginning with the FORT.

4.5.1 The FORT

The FORT was designed after considering several pre-existing classroom observation models such as the Communicative Orientation to Language Teaching Observation Scheme (COLT) (Spada & Fröhlich, 1995), the system for measuring classification and framing in teaching in early grade classrooms (Hoadley, 2005), and Interaction Analysis (Flanders, 1964). Joan Tough's (1977b) strategies for facilitating literacy in early childhood development were also considered. Like the original COLT, the FORT consists of two parts. Part A is used to describe activities directly associated with the teaching of reading at the level of activities and events (or episodes), whereas Part B analyses the verbal interaction between teachers and learners during these activities. The classroom lessons were video-recorded and the resulting data were processed by counting the frequency of fort categories. They were then analysed to understand the methods and beliefs that underlie the pedagogy (that is, using a scaffolded form of interaction) and to relate these to the interviews. This process of recording the classroom lessons is discussed in more detail below.

4.5.2 Audio-visual materials

The classroom lessons were video recorded to allow for repeated viewing and more extensive analysis. The total number of video-recorded lessons is thirty-five, 20-minute segments (see table 4-1). According to Burton and Bartlett (2009), the advantage of audio-visual recordings is that they are relatively unobtrusive and can allow the researcher to concentrate on the participants, while the researcher can share the 'reality' of the participants in a 'natural' setting. However, drawbacks can include: obtaining entrance into the recording site can be difficult; the presence of the researcher may influence the process and interpretation of the recordings can be subjective. To offset these possibilities, I conducted prior observation for several months with the teachers and learners, from November 2015 to April 2016, and made no recordings or notes at all. This was to familiarise both the teachers and the learners with my presence.

Audio recordings in this study were also used as an aide-mémoire and back-up for the semi-structured interviews with the teachers. An audio-recording was made of each teacher's interview, totalling 8 recordings. As it is a relatively unobtrusive data-collection method, it allowed me to give my full attention to observing the lesson at hand. However, I also made notes during the interviews to make sure that no data were lost. The difficulties in obtaining this recorded data have already been mentioned. Again, qualitative data can lack systematicity as human beings and personalities are not easily confined to 'categories' and 'boxes'. It is difficult to change this aspect of research but taking time to build relationships of trust and respect with teachers is an important issue in participant observation and classroom research in general.

4.5.3 Semi-structured interviews

A semi-structured interview (see Appendix E) was conducted with each participating teaching, providing a total of 8 interviews. There was no set time limit on the interviews but each one lasted approximately an hour. The intention was to gain an understanding of the feelings, attitudes and beliefs of teachers towards literacy teaching and learners. According to Burton and Bartlett (2009), the strengths of such interviews is that they take place in a more relaxed atmosphere that can elicit a large amount of data and provide the respondents' own account of events. These are valuable pieces of information that would likely not have been obtainable if I had used a questionnaire. This also allowed for follow-up questions during the research process if necessary. In addition, the researcher may obtain non-verbal clues during an interview process.

Possible weaknesses of interviews (Burton & Bartlett, 2009) are that the presence of the researcher can affect the responses of participants and the researcher may also 'lead' the participant (in this case, the teacher) in producing responses. I tried to be aware of this and allowed teachers to speak for themselves. Interviews could be time consuming for the teachers and again, it was necessary to wait on the teacher's schedule to carry out the task. In order to give the teacher my full attention, I made audio recordings of the interviews. However, I also made some notes. This was to ensure that, if something were to go amiss with the recording(s), I was not left without proper data which could not be transcribed. On the whole, I found that the teachers were more than willing to give me their time and thoughts in these interviews and that they were generally relaxed. The semi-structured questions were designed around the FORT categories so that each question would represent a category. For example, the question as to how the teacher believed she moved learners from decoding to comprehension fell under Part A of the FORT, PCK and Reading Teaching. In

this case, I looked at the types of activities that the teacher did with the learners, whether-or-not she integrated components such as spelling and grammar, whether she incorporated reading, and so forth, and then compared what she did to what she said in the interview. All participating teachers were interviewed between April and November 2016. The data were initially recorded on the semi-structured interview question form (see Appendix E) and then collected and stored.

4.5.4 Field notes

Field notes are important as they allow the researcher to capture information that may not be possible to capture with a video camera (Burton and Bartlett, 2009), for example, my feelings during the lessons themselves and areas of difficulties during the research or personal notes, i.e. the activity around which the lessons took place as well as the visual observations that I made later to determine the level of learner engagement in the lesson and to obtain any non-verbal information from the recordings.

These notes were initially recorded by hand, typed and stored to form part of the narrative and allow for thematic analysis. Personal field notes were made both during the lessons and sometimes afterwards, as was felt necessary. These acted as an aide-mémoire to the research process. However, notes had to be recorded timeously, typed and stored immediately to ensure thorough data collection and storage. The next section discusses the pre- and post-reading assessments conducted with Grades 3 and 4 classes at S1(E) and S2(Z).

4.5.5 Reading assessments

The form of testing used for pre- and post-reading testing for Grade 3 was the EGRA, while the PIRLS and pre-PIRLS were selected for Grade 4 (see Appendices W & X). Firstly, details of the EGRA and the rationale for its use are discussed. Another option available for Grade 3 evaluation was the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). However, the DIBELS requires specific training and is not intended for pre- and post-testing. Rather, it is used for benchmarking (screening) and progress monitoring assessments and the data are usually used to make decisions linked to instructional decision making. Thus, time and budget constraints, as well as practicality and respected design and validity, made the EGRA the best choice. The initial EGRA tests were intended to determine the current level of learners' reading skills, whereas the post-tests were intended to measure any progress in reading that had taken place between the

beginning and the end of the research project. However, these tests are not considered to be ‘causal’ or attributed to any specific teacher, neither are the EGRA tests diagnostic (USAID, 2004; USAID, 2009).

For the Grade 4 assessment, I decided to use the released PIRLS for Grade 4 learners. The PIRLS is held as a global assessment of reading and numeracy every five years and provides a solid benchmark of the current literacy level of Grade 4 learners (Howie et al., 2012; Van Staden and Howie, 2010). A full schedule outlining the dates, grades, schools, major assessments and sub-test batteries is provided (see Appendices W & X), while a detailed explanation of both the EGRA, Pre-PIRLS and PIRLS follows.

a. The Early Grade Reading Assessment (EGRA)

The EGRA is an oral learner assessment designed to measure the most basic foundation skills for literacy acquisition in the early grades, namely recognising letters of the alphabet, reading simple words, understanding sentences and paragraphs, and listening with comprehension. Developed by RTI and education experts in 2006 (Gove and Wetterberg, 2011), EdData II developed the EGRA methodology and has applied it in 11 countries and 19 languages. It has been adopted and used by other implementing partners in more than 30 other countries and more than 60 other languages. Data from the EGRA have been used for feedback on teacher practice in rigorous but easy-to-understand ways (USAID, 2004). The EGRA measures learners' progress towards reading and also gauges early literacy skills through a 15-minute individual oral assessment of five fundamental reading skills (Gove and Wetterberg, 2011).

Two main principles derived from this body of literature support the development of the EGRA. First, reading assessment (and its complement, instruction) is complex, but there is sufficient research evidence to support the development of specific assessment tools to determine what skills learners need in order to become successful readers, regardless of the method by which learners are being taught. The second principle is that early reading skills are acquired in phases: the level of complexity of a language affects how long learners need to acquire early reading skills.

Assessing early reading acquisition is complicated, but one can derive an understanding of the important aspects of assessment from the critical components of instruction. Reading

comprehension is the most important goal of reading instruction (Torgesen, 1998). Members of the National Reading Panel (National Reading Panel, 2006) highlighted five essential components of effective reading instruction. These components form the core of the EGRA comprehension and sub-tests:

- Phonemic awareness – instruction designed to teach children the ability to focus on, manipulate and break apart the sounds (or phonemes) in words;
- Phonics – instruction designed to help readers understand and apply the knowledge of how letters are linked to sounds (phonemes) to form letter-sound (grapheme-phoneme) correspondences and spelling patterns;
- Fluency – instruction, primarily through guided oral reading, which reinforces the ability to read orally with speed, accuracy, and proper expression;
- Vocabulary – instruction, both explicit and implicit, in order to increase both oral and print knowledge of words, a critical component of comprehension and reading; and
- Comprehension – instruction that teaches learners to actively engage with, and derive meaning from, the texts they read (USAID, 2009).

Details of the assessments conducted using the EGRA with Grade 3 learners at School 1 and School 2 follows.

b. The EGRA: Schools 1 and 2

There were two Grade 3 classes at S1(E). All participating learners were initially given the EGRA comprehension test in English as this was the LoLT at S1(E). The tracked learners were given a comprehension and oral fluency assessment in isiZulu as well (see table 11). From the results of this test, seven learners were selected for further tracking based on their initial English assessment scores. The teacher assisted in the choice of these learners. There were four learners from T1 and three from T2. The selection consisted of at least one weaker, one average and one stronger learner. These learners were selected to receive a further battery of EGRA sub-tests, including an isiZulu comprehension test. They were then re-tested in the same English and isiZulu reading and comprehension tests at the end of the study (see Appendix O). The reason that the whole class was not re-tested was largely due to restraints on time available for data collection and classroom access (see 4.3.4). In addition, the initial proposal for the current study allowed for a minimum of

three learners from each participating classroom to be tracked and under-go post study reading assessments. In most cases, the teachers provided slightly above this (see table 10).

School 2 consisted of one Grade 3 class. All learners received an initial comprehension test in the LoLT at S2(Z), isiZulu. From the results of this test, four learners were initially selected, again with the assistance of the teacher, to represent a weaker, an average and a stronger learner. There were initially only four learners tracked for this school as there was only one Grade 3 class in contrast to the 7 learners tracked for Grade 3, S1(E). However, T5 provided another 12 learners two months later (from Grade 3, S2(Z)), which made a total of 16 tracked students from her class. All the tracked learners received an English comprehension test. However, due to the promising results from the English language assessments of the four learners, T5 then provided another 12 learners to be tested in English fluency and comprehension (see 5.9). Unfortunately, they could not be given the EGRA test battery that S1(E) received as these were not available for public use in isiZulu (Howie, 2016). These selected learners were also tested using the same tests at the end of the study (see 5.9). Details of the Pre-PIRLS and PIRLS assessments follows.

c. PIRLS and Pre-PIRLS

Initially, two Grade 4 classes at S1(E), including the Grade 4 English teacher's register class, were issued with the original PIRLS text in May 2016. However, both the teacher and I were concerned that the level of English in the PIRLS was too high for these learners. It was therefore, jointly decided to again issue a comprehension assessment to her register class but that this time, it would be the Pre-PIRLS. Due to the unavailability of the teacher, the Pre-PIRLS was conducted with her class only in October 2016. In the meantime, the same Pre-PIRLS comprehension test was conducted with one Grade 4 class at S2 earlier in the year, during August 2016. The Pre-PIRLS I selected for these assessments was a released English version from 2011. It contained a choice of four comprehension passages, and I selected "The Lonely Giraffe" as I felt it was appropriate for South African learners. This test contained accompanying questions for the learners, with correct answers and scoring guides (International Association for the Evaluation of Educational Achievement, 2011a). The tests were all administered by the teachers at their own convenience, but I marked them. A discussion of Pre-PIRLS and its development follows.

d. Pre-PIRLS

The PIRLS was developed to provide a benchmark for assessment of Grade 4 learners in developing countries and is issued every five years to samples of Grade 4 learners internationally with the intention of measuring literacy trends. Countries repeatedly taking part can utilise the results to measure their literacy progress longitudinally (National Centre for Education Statistics, 2016).

In addition, the Pre-PIRLS was adapted for developing countries and is a steppingstone to participating in the PIRLS, providing a way to assess reading at the end of the primary school cycle – thus they are issued in Grade 4. According to the given information on the Pre-PIRLS (International Association for the Evaluation of Educational Achievement, 2011a), it reflects the same conception of reading as the PIRLS, except that it is less difficult, containing approximately 400 words per text instead of 800 or so in the PIRLS (Spaull, 2016). Designed to test basic reading skills that are prerequisites for success on the PIRLS, the Pre-PIRLS assessment is consistent with the PIRLS framework, which is grounded in literary and informational reading.

Participation in the Pre-PIRLS prepares countries for moving towards participation in the PIRLS. The Pre-PIRLS assessment will provide valuable diagnostic information about strengths and weaknesses in learners' reading skills and important policy information about the necessary steps to improve learners' reading. After each round of assessment, the Pre-PIRLS and PIRLS release selected (English-only) reading passages and related scoring guides into the public domain online passages (International Association for the Evaluation of Educational Achievement, 2011b; International Association for the Evaluation of Educational Achievement, 2011a). These released items can be used by teachers in the same way as the PIRLS, namely:

- to inform discussions about a school's reading curriculum;
- to explore the links between concepts taught and measuring learners' understanding of those concepts;
- to allow teachers to design their own assessments in line with their needs; and
- to allow teachers to compare the performance of their learners to those of students internationally.

Countries repeatedly taking part in both the PIRLS and Pre-PIRLS can utilise the results to measure their literacy progress longitudinally (National Centre for Education Statistics, 2016).

The Pre-PIRLS assessment examines whether the learners can:

- find explicit information in a text;
- make straightforward inferences;
- interpret and integrate ideas and information; and
- examine and evaluate information.

The largest section of the Pre-PIRLS questions (50%) focuses on referential comprehension or retrieving explicit textual information as the test is designed for learners in the earlier processes of learning to read. The function and purpose of all four question types follows: retrieving basic referential information; retrieving inferential information; interpreting and integrating information; and examining and evaluating information.

When finding explicit information, readers need to find explicit information to answer a question they discover during reading or to check their understanding of some aspect of the meaning of the text. The reader must not only understand what is in the text, but also how that information is relevant to the information he/she is looking for. To be a good reader means automatic retrieval of the text. The reader must understand how the information is relevant. This processing stays at the level of the sentence or the phrase for the reader. Tasks involving this type of questioning may be:

- identifying information that is relevant to the specific goal of reading;
- looking for specific ideas;
- searching for definitions of words or phrases;
- identifying the setting of a story (for example, time, place); and
- finding the topic sentence or main idea (when explicitly stated).

When making straightforward inferences, the reader goes beyond the text surface to fill in the gaps in meaning that can occur in texts. Some are straightforward (contained within the text), while others may require the reader to connect two or more ideas or pieces of the text. Although the ideas may be stated, the connection between them is not. Straightforward inferences are text-

based: they are not explicit in the text, but the meaning is very clear and skilled readers make these inferences automatically. Reading tasks that may exemplify this type of text processing include the following:

- inferring that one event caused another event;
- concluding what is the main point made by a series of arguments;
- determining the referent of a pronoun;
- identifying generalisations made in the text;
- describing the relationship between two characters.

When interpreting and integrating ideas and information, readers must draw on their understanding of the world in order to make connections that are not only implicit, but also need some interpretation. For this to occur, readers must draw on their background knowledge more than they do for straightforward inferences. Personal knowledge and experience will help to give an overall meaning to the text and a learner can use these to understand a character's motives, for example, or to obtain a mental image of the information conveyed. Reading tasks that may exemplify this type of text processing may include:

- discerning the overall message or theme of a text;
- considering an alternative to actions of characters;
- comparing and contrasting text information;
- inferring a story's mood or tone;
- interpreting a real-world application of text information.

When examining and evaluating information, the focus shifts from constructing meaning to critical reading. The learner must consider the text against his understanding of the world and may choose to reject, accept or remain neutral to what the text seeks to represent. Readers must also draw on their knowledge of text genre, structure and language conventions. They must be able to reflect on the writer's intentions, the meaning, and even the level of skill of the author. According to Mullis *et al.* (2011), for this to occur, past reading experiences and familiarity with language are essential components. Reading tasks utilising this type of text processing may include:

- evaluating the likelihood that the events described could really happen;
- describing how the author devised a surprise ending;
- judging the completeness or clarity of information in the text;
- determining an author's perspective on the central topic.

While the above has provided a background to the rationale and type of assessments used, a fuller discussion of the findings of the reading assessments follows further on in this thesis (see 5.9).

4.6 Research methods

Each of the three main research paradigms discussed above has specific research methods which can be used in carrying out scientific investigation. For example, positivism, with its objectivist approach, gives importance to research methods focusing on quantitative analysis such as questionnaires, surveys and observation schedules. Post-positivism, or in the case of this study, interpretivism (see 4.5.1) are both related in that they stress a subjectivist approach and involve qualitative data. The main difference between them might be seen as the tendency of post-positivism to focus on observation as opposed to interpretivism's focus on participant observation. In other words, the former seeks to keep a greater degree of distance from the researched (Naveed, 2016).

As the phenomenon I investigated involves the area of teacher knowledge both within education and the domain of language, it was necessary to take into account the fact that the participating teachers were individuals with differing levels of challenge, constraint and creativity. This made complete objectivity an unobtainable and not necessarily a desirable goal (Yin, 2003a). In addition, the areas of formal schooling and education are neither ideology nor value-free. Thus, a post-positivist (or mixed-methods) approach seemed to offer the most authentic, goal-driven and scientific paradigm in which to obtain answers to the research questions (see 1.4).

4.7 Limitations

The limitations in this study have been discussed throughout this chapter. However, they will be summarised here again. The limitations are: subjectivity and researcher bias; time constraints and access to the research sites; and sample size.

a. Subjectivity and researcher bias

There is always the possibility of subjectivity and researcher bias in participant observation and qualitative data in general (see 4.4.1). I was aware of this possibility from the outset of the study and sought to influence the participants as little as possible. This was done by initially sitting in on classroom lessons for several months, with no recording and no notes being made, to familiarise the learners and teachers with my presence. I also felt it was imperative to build relationships of trust and mutual respect with the teachers over time to mitigate any bias I may have had. In order to assist with the issue of subjectivity, particularly when recording data on the FORT and making visual observations of the quality of learner engagement, I employed inter-rater reliability, with 5% to 10% of the material being viewed by a qualified academic.

b. Time constraints and research site access

The research data had to be collected within a certain time frame (from the time of ethical clearance and DBE approval to the end of June 2017). During this time, I could only enter classrooms to record, ask questions or conduct interviews when teachers were available. This made data collection messy at times and non-linear. It was not always possible, for example, to conduct follow-up reading tests with the learners when I would have liked to and, in the case of School 2, I was given a time frame, by the Principal, of one half-hour period in which to conduct the follow-up reading tests with Grade 3 learners. Whereas some teachers were more open about allowing me time to record, others indicated clearly that they would like the recordings to be completed as soon as possible. This made it extremely difficult to catch up or re-record data that may have been incompletely captured or in cases where I would like to clarify or obtain clearer or missing data. It meant that I had to make the utmost use of the time allotted to me as the opportunity to repeat data collection was extremely limited, if not impossible.

The strict rules applying to the protection of personal information (POPI) did not allow me to hold a general debriefing session with the teachers as no part of the recordings or audios could be shown to anyone other than the participating teacher and could only be shown to that teacher herself if she requested a copy of her own video recording/s in writing. Thus, the options for peer-reviews and assistance with, for example, analysing isiZulu teaching lessons, were limited. In order to

offset this limitation, I arranged follow-up interviews with each teacher in order to discuss the teaching relating to what I had observed in their specific videos.

c. Limited sample size

As mentioned previously in this chapter, the sample size for this study was relatively small. This prevents generalisations of findings being made to other teaching situations. However, as noted previously (see 4.4.1), Yin (2003b) states that, in case studies, we do not aim to generalise to databases but to principles or premises. It was the intention of this research to generate hypotheses that provide a logical, tentative explanation for the issue being investigated (Leedy and Ormrod, 2001). In addition, although the initial proposal stated a minimum of three tracked learners from each classroom (and in several cases, more than three learners were tracked), a larger sample for the post-assessments is desirable (see 5.8). It would be beneficial to re-test the original learners in this study, from both schools, before they exit Grade 7 to ascertain a more definite idea of the rate of increases in their literacy skills levels, especially in light of the reading intervention implemented for these learners since Grade 1 at S2(Z).

d. Closed and open questions in the interviews

Initially, I did not focus on the value of open questions versus closed questions and their role in teaching. As a result, although a category was created for the FORT and the questions were analysed from the video-recording data (see 4.4), I did not include a question in the semi-structured interviews that could gauge how the teachers view the value of such questions. In hindsight, it would have been beneficial to the study to have an idea of the beliefs and attitudes of teachers towards open and closed questions as well as how often they believe they use them during their teaching.

e. Recorded isiZulu lessons

It is a limitation of this study that the number of isiZulu lessons recorded were relatively small compared to the number of English lessons. As only two teachers, T1 and T5, gave lessons in both languages, these two teachers were selected for a comparison of their teaching styles in both

languages as I felt that this data, although limited, provides an area of interest for brief comparison and possible further study. Ethical considerations are discussed below.

4.8 Ethical considerations

To ensure ethical rigour, it is vital to obtain informed consent from all participants and gatekeepers and to avoid deception at all times. Burton and Bartlett (2009) suggest the following ethical principles:

- The right to privacy and anonymity: No information obtained from interviews, whether semi-structured or personal, nor any information from classroom recordings was shared with any other person except for the teacher and the peer-rater who co-viewed the material. Identities of participants are, and will continue to remain, anonymous. Faces of children are not visible or identifiable and have been blurred. All recordings were made in accordance with the Protection of Personal Information Act of 2013 (POPI).
- The right to informed consent: As minor children were involved in this study, written permission was sought from the relevant gatekeepers and guardians, such as the Department of Basic Education (see Appendix U), both at national and provincial level. Informed consent was obtained from school principals, caregivers/parents, teachers and assent from individual learners before research was conducted. In addition, an ethical clearance certificate was obtained (see Appendix T).
- The right not to be harmed in any way: I kept this concern in mind and made sure that the rights, privacy and data of all teachers and learners were protected at all stages so as to avoid any harm. An important aspect of this research involved video recordings of classroom lessons. These lessons were only used to analyse data and for presentations at scientific conferences.
- All participants, including Principals, teachers, parents/caregivers and learners, had the right to withdraw their consent to participate in the study at any time. No participant would be penalised in any way for either refusing to participate or withdrawing their consent.
- Signed assent was also required from the learners (see Appendix F). The relevant class teacher read the relevant letter granting permission to the learners in the classroom and

then explained any issues or concepts that the learners may have been unsure of.

Learners were allowed to ask questions about the proposed study.

- It was deemed necessary to video-tape the learners in the classrooms being observed in addition to the teachers in order to conduct a micro-ethnographic analysis of each classroom lesson. Both visual and verbal messages directed from the learners towards the teacher during the teaching process were extremely important. The responses of the learners to the teaching process and related activities, such as their attitudes, facial expressions and body language, contributed towards building a comprehensive picture. In addition, their questions and interactions directed towards each other both informally and during group work needed to be noted in detail.
- Data was recorded, analysed and then stored in securely locked facilities on the premises of the University. The video recordings were transferred to a portable hard-drive for analysis. The recordings were then placed in secure storage facilities on the North West University premises. Along with the data, the recordings will be kept for a period of seven years and will then be shredded and/or destroyed.

4.9 Positionality

It is important to consider the implications of conducting research, as a white woman, in schools with mainly black teaching staff and students, although several of the teachers at School 1 were Indian. As most of the staff at both schools were female, I did not feel that my presence as a woman was of any issue. I was quite warmly welcomed at School 1 (SE) by both staff and learners and did not feel conscious of my status as white woman. However, in the case of School 2 (SZ), there was initially a feeling of mistrust and suspicion from staff as to my possible motives. Over time, as trust was developed between the participants and me, the attitudes appeared to soften. What facilitated the research process was that several teachers who were using additional reading approaches (in both schools) were enthusiastic about the growing reading performance of their learners and keen to share this with an outside observer. I made it quite clear that my role in the classroom was only to observe how teachers teach reading and not to play ‘policeman’ by observing what teachers were doing wrong. A discussion of data analysis and how it was synthesised follows.

4.9.1 Data analysis & synthesis

Quantitative data are usually analysed numerically. In this study, data were captured on the FORT by means of marks (or ticks), totalled, and entered in an Excel spreadsheet. The figures on the spreadsheets were initially averaged over 20 minutes. The 20-minute segments were then taken and averaged over the totals for all lessons obtained from every teacher. This assisted in creating an average despite the differing number of lessons from each teacher.

When the averages were obtained from the Excel data, they were placed into a series of graphs representing the FORT. Each teacher has such a set based upon their analysed lessons. This provided a substantial overview of what happened in each set of lessons. These graphs could then be placed alongside each other so that the case studies could be examined across each other as well as individually. The data were then combined with the additional data from the other instruments. This data from the FORT were analysed according to descriptive statistics as it measures frequency rates (Teddlie & Yashakkori, 2009). The descriptive statistics were not analysed for significance due to the relatively small sample of teachers.

One tends to argue from qualitative data to a general theme or conclusion, with the themes being grounded in the data (Lincoln & Guba, 1985). Member-checking (see 4.3), which can decrease the chance of researcher bias and subjectivity, involves taking the recorded data back to the participants and asking for their input (Lincoln & Guba, 1985). Qualitative analysis is an interactive process back and forth between data collection and analysis as the data sources can be repeatedly viewed and analysed during and after the collection process. Recording the video data allowed me to use this interactive process to good effect. Repeated viewing and thematic analysis aim to produce themes or patterns and interpret meaning, provided this viewing is systematic and rigorous (Teddlie & Yashakkori, 2009). The next section provides a mixed-methods analysis framework.

4.9.2 A mixed-methods analysis and framework

The instruments selected for the study had to fit both the purpose and design and had to ultimately result in answering the research question(s). A selection of both quantitative and qualitative data-collection instruments was used, data were analysed separately and were then brought together to

provide a deeper picture of classroom teaching, which could not have been obtained had only one type of data instrument been used. The purpose was for the two sets to enhance each other. Ultimately, they are “*compared and their relationship with one another observed.*” (Guest, 2013:148). A description of the analysis of the qualitative data plus how the two data types converged, follows.

To reiterate, the qualitative data consisted of two of the FORT categories: activity and materials; semi-structured interviews; informal interviews; classroom observations; and lesson video-recordings. No formal qualitative computer programme was used as there were only eight participating teachers and themes could easily be tracked. Firstly, the trustworthiness of the qualitative data had to be insured, therefore:

- Interviews were audio-recorded, transcribed and subjected to inter-relator reliability;
- Classroom observations were recorded and then compared to the video recordings for accuracy. For example, the researcher could observe the video over time to check if the initial perception of a teaching practice was correct. The video recordings were then subjected to inter-relator reliability;
- Follow up informal interviews were conducted with teachers on aspects of the video content as a form of member-checking;
- The classroom activities and use of materials captured on the FORT could be verified and supported by the video recordings;

A brief discussion on the responses of the teachers towards the video-recording of their lessons follows. In general, the ADD teachers appeared more confident with their teaching approaches, both R2L and READ, and welcomed video-recording of their lessons. One teacher from this group expressed that she was happy also to have independent assessments of the learners reading levels. However, this same teacher, from time to time, also expressed that she felt the video-recording was a disturbance during the lessons and was keen for the recording to be finalised. The NA teacher group, on the other hand, whilst willing to allow video recordings of the lessons, expressed that they felt shy. One teacher in this group was initially quite reluctant. However, over time and as trust was built, these teachers appeared more comfortable with the recordings taking place. During the semi-structured and informal interviews, all of the teachers spoke freely and appeared very willing to share information about their teaching practice, challenges and motivations.

The themes for the qualitative data were selected on the basis of the semi-structured interview questions and the FORT categories. The interview questions themselves were originally designed around the FORT categories. For example, one question from the interview asked teachers what value they placed on two-way classroom interaction. This question was based upon the FORT Part B categories of Language and Dialogue and subsequent speech events (see Appendix B) and the interaction that occurs from student to teacher and from teacher to student. The selected data formed part of each teacher's individual case study in order to observe what she was doing in the classroom, how it was done and why. The two data streams – qualitative and quantitative converged as follows.

4.9.3 Data Synthesis

The quantitative data from the FORT, or what was happening during the lessons, was marked for frequency. This frequency was then linked to the qualitative categories of Activity and Materials by recording each event in 5 minute segments. This provided a picture of what happened, how often and the context in which it took place.

By linking the above data to the qualitative data via the answers provided to the questions in the semi-structured interviews, the video recordings and observations, a picture was obtained as to *why* the teaching took place as it did (i.e. the theory, attitudes and beliefs that provided the motivation), and how it was conducted (i.e. the video recordings and observations).

Finally, by adding the reading assessment results to the above data, I was looking to provide evidence for the possible effects that teacher classroom practices may be having on learners' literacy development. Figure 4-2 illustrates the study's parallel-convergent-data-collection design.

DATA COLLECTION

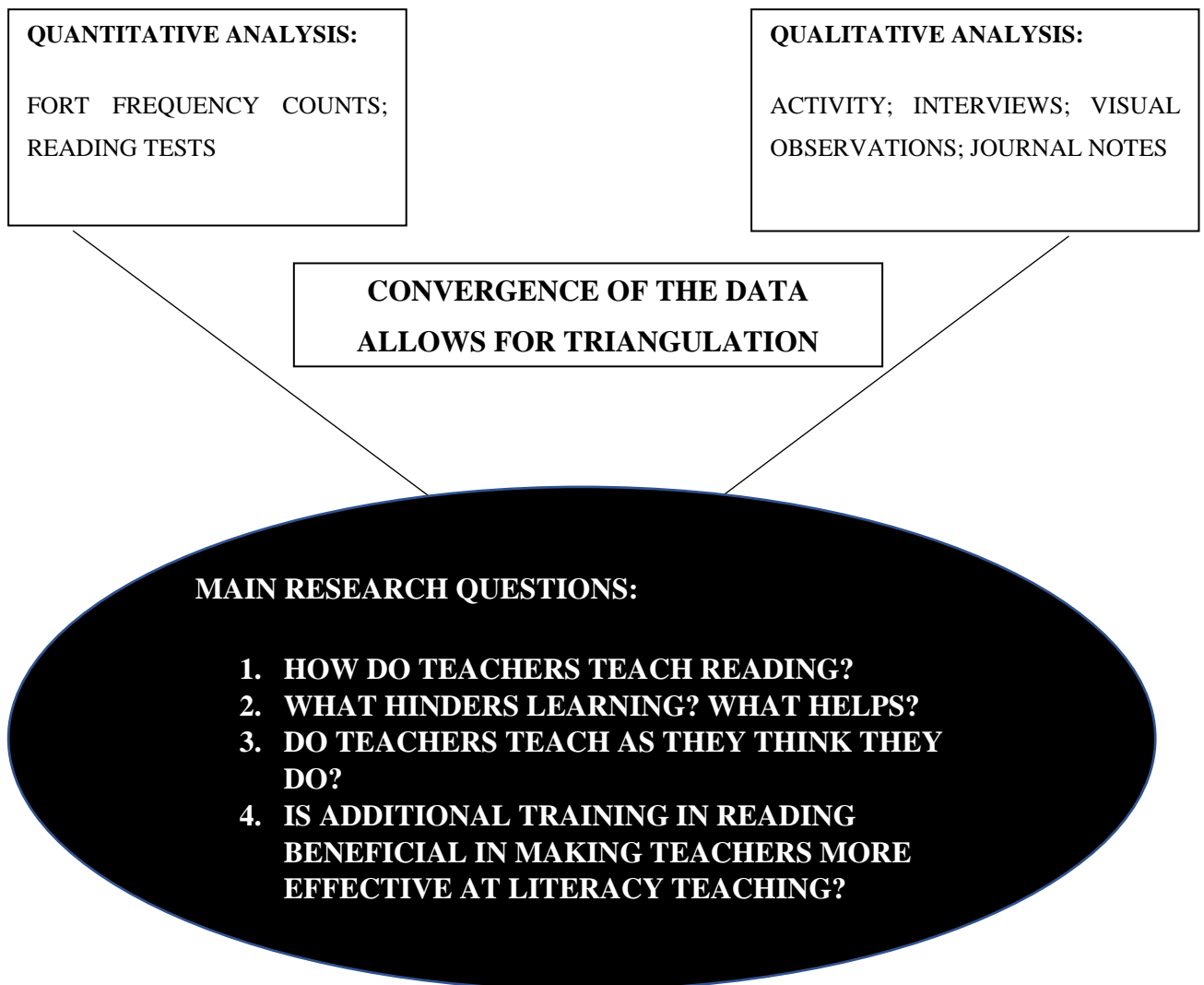


Figure 4-2: Parallel-convergent data-collection design

Figure 4-2 illustrates how convergence of the data ultimately allows for triangulation (Fetters et al., 2013). It is necessary to ask what is *new* in the area of convergence – that is, what information may have been excluded if access to only one type of data was permitted? The rationale is that, by using both types of data sets, the researcher did not only gain a picture of *what* happened during the teaching, which would have been the case with only quantitative data but could also investigate *how or why* the teaching took place the way it did. It is not sufficient to use mixed methods unless one has a clear rationale and can integrate the data effectively (Guetterman, 2017b). Thus, the validation for mixed methods in this study is that one could, firstly, see how teachers teach and determine why they chose that method; and, secondly, one could compare what teachers *think* they do to what they *actually* do. A summary of the chapter follows.

4.10 Summary of chapter 4

This chapter has discussed the methodological approach including post-positivism and positivism, or qualitative and quantitative data. This was followed by an explanation of the epistemology, ontology and related methodology as well as an outline of the research design, mixed methods approach and rationale for choosing an explanatory case study. The chapter described the research context, site and participants.

The research instruments were then discussed, beginning with the FORT. The FORT was used to collect mainly quantitative but also qualitative data and measured the frequency of events, such as activity, teachers' methods of reading teaching PCK, management, and teacher-learner interaction. The findings revealed by this instrument were compared to the responses in the semi-structured interviews with participating teachers, which provided insight into the attitudes and beliefs that drive their teaching practice. In addition, reading assessments were conducted both pre- and post-study with Grades 3 and 4 learners to ascertain their initial literacy levels and whether there had been any growth in their literacy skills across the research period.

Finally, the chapter the ethical considerations, the positionality of the researcher, followed by the method of data analysis and how the different data streams converged. Chapter 5 will discuss the findings of the study.

CHAPTER 5: FINDINGS

5.1 Introduction

The previous chapters in this thesis have discussed the correlation between reading skills and academic success and how children from homes where they have early access to print tend to be more successful during formal schooling (Pretorius, 2014; Taylor & Von Fintel, 2016). In addition, it has provided a literature review, theoretical basis, methodology and design. The current chapter will now discuss the findings in light of the research questions. To reiterate, these are:

- What do teachers do when they teach reading that moves learners from decoding to comprehension?
 - What do they do that hinders the learning of effective reading skills?
 - What do they do that helps the learning of effective reading skills?
 - Do what teachers believe they do when they teach correspond to what they actually do in the classroom?
 - Are teachers who use additional reading teaching training more effective in teaching literacy than those who do not?

The FORT quantitative data addresses questions 1, 2, 3 and 5 while question 4 entails triangulating the qualitative data from the observations and interviews with the FORT data. This chapter will also include a discussion on the results from EGRA, PIRLS and Pre-PIRLS (see 4.4.6) the pre- and post-reading assessments with Grade 3 and 4 classes and how these may support the findings in general.

5.2 Graphical data, semi-structured interviews and observations

The following section presents both the quantitative and qualitative data obtained from the FORT (see Appendices A-D). The unit of measurement for the video analysis was 5 minutes as this allowed for a detailed record and analysis of what happened during the classroom lessons. Furthermore, each lesson consisted of a 20-minute time-period to allow for maximum use of the

collected data. Each number or value indicated on a graph represents an average of the frequency or occurrence of a particular event, behaviour, activity, etcetera, within the 5-minute period. An illustration of the conceptual framework for the analysis is provided in figure 5-1 below.

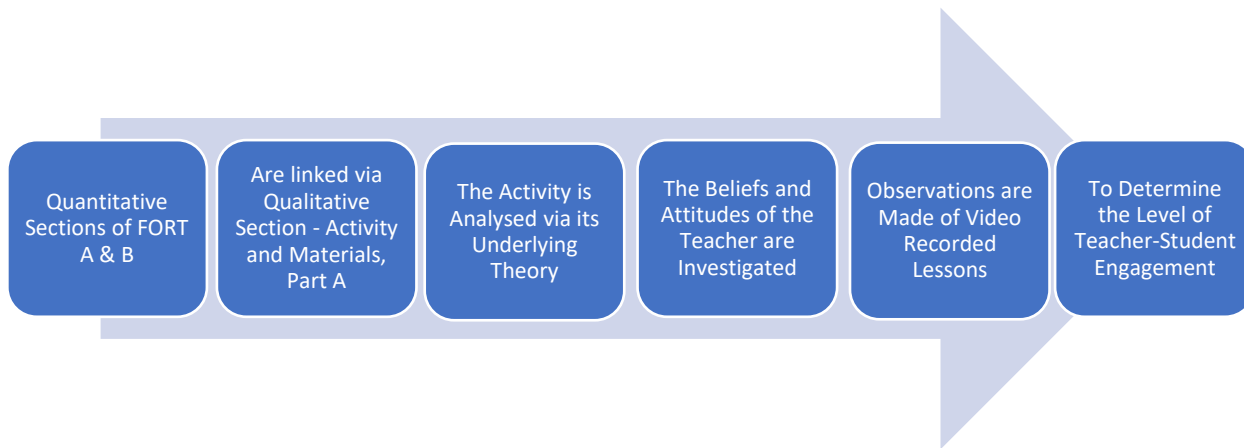


Figure 5-1: Analytical framework

The framework in figure 5-1 illustrates the linking of the quantitative sections of the FORT to the qualitative categories of Activity and Materials. The activity of the lesson and its underlying theory were analysed and combined with the beliefs and attitudes of the teachers towards their teaching. Visual observations of the recorded video segments were then made to determine the level of teacher-to-learner engagement during the teaching process and further support the FORT data. The evidence-based research for the FORT main and sub-categories has been discussed in detail (see 3.9). However, it will be briefly revisited here and during the analysis. An explanation of the sections of the FORT data follows, starting with Part A.

5.3 Part A: PCK, reading & management

Part A of the FORT represents the pedagogical content knowledge of teachers and the teaching of reading. This is represented in two parts due to size constraints, namely Reading Teaching and PCK and Management. To reiterate, the first category in Part A of the FORT is Time (5-minute increments), followed by Activity and Materials and then Participant Organisation (i.e. learner response/s). Participant organisation involves who does the talking. For example, is it the whole

class, a particular group of learners, or individual/s? Reading Teaching is the larger category that includes Modality (see 3.9) with sub-categories of language teaching elements, such as spelling, grammar, vocabulary and writing, as well as different types of reading that learners may participate in, such as silent reading, individual reading and/or reading out loud. Reading Teaching also includes Decoding and Comprehension. Decoding encompasses Oral Fluency; Non-Word Reading; Familiar Word Reading; and Phonemic Awareness, while Comprehension includes Referential and/or Inferential comprehension as well as Open and Closed questions (see 5.6.2). The next category is Activating or Presenting new knowledge, where a teacher uses the existing knowledge that learners bring to the classroom or, if necessary, creates new cognitive references. This is followed by the main category of Management.

Management sub-categories consist of Prompt and Discourse Marker (see 3.9.1) which form an important part of the management of teaching (Government of Alberta: Education, 2017; Wang and Ding, 2015). Management also incorporates Sequencing and Pacing, which involves relaxing of the boundaries that surround the pace and sequencing of the curriculum (Rose, 2004; Bernstein, 1990). Effective management also includes Discipline as an important aspect of class control, as a teacher who struggles in this area runs the risk of hindering the learning process due to distractions and interruptions (Emmer and Stough, 2001). Finally, Procedure involves the teacher's knowledge of what needs to be done for effective teaching, such as handing out material and taking class registers (Cox, 2017). Part B of the FORT represents Interaction and Dialogue.

5.4 Part B: Interaction & dialogue

Part B of the FORT (see Appendices C & D) shows classroom interaction, the frequency of interactions and discourse events from teacher to learner and vice-versa (see 3.9.2). In the light of the importance of two-way classroom interaction between learners and teacher (Tough, 1977b; Vygotsky, 1978), Part B of the FORT sub-categories consist of the types of events that interaction can include, all of which are based on research evidence for best practice. These are: Code-switching; Requesting; Evaluation Questions; Feedback; Explanation; Elaboration; Affirmation; Correction; Repetition; Emotional Response; and Other (Plüddemann, 2015; Lovorn, 2008; Lyster, 1998; Nemours, 2017; Tough, 1977b). These discourse events not only assist with learner

engagement but also with developing comprehension (Hay et al., 2013; Goeke, 2008; Rose, 2011a; Rose, 2011b).

5.5 Data findings

The analysis of the findings will begin with the FORT data and a series of graphic data. On the first set of graphs, the teachers are divided into two groups: the Additionally Trained or (ADD) group, who actively use additional reading training in their teaching and the Non-Additionally Trained (NA) group or NAs, who make use of only CAPS. This is not to say that teachers in the NA group have no further training in reading teaching, but that they choose not to actively use it for various reasons, i.e. the additional approach may be considered too time consuming. The analysis is conducted by using the FORT clusters, or categories, to observe the pedagogic strategies of the teachers, with the values on the graphs indicating how many times an event happened over a 5-minute period. The data graphs do not all have the same horizontal axis value as this would involve using the largest value as a measure of the axis length. This in turn would cause some of the smaller data averages to disappear or become difficult to read. Therefore, each axis is applied individually to each graph and based on the maximum value contained in that graph. Also, there was a limited, and sometimes varied number of lessons recorded for each teacher (see table 4-1). This places limitations on the findings (see 4.7) in that one cannot assume that because a teacher did not use a certain strategy, teaching style or method in the recorded lessons that she never uses it in other lessons. The data is only able to provide a snapshot of what happens in reading teaching but nevertheless, still provides a deeper view into classroom teaching practice. The first graph, figure 5-2 below, will present the reading teaching and PCK averages for both the ADD and the NA teacher groups.

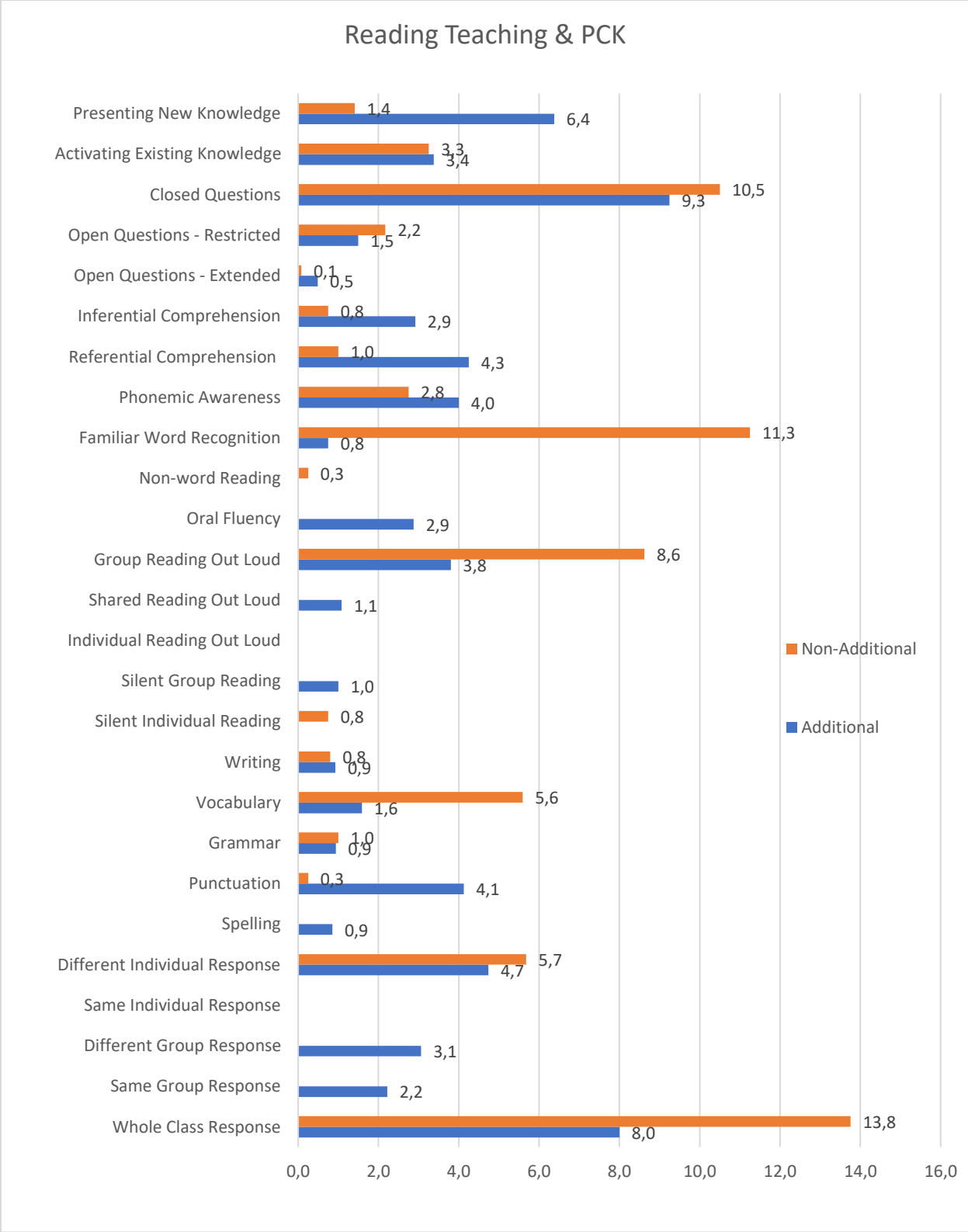


Figure 5-2: Reading teaching & PCK

Analysis of figure 5-2

The following section will analyse the data in figure 5-2 by category, beginning with Activating Existing Knowledge and/or Presenting New Knowledge.

a. Activating existing and presenting new knowledge

It is important for reaching her goal of comprehension that a teacher makes use of the existing knowledge that learners have of their world. Learners who can integrate existing knowledge with new information are able to construct meaning easier than those who cannot and can thus progress through the curriculum more effectively (Strangman et al., 2010; Xie, 2017). In the same way, presenting new knowledge is an important component of reading teaching, for example, when it is used to explain aspects of a text the learners may not be familiar with, thus reducing their semiotic load and helping them to read the text more fluidly. As such, it is an important tool to use in preparing learner to successfully perform a task (Rose, 2015). Both ADD and NA groups made use of activating existing knowledge and have similar averages, while the ADDs scored higher in presenting new knowledge. The reason for this may be that the teachers in the ADD group (including the READ trained teacher, according to the FORT data) were using a form of scaffolded interaction cycle. In this cycle, learners are first prepared for successful reading of the text. In this preparation stage, along with using existing knowledge, the creation of new cognitive references is key. During the interviews, all teachers expressed their belief that it is important to make use of both types. For example: *“(This is) very important. I use flashcards and pictures to activate background knowledge and create new (Information) in the classroom environment. Connections are built in this way.” (T5)*

b. Comprehension

The first category for comprehension is that of open and closed questions. Both groups scored high averages for closed questions, although the ADDs scored higher. A closed question requires a simple ‘yes’ or ‘no’ answer. Therefore, by definition, any question which requires the respondent to think or reflect on the answer would be an open question. Open questions are important in teaching at early grade levels for cognitive development of learners (Siraj-Blatchford et al., 2002). However, not all open questions are necessarily complex or reflective. For example, a question

such as: “What are you going to wear to the dance tonight?” is an open question, yet it can elicit a simple answer, if, for example, the recipient already has a clothing choice in mind (Leech and Onwuegbuzie, 2007). As a result, on the FORT, the open questions have been divided into two types: restricted and extended. In the R2L scaffolded reading cycle, restricted questions are called cue questions and consist of ‘WH’ questions – or synonyms - that enable learners to find key words or information within a text, or referential comprehension. Extended open questions, on the other hand, require more reflectivity and creativity on the part of the learners and can be linked to inferential questions (Rose & Martin, 2012).

The motive for asking the question determines the type of question that the teacher will choose. Specific or text-related answers will require restricted open questions, whereas if one wants the learners to think critically or give their opinion, then an extended question would be used (Rose *et al.*, 1999). Not every open or closed question is text-based. For example, in the recorded isiZulu lessons (see 5.7), T5 scored a high average for open questions as well as for closed questions, while her referential comprehension focus is medium and her inferential comprehension is non-existent. This may be because these lessons consisted of mainly oral fluency reading (with little emphasis on meaning) and a learner-led sing and dance concert (in which the teacher asked learners questions about their performances). As several teachers in the ADD group make use of the R2L reading teaching approach, it can be explained that R2L uses a combination of both question types in that, during detailed reading, there is an elaboration component that allows the teacher to ask extended, more evaluative questions such as: “*What do you think the children might be feeling as they go home?*” (Rose, 2018). The R2L cue questions can be related to the CAPS requirements as CAPS requires teachers to use a selection of differing types of comprehension questions that can be related to the extended or restricted questions mentioned above. These are: literal; reorganization; inferential; evaluation and appreciation questions (Department of Basic Education, 2011). Despite this supposed focus on comprehension, the reality is that, according to research, teachers still tend to spend more time on decoding than on meaning (Pretorius & Klapwijk, 2016).

Returning to the FORT, the NA group scored higher on the restricted open questions, with three of the four teachers, T3, T4 and T6 using them the most. On the other hand, the ADDs scored higher on the extended open questions. All the ADD teachers used these question types in their scaffolding approach, with T1, T5, and T8 using R2L, whilst T7 uses her READ training. As creative, open questions can benefit learners' critical thinking and cognitive skills (Yusoff and Seman, 2018), their use is facilitative in helping learners to achieve the higher-order comprehension outcomes required by CAPS (Department of Education, 2011a).

Regarding inferential and referential comprehension, the data show that the ADD teachers scored a higher average on both types, although neither group was very high. Nonetheless, the gap between the ADDs and NAs exists. The low rate of comprehension used by the NAs could be seen as problematic, considering that the goal of reading is defined as the ability to read for meaning and the lack of focus on comprehension may indicate that teachers are continuing to rely on decoding alone (Pretorius *et al.*, 2016; Pretorius & Klapwijk, 2016).

c. Decoding

Whilst comprehension is the ultimate goal of reading, decoding remains an important component. Decoding also involves the sub-categories of: phonemic awareness; oral reading fluency; vocabulary; familiar word reading; and non-word reading (Nel, 2011; Phonic Books Ltd, 2011b; Ehri, 2011). The ADD group scored a slightly higher average for phonemic awareness and was the only group to make use of oral fluency (see 3.2) which is vital for effective comprehension (Macdonald, 1990:15). In contrast, only the NAs used non-word reading. However, this was at a very low rate and only used by one teacher, T3 in the group. Non-word reading, in this study, is not used to describe teachers using syllables or segments, for example, as was prevalent in the isiZulu lessons (see Figure 5-7). Sounds and segments have been placed under the phonemic awareness category of decoding as they did not involve the actual use of non-existent words (see 3.9.1) and therefore a differentiation was made as per the EGRA test battery (USAID, 2009).

Familiar word recognition, which was used by T2, T3 and T4, scored high on average for the NAs. The three teachers above who made use of this category all wrote word lists on the board and asked learners to read and re-read them out loud, many times over. This can also be viewed as vocabulary building. Even though vocabulary learning is extremely important for reading, it is recognised

that memorization and repetition alone are not necessarily the most effective way to learn new words as more modern methods can be used as well, such as visual aids or objects (Alqahtani, 2015; Boyer, 2017).

Oral reading fluency remains one of the most predictable and reliable indicators of learner comprehension (Reschly et al., 2009) and can be described as a learner reading with automaticity, speed and accuracy whilst being able to focus on the text meaning. Only the ADD teachers used this category. In the recorded lessons, oral fluency events consisted of teachers holding up flash cards and/or breaking up words into syllables for learners to read and pronounce, as well as sustained reading, where learners read and re-read extended text or a sentence (Hasbrouck, 2006).

Whereas whole class reading is beneficial, not just for oral fluency but also to allow weaker learners to follow along by hearing the text read well with accuracy and pace (Hasbrouck, 2006), there was little individual reading used by either teacher group, either out loud or silent. Its use could provide balance to the whole class reading practice (Harvey, 2013:195). Another disadvantage of only allowing choral reading is that the chorusing of answers can lead to the mistaken belief that learning is taking place. However, when the same learners are individually assessed, it appears that they have serious reading deficits (Pretorius, 2014). What the FORT captures is that teaching styles can become entrenched and even those teachers who have had additional training tend to remain in a largely traditional teaching mode, bearing out the findings of the Early Grade Reading Study (EGRS) Report (Taylor et al., 2017). The implications for lack of change from a traditional teaching style are that reading teaching may continue to lack effectiveness (Richards and Rodgers, 2014).

d. Modality: Types of reading and language integration

Both groups made more use of Group Reading Out Loud than any other reading strategies, with the NAs averaging more than double the ADDs. Examination of the activities that lead to the conditions in which the group read out loud showed that teachers were generally doing the following:

- Writing words on the board and asking learners to read them out loud. This was usually repeated several times.
- The teacher read a story and asked the class to read along as a group;
- The teacher allowed the class to read the story out loud as a group;
- In the few cases of silent reading, as with T2, the teacher read the sentences and asked her learners to follow along reading silently.

Materials used were, for example, a big book, or a poem (T1). Learners also read out sentences, some of which were held up by the teacher for the students to read. In the case of T3, learners were asked to take turns reading in groups out loud. Whereas most teachers used these techniques repeatedly, there was a difference in intention between the R2L lessons, and thus between the ADD and NA groups, as the focus tended to be on meaning as opposed to simple repetition of words and sentences.

Whilst the benefits of reading out loud are recognised (Polette, 2005), as with choral reading, it has its limitations. For example, it is difficult to monitor the individual learner's reading progress this way (Reutzel and Juth, 2017). Shared Reading Out Loud was used at a low rate by the ADD teachers only, while in the recorded lessons, no teachers made use of Individual Reading Out Loud at all. Again, this is not to say that differing forms of reading are not used in other, unrecorded lessons.

Furthermore, Silent Individual Reading was used only by the ADD teachers, whereas silent group reading was used only by the NA teachers. The difference between the two reading types are in the teacher's organisation. For example, the learners may go off on their own to read quietly for a while, or they may be required to read silently around the table as a group (Reutzel and Juth, 2017). Silent reading is regarded as valuable in facilitating reading skills and there needs to be focus on the learner reading silently for fluency. However, such reading also needs careful monitoring from time to time to assess learner ability and/or progress (Jablonski, 2018; Reutzel and Juth, 2017). Incidentally, there was no such monitoring observed during the recorded lessons.

There is evidence that integration of language components into reading teaching is beneficial in increasing reading skills (Halliday, 1975; Halliday, 1996; Reed, 2012; Rose, 2018), although the

integration needs to be done in a systematic and goal-orientated manner. For example, T1 used the R2L scaffolding cycle in a recorded lesson where she incorporated a CAPS requirement for teaching of nouns into the learners' reading of a poetry text. She also incorporated punctuation into the same lesson. The ADD teachers made the most use of the FORT language categories. Writing and Grammar were used by both groups at a similar rate, whereas Spelling was used only by ADD teachers. The ADD teachers scored a high average for Punctuation but it was hardly used at all by the NAs. Vocabulary learning was used more by the NAs, which may be a reflection of the NA teachers' beliefs, based on comments from the semi-structured interviews, that learners move from decoding to comprehension mainly via the process of vocabulary, word building; charts and visual aids on the classroom walls that learners can read daily. For example: *"You work with vocabulary (learn new words together) and it flows together over time."* (T2) and *"... when teaching new words ... I also give synonyms, antonyms. Learners learn dictionary skills and use dictionaries."* (T6).

e. Participant organisation

The pedagogical benefit of using varied types of responses from learners in the classroom is well recognized (Rose, 2005; Rose, 2014). By this I mean different individual or group responses. For example, when the teacher asks a question (in the recorded lessons), she selects a different individual each time to answer, or, in the case of group work, the teacher may choose differing groups at their tables. Generally, the teachers tended not to select the same learner or group to answer a series of questions within the observed lesson. As per CAPS requirements, the tables and chairs in the classroom were arranged in such a way that the learners formed groups. On average, in both S1(E) and S2(Z), the groups consisted of approximately 8 learners. Both groups made use of Different Individual Response, although NAs scored slightly higher averages. However, no teachers made use of Same Individual Response. This may be because the classes were large, ranging from 35 to 49 learners and it is likely that the teacher/s wished to provide as many learners as possible with a chance to answer questions.

Only the ADD teachers made use of the categories Different Group Response, at a medium-low average, and Same Group Response at a low average. As these categories were used when learners were performing a task at their table as a group, this may indicate a higher rate of group work on

the part of the ADD teachers. Both groups scored highly on whole class, or choral response, although the NAs scored higher. It would appear that all teachers, whether trained or not, ultimately resorted to choral responses. Again, in the semi-structured interviews, all the teachers expressed the importance of teacher-talk and also two-way interaction in the classroom, even though the actual data suggests these are mainly teacher-led lessons (see Figures 6 & 7). An example is the following comment: *“They need to hear you saying things – they are learning the correct words (you are modelling them) and giving them extra knowledge. Interaction is two way – they give feedback as they learn.” (T1).*

To summarise Participant Organisation, or learner response, the categories most frequently used and for which there are high average scores, are individual responses and whole class (choral) responses. Whilst keeping in mind that the scaffolded approach the ADD teachers are using is a form of reconceptualised teacher fronting, where the interaction cycle is designed to encourage weaker learners to participate and engage critical thinking (Rose & Martin, 2012), the teachers tended to retain tight control. Although a scaffolding cycle is inherently designed to relax the sequencing and pacing boundaries by allowing weaker learners to succeed, in these observed lessons there was no differentiation of task, or of allowing faster learners to work on other activities or individually (Logsdon, 2018). A summary of the data from figure 5-2 follows.

5.5.1 Summary of reading teaching and PCK

Both teacher groups made use of existing knowledge at a similar rate although the ADDs scored higher averages on presenting new knowledge. This may be as a result of the scaffolded interaction cycle that was used by the R2L teaching cycle (see 3.15). The reasonable use of both existing knowledge and presentation of new by both ADD and NA groups can be regarded as facilitative. However, considering the crucial goal of comprehension in reading, the low focus on this by the NA teachers is a concern (Ness, 2016). Whereas both groups make use of both open and closed questions, the ADDs scored higher on open extended questions, while the NAs scored higher on restricted open questions. The reasons for this may be as follows: the ADDs possibly scored higher on extended questions as a result of at least three of them using the R2L elaboration component included in the cue questions which allows the teacher to ask deeper, inferential,

questions that require critical thinking (Rose & Martin, 2012). This would also correlate with figure 3-6, where one sees that the learners respond with more elaboration to the ADD teachers than the NAs. By contrast, the reason the NAs have a higher rate of restricted open questions may be because three teachers in the NA group - T4, T3 and T6 - are using set questions from the relevant CAPS workbook, which may result in a higher average of questions used. This is not to say that the ADD teachers do not use questions from the workbooks. However, as part of the R2L cycle, at least three of the ADD teachers are using their own cue questions for learners from the text. In other words, the cue questions do not necessarily stem from the workbooks and may be fewer in number. Either way, both types of open questions are beneficial and necessary and the lack of focus on inferential comprehension by the NAs would not be beneficial (see 3.9.1).

The ADDs scored slightly higher on phonemic awareness, possibly as the teachers from this group were teaching several of the recorded lessons in isiZulu and concentrated on phonics and syllables. This may be facilitative, as it indicates an understanding of the differences between the sound systems of the two languages and its implications for reading learning (Land, 2015). Familiar word recognition was higher in the NA group, largely due to three of the teachers using repetition to teach new words (Ehri, 2011). Whereas vocabulary and sight word learning were used by the NA group, more modern methods could be employed besides repetition. However, vocabulary building remains a very important component of reading teaching and therefore, the low use by the ADD group could be seen as detrimental (Boyer, 2017; Wilson, 2016). Only the ADDs use oral fluency. Its subsequent lack of use by the NAs can be considered restrictive (Marr *et al.*, 2011). Non-word reading, which is important for learner cognitive development (see 3.9.1) was used only by the NAs and at a low average. Its general lack of use may be cause for concern (Phonic Books Ltd, 2011).

To continue, findings for Modality (see 3.9.1), indicate an emphasis on group reading out loud by teachers, with the NAs scoring higher averages. Only the NAs used silent individual reading while only the ADDs used silent group reading and shared reading out loud. The lack of variation in reading strategies is not regarded as beneficial (Harvey & Goudvis, 2013). Furthermore, there are generally low levels of integration of language, with the NAs scoring higher on vocabulary integration and the ADDs scoring higher on punctuation (Rose, 2018). Concerning Participant Organisation, individual and whole class responses dominated, which may indicate teacher-led

lessons. This is despite that fact that the ADD group had some different group and same group responses (Tsui, 2001). This may indicate that the ADDs had a higher rate of group work than the NA teachers. In the interviews, all teachers claimed to value group work but the FORT data indicates they do not necessarily focus on it. For example, the following interview comments are from two NA teachers: “*(Group work) is very important as it improves communication both from learner to learner and from teacher to learner. It helps students to teach each other.*” (T3) and “*Understanding is increased when learners work in groups and they learn to recognize each other’s talents and respect each other.*” (T6).

5.5.2 Implications for reading teaching

The observation of the data would seem to indicate that additional training in reading does make a difference in the case of the ADD teachers, as they had higher averages of various categories such as extended open questions; greater integration between language and reading teaching and a higher focus on comprehension, whilst also making use of decoding categories such as oral fluency and phonemics. The FORT data, when placed alongside the semi-structured interview data, shows that the ADD teachers had a higher correlation between what they say they do when they teach and what they actually do, for example, focusing on group work, integrating language elements and comprehension. The next graphic data is also in Part A of the FORT and consists of the main category of Management together with its sub-categories.

5.5.3 Management

Classroom management involves the techniques teachers use to keep their classrooms organized, attentive and focused (Hidden Curriculum, 2017; Rose, 2004). Categories are: Prompt; Discourse marker, Pacing and Sequencing; Discipline; and Procedure. Verbal prompting allows the teacher to assess when learners are not moving at the required pace, when they are losing concentration or motivation whereas discourse markers in the teacher’s speech indicate the organization of learning material and time (Emmer and Stough, 2001). An understanding of sequencing and pacing of the curriculum in advantaging or disadvantaging certain learners is an important part of teacher

management strategy (Margolis et al., 2001), as well as discipline, or the ability to control the learning environment (to be able to respond to learners that may have behavioural problems). Finally, Procedure involves the teacher’s knowledge of what needs to be done for effective teaching, such as handing out material and taking class registers (Cox, 2017). Figure 5-3 below provides the data for Management.

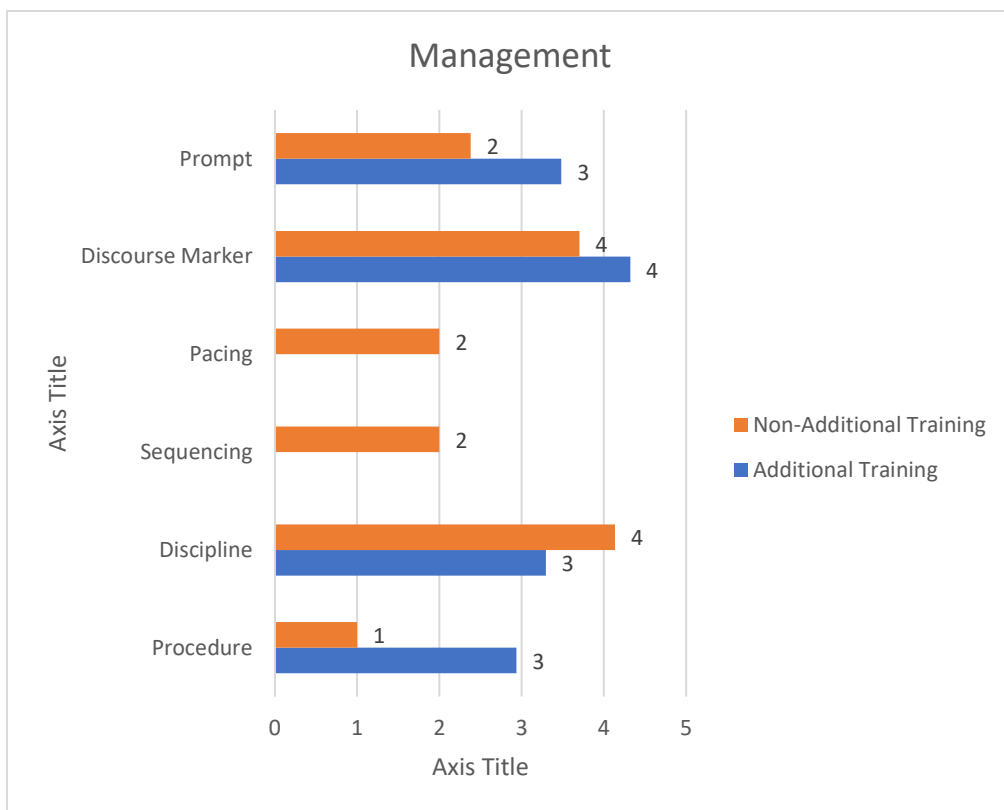


Figure 5-3: Management

Analysis of figure 5-3

Figure 5-3 indicates that both teacher groups shared most of the Management categories at similar averages. In addition, observations show that all the teachers tended to use discipline, prompting and discourse markers in similar ways. For example, prompting is most often used to encourage readers to continue when they are reading or when the teacher has briefly halted the flow of the task to explain or clarify an issue. In the same way, all the teachers used discourse markers as a signal to mark-off sections of information. Each teacher had her own style and way of doing this. For example, she may have used ‘ok’ or ‘right’ for her discourse markers, but the function

remained the same. The NA group is the only one which made overt use of relaxing the sequencing and pacing of the curriculum. This data, however, is somewhat skewed by the fact that only one teacher out of the four, T3, in this group, made use of this category as she perceived that the learners were not grasping a concept and deliberately returned to an earlier stage of the lesson. Nonetheless, even though the sequencing and pacing is not overtly indicated on the graph for the other teachers, those who made use of the scaffolded interaction cycle used it with the intention of relaxing the boundaries to cater for learners who may have fallen behind (Rose, 2005; Klapwijk, 2015). Thus, one must link the quantitative categories with the qualitative ‘Activity & Materials’ category to obtain a deeper picture, thereby also linking Parts A and B of the FORT. This provides both the how and why of the pedagogy. Numbers alone are not sufficient (Leech and Onwuegbuzie, 2007). The meaningfulness of the teacher style will depend on the related activity and theory (e.g. scaffolding via the R2L cycle) underlying her teaching. The activity and theory are guided by the PCK of a capable and skilled teacher and thereby extend learning (Rose and Martin, 2012; Vygotsky, 1978). For example, in the case of comprehension, when a teacher makes a request for information, it may be a closed question or it may be an inferential question where the teacher is aiming to assist learners to understand a word or a concept in the text at a deeper level.

A prominent category is Procedure. Its use by the NAs was low, whereas its use by the ADDs scored slightly higher. The procedure data mainly consisted of teachers handing out worksheets, papers, or learners retrieving the relevant learning equipment. The researcher did not observe, for example, teachers marking the daily register, or marking tests, within the recorded lessons (this is done, presumably first thing in the mornings and after hours). The higher scoring of this category by the ADD group may be a result of the increased activity levels used in the scaffolded learning cycle, which involved additional materials such as sentence strips, scissors and chalk boards. Such activities may reveal greater engagement by the learners in the lesson (Pinter, 2017).

5.5.4 Summary of management

The above has covered Part A of the FORT, Reading Teaching, PCK and Management. Below is the data for Part B that focuses on interaction patterns, firstly from learner, or learner to teacher

and then from teacher to learner. This section lists types of interaction beneficial to teaching (see 3.1). These are: Code-switching; Requesting; Evaluation Questions; Feedback; Explanation; Elaboration; Affirmation; Correction; Repetition; Emotional Response and Other (Plüddemann, 2015; Lovorn, 2008; Lyster, 1998; Nemours, 2017; Tough, 1977b). These discourse events not only assist with learner engagement but also with developing comprehension (Hay et al., 2013; Goeke, 2008; Rose, 2011a; Rose, 2011b). Figure 5-4 below contains data for learner to teacher interaction.

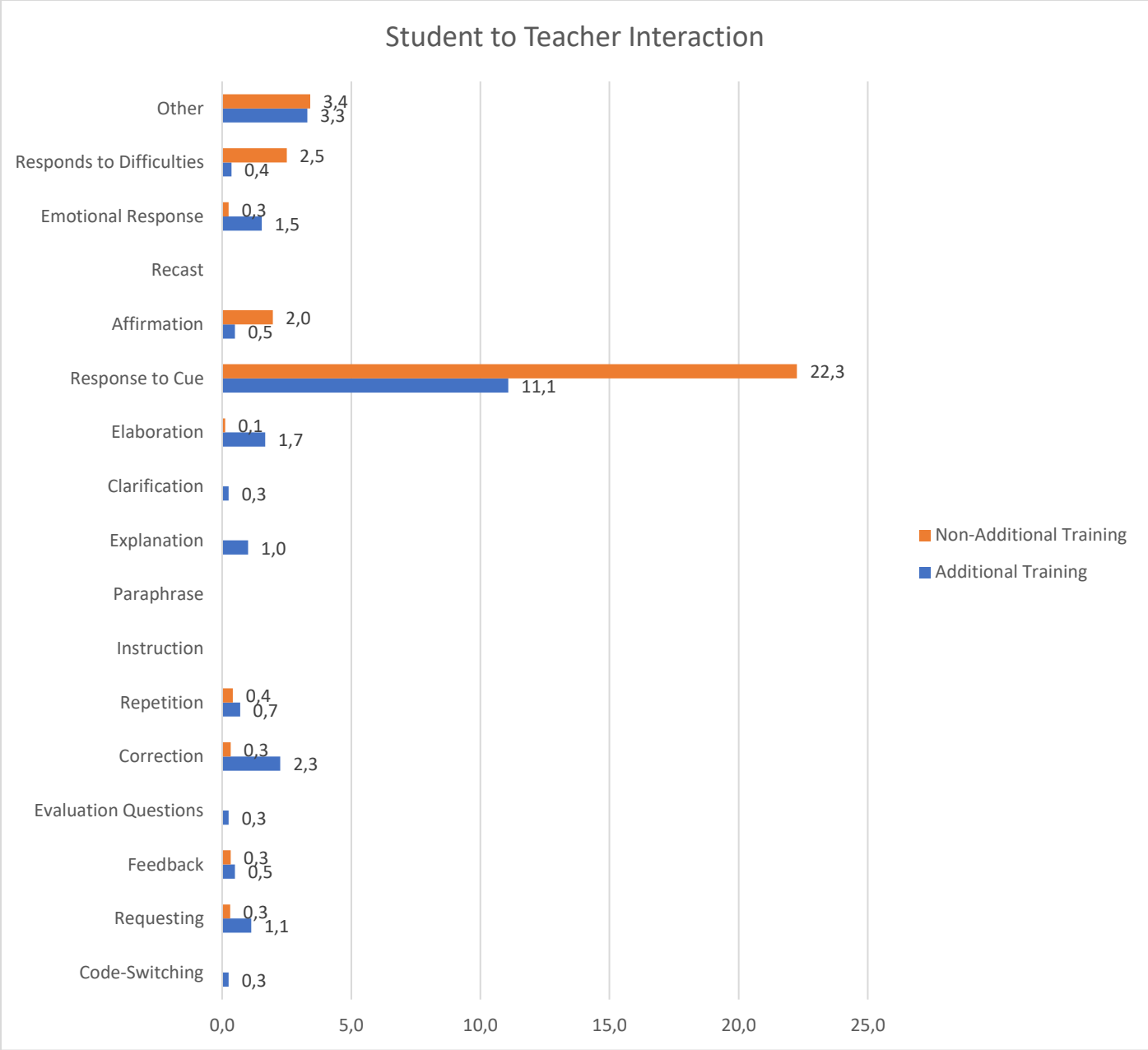


Figure 5-4: Learner to teacher interaction

Analysis of figure 5-4

At a glance, one sees that more of the categories in the graph apply to Add teachers (14) than the NAs (10), although generally at a low average. As with figure 4, specifically Reading Modality, the researcher can see from the overall low averages that most of these lessons were teacher-led (Spaull and Hoadley, 2017). Although the scaffolded interaction cycle is designed to elicit participation from learners, this does not preclude the fact that the continued lack of learner participation and creative involvement in the lessons may not be beneficial. Evidence shows that learner interaction towards the teacher increases academic achievement, especially for weaker learners, so lack of reciprocal interaction in the classroom would be restrictive (Casey, 2018). However, one must take-into account the sizes of the classes both in this study (between 35 and 49 learners) and South African Government schools. As class sizes increase, direct interaction with the teacher generally decreases (Taylor et al., 2017). In addition, Casey (2018:2) states the following as the implications of this: *“In the end, it appears the traditional classroom teacher ends up providing a one-size-fits -all lesson that targets the middle achievers. The high achievers are bored and do not get the chance to maximize their potential, and the low achievers are lost and learn very little.”*

To continue with the analysis, the data indicates that both groups made use of Other at a similar average. By ‘Other’ is meant non-verbal and non-emotional reactions from the learners, such as hand-clapping; going up to the front of the class to write on the board; performing tasks such as wiping their writing boards clean; raising their hands to answer questions; or other physical movements. The use of Other could point to greater learner involvement, i.e. in observed lessons where teachers may ask the learners to pretend to be a certain animal, such as a lion. Correlated with this are emotional responses, where the ADD teachers scored slightly higher than the NAs. Emotional responses, in this study, mainly consisted of laughter and sometimes other forms of non-verbal communication such as pulling faces and showing surprise. This category is different from Affirmation, which has the function of supporting and encouraging learners’ efforts (Martin and Rose, 2007). The learners responded with a higher average of affirmation to the NA teachers. The reason for this may be connected to the way in which learners responded to the teacher’s perceived difficulties as, in both cases, the ADD and NA teachers were pretending to have difficulties by providing deliberately wrong answers to encourage the learners to respond with the

correct ones. The ADD teachers' learners had higher scores in correcting the teacher. The ADDs were also pretending to make errors in a similar pattern to the NAs but this resulted in a slightly different method of response from the learners, i.e. the NA learners affirmed the teachers' correct answers more while the ADD learners verbally corrected the teachers more. Learners of all teachers scored low averages on their elaboration on either the teachers' requests or on the answers that teachers provided in response to the learners' cues. The learners of the ADD group teachers, however, scored higher than those of the NA teachers. By 'elaborate', I mean that the learners are given an opportunity to expand on the initial answers to or from the teacher. As this most often involves several different learners in a lesson putting forward differing answers, suggestions or solutions, I have recorded each elaboration session as one event. In other words, I have not counted every answer from every learner individually but rather seen one session as an elaboration.

In figure 5-4 the responses to teachers' cues score higher for the NA group, who have an average of 22, compared with the ADD group who have an average of 11. The responses to cue consisted of direct responses to teacher-initiated interaction. Whilst the number of learner responses may be high, particularly with the NA learners, again, frequency alone is not sufficient (Leech & Onwuegbuzie, 2007). The importance of teacher-talk in extending, amongst others, comprehension and vocabulary building in learners is documented (O'Toole *et al.*, 2017; Tough, 1977). However, the content of the teacher-talk is paramount, in other words, not just how much is said but *what* is said and *why*. The mixed method design of this study allows for the combination of the qualitative with the quantitative data. The activity, materials, attitudes, beliefs and teaching theories that underpin the teacher-talk are examined and may provide an indication as to whether learning is taking place. In addition, teacher-talk should never be relied upon at the expense of learner talk (Gómez and Lesaux, 2015). For example, where the teacher controls the majority of interaction in a lesson and does not engage the learners in inferential questions, she hinders her ability to lead learners from decoding to comprehension (Ness, 2016).

5.5.5 Summary of learner to teacher interaction

In sum, the overall response to teachers from learners is low, with Response to Cue scoring the highest average for both groups. Although a scaffolded reading teaching approach is designed to

focus on the learner (Rose, 2018), the data for figure 5-4 shows a lack of learner participation and creative involvement in the lessons, which is still restrictive (Mainhard et al., 2018; Casey, 2018). The last graph for the ADDs and NAs, figure 5-5, contains the same categories as figure 5-4 but indicates Teacher to Learner Interaction.

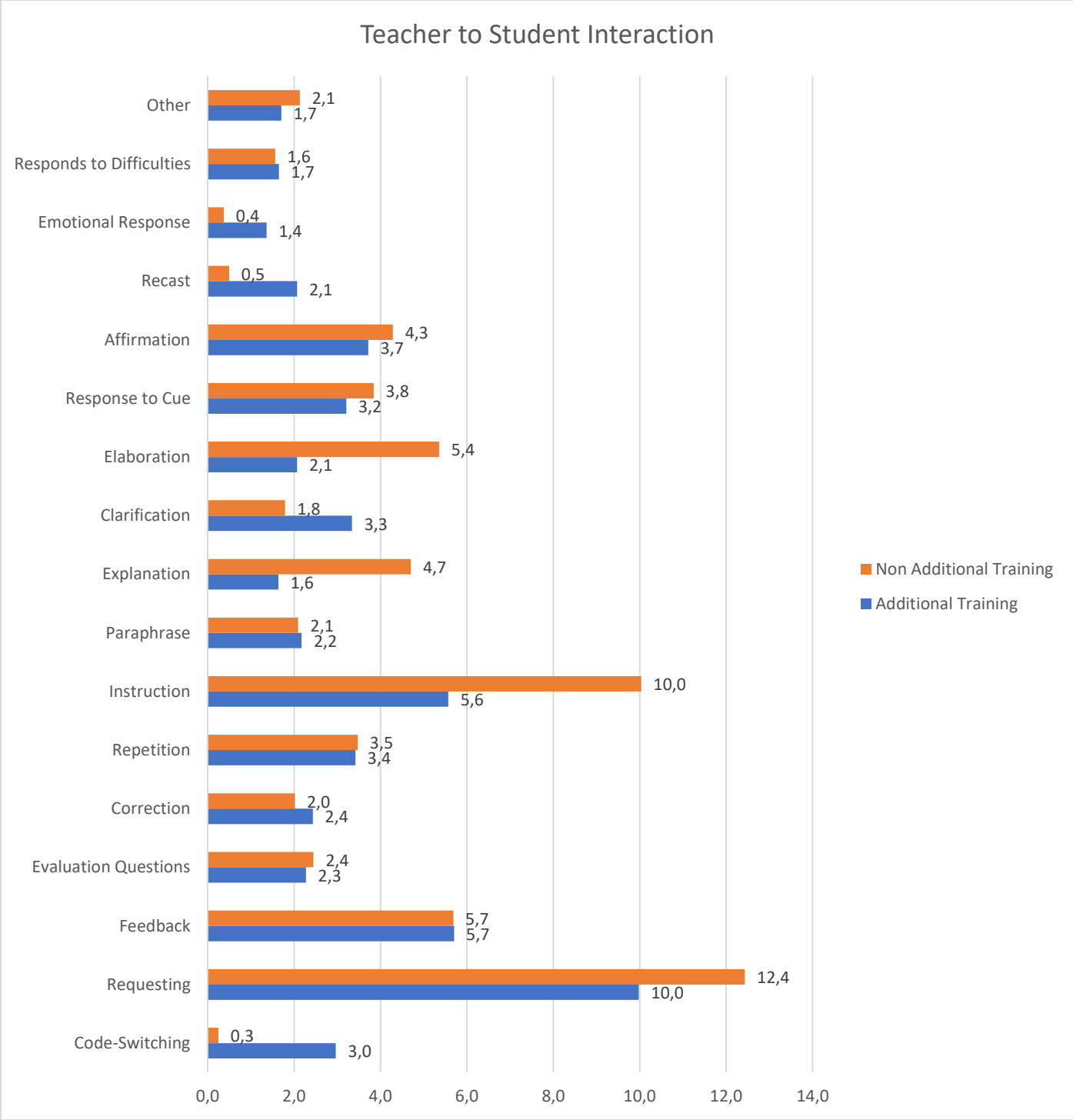


Figure 5-5: Teacher to learner interaction

Analysis of figure 5-5

In figure 5-5, both groups covered all the categories, mostly at similar rates. There was a high average of teacher to learner talk occurring in the classrooms, especially when compared to the learner to teacher-talk (see figure 5-4). The implications for this may be poorer outcomes for learners who do not actively participate in the classroom, as those involved in the learning process learn more effectively than those who do not. In addition, learner participation assists in developing critical thinking skills as well as learning retention (Weaver and Qi, 2005; Garside, 1996). Some major reasons why learner participation may be restricted, according to Weaver and Qi (2005) are the aforementioned large class sizes (see 4.3) as well as the hierarchal structures of teacher-led classrooms where the teacher traditionally holds the power and makes the decisions.

NAs had a considerably higher rate of elaboration; explanation and instruction. Elaboration is quite a meaningful and communicative category and involves instances where the teacher/s go into more detail on a topic or subject. This detail is often quite interesting and intended to extend the learners' understanding of an issue. For example, T3 may elaborate on a story prescribed by CAPS; or T4 may explain the past history of 'measurement' and how learners in the South African school system used to have to put their arm behind their head to determine if they were ready for school. These are, however, elaborations from the teacher on her own initial interaction. It does not necessarily indicate that the teacher encourages the learners to elaborate on their responses to her (see figure 5-4). The reasons for the higher rates of elaboration, explanation and instruction may be because, as the analyses indicate (see figures 5-4 & 5-5), NA teachers focused less on comprehension and they used more closed questions, chorusing answers, choral reading out loud and repetition. This traditional teaching form involves the use of mainly deductive reasoning, which may exclude inductive forms that require the learners to think critically and discover concepts or answers for themselves (Anderson et al., 2018). Consequently, Teachers in the NA group may have used more elaboration, explanation and instruction as a form of what Freire (1972) referred to as banking (see 3.7). As an example of this, the following statement was given during the interview with a teacher in the NA group: "... you need to talk and the learners must do. You talk, you show them and they must practice. You talk, you give them the group work and they must do it ..." (T4). While rote learning, although controversial, still forms an important component of modern teaching (The Room 241 Team, 2012; Wilson, 2016), the over-use of these discourse types

would not be beneficial as the use of both deductive and inductive reasoning in teaching (see table 3-1) is more effective for learning than reliance on only one or the other (Anderson *et al.*, 2018).

The NA teachers also scored slightly higher on the request category than the ADD teachers and received, in turn, more responses to their cues from the learners (see figure 5-4). ADDs scored slightly higher in clarification; recasts and emotional responses, whilst much higher than NAs in in code-switching. This may be because two of the teachers in the NA group did not have isiZulu as their home language (and were therefore unlikely to be making use of it in the classroom). An examination of the functions of the code-switching for both groups shows it was used for the following purposes: the ADD group made use of it for explanation; explaining concepts; translating words; communicating with a child who does not have isiZulu as his home language; instruction; correction; discipline; and evaluation questions. In addition, T5 used code-switching to indicate the transition from an isiZulu to an English lesson within the same Grade 3 classroom. Only one of the remaining NAs, T6, made use of code-switching during the observed lessons for translating concepts from English to isiZulu. As the majority of learners in this study had isiZulu as their home language and yet had to learn in English (in S1(E) from Grade R, in S2(Z), from Grade 4 onwards), the use of code-switching could be regarded as facilitative as its judicious use is shown to assist learners to cope with the language barrier (Henning, 2012).

5.5.6 Summary of teacher to learner interaction

All the teachers had a high rate of teacher-talk and much of this took the form of requests for information. However, the NA teachers tend to use mainly evaluation and assessment questions, whereas the ADD teachers are using more comprehension-based, referential and inferential questions. As one NA teacher commented: “... *when you ask them the question ... to find whether they did understand what you are teaching ... questions are very important ... to help the assessment.*” (T4).

It has been established that teacher-talk is beneficial for learning but not sufficient by itself. Large sized classrooms, as are common in South African Government schools, play a role in this (Weaver & Qi, 2005). The categories that indicate major differences in averages are elaboration,

explanation, instruction; code-switching; and the higher rate of requesting from the NAs. I have suggested that the traditional, deductive teaching style of the NAs may be responsible for the increase in their use of the first three categories. If the Instruction and Requesting categories of Part B of the FORT are matched with Part A, Reading Teaching and PCK, where there is a large volume of individual responses, whole class chorusing and repetition, then one may get a fuller picture of what takes place in the classrooms. While it is a positive indicator that the teachers make use of so many differing types of discourse during their teaching with the learners, the lack of reciprocal interaction is likely to be restrictive (Weaver & Qi, 2005).

5.5.7 Summary of graphic data for ADD and NA teachers

This section has sought to explain how the FORT is a nuanced instrument that can capture the *what* and *how* of classroom practice, as well as how can it can be combined with qualitative data from sources such as teacher semi-structured interviews and visual observations to ascertain whether what teachers say they do when they teach is in accordance with their actual classroom practice. The FORT, with its quantitative and qualitative categories, when combined with additional qualitative information, is able to capture what happens in reading teaching at Foundation and Intermediate level, as well as to provide a picture of the how and why.

Ultimately, the teacher plays a central role in literacy acquisition. Learners need more than just cognitive ability to learn to read. They need guidance and explicit teaching from a more knowledgeable guide, mentor or teacher (Tough, 1977b; Vygotsky, 1978; Rose and Martin, 2012; Bernstein, 1990). The attitudes and beliefs that the teacher holds, based on her theories of reading and teaching as well as her prior experience, will underpin her PCK, which consists of her training, content knowledge and her knowledge of how to teach. The FORT data does indicate that teachers who have received additional training in reading teaching are more likely to be more effective at extending learning. However, the lack of learner participation in the classroom is a concern and it appears that additional training is not enough to transform teaching styles that are firmly and rigidly embedded (Pretorius et al., 2016; Nehal, 2013; Mhlongo, 2012). The teachers in this study, including those already with additional training, may benefit from the Coaching model as outlined in the EGRS (Taylor et al., 2017), as it may take continuous exposure to new ideas and methods

of teaching for teachers to be willing to consider using different strategies. This concludes the data for the ADD and NA groups. The next set of graphs presents the data from two participating Grade 3 teachers who provided recorded lessons on both English and isiZulu. T1 was from S1(E) and T5 was from S2(Z). Both of these teachers have isiZulu as their home language. Using the FORT instrument to capture their classroom practice, a comparison was made between their English reading lessons and their isiZulu reading lessons to ascertain if their teaching styles differed in any significant way when they taught in the different languages. The reasoning behind only selecting two teachers for comparison in isiZulu and English was firstly because this investigation did not form a specific research question. Secondly, only two teachers were teaching in both languages, which made further comparisons difficult. Thirdly, the number of isiZulu lessons recorded were few in number as the majority of lessons were taught in English. There was some debate as to whether or not to include the English versus isiZulu teaching data. However, it was ultimately included as an interesting side-line area of research that I believed could lead to further investigation in the future.

5.6 IsiZulu & English data for T1 and T5

The following graphs examine the isiZulu and English lesson data from T1 and T5 to ascertain similarities or differences between their teaching styles in the respective languages. The lessons are averaged so that the value given indicates how many times the event occurred across a five-minute period. T1 provided four lessons for this data, whilst T5 only provided 2. However, as with the previous graphs, this allows a view into possible differences or similarities in the way that these teachers may approach teaching in the two languages. The graphs again consist of parts A and B of the FORT, with the identical categories. An analysis will be provided after each graph, beginning with figure 5-6, Reading Teaching and PCK.

T1: Reading Teaching & PCK - isiZulu & English

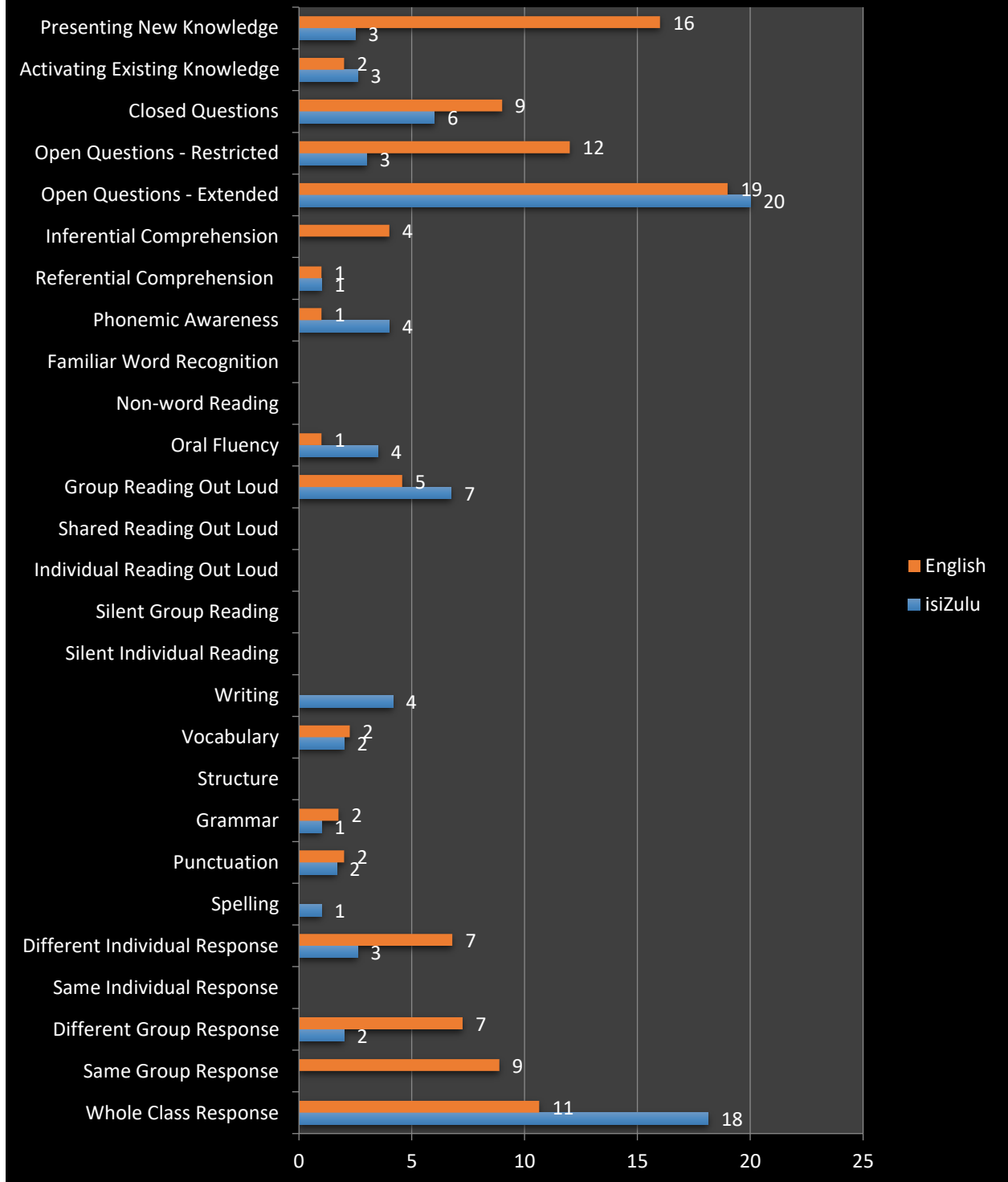


Figure 5-6: T1 Reading teaching & PCK - isiZulu & English

Analysis of figure 5-6

In figure 5-6, T1 was using the R2L cycle for both languages (see figure 3-4). At first glance, the graph shows that she was using similar categories for both, many at a similar average. Writing and Spelling are the exception as she used them only in the isiZulu lessons. Only the categories with noticeable differences will be discussed here.

Firstly, T1 created new knowledge at a much higher average in English. This may be because her isiZulu lessons tended to focus more on phonics – sounds, syllables and pronunciation. Her learners have had English as LoLT since Grade 1 at S1(E). It may be that she felt the need to focus on different aspects in isiZulu as it is First Additional Language for the learners at S1(E). The reading results in isiZulu for this class were quite poor, considering that it is the home language of most of the learners (see Appendix X). This may support the belief that these learners have a deficit in their cognitive academic language proficiency, or CALP (Cummins, 2008). T1 had a higher rate of open questions in her English lessons, although both language types scored a high average, while she focused on inferential comprehension only in English. This may be because T1's lessons consist of different stages of the R2L cycle (see 3.15). For example, in the English lessons, she is using word or information cues to locate referential comprehension, whereas in the isiZulu lessons, her learners are practicing sounds and cutting out syllables from sentence and word strips.

T1's closed questions scored higher in the English lessons, as did her restricted open questions. Inferential comprehension was only used in English while referential comprehension was used at a similar rate for both languages. Again, upon examining the activity of the lessons involved, the isiZulu lessons consisted of finding words and phrases in sentence strips, cutting them out and then breaking the words into syllables and practicing pronunciation, whereas the English lessons consisted of comprehension and sustained reading. In line with this, T1's phonemic awareness and oral fluency scored higher in isiZulu than in English. She has higher learner response average in English - different individual; different group and same group response – which may indicate that more group work occurred in the English lessons. The whole-class responses score considerably higher in isiZulu. This is likely as a result of learners collectively pronouncing words and syllables that T1 was holding up via flashcards.

In summary, T1 indicated a similar style of teaching for both languages on the FORT. This would be in line with her continued use of R2L for both language lessons. Any larger differences between categories are likely as a result of the different activities and tasks T1's learners are performing. Although these tasks form part of the same R2L cycle, they consist of different stages of that cycle (see 3.12). What may be important is the greater focus on phonemics and oral fluency in her isiZulu lessons, as the learners may have difficulties in this area with English as LoLT. Figure 5-7 below provides data for English and isiZulu lessons of T5.

T5: Reading Teaching & PCK - isiZulu & English

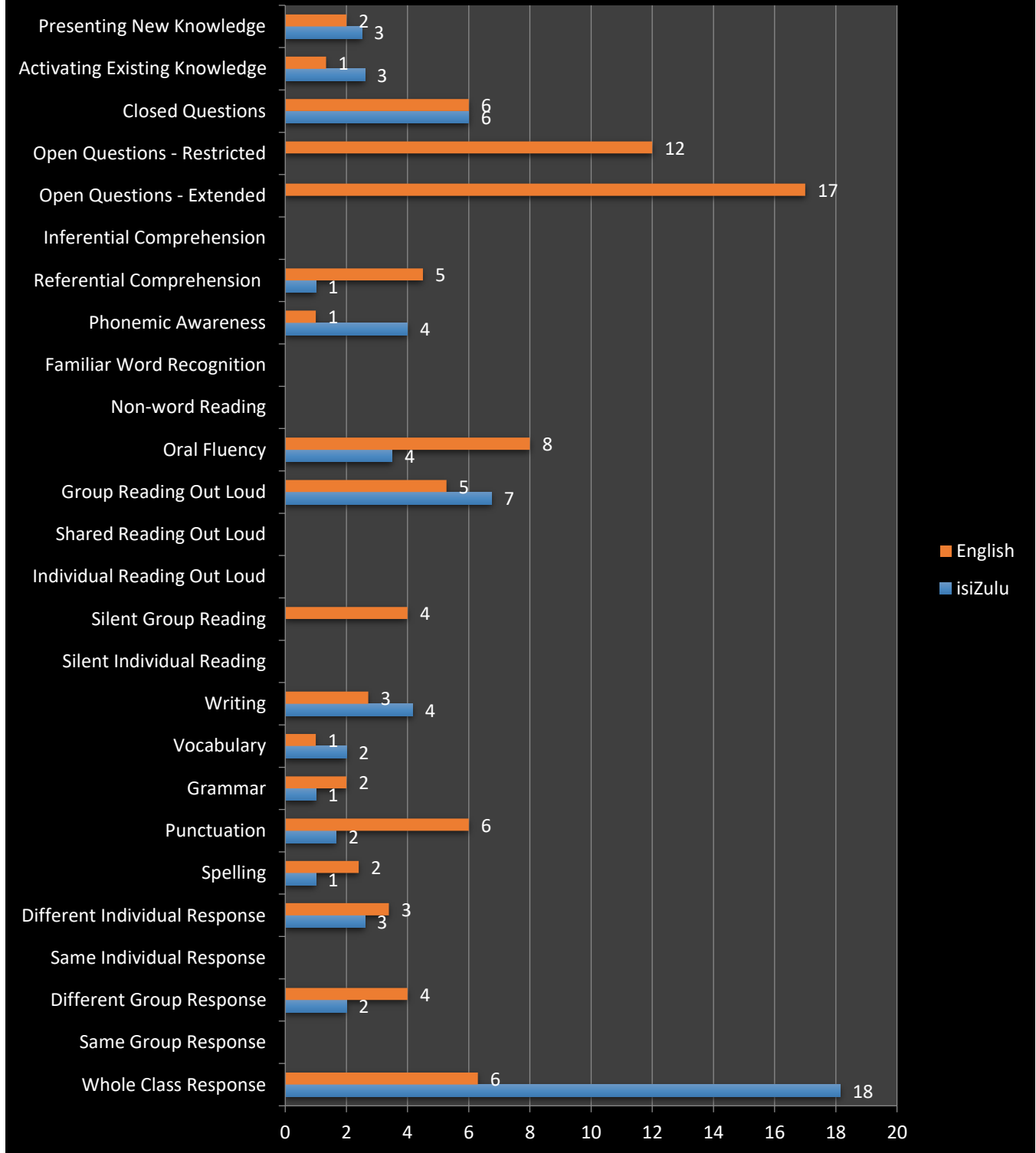


Figure 5-7: T5 Reading teaching & PCK - isiZulu & English

Analysis of figure 5-7

The content of the isiZulu lessons for T5 were quite different from those of her English lessons, which consist of the R2L scaffolding cycle. This is because the isiZulu lessons involved a sustained reading fluency exercise and a largely learner-led concert, where the learners put on a song and dance show for the class. The learners selected their own items to present. The purpose of this concert was to assist the learners with a particular story in the CAPS workbook.

T5 made use of restricted and extended open questions only in her English lessons and her referential comprehension average was higher for that language as well. As with T1, her phonemic awareness scored higher in isiZulu as she concentrated on pronunciation. She focused on oral fluency for both languages, although her English average score was higher. This may be because her learners have their home language, isiZulu as LoLT only up until the end of Grade 3 and she recognised that they need specific help with English language reading. She allowed for silent individual reading in English only (whilst the first isiZulu lessons were whole-class reading exercises) and concentrated on spelling and punctuation slightly more in English. Generally, T5 integrated language learning into reading teaching in both languages. Her response types from the learners were very similar. However, like T1, the collective chorusing of the learners (MacDonald, 2002) scored much higher in isiZulu than in English.

In sum, the difference in the type of activities T5 is engaged in during the English and isiZulu lessons may make it difficult to compare the differences or similarities in her teaching style. For example, her English lesson consisted of reading and referential comprehension to help learners to read a text, while her isiZulu lessons consisted of mainly an oral fluency exercise and learners staging a concert. She had a higher score for phonemic awareness in isiZulu but her oral fluency average was higher in English. The learners must switch to English as LoLT in Grade 4, so it is necessary that the teacher prepare them as much as possible for this change-over. As with T1, T5 integrated language learning with reading teaching in both languages. Interestingly, as with T1, there was a much higher score for choral responses in isiZulu than in English. The reason for this may simply be continuation of the largely teacher-led lesson style evident throughout the study. However, it could also be as a result of the concept underlying the R2L approach used by both teachers that believes whole class responses can help weaker learners to feel more confident in

participating as they do not have to stand out and risk making errors. In other words it may be the result of affective factors (Rose, 2010). Figures 16 and 17 below indicate Management for T1 and T5. Part A of the FORT is presented in two parts, the second of which is Management. Management contains categories that represent how the teacher maintains control of her classroom. The data for figures 5-8 and 5-9 below indicate the management style in both English and isiZulu lessons for T1 and T5 respectively.

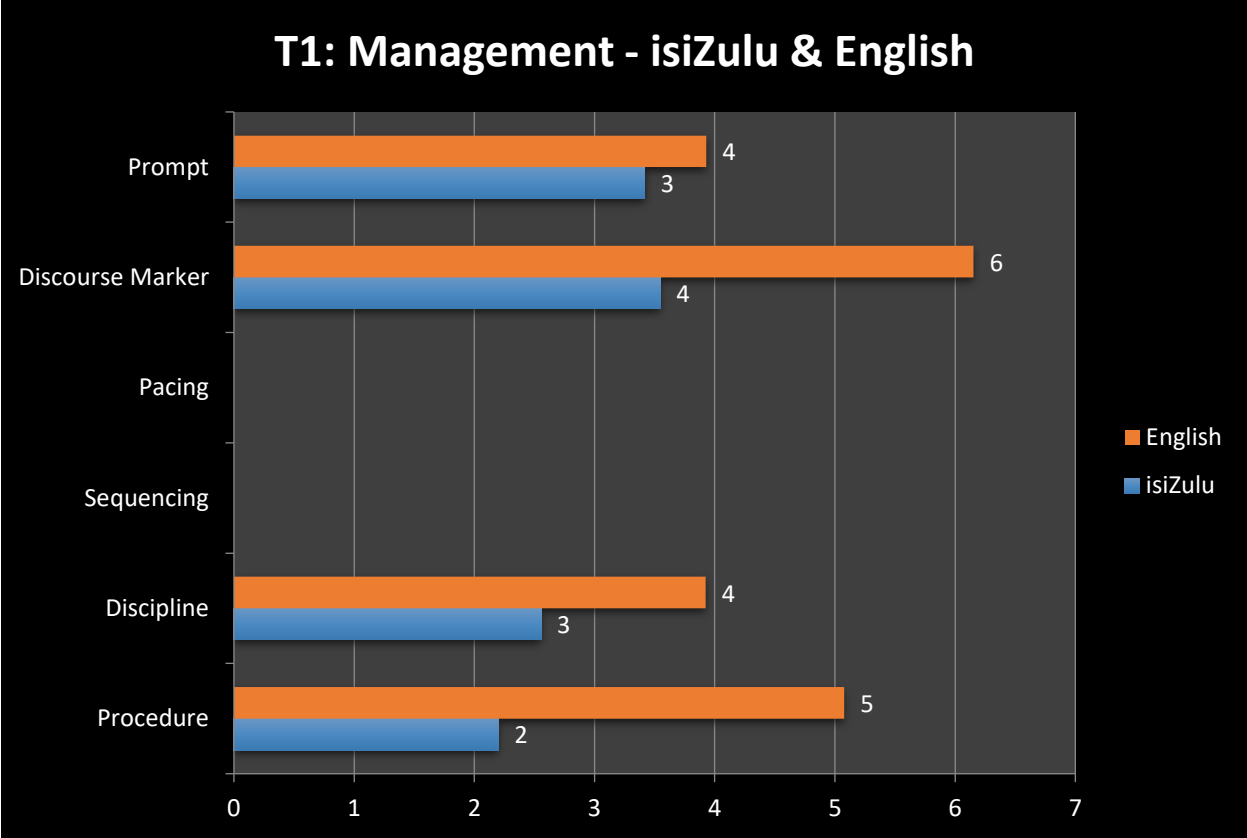


Figure 5-8: T1 Management - isiZulu & English

Analysis of figure 5-8

The LoLT for S1(E) is English. A comparison of the management style of T1 across languages indicates a very similar approach to both. Her sequencing and pacing was not overtly captured but, as mentioned, relaxing of these boundaries to cater for weaker learners is part of the R2L scaffolding cycle that T1 uses. Procedure scored higher for English. By procedure is mean handing out of forms, worksheets, sentence strips, as well as taking registers and so forth. Where Procedure is higher, it may indicate that slightly greater activity was taking place in the classroom during the recorded lessons. Figure 5-9 below indicates Management for T5 in isiZulu and English.

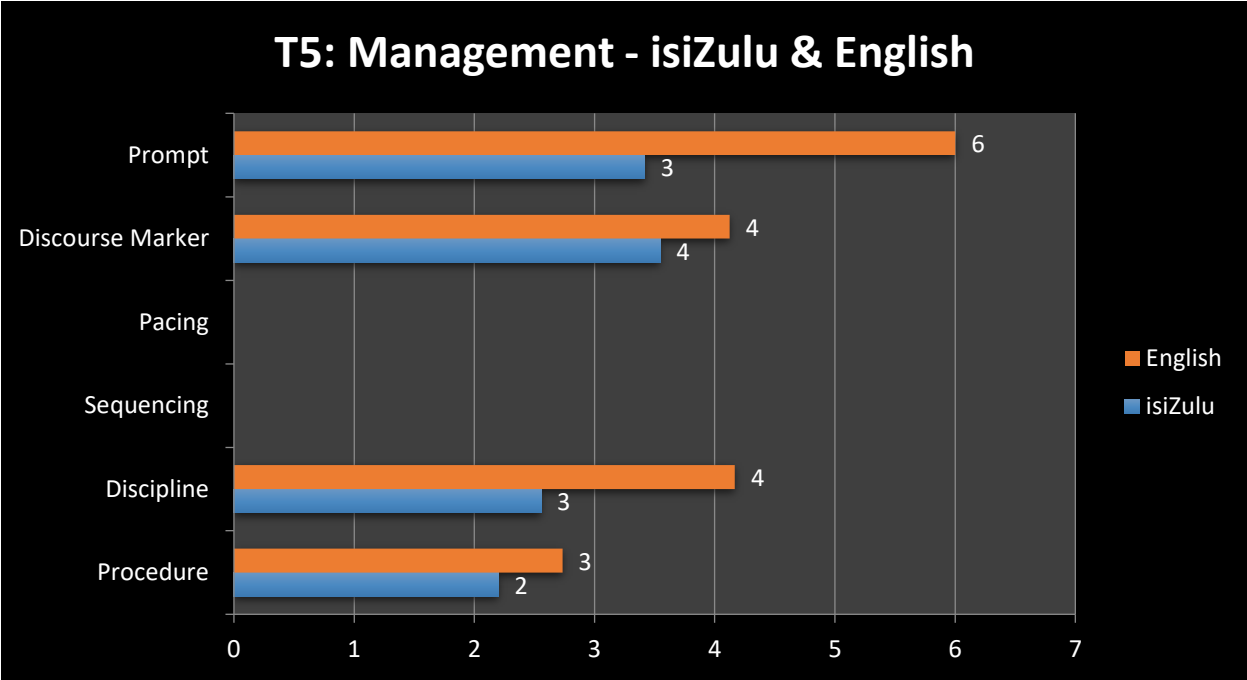


Figure 5-9: T5 Management - isiZulu & English

Analysis of figure 5-9

The results for T5 shown in figure 5-9 are very similar to those of T1 as T5 followed a similar management style pattern for teaching in both languages. Her prompting scored higher for English but this could be a result either of the activity at hand, or even the mood of a particular class on the given day. For example, her discipline for English also scored slightly higher. As with T1, the sequencing and pacing was not overt but T5 utilises the R2L approach. Keeping in mind that the isiZulu lessons consisted of sustained, whole class reading and a variety concert by the learners, one would not necessarily expect to see a focus on relaxing boundaries of pace and curriculum. Figures 5-10 and 5-11 below indicate Learner to Teacher interaction for T1 and T5.

T1: Student to Teacher Interaction - isiZulu & English

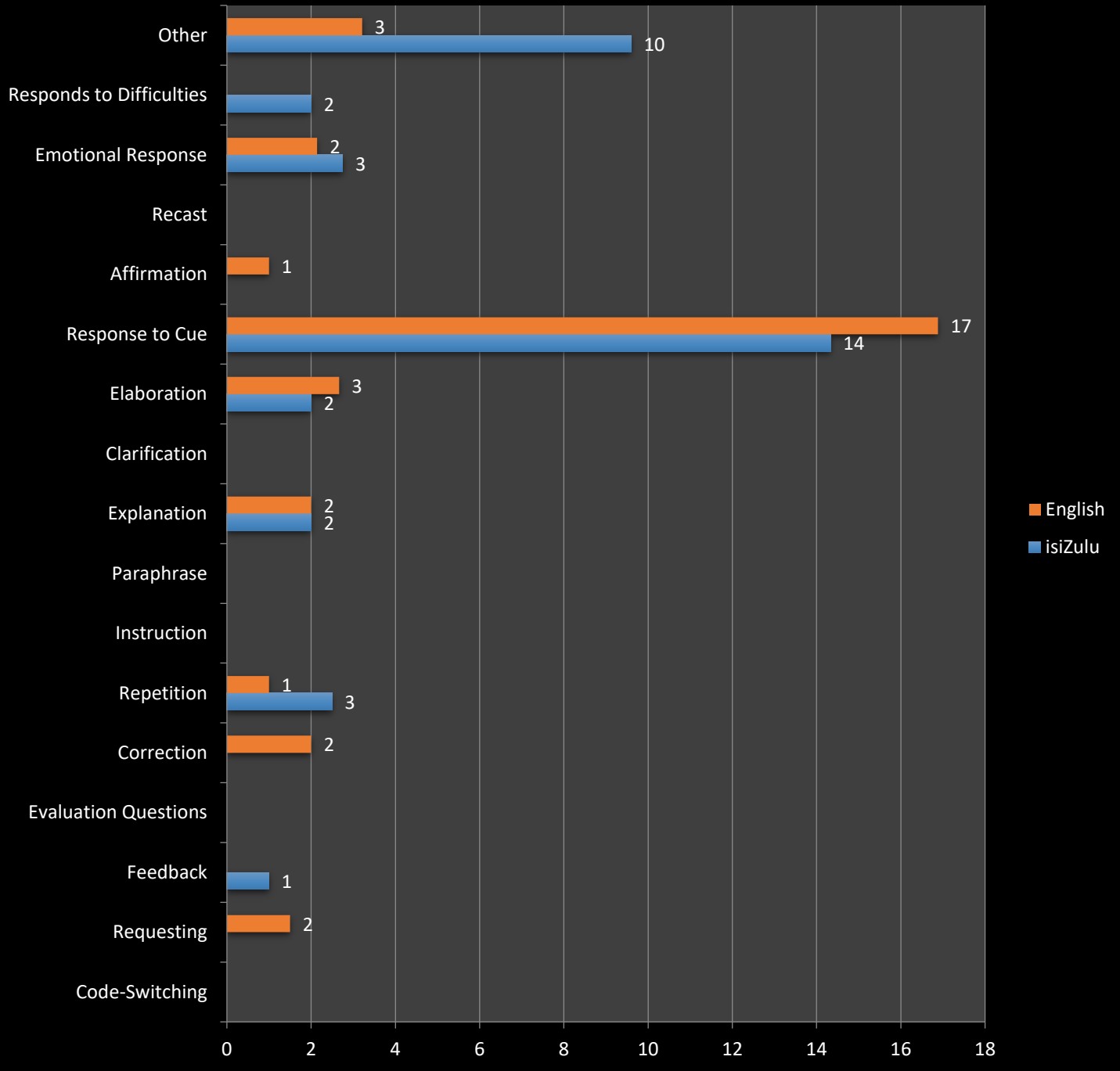


Figure 5-10: T1 Learner to teacher interaction - isiZulu & English

Analysis of figure 5-10

Figure 5-10 for T1 above shows that the learners covered most of the same categories for English and isiZulu, with the exception of correcting, requesting and affirmation towards their teacher. Feedback and responding to (teacher's) difficulties are only found in isiZulu. While learners' responses to cue were similar in English (17) and isiZulu (14), the average for Other scored considerably higher in the isiZulu lessons. This may indicate greater engagement on the part of the learners as 'other' accounts for bodily movements (e.g. pretending to be an aeroplane or a wild animal) and other physical expressions such as raising hands and moving around the classroom. The learners did not code-switch in either language. Throughout this study, code-switching seemed to occur much more from teacher to learner than vice-versa. Figure 5-11 below indicates learner to teacher interaction.

T5: Student to Teacher Interaction - isiZulu & English

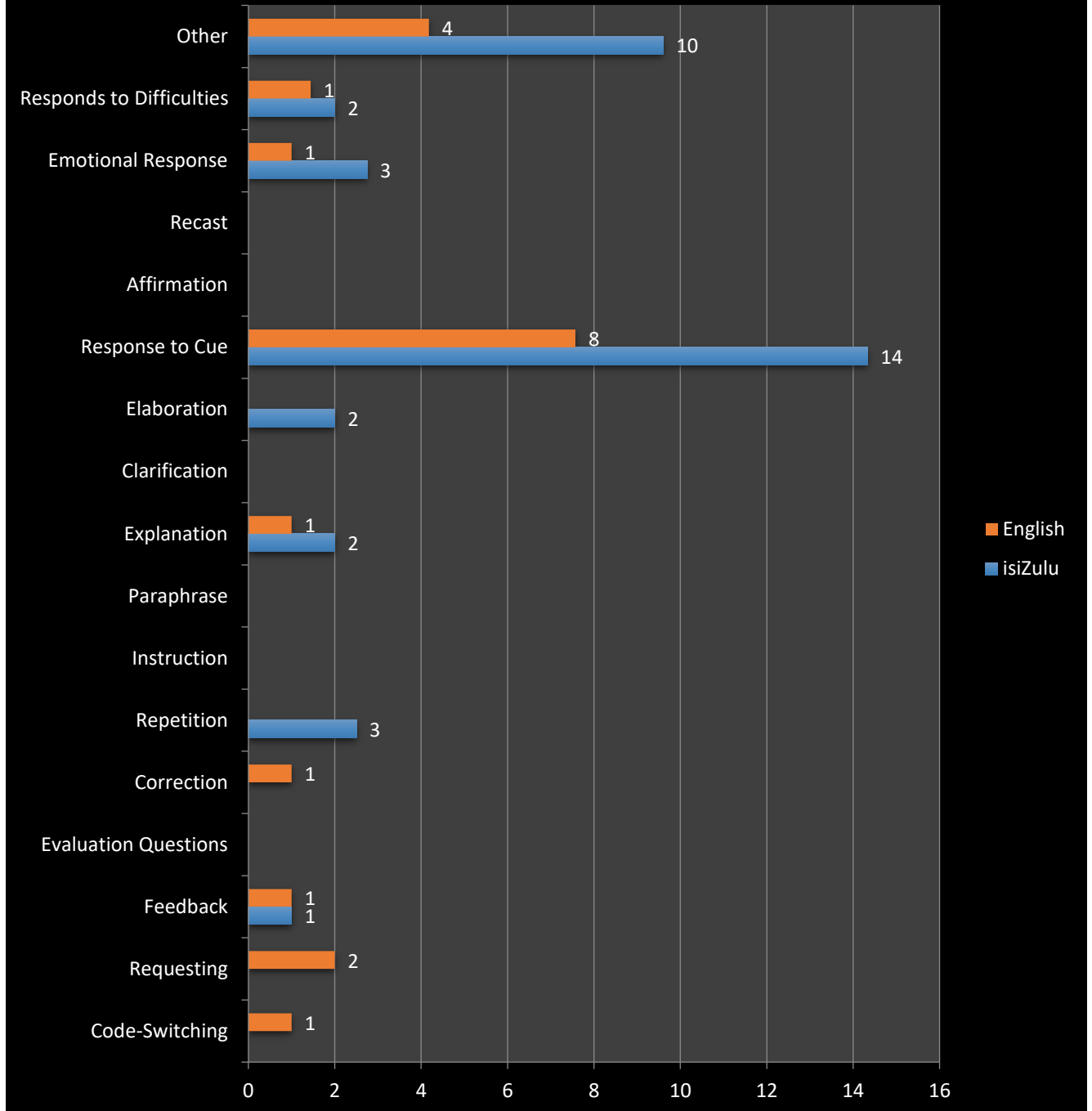


Figure 5-11: T5 Learner to teacher interaction - isiZulu & English

Analysis of figure 5-11

As with the English lessons, figure 5-11 for T5 above indicates that the isiZulu learner responses to the teacher were quite limited. The categories of elaborating and repetition were only used by learner to teacher for isiZulu, whilst correction, requesting and code-switching were only from learner to teacher in English. All these averages scored relatively low, however. Other scored a much higher average for isiZulu but this is likely as a result of the concert, which involved a lot of physical movement on the part of the learners. This might also account for why the emotional responses scored slightly higher for the isiZulu lessons because the learners were very engaged in the performance. Response to Cue scored a high average for both languages but considerably higher for isiZulu. This may have been as a result of both the support T5 gave to the learners during their sustained reading and their responses to her comments during the concert. Both learner to teacher data sets, for T1 and T5, showed that the majority of the lessons were teacher led, in isiZulu as well as in English, with the exception of the concert which the learners largely created themselves. Teacher to Learner interaction follows for T1 and T5 in figure 5-12 below.

T1: Teacher to Student Interaction - isiZulu & English

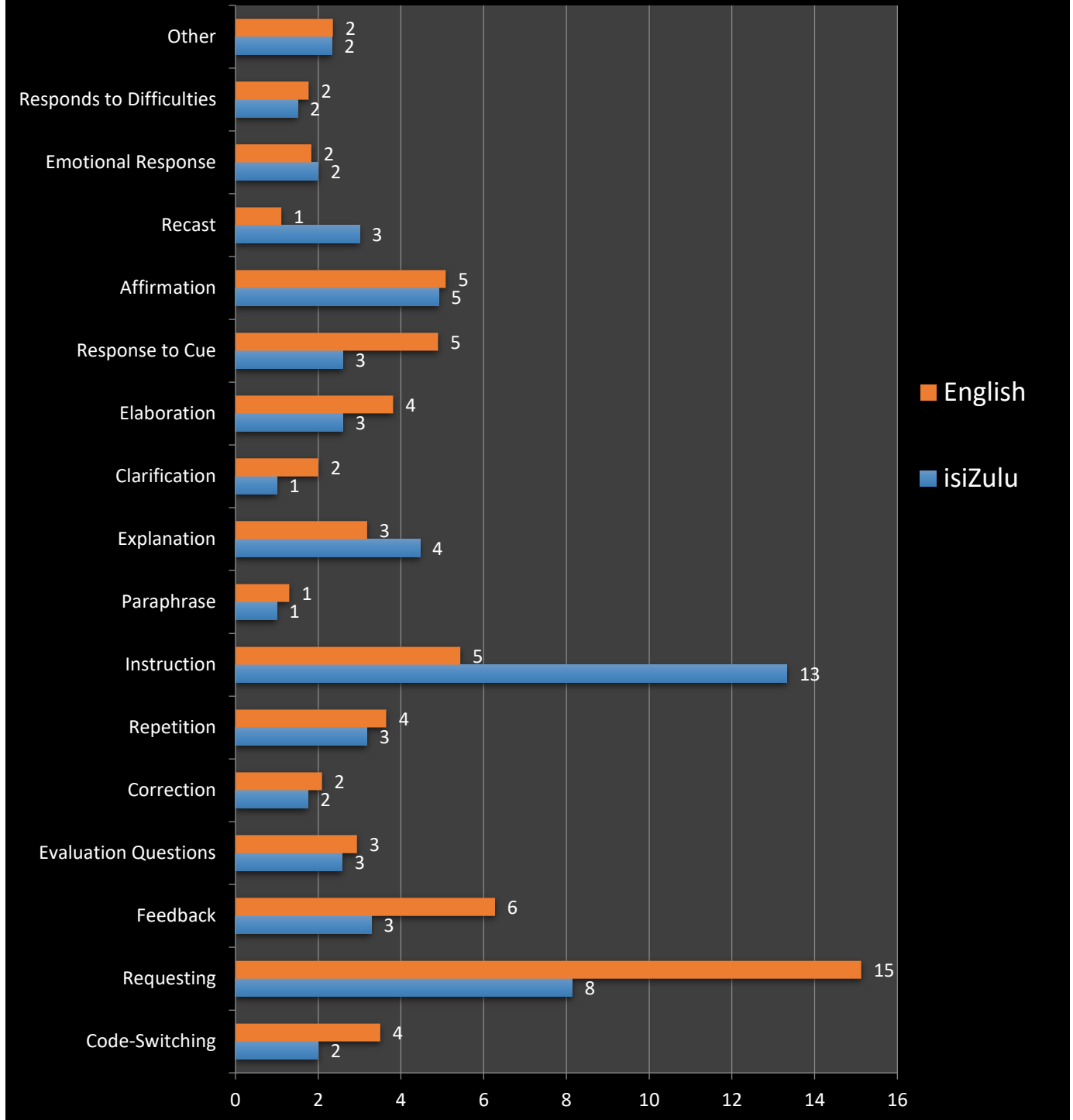


Figure 5-12: T1 Teacher to learner interaction - isiZulu & English

Analysis of figure 5-12

In figure 5-12 above, for T1, there was a large average of teacher to learner talk. T1 covered all categories, the majority at similar averages, for both languages. The differences were Instruction, which scored a much higher average for isiZulu; and Requesting, which was high for both languages but much higher in English. The reason for the higher average of isiZulu instruction may be a result of the activity that involved learners locating words and phrases and cutting them out of sentence strips. Such activity would necessitate a greater amount of instruction from the teacher, for example, when and what to cut out. The higher score for requesting is possibly as a result of the fact that the English lessons consisted of sustained reading and comprehension. This would likely result in the higher rate of feedback from teacher to the learners, indicated on figure 5-12. So again, one must look to the qualitative parts of the FORT, activity and materials as well as the quantitative data to gain a deeper picture of classroom practice. T1 used code-switching slightly more in English, mainly to translate words from isiZulu into English for the learners. Figure 5-13 below provides data for Teacher to Learner Interaction for T5.

T5: Teacher to Student Interaction - isiZulu & English

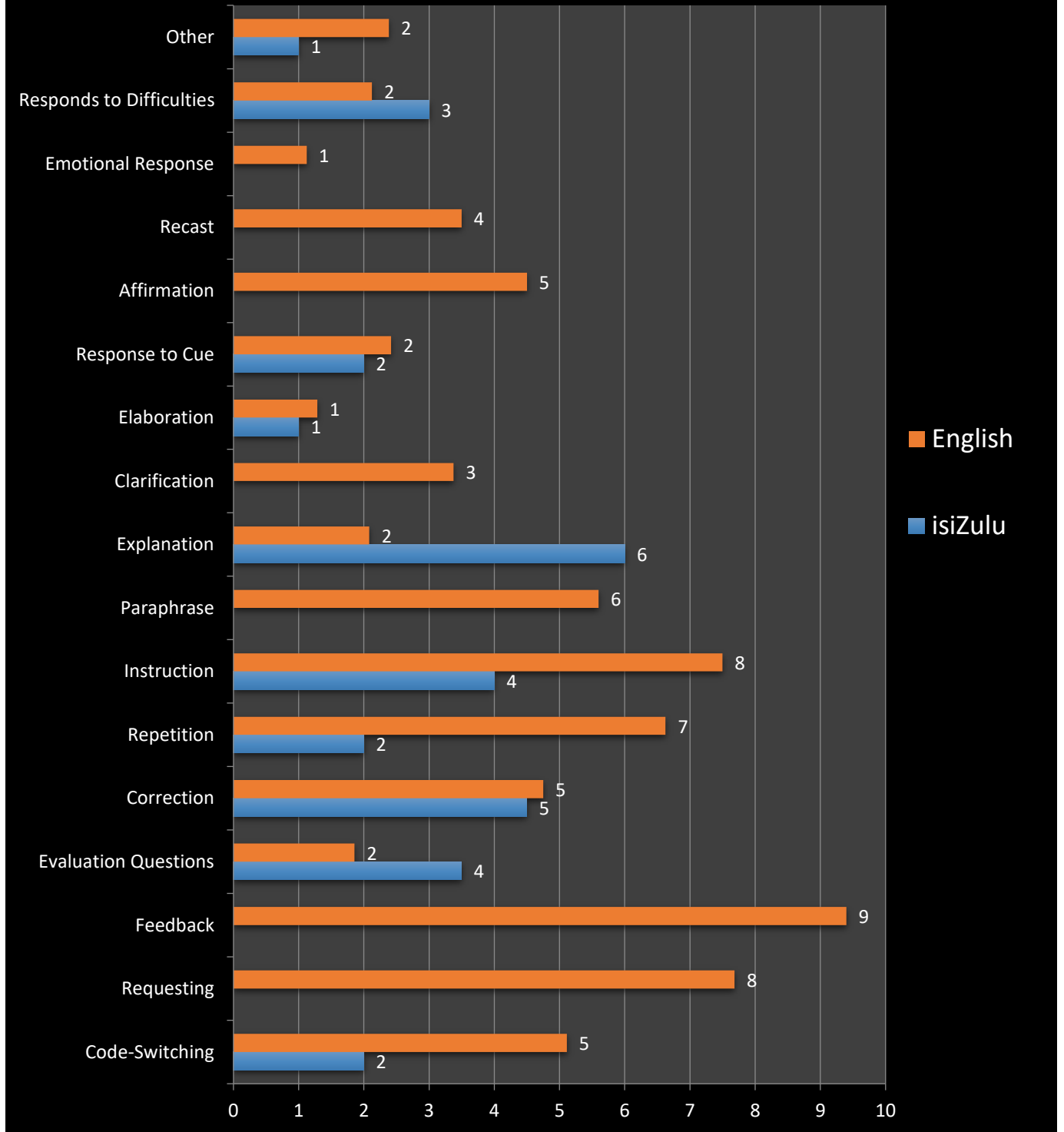


Figure 5-13: T5 Teacher to learner interaction - isiZulu & English

Analysis of figure 5-13

Figure 5-13 above indicates that T5 used only 10 categories in her isiZulu lessons compared to 17 in English. Emotional responses from the teacher, recasts, affirmation, clarification, paraphrase, feedback and requesting were used only in her English lessons. The activities in the isiZulu lesson did not involve much requesting as T5 was using sustained reading as well as prompting to encourage the learners to read further, so thus made fewer requests. Her requests in the concerts took the form of instruction as she called the different learner groups up to perform. Explanation scores higher in isiZulu than in English, while T5's instruction is much higher in English because of the increased number of tasks that learners had to perform. Repetition scored higher in English, possibly as a result of repeated instruction for clarity. Code-Switching also scored higher in English. This is likely because these are isiZulu LoLT learners and they thus need greater support in English language learning. T5 therefore uses code-switching to translate concepts and words into isiZulu to aid learner understanding.

While the English lessons for T5 are worked around a scaffolded teaching cycle, the concert can be viewed as a form of activating existing knowledge (or presenting new knowledge) to support an existing CAPS lesson. Thus, her English lessons and isiZulu lessons reflect quite different teaching strategies. The strategies may indicate the varied choices that T5 uses in her teaching, or her palette that she chooses from in a principled way. As such, they form part of her PCK (Gambrell *et al.*, 2011). The next section contains a presentation of individual teachers' profiles, FORT data, and lesson transcripts.

5.7 Teacher Profiles

The teachers' profiles consist of a brief background on each participating teacher, each one of whom forms a case study. The background will include the qualifications, years of experience and number of video-recorded lessons provided by each teacher. It should be said at this point that several participating teachers openly described their feelings of low morale, when asked if they felt their initial teacher training had been sufficient and also if they felt their own teaching was as effective as it could be. Two examples of these are provided here:

“No. It failed everywhere; the realities are different – cultural issues, each child is very different. These learners at this school are still learning to write, not even reading yet. About half the learners in the class have been transferred from other schools during the year. They come mainly from isiZulu schools. Challenges include discipline issues; very weak students; you have to spoon feed them because they are so weak. The class has mixed abilities and you have to cater for everyone. The stronger kids get bored while you try to help the weaker ones.” (T4).

“I believe they (her teaching methods) are affective and that it makes a difference with some, the clever ones. Others one is not able to reach ... (T2). “I feel demoralized. I often feel that I am not achieving what I am able to achieve, they seem to understand but when the time comes for them to write you see that they don’t get it. We will discuss it and explain but when they have to write on their own, they can’t.” (T7).

The background and video-recorded lessons will be followed by the FORT data in the form of graphs, containing their individual averages for the categories. As with the previous set of graphs, these are grouped into the additionally and non-additionally trained teachers or ADDs (T1, T5, T7 & T8) and NAs (T2, T3, T4 & T6). Furthermore, the FORT data is followed by a short transcript for each teacher in the relevant group, i.e. ADD or NA. The transcripts consist of one segment taken from one lesson of each participating teacher. Teachers T1 and T5, who provided both English and isiZulu reading lessons, have two transcripts each – one in each language. The transcripts were included to provide an example of how the FORT data was collected and analysed. In addition, during the observations of the classroom lessons, I ascertained the level of engagement of the learners in the particular lesson, on the assumption that an engaged learner is more likely to be learning (Johns et al., 2017). The analysis was also subject to inter-rater reliability. The following criteria were used for observing the two-minute video segments for each teacher to determine the level of learner engagement with the lesson.

- the body language of the learners. For example, were they yawning or hunched over their desks, or were they sitting up and alert?
- their level of attention to the teacher. Was the gaze of the learner elsewhere, looking up at the ceiling or at the classroom walls?
- their physical engagement. For example, were they raising their hands or performing physical actions, or were they opening books and finding answers?

- their emotional reactions, if any. For example, were the learners laughing or making funny faces in response to the teacher's comments or questions?
- whether they were reading. Were their eyes focused on the words or sentences and were they following the words with their fingers?

Each transcript begins with an explanation of the lesson activity, followed by the transcript and translation into English (if the lesson was in isiZulu) in the left-hand column. This contains the interactions from both teacher and learners. In the right-hand column, the purpose or function of the discourse is provided in italics. There are times when a particular discourse event can serve more than one function. For example, a repetition from the teacher to learner could also serve as a discipline, depending on the tone the teacher used. In these cases, there is more than one function written in the left-hand column. All names used in the transcripts are pseudonyms. The profiles begin with the ADD teachers.

5.7.1 Additionally trained teachers

a. Case study 1: T1 S1(E)/3 – class teacher

T1 is a Grade 3 teacher, teaching all subjects. She has been teaching for 17 years. Her home language is isiZulu and she has a total of 36 learners in her class, aged between 8-10 years. T1 had a total of 5 recorded English lessons and four recorded isiZulu reading lessons. T1 makes use of the R2L approach in her reading teaching.

b. Case Study 2: T5 S2(Z)/3 – class teacher

T5 has been teaching for some 17 years and teaches Grade 3, all subjects. Lessons were recorded in both her English (4 lessons) and her isiZulu teaching (2 lessons). She has a Diploma from Eshowe College, HDE plus 3. She has 45 students in her classroom aged between 8-10 years old. Her mother-tongue is isiZulu. Her recorded isiZulu lessons are limited to two but still provide an interesting glimpse into the style of her English versus isiZulu reading teaching. T5 is R2L trained and actively makes use of the approach in both teaching both languages.

c. Case Study 3: T7 S1(E)/3 - isiZulu Teacher

This teacher is the Grade 3 isiZulu teacher at School 1. She has 38 learners in her class aged between 9-10. She has 22 years of experience and trained at Mbombulo College, Durban. Her mother-tongue is isiZulu. This teacher completed the READ training course in 2001, based on the Balanced Approach (see 3.16).

d. Case Study 4: T8 S2/4 - isiZulu Teacher

It is unfortunate that there is only one isiZulu lesson for T8. This was included although it was not originally intended for the study. However, I happened to be recording in a classroom where the regular timetable had changed and T8 was willing for me to record her isiZulu lesson for that day. This teacher is also Head of Department for Intermediate Grade level at S2(Z). This teacher is R2L trained and uses it in her classroom. A set of four graphs, figures 5-14 to 5-17, is provided below containing the individual FORT data of the four ADD teachers.

Additionally Trained Teachers: Reading Teaching & PCK

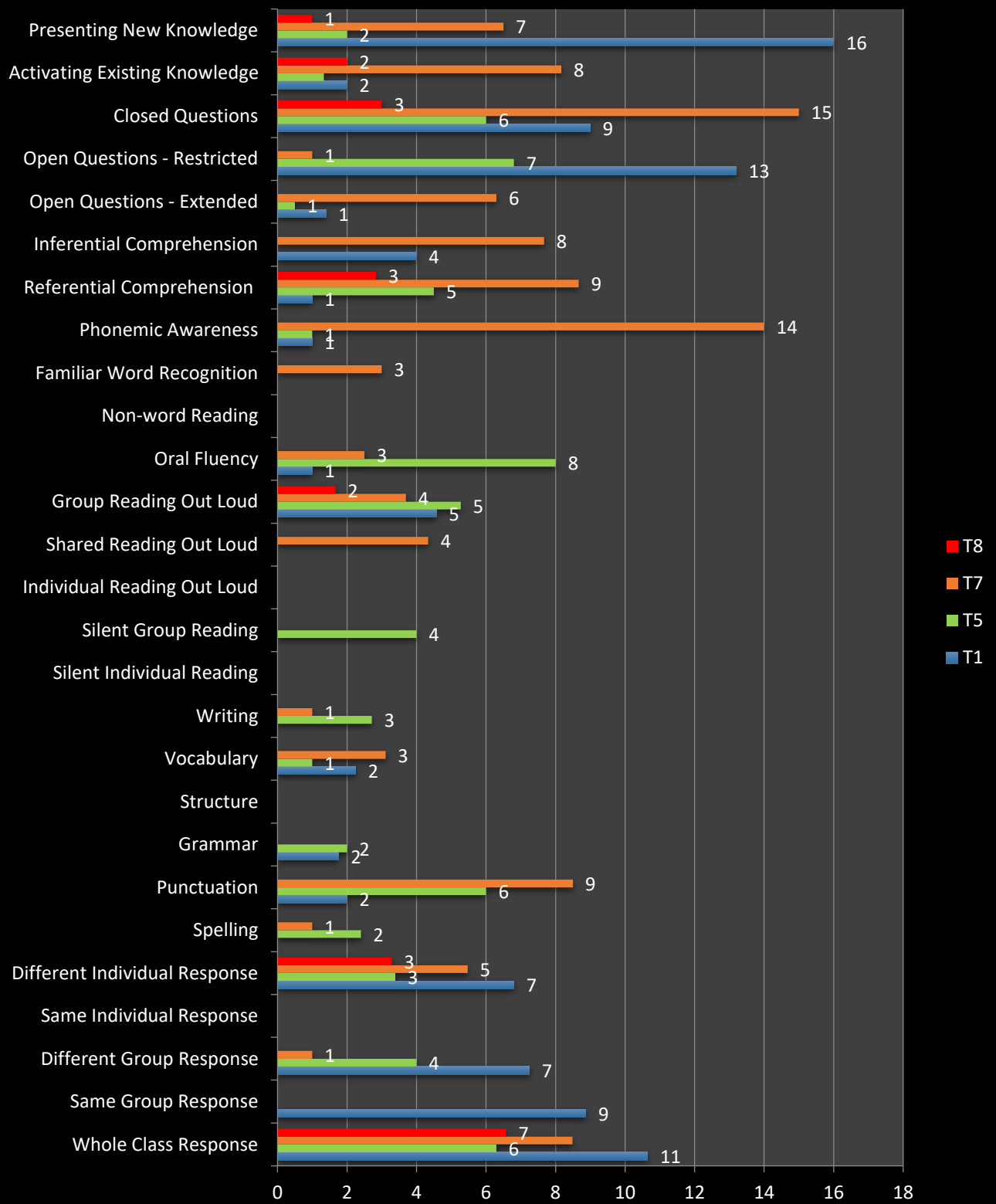


Figure 5-14: Individual data for additionally trained teachers - reading teaching & PCK

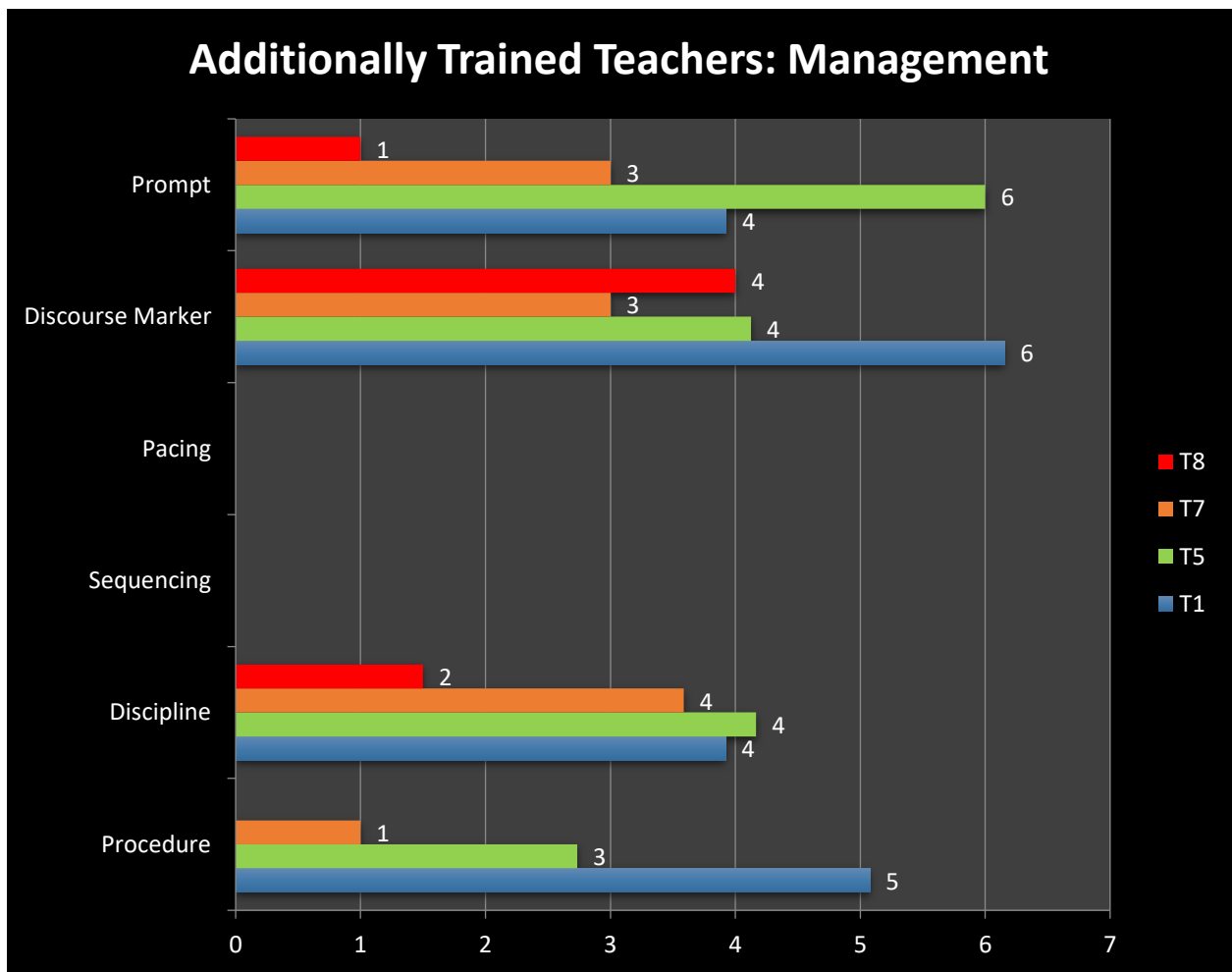


Figure 5-15: Individual data for additionally trained teachers - Management

Additionally Trained Teachers: Learner to Teacher Interaction

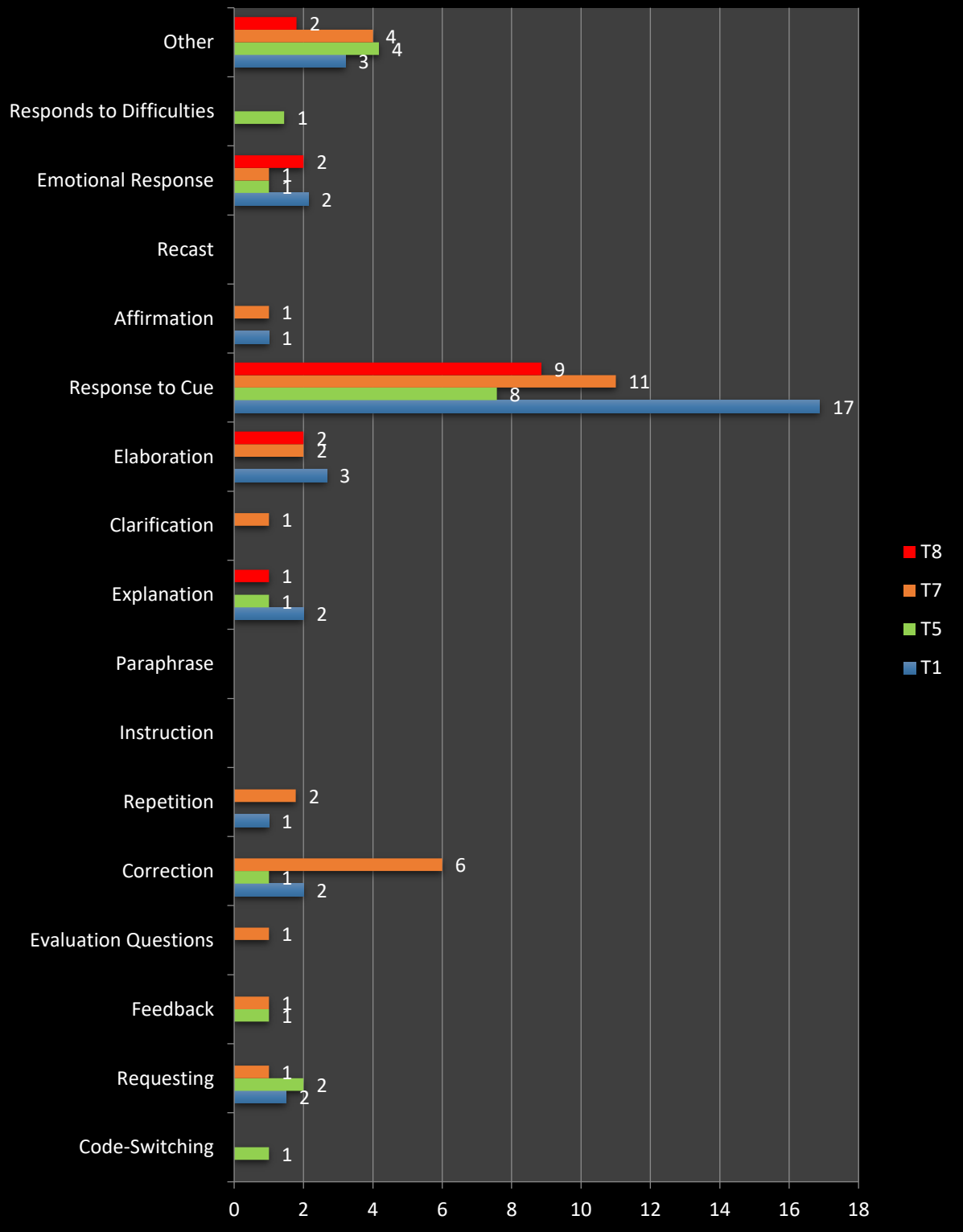


Figure 5-16: Individual data for additionally trained teachers - Learner to teacher interaction

Additionally Trained Teachers: Teacher to Learner Interaction

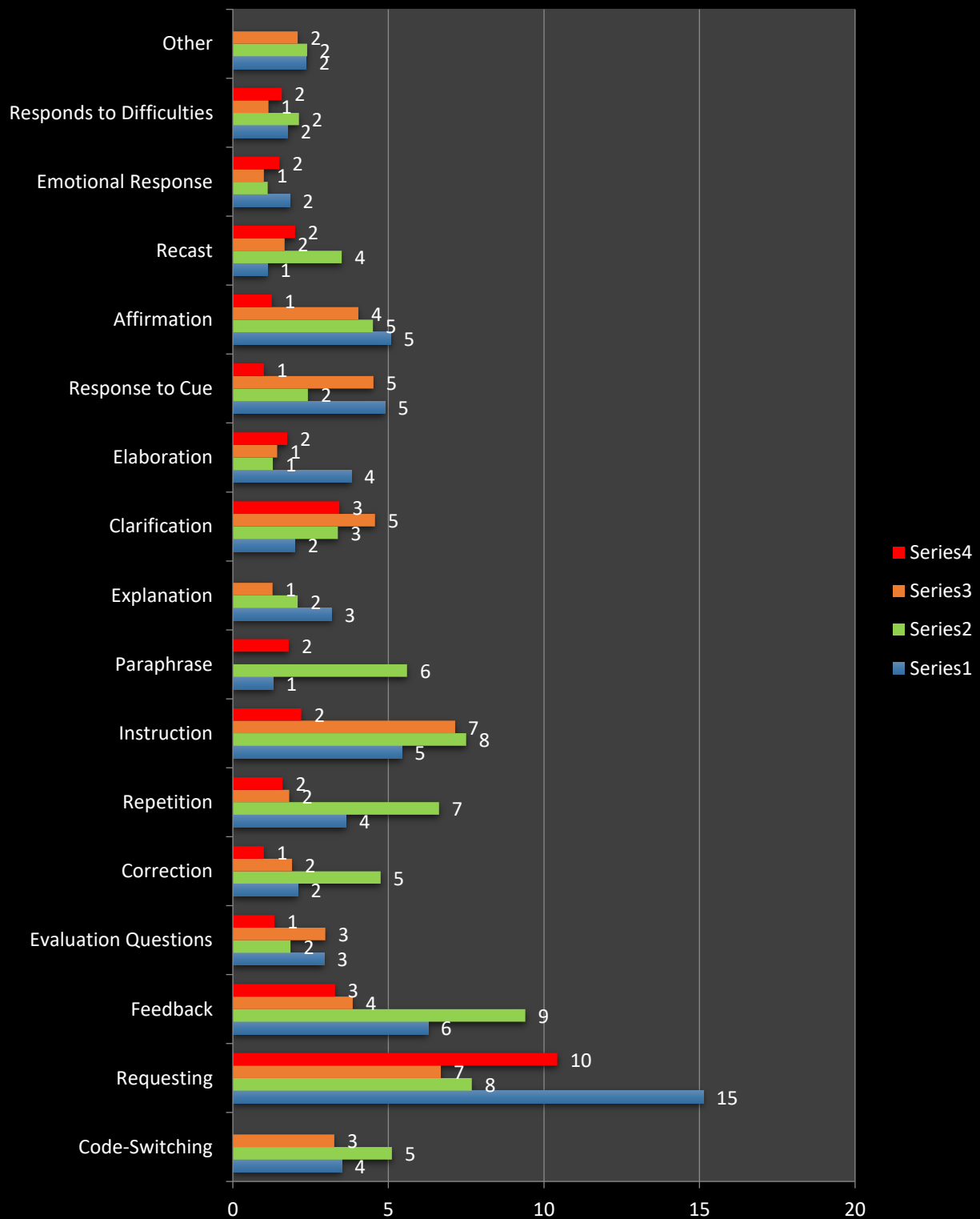


Figure 5-17: Individual data for additionally trained teachers - Teacher to learner interaction

5.7.2 Transcripts for additionally trained teachers

The transcripts for the ADD teachers are provided and analysed below to see how they reflect the FORT data. An overview and aim of the original lesson the transcript originates from is provided first, followed by the transcript and an analysis.

a. T1 S1(E)/3 – English lesson

The purpose of the lesson which the transcription is taken from was to teach punctuation as well as the CAPS requirements for parts of speech, such as nouns and verbs. The teacher began by writing the following sentence on the board without commas, so that the learners could ADD them: “*Mother bought carrots apples bananas and cabbage*”. The learners first read the sentence together as a whole class from the board.

Discourse	Purpose/Function
Teacher: Last one!	<i>Discourse marker; instruction</i>
Learners: Cabbage.	<i>Learners read.</i>
Teacher: Cabbage.	<i>Feedback; repetition</i>
<i>[She indicates that the last noun will be in the singular form.]</i>	
Teacher: Hhayi, let’s buy just one cabbage! Who buys one cabbage, who likes cabbage?	<i>Open question - extended</i>
<i>[Ten of the visible learners raise their hands.]</i>	
Teacher: Cabbage, Eh! ((Pulls a face)). Let mama buy one cabbage.	<i>Emotional response; grammar</i>
<i>[All the learners laugh. The teacher asks a learner.]</i>	
Teacher: You like cabbage?	<i>Closed/evaluation question</i>
Learner: Yes.	<i>Learner responds</i>
Learners: Me too, me too!	<i>Learners respond</i>
Teacher: Thina likes cabbage.	<i>Feedback</i>
Teacher: I like it as a salad, not ((unintelligible)) with phutu.	<i>Feedback</i>

Learners: ... Phutu ... with phutu; phutu, its healthy with phutu. *Learners call out various answers*

[More learners' hands go up.]

Teacher: Where, ah? *Open question - extended*

Teacher: I had cabbages in my garden, nai, yeh, yeh!

I had a lot when I was growing up. *Elaborates*

Analysis

The transcript, even though brief, gives a glimpse of the large variation of categories T1 uses and contains some inferential questions, which are important for leading learners to comprehension. The FORT data indicates that she also focuses on both referential and inferential comprehension, closed questions as well as restricted and extended questions (see figure 5-14). The learners also provide some elaborations to T1 in the transcript. However, the FORT data indicates that the majority of responses from learners to the teacher are in responses to T1's cues or requests (see figure 5-15) and the lessons remain largely teacher-led. The transcript also indicates how T1 integrates language elements such as punctuation and grammar, i.e. 'cabbage' is written in singular form to teach plural versus singular noun forms (see figure 5-14). There is a relatively high level of engagement in the lesson, which is seen from the emotional responses from the learners. For example, they laugh, call out various answers and raise their hands enthusiastically in response to T1's questions. The next transcript is from an isiZulu lesson for T1. The analyses for the isiZulu lesson transcripts, for both T1 and T5, refer to Figures 14 to 21 which contain the data for their recorded isiZulu lessons.

b. T1 S1(E)/3 – isiZulu lesson

The focus of this isiZulu reading lesson from T1 is to teach learners isiZulu vocabulary, correct pronunciation and syllables. She is also teaching word and sound recognition by having the learners find the correct sound and/or form on the sentence strips and cut them out. Once all the words, sounds and phrases have been cut out of the sentence, the learners will scramble them up on their desks and restructure the original sentence.

Discourse

Purpose/Function

Teacher: Thando uthi “Mama beka lezimpahla zami zonke.” [Thando says “Mother, put my clothes away.”]	<i>Reads</i>
Teacher: Uthi sezinjani, Zolile? Sezincane. [He says it how, Zolile? Softly?]	<i>Open question - restricted</i>
Learners: No	<i>Learners respond; code-switch;</i>
Teachers: Ngiyaphila? [Am I correct?]	<i>Evaluation question</i>
Learners: No.	<i>Learners respond; code switch</i>
Teacher: Zinhle? [Teacher chooses a learner.]	<i>Addresses individual learner</i>
Learners: Cha [No.]	<i>Learners respond</i>
Teacher: Uthi sezinjani? [He says it how?]	<i>Open question - restricted</i>
Teacher: Sonke [All of you]	<i>Instruction</i>
Learners: Sezincane [Softly]	<i>Learners respond</i>
Teacher: Sezinjani? [How?]	<i>Open question – restricted</i>
Learners: Sezincane [Softly]	<i>Learners respond; phonemics</i>
Teacher: Ngamanje amazwi uthi sezinjani? Kodwa manje ... Sezincane. [Now he says the words how? Right now, softly.]	<i>Open question – restricted; repetition; phonemics</i>
Learners: Sezincane. [Softly]	<i>Learners respond; repetition; phonemics</i>

Teacher: Izini?

Open question - extended

[What are these?]

Learners: Izimpahla.

Learners respond

Analysis

The analysis for T1's isiZulu transcript refers to Figures 14, 16, 18 and 20. There is a fair amount of repetition in her transcript as T1 asks the learners to repeat the word several times. She encourages them to pronounce it correctly by modelling the sound and syllables. S1(E) is an English LoLT school, although most learners have isiZulu as their mother-tongue. The learners respond to T1 with mainly choral responses. In addition, in the transcript, T1 focuses on phonemics and oral fluency and integrates language elements into her reading teaching, as per her FORT data (see figure 5-6). The transcript shows her use of restricted questions, which occur at a medium average in her data but only one extended open question. Her extended questions, however, are not text-based as T1 does not show use of inferential questions in her data. She does, however, show the use of referential questions (see figure 5-6). The learner to teacher interaction shows emotional responses, while Other scores highly. Both these are indicators of a higher level of learner engagement and are confirmed by the FORT data. Nonetheless, the highest score from learner to teacher interaction is response to T1's cues (see figure 5-10). T1 has a varied use of categories in teacher to learner interaction but the highest averages are for instruction and requesting (see figure 5-12). The learners appear to be engaged in this lesson as their heads are down and they use their fingers to follow and locate the correct words as they read.

c. T5 S2(Z)/3 – isiZulu lesson

In the transcript for T5, isiZulu, the learners are reading the original assent letter which they were required to read and sign for participation in the current study (see Appendix F). The teacher has explained the study to them and is now making use of the text as a reading fluency exercise. The permission letter contains some complicated English words that the learners struggle with, although they seem fluent in reading the isiZulu text.

Discourse

Purpose/Function

[The learners are reading as a whole class.]

Teacher: Ja, Lolucwaningo ...

Prompts; feedback

[Yes, this study ...]

Learners: Luzokwenziwa kusukela ngo February 2016 luze
luyophela ekupheleni kukoNovember 2016.

[It will begin in February 2016 and end in November 2016.]

Learners continue reading

Teacher: Ja, Ngizobe

Prompts

[I will be ...]

Learners: Nigozobe ngibheka amagumbi akho okufundela
futhi ngiphinde ngiqophe ezinye zezifundo
ngizenze ifilimu.

Learners continue reading

[I will be observing your classroom lessons and making some recordings.]

Teacher: Angeke ...

Prompts

Learners: Angeke ngivumele ukuthi kuvele ubuso bakho
kwi khamera kanti neminingwane yakho izoba
imfihlo ...

Learners continue reading

[I will not allow your face to be visible on the camera and your identity
will remain anonymous.]

Teacher: Ja?

Prompts

[Yes?]

Learners: Ngizobe ngithatha izithombe ngemuva ...

Learners continue reading

[The recordings will only be made from the back of the classroom ...]

Analysis

The analysis for T5's isiZulu transcript refers to figures 5-7, 5-9, 5-11 and 5-13. The transcript for T5 isiZulu shows the fluency reading exercise and mainly consists of the learners reading and the teacher responding to difficulties by modelling the pronunciation of the relevant word and prompting the learners to continue. Her prompting average is also high on her FORT data

(see figure 5-9). T5 does not make use of any comprehension, either referential or inferential, in this transcript. Her FORT data indicates she makes use of referential comprehension only at a low rate (see figure 5-7). As with T1, this teacher focuses on phonemic awareness and oral fluency both in the transcript and in her data. She also integrates language elements into her reading teaching, while the responses from her learners are mainly choral (see figure 5-11). As with T1, T5 uses a varied range of categories in her teacher to learner interaction and her highest scoring categories are instruction and requesting (see figure 5-13). There appears to be a high level of learner engagement. In the reading fluency lesson, the learners are following the words with their fingers as they read and appear to be focused on their reading, while in the concert lesson, the learners are obviously having fun as they sing and dance and are very engaged. The lesson containing the learners' concert appears to be the only lesson out of all the video recorded lessons from the participating teachers that is not mainly teacher-led.

d. T5 S2(Z)/3 – English lesson

The transcript is taken from a lesson involving a story and comprehension exercise from the CAPS workbook. In the lesson, T5 is using stage 2 of the R2L cycle (see 3.14) which involves detailed reading of the text facilitated by cue questions.

Discourse	Purpose/Function
Teacher: ... and there's a group of words that tells us about time ... at the beginning of the sentence.	<i>Open question - restricted; instruction</i>
Teacher: At the beginning of sentence no. 1 there are group of words that tells us about time.	<i>Paraphrase; request</i>
Teacher: <i>[Shouts]</i> Look at your story! At the first sentence.	<i>Discipline; instruction; clarification</i>
Teacher: There are group of words at the beginning of the sentence that tells us about time.	<i>Prompt; discipline; paraphrase; repetition</i>
Teacher: Asanda?	<i>Teacher chooses individual</i>
Learner: It is time	<i>Learner responds; individual reads</i>
Teacher: Good, all of us.	<i>Affirmation; instruction</i>

Learners:	It is time.	<i>Learners respond; reading out loud</i>
Teacher:	To do what? What is it that is going to be done?	
	To do what?	<i>Open question - restricted</i>
<i>[Learners put their hands up]</i>		
Teacher:	Yes?	<i>Teacher responds to cue</i>
Learners:	To go!	<i>Learners respond; reading out loud</i>
Teacher:	To go where? Where are they going? See it in the first sentence.	<i>Open question - restricted</i>
Teacher:	Where are they going, Senamile?	<i>Repeats; chooses individual</i>
Learner:	Home.	<i>Learner responds; individual reads</i>
Teacher:	Home, good!	<i>Feedback; affirmation</i>
Teacher:	And there's a feeling there. Who are these people who have got the feeling that I'm going to ask about at the 2 nd sentence?	<i>Request</i>
Teacher:	Yes, Qolo?	<i>Chooses individual</i>
Learner:	Sad.	<i>Learner responds</i>

Analysis

The above transcript for T5, English, shows a fair amount of individual learner responses and a varied use of interaction strategies from teacher to learner as per her data in figure 5-17. However, learner responses are limited to teacher's cues, as is seen in figure 5-16. The segment indicates T5's use of restricted open questions, referential comprehension and low rate of inferential comprehension, as per her data in figure 5-14. Several learners appear distracted - some scratch their ears, one leans back in his chair and yet another is playing with a string of some sort. However, when T5 asks a question, as many as eight or nine hands are raised in response. The majority of learners appear to be following the story with their fingers as the teacher asks reads the text and asks questions.

e. T7 S1(E)/3 – isiZulu lesson

T7 is the Grade 3 teacher for isiZulu at S1(E). In the lesson the transcript if taken from, she is focusing on preparing the learners for sustained reading, which is a CAPS requirement (see 1.4.2), comprehension and phonics. As these learners have had English as LoLT from Grade R at S1(E), T7 is teaching learners isiZulu words that they already appear to be familiar with in English.

Discourse

Purpose/Function

[Okay, today we are going to read. We will read a story that I am not familiar with.]	<i>Discourse marker; explanation; instruction</i>
Teacher: Sifuna ukuyizwa ukuthithini lendaba. [We want to listen to what this story tells us.]	<i>Instruction; elaboration</i>
Teacher: Akesifunde-ke lendaba sizwe. [We are going to read this story that we have listened to.]	<i>Instruction; explanation</i>
Teacher: Sifuna ukuyizwa ukuthi ithini lendaba. [We want to listen to what it tells us.]	<i>Elaboration</i>
Teacher: Akesifunde-ke sizwe lendaba masesiqedile. [We will listen to this story until the end.]	<i>Instruction; elaboration</i>
Teacher: Ngicela nifunde emva kwami. [Then I want you to read it after me.]	<i>Instruction</i>
Teacher: Ngizofunda bese niyafunda emva kwami. [I will read and then you are going to read after me.]	<i>Instruction</i>
Learners: Yes.	<i>Learners respond</i>
Teacher: Ngenkhathi ngifunda mina nizobe nikhomba nina. [As I am reading, you must follow with your finger.]	<i>Instruction</i>
Teacher: Hayi ngempensela, beka phansi impensela. [No pencils, put down your pencils.]	<i>Discipline</i>
Teacher: Uzokhomba ngomunwe wakho uzobona kahle	

amagama esiwafundayo.

Instruction; responds to difficulties

[You will point with your finger so that you can follow the words as I read them.]

Teacher: Ok, Wena uzofunda emva kwami.

Instruction

[Okay, you are going to read after me.]

Teacher: Akasukeke ubamuza alithele kahle itiyelakhe. Abeke ne sinkwa sakhe lapha eceleni asigcobe asibhixan gojamu wakhe.

Teacher reads; phonemics

[After he has poured his tea, he puts his bread to one side and spreads it thickly with jam.]

Teacher: Ok, funda-ke.

Prompt; instruction

[Okay, read.]

Learner: Akasukeke ubamuza alithele kahle itiyelakhe. Abeke ne sinkwa sakhe lapha eceleni asigcobe asibhixan gojamu wakhe.

Learners read after her.

[After he has poured his tea, he puts his bread to one side and spreads it thickly with jam.]

Analysis

The transcript for T7 indicates a high level of instruction as per her data in figure 5-17. In addition, the segment shows some elaboration from teacher to learner, but not from learner to teacher. Her data in Figures 24 & 23 indicates that she elaborates to her learners at a slightly higher average than they elaborate to her. T7 has a high average of phonemic awareness (see figure 5-14) which appears briefly in the transcript. The lesson is teacher-led. Further on in this lesson, the learners are performing ‘animal’ actions, which they enjoy. Some appear distracted and two are yawning. One voluntarily uses his hands to sound out the syllables. All the learners use their fingers to follow the words when they begin reading. They all face towards the teacher and appear to be quite engaged in the lesson.

f. T8 S2(Z)/4 – isiZulu lesson

T8 is conducted a comprehension lesson and the learners are reading a story from their isiZulu workbook. Firstly, the teacher reads from the workbook, then the learners read from their own workbooks. T8 uses the R2L but her use of referential questions in the transcript is different from the R2L form of cue questions as she is not using asking the learners to find and underline important information in the text or making use of elaboration or inferential comprehension.

Discourse

Purpose/Function

Teacher: Ubani uSekheshekheshe?

Open question - restricted

[Who is ueKheshekheshe?]

Teacher: Ok, alright.

Discourse marker

Teacher: Wayaziwa ngezinto ezinthathu?

Open question - restricted

[What three things is he known for?]

Teacher: uSekheshekheshe.

Clarification

[One Learner puts his hand up].

Teacher: uZibhaliwe lapho izincwadi yini?

Open question - restricted

[How is it written in the books?]

Teacher: I ziphi lezozinto?

Open question - restricted

[Where are these things?]

[Two learners put their hands up].

Teacher: uziBhaliwe lapho izincwadi yini? *Repeat; paraphrase*

[How are they written in the workbooks?]

Teacher: Khona engcwadini? *Paraphrase*

[There in the book?]

[One learner puts his hand up].

Teacher: Wazi wanikezwa igama useKheshekheshe? *Open question - restricted*

[Why was he given the name?]

Teacher: Wa? *Evaluation question*

[Learners respond with indistinct answer.]

Teacher: Waziwa kakhulu ngani? *Repeat; open question - restricted*

[What is he well known for?]

[Teacher writes the answers on the board.]

Teacher: Waziwa ngokukuthala. *Responds to difficulty*

[He is known for working hard.]

[Two learners put their hands up.]

[The teacher writes the word on the board.]

Teacher: Umuntu uma ekhuthela usuke enjani?

[How does an industrious person behave?] *Open question - extended*

[One learner puts up a hand. The other learners murmur vague answers].

Analysis

The transcript for T8 indicates her use of mainly referential comprehension and restricted questions, although the FORT data shows these to score a low average. The data indicates that she does not make use of inferential or extended open questions. T8 covers a variety of interaction categories when addressing the learners but these tend to be low averages. Her highest score is for requesting information. In turn, as is shown in the transcript, the learners have a low rate of response to the teacher and their responses are limited mainly to responding

to her cues. This lesson is firmly teacher led and the response from the learners are very limited (see figure 5-15).

The video observations indicate that the learners appear distracted and some of them stare into space. There are few hands raised in response to T8's questions and she therefore repeats her questions several times by use of paraphrase. Learners appear reluctant to answer or do not seem able to find the answers. The overall level of learner engagement for this lesson appears low. This ends the individual profiles for the ADD teachers. The next set of profiles, graphic data and transcripts are those of the NA teacher group.

5.7.2 Non-Additionally Trained Teachers

a. Case Study 2: T2 S1(E)/3

T2 teaches Grade 3 learners in all subjects except isiZulu. She has 39 children in her class, aged between 8 – 10 years. Her mother-tongue is English and she has had 9 years teaching experience at the time of this study. She has a B.Ed. Degree through UKZN. T2 makes use of the CAPS syllabus exclusively.

b. Case Study 3: T3 S1(E)/4

T3 is a Grade 4 subject teacher and teaches English. She has 41 learners in her register class, although she also teaches English to two other Grade 4 classes in the school. The average age of the learners in her class is 9 -11 years old. At the time of this study, she had eight years teaching experience. Her mother-tongue is English. This teacher is using CAPS. She has had some R2L training but feels that the approach takes up too much time to be able to fit into the DBE syllabus comfortably. She also stated that she finds the CAPS curriculum is extremely fast-paced and restrictive.

c. Case Study 4: T4 S2(Z)/4

This teacher is a Mathematics subject teacher for Grade 4, School 2. She has 43 learners in her Register class but teaches a total of 130 overall. The learners' ages range between 9-10 years old. She has 21 years' teaching experience and her mother-tongue is isiZulu. She has a Diploma from Azalea College (now Nelson Mandela University) and completed an ACE Management

course at Pretoria University. Initially, T4 was reluctant to participate in the study but agreed to allow a limited number of lessons and an interview. Thus, there are only three of her mathematics lessons included. However, I felt that the nature of these lessons was both very interesting and important for the study as they provide an insight into the teaching of mathematical concepts to students who must switch over to using English for all their subjects in Grade 4. As a result of this, learners may struggle to understand those concepts. For this reason, I included this data in this project. T4 is using CAPS only for these lessons.

d. Case Study 6: T6 S2/4

T6 is a subject teacher for English, Grade 4 at School 2. She teaches all three Grade 4 classes but has 45 learners in her register class. They range between 9-10 years old. T6 has 17 years of teaching experience and has an Ed Diploma and Unisa HDE. Although she has had some R2L training (see table 4-1), this teacher says she prefers to make use of CAPS only as she feels R2L takes too long to implement along with the CAPS curriculum. Her mother-tongue is isiZulu. A set of FORT graphs showing individual averages for the NA teachers is provided below, followed by the transcripts for the NA teachers.

Non-Additionally Trained Teachers: Reading Teaching & PCK

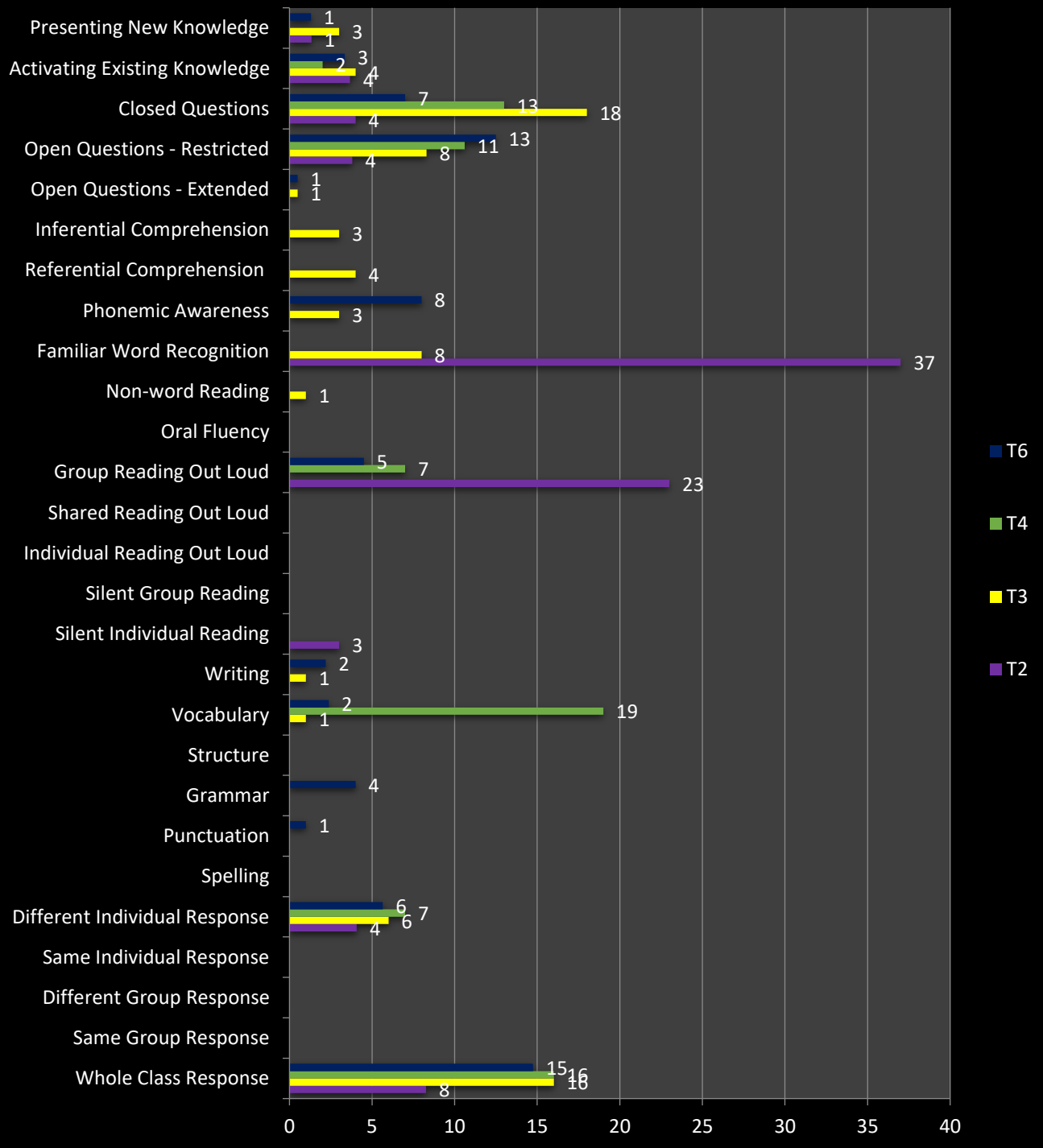


Figure 5-18: Non-additionally trained teachers - Reading teaching & PCK

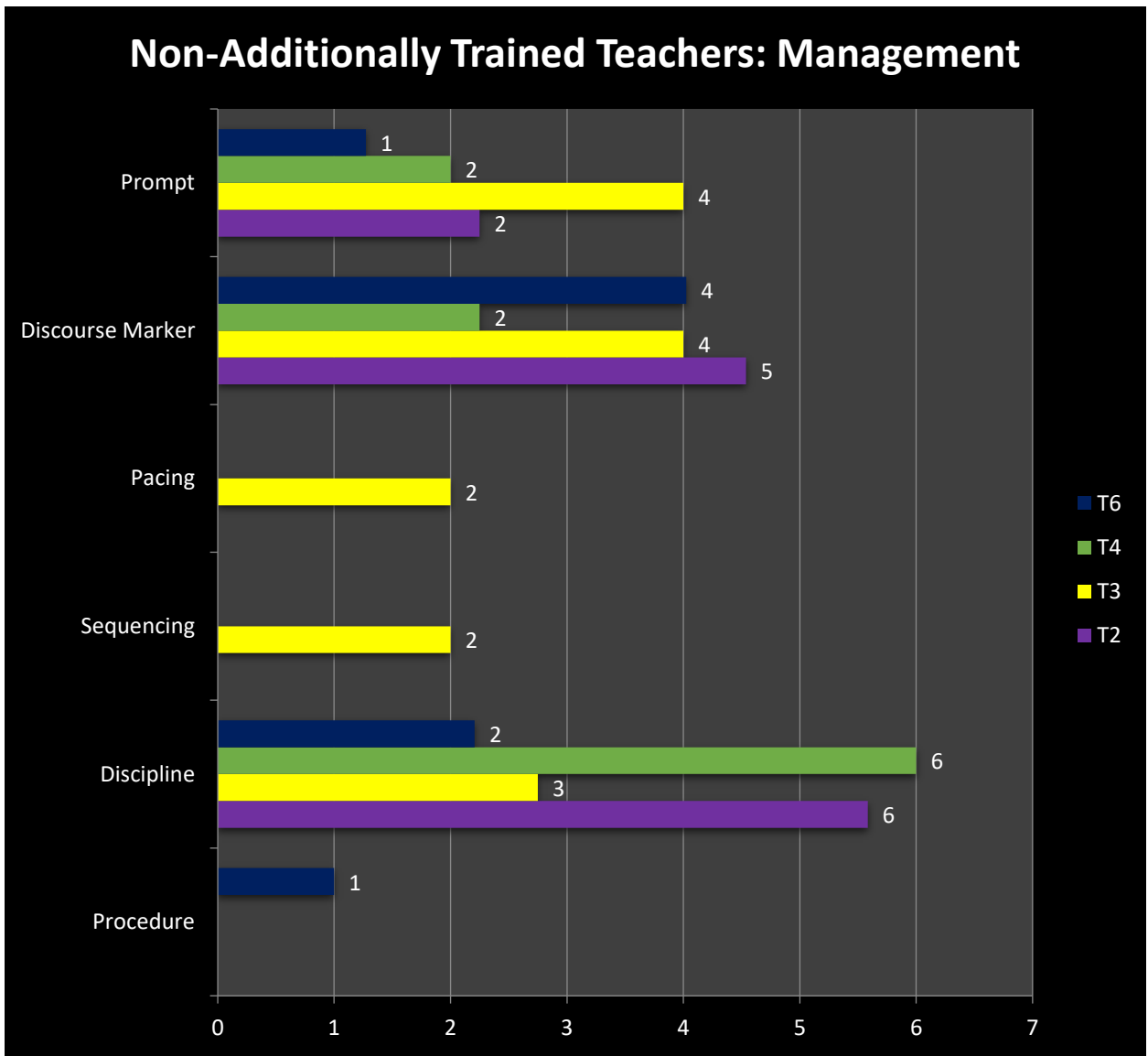


Figure 5-19: Non-additionally trained teachers - Management

Non-Additionally Trained Teachers: Learner to Teacher Interaction

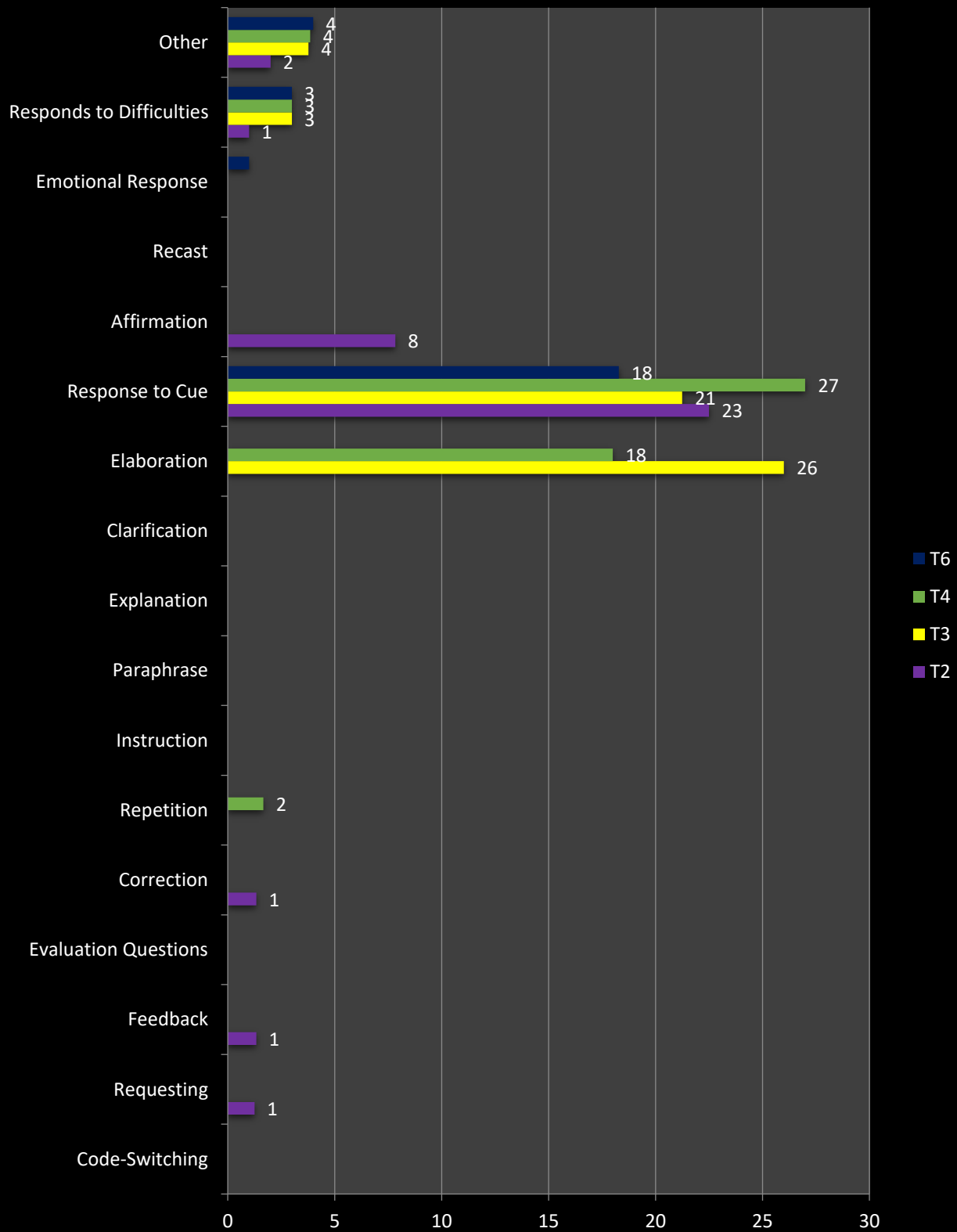


Figure 5-20: Non-additionally trained teachers - Learner to teacher interaction

Non-Additionally Trained Teachers: Teacher to Learner Interaction

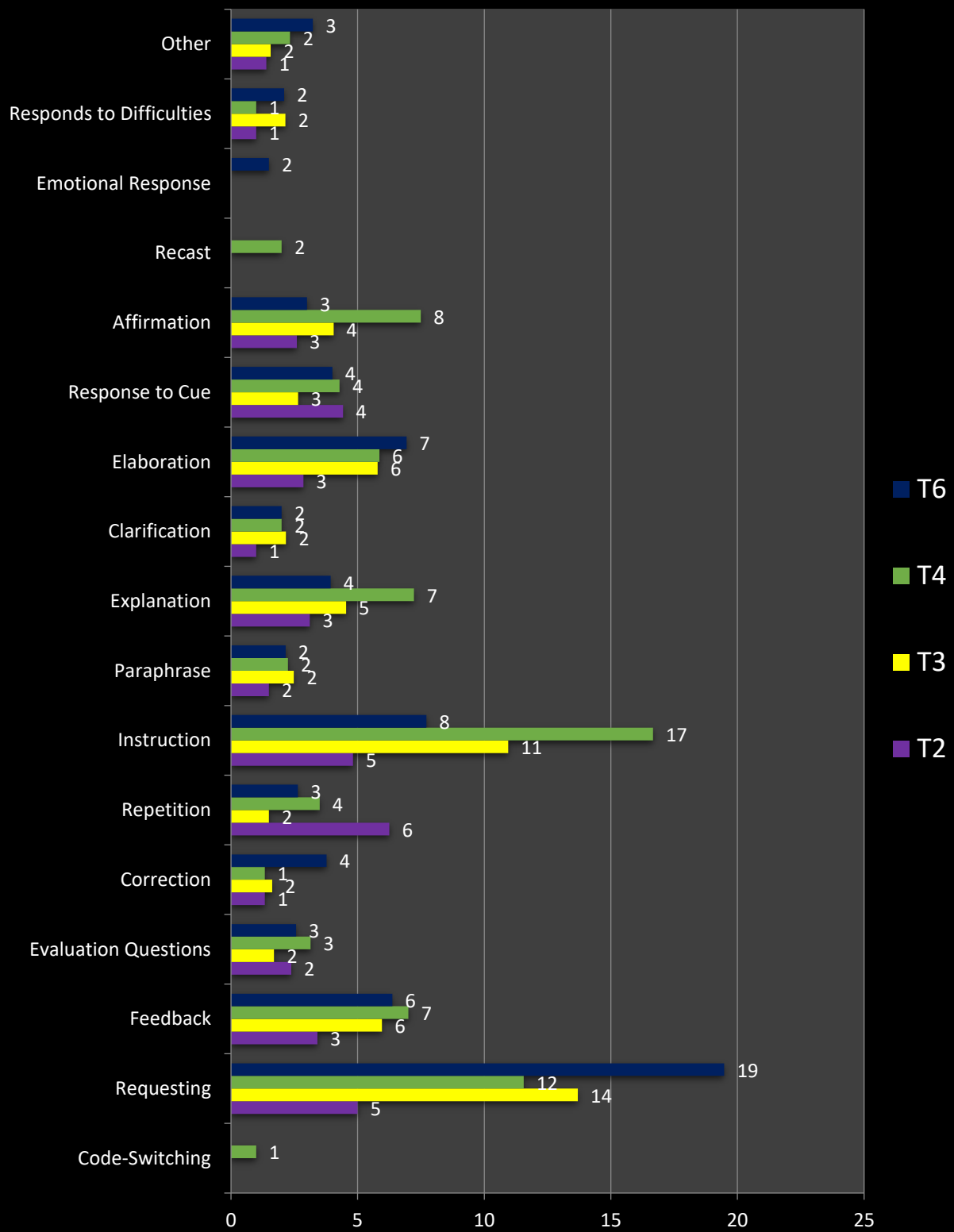


Figure 5-21: Non-additionally trained teachers - Teacher to learner interaction

5.7.3 Transcripts for non-Additionally trained teachers

The transcripts for the NA teachers are provided below, beginning with T2, Grade 3, S1(E)

a. Transcript: T2 S1(E)/3

The focus of this lesson by T2 is to teach vocabulary, specifically homophones. T2 is writing a set of sentences on the board that contain homophones and providing two choices of words in brackets. She is asking the learners to identify the correct form of the word.

Discourse	Purpose/Function
Learners: When I was playing outside the (bee or be) stung me.	<i>Learners respond</i>
Teacher: Which bee/be is it that we are going to ...	<i>Open question - restricted</i>
Teacher: Yes, Thulani?	<i>Teacher chooses randomly</i>
Thulani: The first one.	<i>Individual answers</i>
Teacher: The first one, good boy!	<i>Feedback; affirmation</i>
Teacher: When we are circling you are going to circle in a different ...?	<i>Prompt</i>
Learner: Colour!	<i>Learners respond</i>
<i>[Teacher writes a new sentence on the board: My teacher has a (sun/son).]</i>	
Teacher: Who wants to read (sentence) number 2?	<i>Request</i>
Teacher: Siphon?	<i>Teacher chooses learner randomly</i>
Siphon: My teacher has a sun or son.	<i>Individual answers</i>
Teacher: Good boy, all together!	<i>Affirmation; instruction</i>
Learners: My teacher has a sun or son.	<i>Learners respond</i>
Teacher: Which sun/son, Bandile?	<i>Open question – restricted</i>
<i>[Three individual learners put up their hands.]</i>	
Bandile: Son.	<i>Individual answers</i>
Teacher: Good boy!	<i>Affirmation</i>
<i>[Teacher circles the correct answer.]</i>	
Teacher: You can use a different colour for each one, okay?	<i>Instruction; checks understanding</i>

Learners: Yes.

Learners respond

[Teacher writes on the board: My dad is going to meet/meat us in town.]

Analysis

In the above transcript, the learners mainly provide choral answers to T2's questions. In addition, her requests for information consist of very restricted open questions in that the questions do not require 'yes' or 'no' answers. However, they do consist of an answer that will either be one word or the other (the choice of two words in brackets). This is consistent with her FORT data that indicates no extended open questions and a low average of both close and restricted open questions (see figure 5-18). The learners do not elaborate on their answers and it is not clear whether they are understanding the words they are choosing or just guessing the correct answer. Again, the average of response from learners to teacher T2 is very low in T2's data (see figure 5-20). As mentioned above, the lesson focus is on vocabulary. This accords with T2's FORT data which shows a high average of vocabulary building (see figure 5-18).

The level of learner engagement appears low. Non-verbal indicators show one child leaning on the desk, while another plays with a pencil. One learner gets up during the lesson to sharpen his pencil. The learners bend their heads down and write the answers in their workbooks. It would appear to the observer that the learners lack the enthusiasm to respond to the teacher's cues. They also appear distracted. Out of the participating teachers, T2 has one of the lowest averages of teacher to learner talk and her highest scores are for requesting and repetition (see figure 5-21). Her lessons tend to be teacher-fronted, but with a limited amount of interaction from either teacher to learner or from learner to teacher.

b. Transcript T3 S1(E)/4 English

The lesson that T3's transcript was taken from begins with a selection of vocabulary written on the board, which the learners practice reading and pronouncing (phonemics). T3 then continues with a story in the CAPS workbook which the learners will read. She begins by instructing the learners to look at and identify elements from the related picture.

Discourse	Purpose/Function
Teacher: Page 74, everyone.	<i>Instruction</i>
Teacher: Right, today we are doing another interesting story.	<i>Explanation</i>
Teacher: Let's all look at the picture that is here.	<i>Instruction</i>
Teacher: Let's all look. Before we read the story, let's review the picture.	<i>Instruction</i>
Teacher: What do we see?	<i>Open question - restricted</i>
<i>[Eight Learners raise their hands]</i>	
Teacher: All of you.	<i>Discipline; instruction</i>
Learners: Sun and wind, clouds ...	<i>Learners respond</i>
Teacher: Ok, the sun or the wind or clouds, whatever, we don't know as yet, right?	<i>Feedback</i>
Teacher: Basically, you all tell me, and what else?	<i>Request</i>
Learners: Man.	<i>Learners respond</i>
Teacher: A Man.	<i>Feedback; recast</i>
Teacher: And what is that man doing in the picture?	<i>Request; open question –restricted</i>
Learners: Holding his hat.	<i>Learners respond</i>
Teacher: Holding his hat. And why was he holding his hat?	<i>Feedback; Open question –extended</i>
Learners: Because of the wind	<i>Learners respond</i>
Teacher: Because of the wind. Does he look very hot or very cold?	<i>Feedback; closed question</i>

Analysis

The above transcript indicates mainly choral responses from the learners (see figure 5-18) while T3 makes use of mainly restricted open and closed questions in the segment. She misses some opportunities to make use of inferential questions which may facilitate the comprehension process. For example, when she asks: “*And what is that man doing in the picture?*” she could follow up the initial question with another asking *how* he was holding his hat or even *why* he was wearing a hat.” T2 could also perhaps have asked the learners to explain why the wind is called the “North Wind” and then followed up on their answers with elaboration. Interestingly, although her learners respond mainly to T3 from her cues, the FORT data indicates that they do respond to her with a high average of elaboration from other recorded lessons (see figure 5-20), which points to the use of inferential questions. This is supported by the FORT data that shows that T3 focuses on inferential and referential comprehension in her recorded lessons, although at a low average. She has a high average of closed questions, some restricted open questions and no extended questions (see figure 5-18). Her highest averages for teacher-talk come from her requests and instruction (see figure 5-21).

The learners do not appear to be actively engaged in the lesson. Their hands go up in response to her questions occasionally but they seem to lack enthusiasm and most of the time, they do not raise their hands at all. Many learners seem distracted. They are looking around them, rocking backwards and forwards on their chairs, chewing on pens and so forth.

c. Transcript T4 S2(Z)/4 Mathematics

The focus of T4’s lesson is to teach measurements and mathematical concepts in these lessons. The Grade 4 learners have switched over to English as LoLT and appear to be having some difficulty grasping the English terminology.

Discourse

Purpose/Function

Teacher: Kuhle? We can use a scale, very good.

And what else?

*Affirmation; feedback; open question –
extended*

Learner: We can use this, the rope

Learner responds

Teacher: A rope very good, we can use what? A rope! *Affirmation. request; feedback*

Teacher: We can use what? *Repetition; request*

Learners: A rope. *Repetition; learners answer*

Teacher: We can use what? *Repetition*

Learner: A rope. *Learners respond*

[One learner puts up their hand. The hand stays raised for quite some time].

Teacher: But unfortunately, the rope, does it have numbers? *Closed question*

Learner: *[Unintelligible]*

Teacher: Uh? *Prompt; evaluation question*

Learner: No! *Learners respond*

[Three learners' hands are up]

Teacher: Yes, long time ago the people they used what, the rope
because there were no? *Open question -restricted*

Learner: Rulers. *Learner responds*

Teacher: Okay. *Discourse marker*

Teacher: But now because we've got rulers and some other
materials, we use them because they have got what?
Numbers! *Teacher gives the answer*

Teacher: *[Unintelligible]*

Teacher: And what else that you can use, Siph? *Requests information; open question
- extended*

Teacher: ... You making noise. *Discipline*

Teacher: And what else that you can use? *Open question - extended*

Learner: Our hands. *Learners respond*

Teacher: Our hands, Good. *Feedback; affirmation*

Teacher: Thinks. Umm.

Teacher: Long time ago again, when there were no rulers or
something with numbers the people long time ago, they
used the rope hands to measure something. Even if you'd
be admitted in grade one, they used to say Just touch your

right or your left ear using your arm, if its reaches here it

means you will be admitted in grade one, okay?

[The learners perform do the action of putting their hands behind their head to touch their ears. Some of them continue to play with their ears]

Analysis

T4's transcript indicates mainly choral responses from learners. She makes use of vocabulary building, which corresponds to both her FORT data (see figure 5-18).

The transcript also shows some closed and restricted open questions, which are averaged high on her FORT data, as well as two extended questions, which do not occur often enough in her recorded lessons in general to feature in her data averages (see figure 5-21). The learners respond mostly to T4's cues in the transcript and the teacher elaborates, not the learners, although the FORT data does indicate a high average of elaboration from learners from T4's other recorded lessons (see figure 5-20). In addition, the segment above contains a fair amount of repetition from T4. Similar to other participating teachers, T4's transcript indicates a high level of instruction and requesting, which also appears on the FORT data (see figure 5-21).

Observations reveal that level of learner engagement does not appear to be high and the learners are generally very quiet. One child appears to be chewing on a pen. Some others look at each other or around them. T4 also appears on several occasions to affirm the answers to her own questions, such as: "Do you see that? Good boy!"

d. Transcript T6 S2(Z)/4

In the lesson that the transcript below is taken from, T6 is focusing mainly on vocabulary building and sounds, or phonemic awareness.

Discourse

Purpose/Function

[Holds up word, shows it to the class.]

[Learners hands are raised.]

Teacher:	This word ...	<i>Repetition</i>
Teacher:	Yes?	<i>Chooses learner</i>
Learner:	Helping.	<i>Learner responds; phonemics</i>
Teacher:	Helping!	<i>Feedback</i>
Teacher:	All of you.	<i>Instruction</i>
Learners:	Helping.	<i>Learners respond; phonemics</i>
Teacher:	Okay, now I'm going to cut this word like this ... <i>[Cuts]</i> so that ... it's?	<i>Explanation; prompt</i>
Learners:	Help ... ing.	<i>Learners respond; phonemics</i>
Teacher:	Na?	<i>Evaluation question</i>
Learners:	Help ... ing.	<i>Learner repeat</i>
Teacher:	And ...?	<i>Prompts</i>
Learners:	Help ... ing.	<i>Learners repeat; phonemics</i>
Teacher:	And ...?	<i>Prompt</i>
Learners:	Help ... ing.	<i>Learners repeat; phonemics</i>
Teacher:	And ...?	<i>Prompt</i>
Learners:	Help ... ing.	<i>Learners repeat; phonemics</i>
Teacher:	We are going to look at this for the last time. Now its ...?	<i>Instruction; prompt</i>
Learners:	Help ... ing.	<i>Learners repeat; phonemics</i>
Teacher:	Now? <i>[She unfolds the word.]</i>	<i>Request</i>
Teacher:	Helping.	<i>Learners respond; phonemics</i>

Teacher:	Can you please just write that word?	<i>Request; instruction</i>
Teacher:	Write it on that paper with the story.	<i>Instruction</i>

Analysis

The transcript for T6 indicates a fair amount of repetition as learners repeat the word she is holding up several times. However, the learners do not score high averages in their interaction with this teacher on their FORT data (see figure 5-20). She integrates language elements such as writing and vocabulary into her reading teaching, as is evident on both the transcript and the FORT data. The main responses from the learners are choral (see figure 5-18). In addition, T6 focuses on phonemic awareness, which is averaged high in her FORT data. The segment shows no open, closed or comprehension questions and, while T6 uses some restricted open and closed questions, she does not use extended questions or focus on comprehension (referential or inferential) in her recorded lessons (see figure 5-18).

The transcript shows that learners do not elaborate or respond beyond pronunciation and responses to her cue in the transcript, which concurs with the FORT data (see figure 5-20). As with other teachers in this study, T6's teacher-talk consists of mainly instruction and requesting information, while she also has a high average of elaboration (see figure 5-21). Her lesson tends to be mainly teacher-led. Furthermore, learner engagement level appears to be low. Some learners appear distracted. Others. Some are looking in their bags for their workbooks. However, most of the learners seem to be facing the teacher, their hands go up when she asks a question. They appear to be engaged in reading the word that she is holding up out loud and they write it down. Although this class appears engaged on one level, there is an air of detachment about the learners. They seem to respond to the teacher's requests when she asks them to do something specific, yet she does not appear to hold their attention outside of this.

5.7.4 Summary of transcripts

The purpose of the two-minute segments is to create a deeper picture of the classroom interaction and teaching styles but also to compare, and thereby confirm, the FORT data. In this way the data can be triangulated. Also, by analysing the function of the discourse in the transcriptions, one can also gain insight into how the different parts of the FORT come

together: qualitative activities, reading teaching, PCK, modality, comprehension, management and so forth are integrated with discourse events from teacher to learner and vice-versa. This serves to support the Facilitative-Restrictive Model (see figure 3-2), based on the work of Halliday (1978), Bernstein (1990) and Tough (1977b), that theories and beliefs influence the PCK of the specific teacher, whilst this PCK is realized via language via dialogue between teachers and learners. By providing a level of engagement for each observed 2-minute video and transcript, the researcher can also see that the level of learner engagement is higher overall for the ADD teachers, with the exception of T8, than for the NA teachers. The following section provides details of the EGRA and PIRLS (see 4.6.6) pre- and post-reading assessments findings.

5.8 Pre- and post-study reading assessments

A detailed description of the EGRA, PIRLS and Pre-PIRLS assessments and rationale for their selection has been provided (see 4.4.6). In this Chapter, the findings of the EGRA Grade 3 pre- and post-study assessments at S1(E) and S2(Z) will be discussed. The Pre-PIRLS and PIRLS assessment results for Grade 4 are provided in the Appendices (see Appendix X). The initial reading assessments for both Grade 3 and 4 were conducted between April and October 2016 and then repeated in April 2017 (see Appendix W).

a. EGRA assessments Grade 3: S1(E) & S2(Z)

The EGRA assessments were administered to two Grade 3 classes at S1(E) and one Grade 3 class at S2(Z). A comprehension test was provided initially for all learners in the participating classrooms. At S1(E), this was conducted first in English, whereas at S2(Z) it was conducted first in isiZulu, according to the relevant LoLT at each school. The total number of words used as benchmarks for the EGRA English text is 71 and for the isiZulu text it is 43 words correctly pronounced per minute (wcpm), which according to EGRA is the expected level of reading speed for first semester, Grade 3 (USAID, 2004; USAID, 2009) in each respective language. If learners were reading at a higher rate than this, then the formula for working out the score, dividing the number of words by 60 and subtracting the number of errors in mispronunciation or inability to read the words, will indicate that the learner is reading faster than average. In cases where the learner was unable to read the first line, 'discontinued' was written in the score column, according to EGRA guidelines.

The EGRA assessments involved a reading text followed by a series of five comprehension questions (see Appendices Q & R). If the learner was not able to complete the full text in the minute allowed for the reading test, he or she was only required to answer the question/s that related to the section that was successfully completed. Therefore, for example, some learners may have answered all five questions whereas a slower learner may only have been able to answer three.

From the results of the comprehension tests, a minimum of three learners were then selected from each class to undergo a further series of EGRA tests, as per the initial proposal for the current study. The tracked learners were selected with the help of the participating class teacher and involved at least one stronger, one average and one weaker learner. In some cases, the teacher provided more than three learners for tracking. The full battery of EGRA tests were not available for public use in isiZulu (Howie, 2016) and were therefore only provided for S1(E) as was is an English-medium school. The EGRA English test battery was freely available (USAID, 2009) and provided a range of sub-tests. These were: Letter-Sound Correspondence; Phonemic Awareness; Familiar Word Reading; Non-Word Reading; isiZulu Comprehension & Fluency (see Appendices W and X). The tracked learners were provided with a further set of assessments. This consisted of an initial, EGRA comprehension and fluency test in their FAL (isiZulu at S1(E) and English at S2(Z)), followed by the same English and isiZulu EGRA tests post-study.

The pre-study tests for S1(E) occurred in April and May 2016 and in August and October 2016 for S2(Z). The reasons for the delay in the testing at S1(E) and S2(Z) was due to the difficulty of access, particularly regarding S2(Z) (see 4.7). The EGRA post-test results for the tracked learners were conducted in April 2017 for both schools (see Appendix W).

b. EGRA Results S1(E) – Two Grade 3 Classes English LoLT

I administered these baseline tests to the learners of both Grade 3 classes at S1(E) between 20th and 25th April 2016. The tests consisted of an initial English Comprehension test given to all learners. According to EGRA, learners with English MOI should be reading at around 71

wcpm towards the end of the first semester. As April falls on the cusp of first and second term in South African Government schools, the reading rate should be between 71 and 92 wcpm (USAID, 2004; USAID, 2009). Table 5-1 below indicates reading scores for T1, Grade 3, S1(E) for English comprehension and fluency. Learner scores are listed in descending order. The three tracked learners' results are in in red type.

Table 5-1: T1 S1(E)/3 – English comprehension & fluency: May 2016

Learner No.	WCPM	No. of correct comprehension questions /5
Average reading rate 2nd term grade 3: 71 - 92 wcpm		
1	145	5/5
2	117	5/5
3	89	5/5
4	89	5/5
5	88	5/5
6	69	5/5
7	60	1/3
8	58	2/3
9	56	3/3
10	47	2/3
11	45	2/3
12	42	3/3
13	41	3/3
14	40	3/3
15	36	3/3
16	34	3/3
17	33	3/3
18	32	3/3
19	31	2/3
20	31	1/2
21	31	3/3
22	31	1/2
23	30	2/3
24	29	1/3
25	20	1/2
26	20	1/3
27	17	2/3
28	17	1/3
29	8	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0

According to table 5-1 above, five learners are above or well within the range of the required reading level. One is slightly below. Three are below; five are low and the remaining 15 are extremely weak. Five learners are not able to read at all. The comprehension scores are not particularly high, with 6 learners at 100% and 9 at 60%. Five have 40% comprehension whilst 4 have only 10%. Table 5-2 below shows results for four tracked learners from this same class, including the EGRA sub-tests.

Table 5-2: T1 S1(E)/3 – EGRA assessment results English & isiZulu

Tracked Learner No.	Pre-Study Assessment English – May, 2016 (wcpm 71-92) & isiZulu (wcpm 43) Comprehension & Fluency		Post-Study Assessment English – March, 2017 (wcpm 71-92) & isiZulu (wcpm 43) Comprehension & Fluency	
	89 wcpm; Comprehension Score = 5/5	20 wcpm; Comprehension Score = 3/5	106 wcpm; Comprehension Score = 5/5	36 wcpm; Comprehension Score = 3/5
3	89 wcpm; Comprehension Score = 5/5	20 wcpm; Comprehension Score = 3/5	106 wcpm; Comprehension Score = 5/5	36 wcpm; Comprehension Score = 3/5
10	47 wcpm; Comprehension Score = 2/5	0	86 wcpm; Comprehension Score = 4/5	3 wcpm; Comprehension Score = 3/4
23	30 wcpm; Comprehension Score = 2/5	0	77 wcpm; Comprehension Score = 4/5	17 wcpm; Comprehension Score = 5/5

The table 5-2 results for the tracked learners are discussed below in number order.

i. Learner 3

This learner was initially a strong reader and well within the accepted range of between 71-92 wcpm. Her comprehension was 100%. Despite being one of the stronger readers in English, Learner 3 struggled in her mother-tongue, isiZulu with only 20 wcpm instead of the accepted level of 43, with comprehension at only 60%. The post-tests in English and isiZulu indicated an increase in English from 80 to 106 wcpm, with 100% comprehension while her isiZulu had increased to 36 wcpm, still with 60% comprehension.

ii. Learner 10

Learner 10 was weaker in English reading at only 47 wcpm, with 40% comprehension. This learner was unable to read a single word of the isiZulu text, so the test was discontinued as per EGRA recommendations. Post-test, English had improved to 86 with 80% comprehension. His isiZulu remained very low at only 3 wcpm however, this learner was able to comprehend the isiZulu text despite his not being able to read it out loud and he had 80% comprehension.

iii. Learner 23

This learner's initial scores were low, with only 30 wcpm in English and 40% comprehension. His post-test English reading had improved to 77 wcpm with 80% comprehension whilst his isiZulu was now on 17 wcpm with 100% comprehension.

Table 5-3 indicates that the initial reading results for T1 are generally low and below the expected Grade level. These results are in line with other South African studies at foundation and intermediate grade reading levels (Pretorius *et al.*, 2016; Van der Berg, 2015; Van der Berg *et al.*, 2016). However, the results of the post-study re-assessment showed that all learners had increased both their English and isiZulu reading speed, fluency and comprehension and all three learners appeared to have made gains in both fluency, speed and comprehension.

Learner 3 has increased reading speeds and fluency in both languages; Learner 10 showed that English wcpm and comprehension had doubled while his isiZulu reading speed had not increased, although his comprehension appeared to have improved. Learner 23 more than doubled his wcpm and his comprehension, whilst his isiZulu wcpm had increased, although still below the expected level for end of Semester 1, Grade 3. However, his comprehension in isiZulu had also increased and was now at 100%.

What may be relevant here is that T1, as mentioned, uses the scaffolded R2L approach. However, she is currently the only teacher in S1(E) who makes active use of R2L. This means that her learners have not had scaffolded reading support before they attended her class and will not have the scaffolded support after they leave. Although it is difficult to show causality regarding reading skills, considering that the learners had only been with T1 for some three months at the time of the pre-study assessment, the results are slightly higher for the pre-study assessment, Grade, than T2, who made use only of CAPS. The post-assessment results for T1

in table 5-3, however, show that the gains her learners make are comparable to the gains made by T2's learners during the same time period. The results for T2 are presented in table 5-3 below which contains both the pre- and post-assessment results. Tracked learners appear in red type.

Table 5-3: T2 S1(E)/3 – English comprehension & fluency: April 2016

Learner No.	WCPM: Total /71	No. of correct comprehension questions /5
Average reading rate 2nd term grade 3: 71 - 92 wcpm		
1	145	5/5
2	87	3/5
3	79	3/5
4	74	5/5
5	73	5/5
6	62	4/4
7	61	4/4
8	57	3/3
9	57	4/5
10	54	4/5
11	45	0
12	43	1/3
13	39	3/3
14	35	0
15	34	1/3
16	30	2/3
17	29	0
18	29	3/3
19	26	3/3
20	26	1/3
21	23	3/3
22	20	3/3
23	19	1/3
24	17	2/3
25	16	0
26	14	2/2
27	10	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0

Table 5-3 above indicates that there are only five learners who are at the required reading level. Five are slightly under. Seven are considerably lower, ten are very weak and six learners are unable to read a single word of English text. These learners appear to initially have weaker literacy skills in general for the pre-test than the class of T1. However, the learners for T2 also showed reasonable improvements during the post-assessments, as indicated in table 5-4 below, which contains the pre- and post-results for T2's class.

Table 5-4: T2 S1(E)/3 – EGRA assessment results English & isiZulu

Tracked Learner No.	Pre-Study Assessment English – April, 2016 (wcpm 71-92) & isiZulu (wcpm 43) Comprehension & Fluency		Post-Study Assessment English – March, 2017 (wcpm 71-92) & isiZulu (wcpm 43) Comprehension & Fluency	
	Wcpm	Comprehension	Wcpm	Comprehension
1	145 wcpm, Comprehension = 5/5	0	165 wcpm, Comprehension = 5/5	35 wcpm, comprehension = 5/5
10	54 wcpm Comprehension = 4/5	3 wcpm Comprehension = 5/5	84 wcpm; Comprehension = 5/5	11 wcpm, comprehension = 3/5
12	43 wcpm Comprehension = 1/5	0	65 wcpm Comprehension = 4/5	17 wcpm comprehension = 5/5

Table 5-4 above for T2 S1(E)/3 shows the results for the three tracked learners from this class. Each tracked learner is discussed below.

i. Learner 1

This learner is perhaps the strongest reader in this class. She was reading English initially at 145 wcpm, considerably over the expected rate with 100% comprehension. Her increase in English reading shows that she was now on 165 wcpm at 100% comprehension while her isiZulu was poor at 35 wcpm, way below the expected average as she was now in Grade 4 post-test in 2017. Her comprehension was 100%.

ii. Learner 10

The initial reading speed for this learner was 54 wcpm and 80% comprehension. His isiZulu reading was virtually non-existent at 3 wcpm. However, his comprehension was 100% which may indicate he can understand more than he is actually able to sound out and read. Post-testing indicated his English had increased to 84 wcpm with 100% comprehension, while his isiZulu had increased to 11 wcpm with 75% comprehension.

iii. Learner 12

This learner scored an initial 43 wcpm out of an expected range of between 71 -92 wcpm with only 25% comprehension. He was unable to read a single word in his home language, isiZulu. His post-test English results showed he had increased to 65 wcpm and comprehension as at 80%. His isiZulu reading was now at 17 wcpm (out of an expected 43 wcpm) and comprehension was 100%.

As with the results from T1, the post-study re-assessment showed that all learners had increased both their English and isiZulu reading speed and fluency. The post-assessment increases also appear to be comparable to one another in terms of wcpm and comprehension. This may bring into question the effectiveness of the R2L approach used by T1 with her Grade 3 learners if they did not show greater increases across the year than the learners who did not have the R2L intervention. The increase in reading levels would appear to be greater proportional to the initial strength of the learner's reading skills, i.e. weaker learners showed greater improvement (Rose, 2006; Rose, 2011a; Van der Slik & Weideman, 2008). The final set of results in table 5-5 below are the EGRA assessment results for the remaining Grade 3 teacher, T5 at S2(Z).

c. Reading assessment results T5, Grade 3, S2(Z)

The next set of reading results are those for T5, S2(Z), Grade 3. The teacher provided 4 learners for tracking. The 4 tracked learners were then tested by means of the EGRA English comprehension and fluency. T5 uses R2L and a scaffolded interaction cycle. She felt very confident, in her interview, when questioned on the readiness of her learners for Grade 4 and the switch to English as LoLT, that they would be ready for the change. She commented as follows: "... *the learners will be ready.*" (T5)

The EGRA was administered to the Grade 3 class at S2(Z) between August and October 2016. The testing occurred later than I originally desired due to the abovementioned difficulties in accessing the research site (see 4.7). A comprehension test was provided initially for all the participating Grade 3 learners at the school in isiZulu. In total, 38 learners were assessed for isiZulu comprehension and 4 were selected, or tracked, firstly for testing in English comprehension and then for post-testing in both languages.

Table 5-5: T5 S2(Z)/3 – isiZulu comprehension & fluency: April 2016

Learner no.	isiZulu Fluency: Total /43 (wcpm)	Comprehension Score /5
1	51	4/5
2	50	5/5
3	49	5/5
4	46	3/5
5	44	2/5
6	44	5/5
7	43	5/5
8	43	5/ 5
9	38	5/5
10	37	4/5
11	37	5/5
12	34	4/5
13	32	5/5
14	31	5/5
15	29	5/5
16	29	4/5
17	29	4/5
18	27	2/3
19	27	4/5
20	27	4/5
21	26	5/5
22	26	5/5
23	26	5/5
24	25	5/5
25	24	5/5
26	23	2/5
27	23	2/5
28	23	3/3
29	22	5/5
30	21	3/3
31	20	5/5
32	19	5/5
33	18	4/4
34	18	4/4
35	16	3/3
36	14	3/3
37	11	3/3
38	Discontinued	-

5.8.1 Analysis of reading assessments

This analysis will begin with the isiZulu assessments and reading speed. From the above initial reading, 8 learners are reading at or above the expected rate. Six learners fall slightly below, 17 are considerably below, while the remaining 6 are very weak. The last learner, no. 38, has special needs and her initial assessment was discontinued as she was unable to read the first line of text. It is not that the reading speed of learners is high, although it compares favourably with national results but that the fluency and comprehension levels of the learners is above average. For example, during a recent classroom study undertaken in 2008, Grade 3 learners obtained 19% for home-language literacy assessments in the ANAs (Pretorius, 2014). In addition, Draper and Spaul (Draper & Spaul, 2015) analysed oral fluency in reading (ORF) in English using data from 1772 rural learners in grade 5 gathered by NEEDU in 2013. The ORF of English rural learners was very low: 41% were considered to be non-readers in English (less than wcpm) and 11% could not read a single English word from the passage. Further, as mentioned (see 2.2), SACMEQ assessed the reading levels of Grade 6 learners and found little improvement in the poor reading scores between 2000 and 2007 (SACMEQ, 2011; Pretorius, 2014). Compared to the above scores provided for readers across South Africa, the S2 (Z) Grade 3 reading scores indicate a considerably higher level of reading skill. I initially sought to evaluate the results for fluency and comprehension according to the guidelines provided by McCormick (McCormick, 1995:100 in Pretorius & Ribbens, 2005), who proposes three levels of reading ability as follows:

- At the independent level, the reader reads with 98% decoding accuracy and at least a 95% level of comprehension. These are highly skilled readers who can effectively learn from texts appropriate for that specific maturational level.
- At the instructional level the reader reads with 95% decoding accuracy and about 75% comprehension. These are readers who do not have major reading problems but who can benefit from reading instruction at their maturational level.
- At the frustration level, the reader reads with less than 90% decoding accuracy and 50% or less comprehension. These are readers who have major reading problems and who are reading well below their maturational level. They need intensive reading programmes to increase their reading level.

However, these guidelines do not seem necessarily appropriate for these assessments at S2 (Z), as wcpm and comprehension scores do not always match up. What may be relevant, as previously mentioned, is not so much the speed of the readers but the accuracy with which they read, as well as their high levels of comprehension. According to the McCormick guidelines (McCormick, 1995), only four learners in the entire group had frustration levels of comprehension, excluding the discontinued learner who, it was seen, made some improvement in her post-reading tests. In addition, the reading rates of the learners included virtually no errors. In other words, the learners were reading relatively slowly but with extremely high accuracy and comprehension rates. While reading speed is an important component of fluency and reading skill, in this case the reading speeds can be developed through practice (Nation, 2015).

There may be several reasons why the learners in this classroom had a higher level of reading skill. One may be the fact that they had the opportunity to learn in their home language, isiZulu, which also may account for the stronger English reading levels of these learners (Taylor & Von Fintel, 2016). However, assessments from other such schools across SA where the home language is the LoLT do not necessarily show acceptable reading levels, which indicates that it may not be this reason alone that increases the reading ability of the Grade 3 learners (Draper & Spaul, 2015; Spaul & Pretorius, 2015; Venter, 2012). Another relevant factor was that S2 (Z) instituted additional reading training for all the teachers in the school and the learners in T5s class had an active reading intervention, in this case R2L, since Grade 1. This initial level of reading ability with this Grade 3 class appears extremely promising and seems to indicate that additional training in reading teaching can prove very effective if applied over a longer period, such as across the foundation phase. However, the post-assessment scores for T5's learners point to a different outcome as they show similar gains in comprehension and fluency to learners of both T1 and T2. The pre-and post-assessment scores for T5 S1 (E)/3 are presented in table 5-6, below.

Table 5-6: T5 S2 (Z)/3 – EGRA assessment results English & isiZulu

Tracked Learner No.	Pre-Study Assessment isiZulu – April, 2016 (wcpm 43) & English (wcpm 71-92) Comprehension & Fluency		Post-Study Assessment isiZulu – April, 2017 (wcpm 43) & English (wcpm 71-92) Comprehension & Fluency	
	7	43 wcpm; Comprehension Score = 5/5	76 wcpm; Comprehension Score = 4/5	55 wcpm; Comprehension Score = 5/5
30	21 wcpm; Comprehension Score = 5/5	31 wcpm; Comprehension Score = 1/3	26 wcpm; 5/5 Comprehension Score = 5/5	47 wcpm; Comprehension Score = 2/4
32	19 wcpm; Comprehension Score = 5/5	34 wcpm; Comprehension Score = 3/3	23 wcpm; Comprehension Score = 5/5	45 wcpm; Comprehension Score = 3/5
38	Discontinued	Discontinued	9 wcpm; Comprehension Score = 3/3	8 wcpm; Comprehension Score = 2/3

5.8.2 Post-study reading assessments

The post-test analysis of the tracked learners for T5 are indicated below by number, followed by a summary of the overall post-assessment results for all three Grade 3 teachers.

a. Learner 7

Post-tests showed that Learner 7 had initially 43 wcpm in isiZulu with 100% comprehension and 76 wcpm in English with 75% comprehension. Post-tests showed an improvement in her isiZulu reading speed from 43 to 55, although intriguingly her English reading speed had decreased from 76 wcpm (out of a total of 71) to 63. The reasons for this may be an area for further study (Steinke, 2012). Her comprehension scores for both languages were 100%.

b. Learner 30

This learner had an initial isiZulu reading speed of 21 wcpm and 100% accuracy. His English score was 31 with only 32% comprehension accuracy. His post-tests showed his isiZulu had increased to 26 with 100% comprehension whilst his English increased to 47 with 50% comprehension.

c. Learner 32

This learner had an initial reading speed in isiZulu of 19 wcpm, with 100% comprehension with 31 wcpm in English with 32% comprehension. His increase showed 47 wcpm in isiZulu with 50% comprehension and 26 words in English with 100% comprehension.

d. Learner 38

This learner was the weakest learner in the class. Her reading with discontinued in both isiZulu and English. Her improvement showed that she was now reading at 9 wcpm with 100% comprehension in isiZulu. She now had 8 wcpm in English with 66% comprehension score.

5.8.3 Summary of pre- and post-test results

In sum, T1 uses a scaffolded approach to reading teaching. Her learners had no previous scaffolding in Grade 1 and 2, neither did they continue with scaffolding in Grade 4 during the post-assessments. T2 used only CAPS. The pre-study results for T1 showed that her initial reading assessment scores were higher than those of T2.

In addition, the initial reading scores of T5 were stronger, particularly in fluency and accuracy, than either T1 or T2. This would appear to support the idea that additional training in reading teaching is beneficial for increasing literacy skills, especially when combined with the FORT data that shows that trained teachers tend to make use of a greater number of teaching strategies, including focus on comprehension, phonemic awareness, integrating language elements into teaching and the use of restricted and extended open questions. In addition, the fact that S2(Z) has implemented a reading intervention programme at the school and T5's learners have received a scaffolded approach since Grade 1, would seem to support the case for the benefits of teacher

training even further. The reading intervention, coupled with the use of the mother-tongue as LoLT at S2 (Z), would assumedly help to explain the positive reading results.

However, the post-assessments reading results are generally the same for all three teachers: T1, T2 and T5, regardless of mother-tongue instruction, scaffolding or additional reading training. In addition, the post-assessment increases are comparable for both the L1 and the FAL for all learners. As mentioned, the weaker students tended to show a greater increase than the stronger students and some stronger students tended to show a decrease in ability (Steinke, 2012; Van der Slik & Weideman, 2008). This calls into question the sufficiency of additional reading training alone in creating more effective literacy teachers. The reading results for the PIRLS and Pre-PIRLS conducted with Grade 4s, pre-and post-study, will now be discussed. Due to size constraints, the detailed data of the Grade 4 results are provided in Appendix X. However, a summary of the assessments and results are provided below.

5.9 Summary of Grade 4 reading results: PIRLS and Pre-PIRLS

The PIRLS 2011 released text was given to two Grade 4 classes only at S1(E) during May 2016. The total number of learners initially tested in both groups was 59. The Pre-PIRLS as conducted with one class each from S1(E) and S2(Z) between August and October 2016, with a total of 83 learners across both schools. Thirty-nine were from S1(E) and 44 were from S2(Z). The test was administered by the relevant class teachers, i.e. T3/S1(E) and T6/S2(Z). Both the PIRLS and Pre-PIRLS contain the following four question types:

- Retrieving Explicitly Stated Information;
- Making Straightforward Inferences;
- Interpreting and Integrating Ideas and Information;
- Examining and Evaluating Content, Language and Textual Elements.

A summary of the Grade 4 PIRLS and Pre-PIRLS assessments follows.

5.9.1 The PIRLS assessments

In the initial PIRLS, which is the international standard for reading assessment, two groups were tested at S1(E), which has English as LoLT. The PIRLS and Pre-PIRLS assessments were only conducted with the learners in English as the isiZulu versions are not available for public use. These are labelled 4A and 4B. Of the five basic referential questions, only 3% of learners in 4A could answer all five, while 15% could answer none.

Of the two inferential questions, 48% could answer none. Almost 50% of the learners could not answer one of the two questions that required them to interpret and integrate ideas and information. In addition, over 50% of the learners could not answer any of the three questions that required examining and evaluation content, language and textual elements, i.e. higher order questions.

Of the second group tested, 4B, 12% could not answer any basic referential questions. Almost 60% could not answer any inferential questions while 35% percent could not answer questions that required interpretation and integration of ideas and information. Finally, almost 60% could not answer any questions that required examination and evaluation of information, content, language and textual elements. In other words, the reading results from the PIRLS were extremely poor.

5.9.2 The Pre-PIRLS assessments

Due to these poor results, the learners at S1(E) were re-tested using the Pre-PIRLS (see 4.4.6) and the Pre-PIRLS was then administered at S2(Z) as well. S2(Z) did not receive the initial PIRLS. Learners who were assessed at S1(E) had the following results: only 2.4% could answer all six basic referential questions; 5% could answer all five inferencing questions; 9% could answer both questions that required examination and evaluation of content; while 62% could not answer the single question that required interpretation and integration of information and ideas.

Of the learners at S2(Z) who were assessed by means of the Pre-PIRLS : 16% could answer all the basic referential questions; 21% could answer all five inferencing questions; 37% could answer two questions that required examination and evaluation of content; while almost 50% could not answer the single question that required integrating and interpreting information and ideas. Thus, the results for S2(Z) were considerably higher than those of S1(E), although the results for both

groups are weak. The reason for this difference in scores at the two schools may be varied. It is interesting that the English LoLT school performed poorer on the Grade 4 results in English than the school that had had isiZulu up until the end of Grade 3. One might expect the opposite result, i.e. the English medium school would be stronger. Nonetheless, one must take into account the benefits of mother-tongue instruction in the foundation years as literacy skills are transferred from the L1 to the L2 (Cummins, 2001; Taylor & Von Fintel, 2016). In addition, as mentioned above, S2(Z) has implemented the reading intervention since Grade 1 for these learners. However, as with the EGRA assessments, the post-test results of the Grade 4's challenges the initial presumption as the increases across the study period were relatively low. A discussion of the post-assessment results for the Grades 4s across both schools follows.

5.9.3 Post-assessment results for S1(E) & S2(Z)

The post-study assessments were conducted during April and June 2017. As with the pre-study assessments, both sets of Grade 4 tests at S1(E) and S2(Z) were administered by the relevant (now Grade 5) teacher and I marked them. One Grade 4 class at each school was assessed, using the identical Pre-PIRLS assessment that was given for the pre-study assessment. The learners were now in Grade 5 and the classes had become mixed. This meant that, when testing a single class, I obtained a mixture of learners from previous Grade 4 classes that had completed the original Pre-PIRLS. I then selected those learners from each group that had taken the previous assessment so that I could compare their scores. This resulted in a total of eight learners being selected from S1(E) and considerably more, 26 learners, from S2(Z). Although this created an imbalance in the numbers of post-assessment learners from each school, the initial proposal was to track a minimum of three learners from each group, so the tracked numbers of both schools were higher. In addition, it was S2(Z) that had the initially higher reading results and this school provided the 26 learners for re-testing. This may have skewed results in favour of increased literacy skills. Yet, in spite of the greater number of learners tracked for post-assessment, the literacy skills increase overall for S1(E) and S2(Z) were extremely low and indicated a small increase of only 3% in reading levels (see Appendix X).

As with the post-assessment results of the Grade 3 classes, the Grade 4 classes indicated that some stronger students went down in their reading levels, while the weaker students either stayed

consistent or improved slightly in their reading ability levels. As mentioned, there were some gains post-assessment but overall, the reading levels remain poor, especially considering that the (now Grade 5s) were being tested by means of the Pre-PIRLS and not the PIRLS.

5.10 Summary of chapter 5

This chapter has discussed the Findings of the study, beginning with background information on each case study, or participating teacher. This was followed by graphs containing the FORT data. The first set contained 4 graphs divided into teachers who use additional reading teaching training in their lessons (ADDs) and those who use only CAPS (NAs). The results for each teacher were entered into a data spreadsheet for the respective group and then an average was taken for each group. Averages were then displayed graphically for comparison. The graphs included Reading Teaching and PCK; Management; Interaction from Learner to Teacher; and Interaction from Teacher to Learner. Findings indicate that the teachers who have additional training in reading seem to use more beneficial teaching tools and strategies than those who only use CAPS. For example, the ADD teachers focus more on comprehension, group work, integrate language elements into their reading teaching and focus on oral fluency and phonemics than the NA group. In addition, a higher rate of Other and Emotional Response from the learners in the ADD teachers' classrooms may indicate a higher level of engagement than learners in the NA groups. However, despite greater engagement, even the ADD group lessons tend to be teacher-led, resulting in limited interactions from learners to teachers. All participating teachers tended to use requests and instruction to learners more than other forms of teacher-talk, while the highest number learners' responses to teachers consisted of responses to the teachers' cues.

The graphs showing the differences between the ADD and NA group were followed by a further set of graphs comparing the isiZulu and English language lessons for T1 and T5 in terms of their teaching styles. T1's data indicated that she tends to use a similar style when teaching for both languages although her averages for phonemics and oral fluency are higher in her isiZulu lessons. T5 makes use of the R2L approach (see 3.14) for her English lessons but, in this case, the recorded isiZulu lessons contained very different activities from her English lessons and it is therefore difficult to compare the teaching styles, although, as with T1, T5 integrates language elements into both lesson types and focuses more on phonemic awareness and oral fluency in her isiZulu lessons.

The two isiZulu recorded lessons for T5 may give an insight into the different activities that this teacher provides for her learners and the lesson where the learners create a concert for their peers is the only lesson in this study which is not wholly teacher-led.

A profile of all the teachers then followed. The profiles were clustered, again, into ADD and NA teacher groups. The profiles consisted of an initial background on each individual teacher within the group, followed by a set of graphs (per group) showing the individual FORT data scores for each teacher. A series of transcripts were then presented, one from each teacher, to illustrate how the FORT data was collected and to ascertain the engagement levels of the learners in the video-recorded lessons (via observation). These short segments were analysed in terms of and linked to the FORT graphic data for each individual teacher.

The reading pre- and post-reading assessments were then discussed for the Grade 3 teachers: T1, T2 and T5, at both S1(E) and S2(Z). It initially appeared, from the pre-study assessments, that the teachers who received additional reading training and make active use of it in their classrooms had stronger reading results. However, the post-assessment results of all three classes at both schools, indicated that the post-study increases in literacy skill were similar across the learners of all three teachers, regardless of training or reading intervention/s at the schools.

Finally, a summary of both the PIRLS and Pre-PIRLS comprehension assessment was provided. Due to size constraints, the full results of the pre- and post-assessment results for Grade 4s are included in the Appendices (see Appendix X). Initially, the PIRLS was conducted with two classes at S1(E) but the results were so poor that it was decided to re-test the learners with the Pre-PIRLS.

The Pre-PIRLS was then issued to one class at S1(E) and one class at S2(Z). The results of the Pre-PIRLS, although a slight improvement on the PIRLS, were still very poor and indicated that a large portion of the learners are unable to answer basic referential questions and lack the skills to answer either inferential or higher-order questions. S2(Z) showed a stronger set of literacy skills in the Pre-PIRLS compared to S1(E). This may be due to the advantages of mother-tongue instruction up until the end of Grade 3 at S2(Z) (Taylor, 2016; Huguet, 2000; Ness, 2016) as well as the reading intervention implemented the Grade 4 learners have had at S2(Z) since Grade 1. However, the post-assessment results showed only a small increase of 3% overall in the learners' literacy skills across both schools. This was similar pattern to the EGRA post-assessment results with the Grade 3s at both schools. Again, stronger students tended to go down slightly in their

reading skills levels, post-assessment, whilst poorer students either remained consistent in their levels or made slight improvements. Overall, the reading levels of the Grade 4s (now Grade 5s) remained low. The generally poor results of the Grade 4 reading assessments may point to the lack of focus by teachers – particularly those in the NA group - on both referential and inferential comprehension, as well as the limited use of restricted open and extended open questions, indicated in the FORT data. In addition, traditional teaching methods still prevail in the classrooms. This lack of focus on these areas is restrictive in that the learners are clearly not being moved from decoding to comprehension. Chapter 6 will discuss the findings in light of the research questions and provide a conclusion.

CHAPTER 6: DISCUSSION AND CONCLUSION

6.1 Conclusion

The study has been an interpretivist, parallel convergent design and is a multiple, explanatory case study. The focus was on teachers in their classrooms and how they teach literacy skills. The study took place from 2015 to 2018 in two schools in the Natal Midlands. In total, 8 teachers and their learners participated. The instruments were: an instrument designed to capture classroom practice, called the FORT; semi-structured interviews with participating teachers to capture their attitudes and beliefs towards their teaching; video-recorded lessons of classroom reading teaching; journal notes; observations; and pre- and post-study reading assessments of participating learners.

The literature review provides relevant research studies in classroom practice and reading teaching in South Africa from Foundation to Intermediate Grade levels (Grades 1 to 6) and places the current study in context. Whereas other studies have investigated separate teaching issues such as PCK, teacher training and classroom practice, the current study combines all these elements into one study. In addition, the use of video- recorded lessons and the FORT, effectively captures classroom teaching practice and interaction. Finally, the study investigates PCK and decoding to comprehension across Grades 3 and 4 and therefore fills an important gap in the research literature.

Findings were that teachers who use additional training in reading teaching tend to be more effective teachers as they focus more on comprehension, oral fluency, group work and reading strategies than teachers who do use only CAPS. However, despite their additional training, these teachers still tend towards traditional teaching styles with teacher-led lessons that restrict learner creativity and agency.

As discussed previously (see 5.10), from the pre-reading assessments one might have expected teachers who received additional reading training to have ultimately had stronger reading results. However, the post-assessment results of all three classes at both schools, showed that the post-study increases in literacy skill were similar across the learners of all three teachers. This leads to the conclusion that reading training alone is necessary and beneficial, as indicated by the FORT data, but not sufficient to lead learners from decoding to comprehension. Despite the implementation of a scaffolding approach in several classrooms of participating teachers, all the

teachers, regardless of training, appear to continue with traditional teaching forms, which indicates that additional training alone may not be sufficient to change deeply-embedded teaching styles.

Several of these teachers believe that they teach differently than they actually do, which shows that they have some awareness of how reading teaching should occur, yet they do not practice it. In addition, pre- and post-reading assessments for both Grades 3 and 4 showed that learner reading levels remain poor. This is despite teacher training and an intervention at one of the two schools since Grade 1. The process of decoding to comprehension did not take place across the two Grades for the learners in this study. It has therefore been suggested that, in addition to receiving additional reading training, teachers may benefit from receiving the coaching model as proposed in the Early Grade Reading Study (Taylor *et al.*, 2017).

PCK underpins the effectiveness of a teacher. Teachers need not only content knowledge, subject and general teaching knowledge, but also pedagogical content knowledge in order to teach reading effectively (Pretorius & Klapwijk, 2016). However, it appears that additional training is simply not sufficient to transform teaching styles which are rigidly embedded. It takes continuous exposure to new ways of teaching for these ideas to be gradually taken up and become part of a teacher's PCK.

6.2 Discussion of the findings

There were four major areas of data presentation in chapter 5 that sought to answer the proposed research questions. Firstly, the participating teachers were divided into two groups: the ADDS, or those who use additional training in reading teaching and the NAs, or those who use only CAPS. The FORT data was presented on a set of four graphs for these two teacher groups. Within this data was included the qualitative data from the semi-structured and informal teacher interviews. Secondly, the teaching of two teachers in isiZulu and English was presented on a set of eight graphs to allow for comparison between teaching styles for both languages. Thirdly, the participating teacher data was presented individually by means of eight graphs and a transcript was provided for each individual teacher, showing how the FORT data was captured and observing the engagement levels of the learners in the relevant lessons. Finally, the pre-post study reading assessment results for EGRA (Grade 3), PIRLS and Pre-PIRLS (Grade 4) were provided and discussed. This chapter will provide a discussion of the above findings from the respective

research areas according to the research questions, followed by a conclusion to the study. However, initially, I will place the findings in context in light of the literature and theory discussed in Chapters 2 and 3.

6.3 Findings, Literature & Theory

As a background to the findings, I will briefly revisit the current problems inherent in the South African education system. Firstly, teachers are not adequately trained to teach reading at the early grade levels (Klapwijk, 2015). Initial teacher education has a decisive impact on trainee teachers and the structure and sequencing of their lessons tend to follow the patterns originally set in the colleges (Akyeampong et al., 2013). In addition, Nkosi (2011) found that teachers beliefs tend to strongly influence their teaching. Teachers indicate a lack of focus on comprehension and the value of reading. There is also a disconnection between what is taught in ITE courses and the realities of the classroom (Taylor, 2014). This is exacerbated by the continued use of natural approaches, both previously on OBE and now in CAPS (Hoadley, 2017; Martin & Rose, 2012). As a result of these and other factors, learners are not learning to read for meaning (Klapwijk, 2015; Pretorius & Klapwijk, 2016; Spaul et al., 2016).

The theories in this study put forward as a basis for effective reading teaching are: those of explicit teaching, such as comprehension skills; grammar and genre (writing skills); returning the teacher to the classroom as a guide and mentor to scaffold learners; continued teaching of reading beyond the foundation grades; teacher-talk, with the understanding that it is not just the amount of talk that matters but what is said; and the equal importance of student agency (Halliday, 1976; Martin & Rose, 2012; Vygotsky, 1978; Wildsmith, 1992; Tough, 1977). Underpinning this is a concern for the plight of disadvantaged learners entering the formal schooling system, as literacy skills are difficult to teach effectively if the variables of socio-economic status and educational issues are not taken into consideration as well (Bernstein, 1990; Wilsenach, 2015).

The FORT instrument, developed and adapted from the original COLT (Hoadley, 2005; Spada & Fröhlich, 1995) to capture classroom reading practice has served to support data from the abovementioned literature. For example, teachers do not necessarily teach as they believe they do (Mudzielwana, 2012). The FORT also indicates that classroom lessons tend to be teacher-led and teachers still make use of rote teaching methods. Such findings support the research from both Coakley-Fields (2018), who investigates the effects of types of teacher-talk on learners and

learning, as well as Hoadley (2017), who found in her evaluation of the CAPS curriculum that, while control is being brought back to classrooms via CAPS, power relations are still firmly in place and knowledge remains restricted.

This study included four teachers who were using additional training in reading teaching in their classrooms. The remaining four participating teachers use only CAPS. The additional approaches used were READ and R2L (see 2.9). READ encourages reading skills by actively placing focus on learners reading and using different reading strategies. However, it is, as a DBE initiative, based upon natural approaches and lacks explicit teaching, thereby reducing its effectiveness (Freedman, 1993; Rose & Martin, 2012). R2L, on the other hand, is based on the principal of explicit teaching, and elaboration, or two-way interaction between student teacher and vice versa (Halliday, 1994; Rose & Martin, 2012; Vygotsky, 1978). A discussion will now take place under each research question. For ease of reference, the research questions are re-stated below:

- What do teachers do when they teaching reading that leads learners from decoding to comprehension?
 - What practices help their reading teaching?
 - What practices hinder their reading teaching?
 - Do teachers teach as they believe they do, according to their interviews and the FORT data?
 - Does additional reading training assist in creating more effective literacy teachers?

Each question will be discussed under its relevant heading, starting with an examination of what the participating teachers did when they taught literacy: what practices facilitated literacy acquisition and which ones restricted it. For the sake of this analysis, the teachers are clustered again into their ADD and NA groups.

6.4 What participating teachers do when they teach

The teaching style and classroom practices of the eight participating teachers in this study were captured using the FORT, which has shown itself to be a reliable, nuanced and sensitive instrument that can accurately capture how teachers teach reading within a classroom setting. In addition, it

is adaptable as it can be used by a single researcher or by a group, all depending on the context and need. The teachers were divided into two groups: those who use additional reading teaching in their classrooms and those who use only CAPS (see 1.4.2). I will begin with a description of what the ADD teachers do when they teach, followed by the NA teachers and then a description of what both teacher groups do.

a. ADD teachers

When they teach, the ADD teachers make effective use of comprehension strategies, both referential and inferential. They use a fair number of closed questions, some open restricted questions and a high use of extended open questions. The ADD teachers focus on sounds and phonemic awareness and oral fluency. They also use some variation in learner reading strategies with their learners, such as group reading and shared reading out-loud although it would be facilitative to use a greater variety of reading types, such as individual reading, both silent and out-loud.

The ADDs use most management categories but they focus more on procedure, which may indicate more activities taking place in the classroom. They also use a scaffolded interaction form of reading teaching that allows for the relaxing of the sequencing and pacing of the current, somewhat prescriptive, CAPS curriculum. The ADD teachers make use of group work and tend to integrate language elements such as writing, punctuation, spelling and grammar into their teaching.

The ADD teachers' learners showed a greater number of and variation across categories in their responses, such as emotional reactions, including laughter and body movements (e.g. raised hands) that may indicate more learner engagement. Despite this, the learner to teacher responses remain limited and the lessons are mainly teacher-led. Even with additional training, the ADD teachers tend towards traditional teaching styles that appear deeply entrenched and they retain tight control over their classroom interaction. The highest score for learner to teacher responses for the ADD group is the response to the teachers' cues. Furthermore, while the ADD teachers have a varied amount of teacher to learner talk across categories, their highest categories are requests for information and instruction. The ADD teachers make use of code-switching in their lessons to facilitate understanding, although the majority of code-switching is from teacher to learner and their learners generally do not use code-switching in response to their teachers. Finally, the ADD

teachers appear, from the video observations and transcripts, to have a reasonably high level of learner engagement.

b. NA teachers

The practices of the NA from the FORT data are as follows. The teachers have a limited focus on either referential or inferential comprehension. They do use some decoding. They use many closed questions and a high number of restricted open questions, while their use of open extended questions is low. The NA teachers concentrated mainly on vocabulary building, as per their beliefs that one moves learners from decoding to comprehension via learning words. They also have a high focus on familiar word recognition and show an indication of integration of language elements into their teaching, although sometimes at low averages as in the case of punctuation and a lack of spelling. They tend to have a lower focus on group work and show a lack of reading strategies in that they make use of mainly group reading out-loud. The NA teachers show a lack of variation in learner responses, or participant observation as they have a high average of choral response from their learners with some differing individual learner responses only. Concerning management, the NA teachers generally make use of most categories. However, they do not make use of a scaffolded, reading teaching approach or interaction cycle and, with the exception of one teacher, they do not overtly relax the sequencing and pacing boundaries of the lessons.

Their learners showed quite a limited rate of interaction with the NA teachers and the highest average is for responses to the teachers' cues. The NAs retain tight control over the classroom interaction and discourse. They use a variety of discourse types with their learners but their highest interaction averages are for instruction and requesting, which is an indicator of their teacher-led teaching style.

6.5 What do teachers do that helps literacy learning?

The following are identified as facilitative teaching practices (see 3.9):

- Teachers make use of existing learner knowledge;
- They show a reasonable use of closed and restricted open-questions;

- The ADD teachers use a reasonable variety of teaching strategies and focus on comprehension, extended-open questions, phonemic awareness and oral fluency;
- In addition, ADD teachers use a scaffolded teaching approach;
- The teachers integrate language elements, such as grammar, punctuation and writing into their reading teaching;
- They focus on vocabulary building and familiar word recognition; and
- They use a variety of discourse styles and interactions with their learners;
- Code-switching is used judiciously;
- There is a reasonable level of learner engagement in the lessons (by ADD teachers).

6.6 What do teachers do that restricts literacy learning?

The following are identified as restrictive teaching practices:

- The low focus on comprehension and the lack of use of open-extended questions;
- A low focus on phonemic awareness oral fluency (by the NA teachers);
- The tendency towards a low focus on group work;
- Mainly choral responses and chanting from learners to teachers;
- Teacher led lessons and lack of learner to teacher interaction, in general;
- Lack of reading strategies used;
- Lack of a scaffolded teaching approach;
- The use of mainly requests and instructions by teachers when interacting with their learners;
- The continuation of traditional, top-down, teaching styles; and
- The poor level of learner engagement in many of the recorded lessons;
- The fact that learners are generally not being moved from decoding to comprehension.

6.7 Do teachers teach as they believe they do?

Neither teacher group teaches exactly as they believe they do (Mudzielwana, 2012). On the contrary, both groups believe they give priority to two-way interaction in the classroom whereas both groups have a teacher-fronting style (Hoadley, 2017). However, the ADDS tend to teach more as they say they do in their interviews, especially regarding their focus on comprehension and group work. The NAs believe, according to their interviews, that issues of comprehension and group work are very important. However, they do not make them a priority in the classroom, according to the FORT data. It should be said here that no teacher disputed the idea that that comprehension is the ultimate goal of reading. They all believe they are moving their learners towards reading for meaning but, in reality, it is not happening. This is borne out by the results of the reading assessments that indicate that the learners initially had low reading skills levels on the pre-tests and continued to have low reading levels after the study period had ended, as reading skills increases were poor for both Grades but particularly for Grade 4s across both S1(E) and S2(Z), who showed extremely poor reading levels for the Pre-PIRLS assessments in Grade 5. This leads to a discussion on the final research question.

6.8 Does additional reading training assist in creating more effective literacy teachers?

Although the learners in the classrooms of the teachers with additional training appeared to initially have higher levels of literacy skills, there was a lack of reading skills progress across the study year, despite the additional training of the teachers. The fact is that, according to both FORT data and the reading assessment results, these learners in S1(E) and S2(Z) have not been moved from decoding to comprehension. Therefore, additional reading teaching training appears to be necessary but not sufficient to lead learners to read for meaning. Despite the additional training, traditional teaching styles and ideas appear to remain deeply embedded (Akyeampong *et al.*, 2013). The findings of the current study would seem to support the findings of the EGRS report that training did not appear to be as effective as was hoped and that on-going coaching for reading teachers may be required (Taylor *et al.*, 2017). Recommendations follow below.

6.9 Recommendations

The effective reading teacher will use her PCK, underpinned by her beliefs, attitudes and theories of teaching, to create teacher-talk; student talk; and student to student talk in such way that it facilitates and extends learning. However, to do this she needs holistic, effective reading teaching training.

Considering this, I would recommend further teacher training for reading teachers. The FORT data indicates that it is beneficial and increases teachers' effectiveness in extending learning. However, it appears, also from the FORT data, the relevant interviews and the reading assessment results, that training is not sufficient to assist teachers to move learners from decoding to comprehension across Grades 3 and 4. I believe it is safe to say that no teacher wishes to be ineffective but that some may lack the tools and face demoralization.

Ultimately, the PCK of trained teachers in this study has been shown to affect their teaching practice in a beneficial manner. Findings are there are other aspects of their PCK that remain resistant to change. However, this resistance does not mean that their PCK is immune to change. With support and additional interventions, such as the suggested coaching model in the EGRS report ((Taylor *et al.*, 2017), a teacher's PCK can grow and develop, in particular in the area of reading teaching at the foundational and intermediary grade levels of South African schools.

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APPENDICES

APPENDIX A: FORT PART A – PCK & READING TEACHING

Time	Activity & Type of Material Used	Participant Organization			Reading Teaching										Activating & Creating Knowledge	
		Class	Group	Individual	Modality					Decoding		Comprehension				
					Focus on Integrated Skills			Silent Reading	Reading Out Loud							
	Choral (Whole Class) Response															
	Same Group Response															
	Different Group Response															
	Same Individual Response															
	Different Individual Response															
	Spelling															
	Punctuation															
	Grammar															
	Vocabulary															
	Writing															
	Individual Silent Reading															
	Group Silent Reading															
	Individual. Reading Out Loud															
	Shared Reading Out Loud															
	Group Reading Out Loud															
	Oral Fluency															
	Non-word reading															
	Familiar Word Recognition															
	Phonemic Awareness															
	Referential Comprehension															
	Inferential Comprehension															
	Open Question - Extended															
	Open Question - Restricted															
	Closed Question															
	Existing															
	New															

APPENDIX B: FORT PART A - MANAGEMENT

Management				Organization of Information	
Procedure	Discipline	Pacing	Sequencing	Prompt	Discourse Marker

APPENDIX C: FORT PART B – TEACHER TO LEARNER INTERACTION

Language	Dialogue																
LoLT	Code-switching	Requesting	Feedback	Evaluation Questions	Correction	Repetition	Instruction	Paraphrase	Explanation	Clarification	Elaboration	Response to Cue	Affirmation	Recast	Emotional Response	Responds to Difficulties	Other

APPENDIX D: FORT PART B – LEARNER TO TEACHER INTERACTION

Language	Dialogue																
LoLT	Code-switching	Requesting	Feedback	Evaluation Questions	Correction	Repetition	Instruction	Paraphrase	Explanation	Clarification	Elaboration	Response to Cue	Affirmation	Recast	Emotional Response	Responds to Difficulties	Other

APPENDIX E: STRUCTURED INTERVIEW QUESTIONS FOR TEACHERS

A. SCHOOL DETAILS

1. School MOI:
2. What grade/s do you teach?
3. How many learners are there currently in your class?
4. What is the age range of the learners in each class?

B. PERSONAL DETAILS

5. How many years teaching experience do you have?
6. What is your mother-tongue?

C. PERSONAL DEVELOPMENT

7. How do you feel your qualification helps you in your teaching? Are there ways in which you think it could have been improved?
8. Challenges in teaching?
9. How effective do you believe your own methods are in teaching reading?

D. READING TEACHING

10. What difficulties with reading do your learners experience in the language of learning and teaching?
11. How much support do you feel caregivers/parents provide to the learners and to you?
12. How do you move your learners from decoding to comprehension?

E. ACTIVITIES

13. What do your learners do in class when they learn to read?

F. MATERIALS USED

14. What additional materials do you use to teach reading, other than those prescribed by the curriculum?

G. PACING & SEQUENCING

15. How often do your learners have a specific time set aside for your reading during class time and how do they respond to this time?

H. PARTICIPANT ORGANIZATION

16. What do you believe are the benefits of group work? Why?

I. ACTIVATING KNOWLEDGE

17. How important is it for a teacher to rely on the background knowledge learners acquire outside the classroom? Why?

K. CLASSROOM INTERACTION BETWEEN TEACHER/LEARNER AND LEARNER/TEACHER

18. How important do you believe it is to have interaction between teacher and learners and vice-versa in the classroom?

L. LANGUAGE

19. What challenges, if any, do you encounter using English as MOI?

APPENDIX F: INFORMED ASSENT FROM LEARNERS



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NOORDWES-UNIVERSITEIT
POTCHEFSTROOM CAMPUS

Fakulteit Opvoedingswetenskappe / Faculty
Education Sciences

Privaatsak / Private Bag X6001, Potchefstroom
Suid-Afrika / South Africa 2520

T:

F:

<http://www.nwu.ac.za>

School of Human & Social Sciences

Tel: 084 617 7560

Email: kellie.steinke@gmail.com

12 March 2016

Dear Learner

Consent to Participate in Research

My name is Kellie Steinke and I am researching how teachers teach children to read. I am looking to find the best way of teaching them. The name of this study is “The Pedagogical Content Knowledge of Teachers and its Effect on Enliterating Grade Three and Four Learners”. The study will investigate the methods that teachers use to teach their learners how to read. It is intended that the research at your school will start in February 2016 and will end in November 2016.

I will be observing your classes and I will be recording some of the lessons with a video camera. This is for my own use to help me remember what happened in class. I will not allow your face to be seen on camera and your information will be secret. I will only be filming from the back of the classroom. If by accident your face is visible it will be blurred like they do on TV. All I want to do is to watch how you learn to read by looking at the activities your teacher does with you, like group or shared

reading. Three of you will be selected from the class to work more closely with me by showing me how well you can read and how well you understand the material you have to read.

This study will not hurt you in any way and no one will know it is you taking part. You are not forced to take part and you can leave the study at any time. You will not be punished for leaving. If you have questions you may ask me or the teacher at any time.

Your teacher or caregiver can contact Professor Rosemary Wildsmith-Cromarty, Cell: 0837853059, E.Mail: 21137544@nwu.ac.za or the researcher, Kellie Steinke, Cell: 0846177560, E.Mail: kellie.steinke@gmail.com at any time if you have questions about the research or she or he can contact the **Research Ethics Office** if you have questions about your rights as a research participant. The contact details are:

The Higher Degrees Office

Building F

Room 143

Phone No: 018 299 2623

Email: PostGrad-EnquiriesPOTCH@nwu.ac.za

Signature of Learner

Date

APPENDIX G: INFORMED CONSENT FROM CAREGIVERS/PARENTS



Fakulteit Opvoedingswetenskappe / Faculty
Education Sciences

Privaatsak / Private Bag X6001, Potchefstroom
Suid-Afrika / South Africa 2520

T:

F:

<http://www.nwu.ac.za>

School of Human & Social Sciences

Tel: 084 617 7560

Email: kellie.steinke@gmail.com

12 March 2016

Dear Caregiver/Parent

Consent to Participate in Research

My name is Kellie Steinke and I am researching how teachers teach children to read. I am looking to find the best way of teaching them. The name of this study is “The Pedagogical Content Knowledge of Teachers and its Effect on Enliterate Grade Three and Four Learners”. The study will investigate the methods that teachers use to teach their learners how to read. Therefore the main focus of this research will be on the teacher. It is envisaged that the study will run from February 2016 until the end of November, 2016. I have attached a time schedule to this letter to enable you to see how often I will be observing in the classroom/s.

I will be observing Grade 3 and 4 classrooms which include your child or children. I will be recording some of the lessons with a video camera to help me analyse the data. All children who take part in my study will be kept anonymous as I will not film the children's faces. I will only use the filming from the back of the classroom so that I cannot identify any individual child. The information I get from my research may be used for presentations in scientific conferences and for publishing in scientific journals only. It will NOT be used for any other purpose except with the teachers who were teaching the classes to improve their practices. From each class three children will be selected to closely monitor how the teaching method is helping the children to read.

This study will not result in any risk, harm or inconvenience to your child or children.

You may contact Professor Rosemary Wildsmith-Cromarty, Cell: 0837853059, E.Mail: 21137544@nwu.ac.za or the researcher, Kellie Steinke, Cell: 0846177560, E.Mail: Steinke@ukzn.ac.za at any time if you have questions about the research.

You may contact the **Research Ethics Office** if you have questions about your child's/children's rights as a research participant. The contact details are:

The Higher Degrees Office

Building F

Room 143

Phone No: 018 299 2623

Email: PostGrad-EnquiriesPOTCH@nwu.ac.za

Your child will not be forced to participate in the research and she/he/they will not lose benefits if they want to withdraw. The results will remain confidential and your child will not be identified.

If you allow your child/children to participate then please read the following and sign below.

The research study, including the above information, has been described to me orally. I understand what my child is involved in and I give permission for them to participate. I have been given an opportunity to ask any questions that I might have about participation in the study.

Signature of Caregiver/Parent

Date

APPENDIX H: PERMISSION LETTER FROM GATEKEEPER/S A



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POTCHEFSTROOM CAMPUS

Fakulteit Opvoedingswetenskappe / Faculty
Education Sciences

Privaatsak / Private Bag X6001, Potchefstroom
Suid-Afrika / South Africa 2520

T:

F:

<http://www.nwu.ac.za>

School of Human & Social Sciences

Tel: 084 617 7560

Email: kellie.steinke@gmail.com

12 March 2016

The HoD, Department of Basic Education
Dr Nkosinathi Sishi c/oHead Office
247 Burger Street
Pietermaritzburg
3200

Dear Dr Sishi

Gatekeeper Permission for Research in Two Primary Schools in Pietermaritzburg

My name is Kellie Steinke and I am conducting doctoral research in literacy learning and teaching. The title of my planned research is “The Pedagogical Content Knowledge of Teachers and its Effect on Enliterate Grade Three and Four Learners”. I would like to research a particular approach to

reading which is currently being used in two of the schools under your jurisdiction. It is envisaged that the classroom observations will take place from February 2016 to the end of November, 2016. It is my intention to observe one grade three and once grade four teacher's classroom once a week, subject to the convenience of the teacher involved. I understand that there may be times when it will not be convenient for me to sit in on the class, for example, during the ANA's. An observation time schedule is attached for your information.

I will be working with a possible 8 teachers from two schools who are responsible for teaching reading to Grades three and four learners over a four-month period. In addition, a total of 24 learners – three from each classroom, will be selected for close tracking. I will need permission to collect the following data from the teachers and learners:

- Samples of learner's formal writing tasks
- Audio-recordings of initial and post-research readings made by the tracked learners. These will be used to analyse results only
- Video recordings of classroom teaching sessions. They will be used to analyse results and for presentations at scientific conferences. They will not be used for any other purpose and the participants will remain anonymous. Faces of children will not be visible or identifiable
- Completed questionnaires on teachers' attitudes towards teaching and teaching practices
- Information from semi-structured class discussions and classroom interactions which will be used for informative and statistical purposes.

This study will not result in any risk, harm or inconvenience to the participants and the project will have ethical clearance from the University before research can proceed.

You may contact Professor Rosemary Wildsmith-Cromarty, Cell: 0837853059, E.Mail: 21137544@nwu.ac.za or the researcher, Kellie Steinke, Cell: 0846177560, E.Mail: kellie.steinke@gmail.com at any time if you have questions about the research.

I would be grateful if you would grant this permission for this research to proceed by providing a letter of approval.

You may contact the **Research Ethics Office** if you have questions about participants' rights. The contact details are:

The Higher Degrees Office

Building F

Room 143

Phone No: 018 299 2623

Email: PostGrad-EnquiriesPOTCH@nwu.ac.za

Yours sincerely



Mrs Kellie Steinke

Doctoral Student

North West University

APPENDIX I: PERMISSION LETTER FROM GATEKEEPER/S B



Fakulteit Opvoedingswetenskappe / Faculty
Education Sciences

Privaatsak / Private Bag X6001, Potchefstroom
Suid-Afrika / South Africa 2520

T:

F:

<http://www.nwu.ac.za>

School of Human & Social Sciences

Tel: 084 617 7560

Email: kellie.steinke@gmail.com

12 March 2016

The Chief Director, Department of Basic Education

Ms Carol Nuga-Deliwe

c/o Sol Plaatje House

222 Struben Street

Pretoria

0001

Dear Ms Nuga-Deliwe

Gatekeeper Permission for Research in Two Primary Schools in Pietermaritzburg

My name is Kellie Steinke and I am conducting doctoral research in literacy learning and teaching. The title of my planned research is “The Pedagogical Content Knowledge of Teachers and its Effect

on Enliterate Grade Three and Four Learners”. I would like to research a particular approach to reading which is currently being used in two of the schools under your jurisdiction. It is envisaged that the observations at the school sites will run from February 2016 to the end of November, 2016. The visits to the schools will be subject to the convenience of the participating teachers and may not take place, for example, during the ANAs.

I will be working with a possible 8 teachers from two schools who are responsible for teaching reading to Grades three and four learners over a four-month period. In addition, a total of 24 learners – three from each classroom, will be selected for close tracking. I will need permission to collect the following data from the teachers and learners:

- Samples of learner’s formal writing tasks
- Audio-recordings of initial and post-research readings made by the tracked learners. These will be used to analyse results only
- Video recordings of classroom teaching sessions. They will be used to analyse results and for presentations at scientific conferences. They will not be used for any other purpose and the participants will remain anonymous. Faces of children will not be visible or identifiable during such presentations.
- Completed questionnaires on teachers’ attitudes towards teaching and teaching practices
- Information from semi-structured class discussions and classroom interactions which will be used for informative and statistical purposes.

This study will not result in any risk, harm or inconvenience to the participants and the project will have ethical clearance from the university before research can proceed.

I would be grateful if you would grant this permission for this research to proceed by providing a letter of approval.

You may contact Professor Rosemary Wildsmith-Cromarty, Cell: 0837853059, E.Mail: 21137544@nwu.ac.za or the researcher, Kellie Steinke, Cell: 0846177560, E.Mail: kellie.steinke@gmail.com at any time if you have questions about the research.

You may contact the **Research Ethics Office** if you have questions about participants’ rights. The contact details are:

The Higher Degrees Office

Building F

Room 143

Phone No: 018 299 2623

Email: PostGrad-EnquiriesPOTCH@nwu.ac.za

Yours sincerely



Mrs Kellie Steinke

Doctoral Student

North West University

APPENDIX J: PERMISSION LETTER FROM GATEKEEPER/S C



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Education Sciences

Privaatsak / Private Bag X6001, Potchefstroom
Suid-Afrika / South Africa 2520

T:

F:

<http://www.nwu.ac.za>

School of Human & Social Sciences

Tel: 084 617 7560

Email: kellie.steinke@gmail.com

12 March 2016

The Manager, District Department of Basic Education

Mr W. M. Mahlambi

Head Office

247 Burger Street

Pietermaritzburg

3200

Dear Mr Mahlambi

Gatekeeper Permission for Research in Two Primary Schools in Pietermaritzburg

My name is Kellie Steinke and I am conducting doctoral research in literacy learning and teaching. The title of my planned research is “The Pedagogical Content Knowledge of Teachers and its Effect on Enliterating Grade Three and Four Learners”. I would like to research a particular approach to

reading which is currently being used in two of the schools under your jurisdiction. It is envisaged that the observations at the schools will run from February 2016 until the end of November, 2016. These observations will take place at the convenience of the participating teachers and will not take place, for example, during the ANAs.

I will be working with a possible 8 teachers from two schools who are responsible for teaching reading to Grades three and four learners over a four-month period. In addition, a total of 24 learners – three from each classroom, will be selected for close tracking. I will need permission to collect the following data from the teachers and learners:

- Samples of learner's formal writing tasks;
- Audio-recordings of initial and post-research readings made by the tracked learners. These will be used to analyse results only;
- Video recordings of classroom teaching sessions. They will be used to analyse results and for presentations at scientific conferences. They will not be used for any other purpose and the participants will remain anonymous. Faces of children will not be visible or identifiable;
- Completed questionnaires on teachers' attitudes towards teaching and teaching practices;
- Information from semi-structured class discussions and classroom interactions which will be used for informative and statistical purposes.

This study will not result in any risk, harm or inconvenience to the participants and the project will have ethical clearance from the university before research can proceed.

I would be grateful if you would grant this permission for this research to proceed by providing a letter of approval.

You may contact, Professor Rosemary Wildsmith-Cromarty, Cell: 0837853059, E.Mail: 21137544@nwu.ac.za or the researcher, Kellie Steinke, Cell: 0846177560, E.Mail: kellie.steinke@gmail.com at any time if you have questions about the research.

You may contact the **Research Ethics Office** if you have questions about participants' rights. The contact details are:

The Higher Degrees Office

Building F

Room 143

Phone No: 018 299 2623

Email: PostGrad-EnquiriesPOTCH@nwu.ac.za

Yours sincerely



Mrs Kellie Steinke

Doctoral Student

North West University

APPENDIX K: INFORMED CONSENT FROM TEACHERS



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Fakulteit Opvoedingswetenskappe / Faculty
Education Sciences

Privaatsak / Private Bag X6001, Potchefstroom

Suid-Afrika / South Africa 2520

T:

F:

<http://www.nwu.ac.za>

School of Human & Social Sciences

Tel: 084 617 7560

Email: kellie.steinke@gmail.com

12 March 2016

Dear Teacher

Consent to Participate in Research

My name is Kellie Steinke and the title of my planned research is “The Pedagogical Content Knowledge of Teachers and its Effect on Enliterating Grade Three and Four Learners”. It is intended that the research visits will take place from February, 2016 until the end of November, 2016. However, these visits will be subject to your convenience and I will not observe, for example, during the ANAs.

The research will be conducted in a total of two schools in KwaZulu Natal over a six-month duration. Within these schools, two participating teachers will be utilising the State curriculum only whilst the remaining teachers will be implementing the Read to Learn approach alongside the state curriculum. In addition, a total of six learners – three from each classroom, will be selected for close tracking.

You have been asked to participate in this research study by allowing the following procedures:

- Samples of learner's formal tasks writing will be taken;
- Audio-recordings will be made of initial and post-research readings made by the tracked learners. These will be used to analyse results only;
- The classroom teaching sessions will be video-recorded. They will be used to analyse results and for presentations at scientific conferences. They will not be used for any other purpose and you will remain anonymous. Faces of children will not be visible or identifiable;
- Teachers will be requested to participate in completing a questionnaire on attitudes towards teaching and teaching practices;
- Information may be used from semi-structured class discussions and classroom interactions to be used for informative and statistical purposes.

This study will not result in any risk, harm or inconvenience to you.

You have been informed about the study by Kellie Steinke.

You may contact Professor Rosemary Wildsmith-Cromarty, Cell: 0837853059, E.Mail: 21137544@nwu.ac.za or the researcher, Kellie Steinke, Cell: 0846177560, E.Mail: kellie.steinke@gmail.com at any time if you have questions about the research.

You may contact the **Research Ethics Office** if you have questions about your rights as a research participant, or if you are injured in any way as a result of this research. The contact details are:

The Higher Degrees Office

Building F

Room 143

Phone No: 018 299 2623

Email: PostGrad-EnquiriesPOTCH@nwu.ac.za

Your participation in this research is voluntary, and you will not be penalized or lose benefits if you refuse to participate or decide to stop at any time.

You may be assured that the results of this research will remain confidential and your anonymity is assured.

If you agree to participate, you will be given a signed copy of this document and the participant information sheet, which is a written summary of the research.

The research study, including the above information, has been described to me orally. I understand what my involvement in the study means and I voluntarily agree to participate. I have been given an opportunity to ask any questions that I might have about participation in the study.

Signature of Teacher

Date

APPENDIX L: PARENTAL/CAREGIVER CONSENT: ISIZULU TRANSLATION



Fakulteit Opvoedingswetenskappe / Faculty
Education Sciences

Privaatsak / Private Bag X6001, Potchefstroom
Suid-Afrika / South Africa 2520

T:

F:

<http://www.nwu.ac.za>

School of Human & Social Sciences

Tel: 084 617 7560

Email: kellie.steinke@gmail.com

12 March 2016

Sawubona Mnakekeli/ Mzali

Ukuvuma Ukubamba Iqhaza Ocwaningweni

Igama lami ngingu Kellie Steinke ngenza ucwaningo mayelana nendlela othisha abafundisa ngayo abantwana ukuzifundela. Inhloso yami ukuthola ukuthi ingaba khona yini indlela engcono yokubafundisa. Igama lesifundo sithi: “The Pedagogical Content Knowledge of Teachers and its Effect on Enliterating Grade Three and Four Learners”. Lolucwaningo luzokwenziwa kusukela ngo February 2016 luze luyophela ekupheleni kukoNovember, 2016.

Ngizobe ngibheke kakhulukazi kumagumbi okufundela aka Grade 3 kanye no Grade 4 okuzobandakanya umntwana noma abantwana bakho. Ngizobe ngiqopha ezinye zezifundo nge ngizenze ifilimu (video camera) ukuze ngisizakale uma sengihlaziya lemininingwane. Bonke abantwana abazoba ingxenye yalesifundo bazogcinwa njengemfihlo njengoba nami ngizokwenza konke okusemandleni ukungathathi izithombe ezinobuso babo. Ngizokopha

ifilimu ngemuva kwegumbi lokufundela. Imininingwane engizoyithola kulolucwaningo ingase isetshenziswe njengesibonakaliso kwizinkomfa zesayensi iphinde yaziswe nasezincwadini ezazisa izindaba (journals) zesayensi kuphela. Angeke isetshenziselwe ezinye izinhloso ngaphandle kothisha abafundisa kulawomagumbi ukunezezela ulwazi lwabo.

Lesisifundo angeke sibe nemiphumela engafakana engcupheni, uthinteke noma ezoba inkinga kumntwana noma abantwana bakho.

Ungathintana no Professor Rosemary Wildsmith-Cromarty, Makhalekhukhwini: 0837853059, E.Mail: 21137544@nwu.ac.za no Kellie Steinke, Cell: 0846177560, E.Mail: kellie.steinke@gmail.com noma ingasiphi isikhathi uma unemibuzo mayelana nalolucwaningo.

Ungathintana ne **Research Ethics Office** uma unemibuzo ngamalungelo omntwana/abantwana njengo mbambi qhaza lukolucwaningo. Imininingwane yabo ithi:

The Higher Degrees Office
Building F
Room 143
Inombolo yocingo: 018 299 2623
Email: PostGrad-EnquiriesPOTCH@nwu.ac.za

Umntwana wakho angeke aphoqeletwe ukuba ingxenye yalolucwaningo futhi lokho akuchazi ukuthi kukhona okuzothathwa kuyena uma ekhetha ukungalibambi iqhaza. Imiphumela izogcinwa njengemfihlo futhi angeke livezwe igama lomntwana wakho

Uma uvumela umntwana noma abantwana bakho ukuthi babe ingxenye sizocela ufundisise lokhu okulandelayo bese usayina ngezansi.

Lesisifundo, sihlanganisa imininingwane engenhla, echazwe kimina njengomsebenzi ozokhulunywa ngomlomo.

Ukusayina kobambe iqhaza

Usuku

APPENDIX M: LEARNER CONSENT: ISIZULU TRANSLATION



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POTCHEFSTROOM CAMPUS

Fakulteit Opvoedingswetenskappe / Faculty
Education Sciences

Privaatsak / Private Bag X6001, Potchefstroom
Suid-Afrika / South Africa 2520

T:

F:

<http://www.nwu.ac.za>

School of Human & Social Sciences

Tel: 084 617 7560

Email: kellie.steinke@gmail.com

12 March 2016

Sawubona Mfundi

Ukuvuma Ukubamba Iqhaza Ocwaningweni

Igama lami ngingu Kellie Steinke ngenza ucwaningo mayelana nendlela othisha abafundisa ngayo abantwana ukufunda. Inhloso yami ukuthola ukuthi ingaba khona yini indlela engcono yokubafundisa. Igama lesifundo sithi: “The Pedagogical Content Knowledge of Teachers and its Effect on Enliterate Grade Three and Four Learners”. Lolucwaningo luzokwenziwa kusukela ngo February 2016 luze luyophela ekupheleni kukoNovember 2016.

Ngizobe ngibheka amagumbi akho okufundela futhi ngiphinde ngiqophe ezinye zezifundo ngizenze ifilimu. Angeke ngivumele ukuthi kuvele ubuso bakho kwi khamera kanti neminingwane yakho izoba imfihlo. Ngizobe ngithatha izithombe ngemuva kwegumbi ofundela kulona. Uma kwenzekile ngephutha ubuso bakho bavela buyofihlwa njengoba kusuke kwenzeka kumabonakude.

Lesisifundo angeke sikukhinyabeze noma kungabe iyiphi indlela futhi akukho noyedwa ozokwazi ukuthi ubambe iqhaza. Awuphoqelekile ukubamba iqhaza futhi ungaphuma kulesisifundo noma kungasiphi isikhathi. Angeke ujeziselwe ukuthi ushiye isifundo phakathi nendawo. Uma unemibuzo ungabuza kithina noma uthisha noma ingasiphi isikhathi.

Uthisha noma umnakekeli wakho angathintana no Professor Rosemary Wildsmith-Cromarty, inamba kamakhalekhukhwini: 0837853059, E.Mail: 21137544@nwu.ac.za no Kellie Steinke, Cell: 0846177560, E.Mail: kellie.steinke@gmail.com noma kungasiphi isikhathi uma unemibuzo ngocwaningo noma umfundi angathintana ne **Research Ethics office** uma unemibuzo ngamalungelo omntwana/ngabantwana njengabambi qhaza ocwaningweni. Imininingwane nansi:

The Higher Degrees Office

Building F

Room 143

Inombolo yocingo: 018 299 2623

Email: PostGrad-EnquiriesPOTCH@nwu.ac.za

Ukusayina kobambe iqhaza

Usuku

APPENDIX N: LETTER REQUESTING PRINCIPAL'S PERMISSION



Fakulteit Opvoedingswetenskappe / Faculty
Education Sciences

Privaatsak / Private Bag X6001, Potchefstroom

Suid-Afrika / South Africa 2520

T:

F:

<http://www.nwu.ac.za>

School of Human & Social Sciences

Tel: 084 617 7560

Email: kellie.steinke@gmail.com

The Principal

12 March 2016

Dear

Consent to Participate in Research

My name is Kellie Steinke and I would like to request permission to conduct research at your school. The title of my planned research is **“The Pedagogical Content Knowledge of Teachers and its Effect on Enliterating Grade Three and Four Learners”**. The purpose of the proposed study is to investigate how teachers teach learners to read and, in particular, how these teachers move the learners from decoding to comprehension.

The research will be conducted in a total of two schools in KwaZulu Natal. It is envisaged that the classroom observations will take place from February 2016 until the end of November, 2016. I would

like to visit your school once a week and observe the teaching pedagogy in two classes on that given day. However, this would be subject to the willingness and convenience of the teachers concerned and I understand that there will be times when it will not be convenient for me to visit the school, for example, during ANAs. An Observation Time Schedule is attached for your perusal. I would ultimately like to select a maximum of four teachers (two grade three and two grade four teachers) from each of these schools. In addition, three learners from each classroom will be selected for close tracking in order to monitor their reading progress throughout the study.

The research will consist of the following procedures:

- Samples of learner's formal tasks writing will be taken;
- Audio-recordings may be made of initial and post-research readings made by the tracked learners. These will be used to analyse results only;
- The classroom teaching sessions will be video-recorded. They will be used to analyse results and for presentations at scientific conferences. They will not be used for any other purpose and participants will remain anonymous. Faces of children will not be visible or identifiable as they will be blurred. These recordings will be made in accordance with the Protection of Personal Information Act of 2013 (POPI);
- Teachers will be requested to participate in semi-structured interview in order to ascertain their beliefs and particular attitudes towards teaching and teaching practices;
- Information may be used from semi-structured class discussions and classroom interactions to be used for informative and statistical purposes.

This study will not result in any risk, harm or inconvenience to the teachers or learners involved. Permission will be sought from Department of Basic Education officials, teachers, parents and learners before any formal research is conducted.

Both yourself and the participants may contact Professor Rosemary Wildsmith-Cromarty, Cell: 0837853059, E.Mail: 21137544@nwu.ac.za or the researcher, Kellie Steinke, Cell: 0846177560, E.Mail: kellie.steinke@gmail.com at any time should there be questions about the research. In addition, the **Research Ethics Office** may be contacted should there be any questions about the rights of research participants, or if anyone is injured in any way as a result of this research. The contact details are:

The Higher Degrees Office
Building F
Room 143
Phone No: 018 299 2623
Email: PostGrad-EnquiriesPOTCH@nwu.ac.za

All participation in this research is voluntary, and no one will be penalized or lose benefits should they refuse to participate or decide to stop at any time.

Please be assured that the results of this research will remain confidential and all anonymity of participants is assured.

If you are willing for this research to proceed, please may I request that you sign this letter below?
Your time and kindness are very much appreciated.

Yours faithfully

KELLIE STEINKE

Signature of Principal

Date

APPENDIX O: PRE- AND POST-READING ASSESSMENTS SCHOOL 1 & SCHOOL 2

SCHOOL 1:			
Grade 3			
LoLT: English	No. of Learners	Tests	
Early Grade Reading Assessment (EGRA)			
Date			Administered by:
April 2016 May 2016	34+31 (x 2 classes)	English Comprehension & Fluency	Researcher
May 2016	7 (x 2 classes)	Letter-Sound Correspondence; Phonemic Awareness; Familiar Word Reading (isiZulu); Non-Word Reading; isiZulu Comprehension & Fluency	Researcher

Re-Testing			
April 2017	7		Researcher

SCHOOL 1:			
Grade 4			
LoLT: English	No. of Learners	Tests	
Progress in Reading Literacy Skills (PIRLS)			
Date			Administered by:
May 2016	90 (x2 classes)	English: Released 2011 Comprehension Passage, “Fly, Eagle, Fly”	Teacher
Progress in Reading Literacy Skills (Pre-PIRLS)			
October, 2016	47	English: Released 2011 Comprehension Passage, “The Lonely Giraffe”	Teacher
Re-Testing			
April 2017	44	English: Released 2011 Comprehension Passage, “The Lonely Giraffe”	Teacher

SCHOOL 2:			
Grade 3			
LoLT: Isizulu	No. of Learners	Tests	
Early Grade Reading Assessment (EGRA)			
Date			Administered by:
August 2016	38	IsiZulu Comprehension & Fluency	Researcher
October 2016	12	Familiar Word Reading (isiZulu); English Comprehension & Fluency	Researcher
Re-Testing			
April 2017	4		Researcher

SCHOOL 2:			
Grade 4			
MOI: English	No. of Learners	Tests	
Progress in Reading Literacy Skills (Pre-PIRLS)			
Date			Administered by:
August 2016	44	English: Released 2011 Comprehension Passage, “The Lonely Giraffe”	Teacher
Re-Testing			
April 2017	44	English: Released 2011 Comprehension Passage, “The Lonely Giraffe”	Teacher

APPENDIX P: PRE-PIRLS READING ASSESSMENT GRADE 4
PROGRESS IN INTERNATIONAL READING LITERACY STUDY

PIRLS



TIMSS & PIRLS
International Study Center
Lynch School of Education, Boston College

PIRLS 2011 User Guide

for the International Database

prePIRLS Released Passages and Items

Copyright©2013 International Association for the Evaluation of Educational
Achievement (IEA)

pirls 2011 User Guide for the International Database

Edited by Pierre Foy and Kathleen T. Drucker

Publishers: TIMSS & PIRLS International Study Center,

Lynch School of Education, Boston College

and

International Association for the Evaluation of Educational Achievement (IEA)

Library of Congress Catalog Card Number: 2013930047

ISBN-13: 978-1-889938-14-1

For more information about timss contact:

TIMSS & PIRLS International Study Center

Lynch School of Education

Boston College

Chestnut Hill, MA 02467

United States

tel: +1-617-552-1600

fax: +1-617-552-1203

e-mail: pirls@bc.edu

pirls.bc.edu

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prePIRLS Released Passages and Items

Reading for Literary Experience

Brave Charlotte

Lonely Giraffe

Reading to Acquire and Use Information

Caterpillar to Butterfly

Two Giant Dinosaurs

PIRLS 2011 USER GUIDE FOR THE INTERNATIONAL DATABASE

pre PIRLS RELEASED PASSAGES AND ITEMS

5

prePIRLS 2011 Released Item Information

Item ID	Passage Title	Passage Sequence	Reading Strategy	Description of Question	Maximum Points	Grade
L11B01C	Brave Charlotte	B01	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	-
L11B02C	Brave Charlotte	B02	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	-
L11B03C	Brave Charlotte	B03	Literary Experience	Interpret and Integrate Ideas and Information	2	-
L11B04M	Brave Charlotte	B04	Literary Experience	Examine and Evaluate Content, Language, and Textual Elements	1	A
L11B05C	Brave Charlotte	B05	Literary Experience	Make Straightforward Inferences	1	-
L11B06M	Brave Charlotte	B06	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	B
L11B07C	Brave Charlotte	B07	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	-
L11B08C	Brave Charlotte	B08	Literary Experience	Make Straightforward Inferences	2	-
L11B09M	Brave Charlotte	B09	Literary Experience	Make Straightforward Inferences	1	C
L11B10C	Brave Charlotte	B10	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	-
L11B11C	Brave Charlotte	B11	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	-
L11B12M	Brave Charlotte	B12	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	B
L11B13M	Brave Charlotte	B13	Literary Experience	Make Straightforward Inferences	1	C
L11B14M	Brave Charlotte	B14	Literary Experience	Make Straightforward Inferences	1	A
L11B15C	Brave Charlotte	B15	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	-
L11B16C	Brave Charlotte	B16	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	-
L11B17C	Brave Charlotte	B17	Literary Experience	Interpret and Integrate Ideas and Information	1	-
L11B18C	Brave Charlotte	B18	Literary Experience	Interpret and Integrate Ideas and Information	1	-
L11L01C	Lonely Giraffe	L01	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	-
L11L02M	Lonely Giraffe	L02	Literary Experience	Make Straightforward Inferences	1	C
L11L03C	Lonely Giraffe	L03	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	-
L11L04M	Lonely Giraffe	L04	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	C
L11L05M	Lonely Giraffe	L05	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	D
L11L06M	Lonely Giraffe	L06	Literary Experience	Make Straightforward Inferences	1	A
L11L07M	Lonely Giraffe	L07	Literary Experience	Examine and Evaluate Content, Language, and Textual Elements	1	B
L11L08M	Lonely Giraffe	L08	Literary Experience	Make Straightforward Inferences	1	B
L11L09M	Lonely Giraffe	L09	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	D
L11L10M	Lonely Giraffe	L10	Literary Experience	Make Straightforward Inferences	1	A
L11L11C	Lonely Giraffe	L11	Literary Experience	Make Straightforward Inferences	1	-
L11L12M	Lonely Giraffe	L12	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	D
L11L13C	Lonely Giraffe	L13	Literary Experience	Examine and Evaluate Content, Language, and Textual Elements	1	-
L11L14C	Lonely Giraffe	L14	Literary Experience	Focus on and Retrieve Explicitly Stated Information	1	-
L11L15C	Lonely Giraffe	L15	Literary Experience	Interpret and Integrate Ideas and Information	1	-

prePIRLS 2011 Released Item Information (Continued)

			Purposes for Reading	Processes of Comprehension	Maximum	
		Sequence				
L11C01C	Caterpillar to Butterfly	C01	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	-
L11C02C	Caterpillar to Butterfly	C02	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	-
L11C03C	Caterpillar to Butterfly	C03	Acquire and Use Information	Interpret and Integrate Ideas and Information	1	-
L11C04M	Caterpillar to Butterfly	C04	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	B
L11C05M	Caterpillar to Butterfly	C05	Acquire and Use Information	Make Straightforward Inferences	1	A
L11C06M	Caterpillar to Butterfly	C06	Acquire and Use Information	Interpret and Integrate Ideas and Information	1	C
L11C07C	Caterpillar to Butterfly	C07	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	-
L11C08C	Caterpillar to Butterfly	C08	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	-
L11C09C	Caterpillar to Butterfly	C09	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	-
L11C10M	Caterpillar to Butterfly	C10	Acquire and Use Information	Make Straightforward Inferences	1	A
L11C11M	Caterpillar to Butterfly	C11	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	D
L11C12M	Caterpillar to Butterfly	C12	Acquire and Use Information	Make Straightforward Inferences	1	B
L11C13M	Caterpillar to Butterfly	C13	Acquire and Use Information	Make Straightforward Inferences	1	D

L11C14M	Caterpillar to Butterfly	C14	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	C
L11C15C	Caterpillar to Butterfly	C15	Acquire and Use Information	Interpret and Integrate Ideas and Information	1	-
L11C16C	Caterpillar to Butterfly	C16	Acquire and Use Information	Examine and Evaluate Content, Language, and Textual Elements	1	-
L11D01C	Two Giant Dinosaurs	D01	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	-
L11D02M	Two Giant Dinosaurs	D02	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	B
L11D03C	Two Giant Dinosaurs	D03	Acquire and Use Information	Make Straightforward Inferences	1	-
L11D04C	Two Giant Dinosaurs	D04	Acquire and Use Information	Make Straightforward Inferences	1	-
L11D05C	Two Giant Dinosaurs	D05	Acquire and Use Information	Examine and Evaluate Content, Language, and Textual Elements	2	-
L11D06M	Two Giant Dinosaurs	D06	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	A
L11D07M	Two Giant Dinosaurs	D07	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	D
L11D08M	Two Giant Dinosaurs	D08	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	D
L11D09C	Two Giant Dinosaurs	D09	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	-
L11D10C	Two Giant Dinosaurs	D10	Acquire and Use Information	Focus on and Retrieve Explicitly Stated Information	1	-
L11D11M	Two Giant Dinosaurs	D11	Acquire and Use Information	Make Straightforward Inferences	1	B
L11D12C	Two Giant Dinosaurs	D12	Acquire and Use Information	Make Straightforward Inferences	1	-

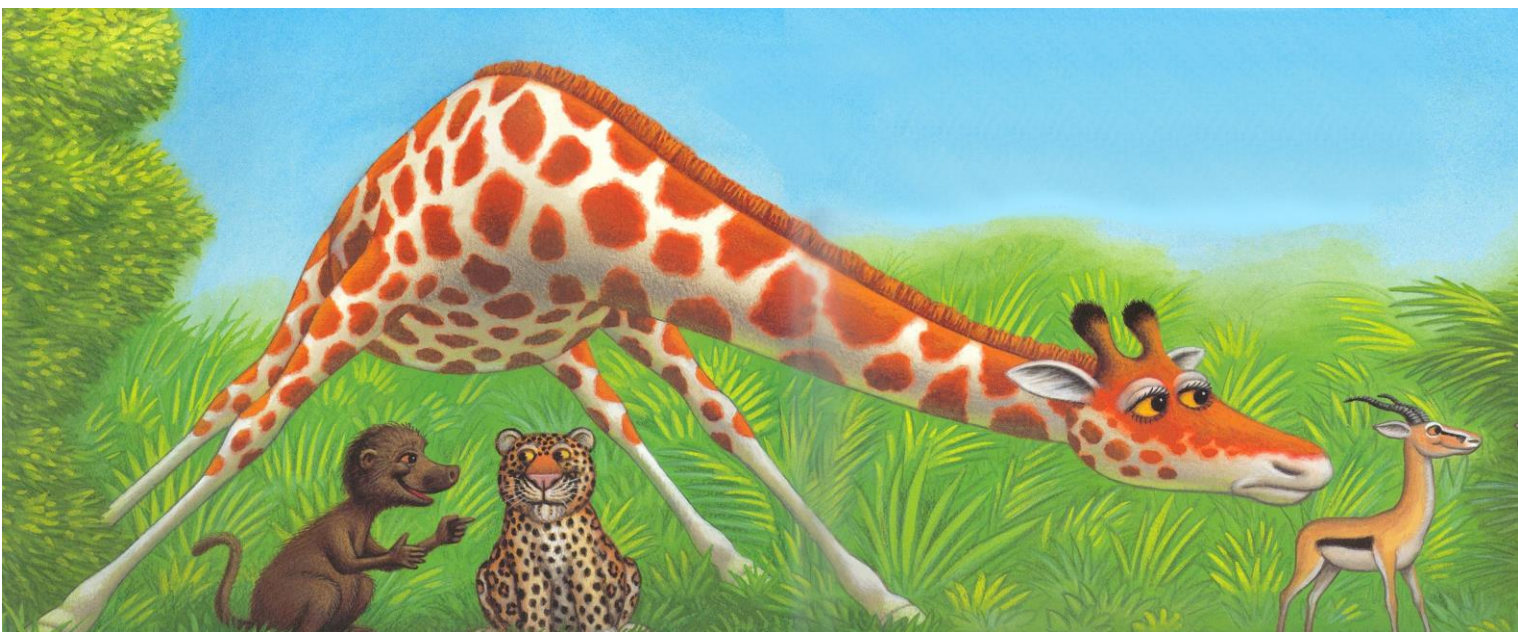
L11D13M	TwoGiantDinosaurs	D13	Acquire and Use Information	Make Straightforward Inferences	1	C
L11D14M	TwoGiantDinosaurs	D14	Acquire and Use Information	Interpret and Integrate Ideas and Information	1	B
L11D15C	TwoGiantDinosaurs	D15	Acquire and Use Information	Examine and Evaluate Content, Language, and Textual Elements	1	-
L11D16C	TwoGiantDinosaurs	D16	Acquire and Use Information	Examine and Evaluate Content, Language, and Textual Elements	1	-

The Lonely Giraffe

By Peter Blight Illustrated by Michael Terry

The jungle animals were a friendly bunch. All the animals met every morning to talk about the jungle news. Everyone took their turn to speak, but no one listened to the giraffe.

The giraffe was just too tall. By the time he lowered his head to the ground to speak the other animals had lost interest.



—
What did the animals talk about every morning?

1 _____

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Why didn't anyone listen to the giraffe?

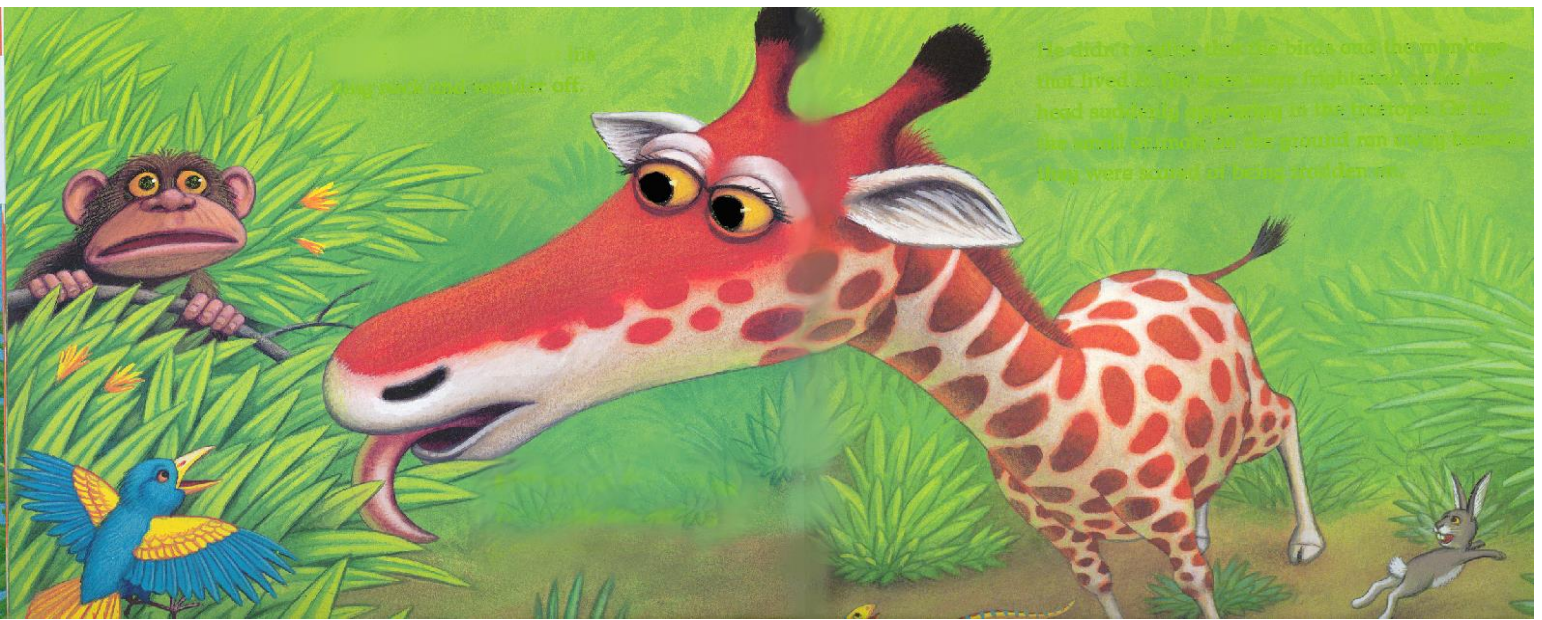
A He did not wait his turn to speak.

B He spoke too quietly to be heard.

***C** He was too tall.

D He was not friendly.

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So the giraffe would lift his long neck and wander off. He spent all day with his head in the trees eating the sweetest leaves.

He didn't know that the birds were frightened of his large head suddenly appearing in the treetops. Or that the small animals on the ground ran away because they were scared of being stepped on.

After a while, the lonely giraffe stopped trying to speak to anyone. This went on for the rest of the long dry summer.

—
Which leaves did the giraffe eat?

1 —
—

Why were the animals on the ground afraid of the giraffe?

A he would suddenly appear

B he had a large head
—

*C he might step on them

D he ate all their leaves

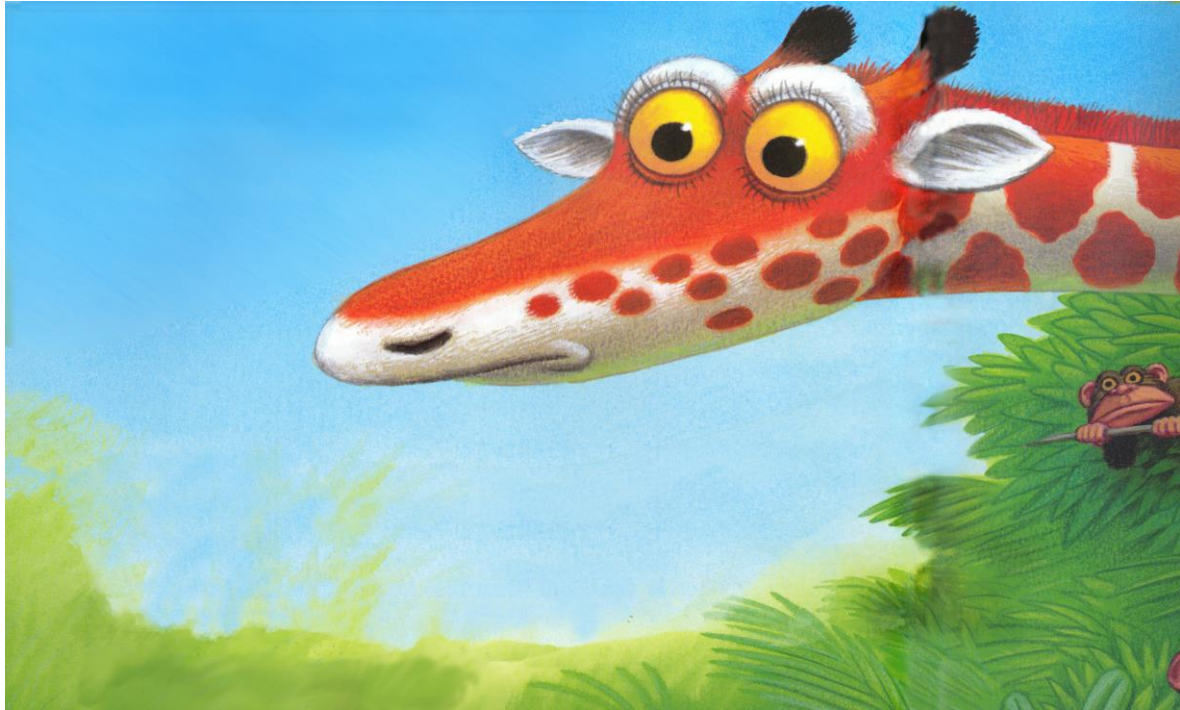
What did the giraffe stop doing over the summer?

A wandering off

B frightening the birds

C appearing in the treetops

*D speaking to anyone



Then the rainy season came. The rain poured down for days. The animals huddled together beneath the bushes. Then the leopard heard a distant roar. But nobody could think what it was.

The giraffe looked over the heads of the animals on the ground. His big eyes widened like saucers and he slowly bent down until the worried animals could hear him.

“The river is flooding,” said the giraffe. “A wall of water is racing down the valley and will soon be here.”

“What can we do?” asked the gazelle. “It’s too late to run away.”

—
Why did the animals huddle together beneath the bushes?

*A It was raining.

B They were scared of the giraffe.

C They heard a roar.

—
D It was hard to climb the trees.

“His big eyes widened like saucers.”

What do these words from the story tell you about the giraffe?

A He was glad.

*B He was shocked.

C He was angry.

D He was excited.

What made the roaring sound in the distance?

A a leopard

*B a flood

C a monkey

D a tree falling

“Climb up here,” called the monkey from the treetops. “The river won’t reach the high branches.”



The animals raced to the trees. But some of them could not climb up the slippery tree trunks. Their hooves and tails were not made for climbing.

—
Who told the animals to climb to the treetops?

- A** the giraffe **B** the leopard **C** the warthog
***D** the monkey

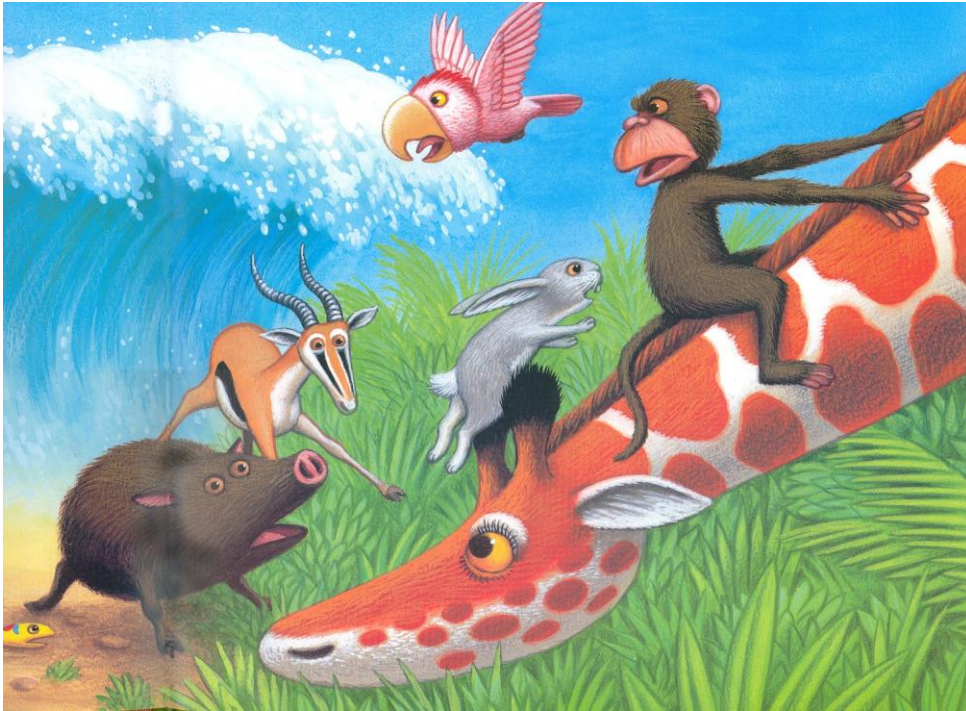
—
Why were the animals trying to climb to the treetops?

- *A** to stay out of the water
B to see the valley
C to reach the sweet leaves
—
D to hide from the leopard

Why couldn't some of the animals climb up the slippery tree trunks?

1 _____

Then the giraffe had an idea. He bent his knees and spoke to the animals. “Climb on to my back. The water is almost here.”



The flooded river was splashing around the animals. The monkey jumped onto the giraffe’s neck and called to the others. The hairy wart hog was next to carefully climb on. One by one the animals helped each other to safety.

—
What was the giraffe's idea for the animals?

A to climb the trees

B to swim in the river

C to hide behind his legs

* D to climb on his back

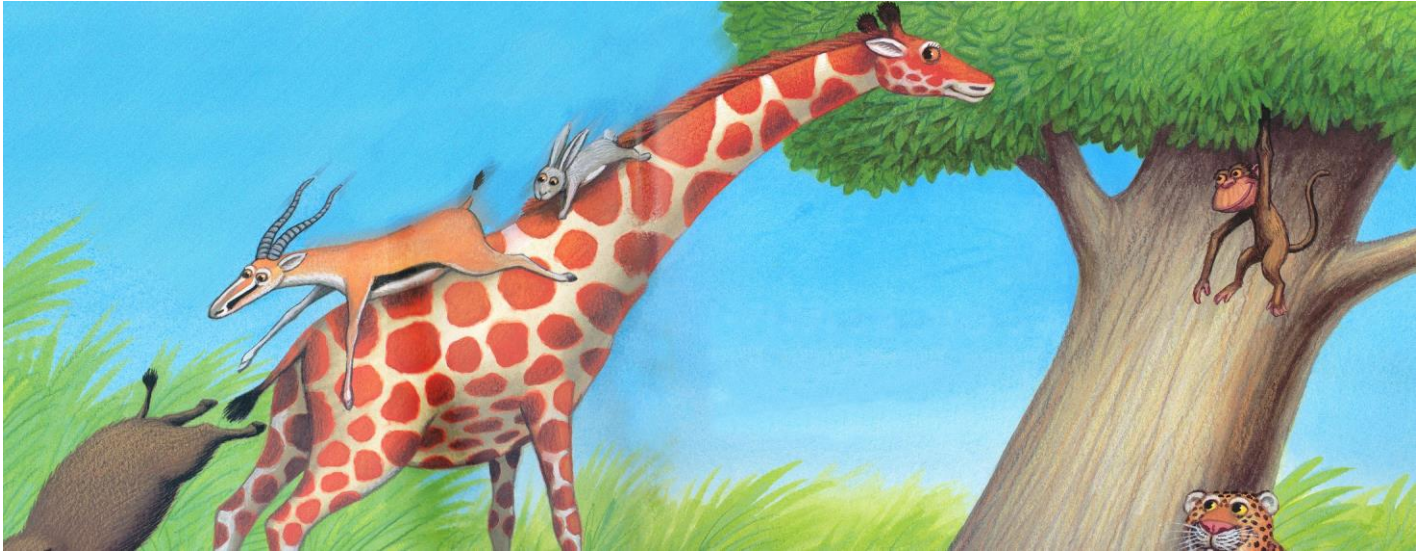
—
Look back at this picture:



What is the monkey doing sitting on the giraffe's neck?

1 _____

The giraffe straightened his knees as the water flooded the jungle. He stretched up his long neck and the last few animals hurried into the branches. The water washed around the giraffe's strong legs and sprayed the animals in the trees.



Then the flood rushed on. The water slowly sank back to the ground and the sun came out from behind the clouds. The giraffe poked his head up into the high branches and the animals slid down his back to the ground.

From that day on the giraffe was never lonely again.

—
What did the animals do when the sun came out again?

1 _____

—
How was the giraffe's life different after the flood?

1 _____

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The Lonely Giraffe, Item 1

What did the animals talk about every morning?

Process: Focus on and Retrieve Explicitly Stated Information

1 – Acceptable Response

The response indicates that the animals met to talk about the (jungle) news.

Examples: jungle news news

animal news

0 – Unacceptable Response

The response does not indicate that the animals meet to talk about the jungle news.

Example:

the giraffe

the jungle (Please note that this response is too vague.)

The Lonely Giraffe, Item 3

3. Which leaves did the giraffe eat?

Process: Focus on and Retrieve Explicitly Stated Information

1 – Acceptable Response

The response indicates that the giraffe ate the sweetest (leaves).

Examples: sweetest leaves sweetest sweetest ones

0 – Unacceptable Response

The response does not indicate that the giraffe ate the sweetest leaves.

Examples:

leaves

tree leaves bird's leaves

The Lonely Giraffe, Item 11

11. Why couldn't some of the animals climb up the slippery tree trunks?

Process: Make Straightforward Inferences

1 – Acceptable Response

The response indicates that some animals could not climb trees because their hooves and tails, or their bodies in general, were not made for climbing.

Examples:

They didn't have the right hooves. They weren't made for climbing. wrong tails

Their bodies weren't made for climbing. They weren't climbing animals.

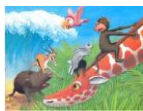
0 – Unacceptable Response

The response does not recognize that some animals could not climb trees because their hooves and tails were not made for climbing. Please note that the responses "hooves" or "tails" are too general to be considered correct.

Examples: hooves tails

The Lonely Giraffe, Item 13

Look back at this picture:



What is the monkey doing sitting on the giraffe's neck?

Process: Examine and Evaluate Content, Language, and Textual Elements

1 – Acceptable Response

The response indicates that the monkey was on the giraffe's neck to call to the other animals.

Examples:

He was calling the other animals. He was helping the other animals. leading them
showing them what to do

0 – Unacceptable Response

The response does not indicate that the monkey was on the giraffe's neck to call to the other animals. Please note that any response indicating that the monkey was climbing up the giraffe's neck (to stay safe) is incorrect because the monkey was able to climb trees.

Examples:

climbing on his neck to stay safe He was looking at the flood. coming down

The Lonely Giraffe, Item 14

What did the animals do when the sun came out again?

Process: Focus on and Retrieve Explicitly Stated Information

1 – Acceptable Response

The response indicates that the animals came down from the trees or slid down the giraffe's back.

Examples:

They came down from the trees. They came down.

They slid down the giraffe's back. They climbed down his neck.

0 – Unacceptable Response

The response does not indicate that the animals came down from the trees or slid down the giraffe's back.

Examples:

played

went swimming

The Lonely Giraffe, Item 15

How was the giraffe's life different after the flood?

Process: Interpret and Integrate Ideas and Information

1 – Acceptable Response

The response provides an appropriate description of how the giraffe's life was different (i.e., improved) after the flood.

Examples:

He wasn't lonely. He had friends. He was happier.

now the animals listen to him

0 – Unacceptable Response

The response does not provide an appropriate description of how the giraffe's life was different after the flood. The response may provide a description of why the giraffe's life was different.

Examples:

He was lonely.

He saved the other animals.



TIMSS & PIRLS
International Study Center
Lynch School of Education, Boston College



**BOSTON
COLLEGE**



ISBN: 978-1-889938-14-1

APPENDIX Q: EGRA READING ASSESSMENT ISIZULU



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

EARLY GRADE READING ASSESSMENT TOOL SMRS-EGRA

isiZulu

General Instructions

It is important to establish a relaxed attitude through some simple initial conversation of interest to the child. The child should perceive the assessment more as a game than a formal assessment. After you have finished, thank the child and give him/her a pencil as a token of appreciation.

Verbal Consent

Read the text in the box to the child:

My name is _____. I'm working with the Department of Education.

- We are trying to understand how children learn to read. You were picked by chance, like in a raffle or lottery.
- We would like your help in this. But you do not have to take part if you don't want to.
- I'm going to ask you to sound out letters, and read words and a short story out loud, and then may ask you a few questions about the story you read.
- Using this stopwatch, I will see how long it takes you to do these things.
- This is NOT a test and it will not affect your grade at school.
- I will NOT write down your name so no one will know that these are your answers.
- Once again, you do not have to participate if you do not wish to. Also, once we begin, if

Tick box if verbal consent is obtained:

YES

(If verbal consent is not obtained, thank the child and move on to the next child)

A. Date of Assessment:		D. Student's Gender	<input type="radio"/> girl	<input type="radio"/> boy
B. Assessor's Name:		E. Birth Information:	Month : _____ Year : _____ Age: _____	
C. School Name:		F. Grade R Attendance	<input type="radio"/> yes	<input type="radio"/> no

1. Letter Sounds (LS)

Show the learner the chart of letters (Chart 1).

Here is a page full of letters. I would like you to sound as many letters as you can. You will start here and move across the page. (Point to the leftmost letter on the top row of the exercise, moving from left to right.) **When I say, ‘Begin’, you will sound the letters as best you can. Point to each letter as you sound it. If you don’t know the sound of a letter, just skip it.**

Let’s practice first. (Point to the first example letter, moving from left to right, to practice the instructions given above.)

Ok, now we’re ready to begin. Put your finger on the first letter. Ready? Begin.

- Start the timer when the child starts.
- Strike a line through a letter that the learner sounds incorrectly or cannot sound at all. For example: ~~b~~
- If the learner stops for more than 3 seconds, tell the learner to go on and strike a line through the letter. For example: ~~b~~
- If the learner corrects himself/herself, accept it as correct. (If a strike has already been made on the letter, circle it to mark it correct.)
- If the entire first line has strike-through lines across all the letters, stop the assessment, place a bracket (]) after the last letter on the first line and make a tick mark (†) at the bottom of the exercise (in the box provided) to record that the exercise was discontinued.
- After one (1) minute, say “**Stop**”. Place a bracket (]) after the last letter that the learner has attempted to sound.
- Count and record the number of letters that the learner sounded correctly.
- If the learner sounds all the letters in less than one (1) minute, record the time remaining on the stopwatch at the bottom of the exercise.

LETTER SOUNDS, CHART 1

Examples: b S

W	G	H	b	S	l	g	m	i	L	/10
g	V	B	Q	l	f	l	Z	s	w	/20

Y	s	Q	P	M	v	O	t	n	P	/30
l	K	T	D	K	T	q	d	z	w	/40
N	k	c	D	d	y	b	j	B	v	/50
S	n	C	B	p	Y	F	c	a	E	/60
L	L	o	o	X	N	E	Y	p	x	/70
Z	A	e	x	f	F	h	u	A	t	/80
h	w	z	m	U	H	j	G	X	u	/90
V	l	h	g	S	y	Z	W	L	N	/100
W	l	S	M	V	g	V	q	h	j	/110

Total number of letters sounded correctly:

If time remains on stopwatch at completion, record it here (# seconds):

Tick this box if the exercise was discontinued:

1. Familiar Word Reading (WR)

Show the learner the chart of words (Chart 2).

Here is a page full of words. I would like you to read aloud as many words as you can.

You will start here and move across the page. (Point to the leftmost word on the top row of the exercise, moving from left to right.) **When I say, 'Begin', you will read the words as best you can. Point to each word as you read it. If you don't know a word, skip it.**

Let's practice first. (Point to the first example word to practice the instructions given above.)

Ok, now we're ready to begin. Put your finger on the first word. Ready? Begin.

- Start the timer when the child starts.
- Strike a line through a word that the learner reads incorrectly or cannot read at all. For example: ~~umama~~
- If the learner stops for more than three (3) seconds, tell the learner to go on and strike a line through the word. For example: ~~umama~~
- If the learner corrects himself/herself, accept it as correct. (If a strike has already been made on the word, circle it to mark it correct.)
- If the entire first line has strike-through lines across all the words, stop the assessment, place a bracket (]) after the last word on the first line and make a tick mark (‡) at the bottom of the exercise (in the box provided) to record that the exercise was discontinued.
- After one (1) minute, say: **"Stop"**. Place a bracket (]) after the last word that the learner has read correctly.
- Count and record the number of words that the learner read correctly.
- If the learner reads all the words in less than one (1) minute, record the time remaining on the stopwatch at the bottom of the exercise (in the box provided).

FAMILIAR WORDS, CHART 2

Examples: usisi

icici

umama	ikati	ubaba	itiye	vela	/5
hlela	sika	utshani	umfana	abantu	/10
iqanda	Isigqoko	incwadi	indoda	isicabha	/15
umshibilizo	ingxabano	izitsha	imfuno	inhlwathi	/20

qoba	ugodo	cula	veza	khala	/25
ihleza	umoba	ibhodi	amanzi	isitsha	/30
inkomishi	isicabha	insipho	ukuhlansa	ibhentshi	/35
ibhubesi	impukane	impama	igatsha	ingqathu	/40
iphephandaba	umgqomo	umsindo	insizwa	intshonalanga	/45
isikhwama	ummese	indlebe	inkinobho	isicabucabu	/50

Total number of words read correctly:

If time remains on stopwatch at completion, record it here (# seconds):

Tick this box if the exercise was discontinued:

2. Passage Reading (PR)

Show the learner the passage chart (Chart 3).

Now I'm going to ask you to read this story out loud. If you get stuck, skip the word and keep on reading. When I say, 'Stop', stop reading the story. I will next ask you some questions about what you have just read – so try to remember the story you're reading. You will start here. (Point to the first word of the passage.)

Ready? Begin.

- Start the timer when the child starts.
- Strike a line through words that the learner reads incorrectly or cannot read at all. For example: ~~lami~~
- If the learner stops for more than three (3) seconds, tell the learner to go on and strike a line through the word. For example: ~~lami~~
- If the learner corrects himself/herself, accept it as correct. (If a strike has already been made on the word, circle it to mark it correct.)
- If the entire first line has strike-through lines across all the words, stop the assessment, place a bracket (J) after the last word on the first line and make a tick mark (†) at the bottom of the exercise (in the box provided) to record that the exercise was discontinued.
- After one (1) minute, say: “**Stop**”. Place a bracket (J) after the last word that the learner has read correctly.
- Count and record the number of words that the learner read correctly.
- If the learner reads the passage in less than one (1) minute, record the time remaining on the stopwatch at the bottom of the exercise (in the box provided).

PASSAGE READING, CHART 3

Igama lami nginguJabu.	/3
Ngineminyaka eyisithupa.	/5
Ngithanda ukusiza usisi uma egeza izitsha. Usisi engitshela ukuthi	/10
kubalulekile ukusizana, kanye nokuhlazeka.	/17
Abanye abafana bacabanga ukuthi	/22

amantombazane kuphela okufanele	/25
ageze izitsha, kanti akunjalo.	/29
Umama wangitshela ukuthi wonke	/33
umuntu kufanele azigeze izitsha.	/37
Ngiyathanda ukulekelela usisi uma	/41
egeza izitsha.	/43

Total number of words read correctly:

If time remains on stopwatch at completion, record it here (# seconds):

Tick this box if the exercise was discontinued:

3. Comprehension Questions

Now I am going to ask you a few questions about the story you have just read. Try to answer the questions as best you can.



- If the child read only part of the story, only ask the questions related to the part that s/he has read. Enter a dash (--) in the boxes for questions not covered.
- Enter a tick (✓) for each question answered correctly.
- Leave a blank for each question answered incorrectly.
- If the learner corrects himself/herself, accept the answer as correct.
- Count and record the number of questions that the learner answered correctly at the bottom of the exercise.

Question	Answer	Correct
1 Ngubani igama lomfana? .	uJabu	
2 Uneminyaka emingaki umfana? .	Eyisithupa	
3 Ngabe uthanda ukwenzani umfana? .	Ukusiza usisi	
4 Umama wamtshela ukuthi yini ebalulekile? .	Ukusizana kanye nokuhlazeka	
5 Ucabanga ukuthi usisi uzizwa enjani uma uJabu emsiza? .	Ejabule/ejabulile	
<i>Total number of questions answered correctly:</i>		/5

End of assessment. Make sure you have properly recorded all information on each page of the assessment before letting the child go. Once everything is properly recorded and complete, thank the child and give him/her a pencil as a token of appreciation.

APPENDIX R: EGRA ENGLISH COMPREHENSION



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

EARLY GRADE READING ASSESSMENT TOOL

SMRS-EGRA

ENGLISH

General Instructions

It is important to establish a relaxed attitude through some simple initial conversation of interest to the child. The child should perceive the assessment more as a game than a formal assessment. After you have finished, thank the child and give him/her a pencil as a token of appreciation.

Verbal Consent

Read the text in the box to the child:

My name is _____. I'm working with the Department of Education.

- We are trying to understand how children learn to read. You were picked by chance, like in a raffle or lottery.
- We would like your help in this. But you do not have to take part if you don't want to.
- I'm going to ask you to sound out letters, and read words and a short story out loud, and then may ask you a few questions about the story you read.
- Using this stopwatch, I will see how long it takes you to do these things.
- This is NOT a test and it will not affect your grade at school.
- I will NOT write down your name so no one will know that these are your answers.
- Once again, you do not have to participate if you do not wish to. Also, once we begin, if

Tick box if verbal consent is obtained:

YES

(If verbal consent is not obtained, thank the child and move on to the next child)

A. Date of Assessment:	
B. Assessor's Name:	
C. School Name:	

D. Student's Gender	<input type="radio"/> girl	<input type="radio"/> boy
E. Birth Information:	Month : _____ Year : _____ Age: _____	
F. Grade R Attendance	<input type="radio"/> yes	<input type="radio"/> no
	<input type="radio"/>	<input type="radio"/>

1. Letter Sounds (LS)

Show the learner the chart of letters (Chart 1).

Here is a page full of letters. I would like you to sound as many letters as you can. You will start here and move across the page. (Point to the leftmost letter on the top row of the exercise, moving from left to right.) **When I say, ‘Begin’, you will sound the letters as best you can. Point to each letter as you sound it. If you don’t know the sound of a letter, just skip it.**

Let’s practice first. (Point to the first example letter, moving from left to right, to practice the instructions given above.)

Ok, now we’re ready to begin. Put your finger on the first letter. Ready? Begin.

- Start the timer when the child starts.
- Strike a line through a letter that the learner sounds incorrectly or cannot sound at all. For example: ~~b~~
- If the learner stops for more than 3 seconds, tell the learner to go on and strike a line through the letter. For example: ~~b~~
- If the learner corrects himself/herself, accept it as correct. (If a strike has already been made on the letter, circle it to mark it correct.)
- If the entire first line has strike-through lines across all the letters, stop the assessment, place a bracket (J) after the last letter on the first line and make a tick mark (✓) at the bottom of the exercise (in the box provided) to record that the exercise was discontinued.
- After one (1) minute, say “**Stop**”. Place a bracket (J) after the last letter that the learner has attempted to sound.
- Count and record the number of letters that the learner sounded correctly.
- If the learner sounds all the letters in less than one (1) minute, record the time remaining on the stopwatch at the bottom of the exercise.

LETTER SOUNDS, CHART 1

Examples: **b** **S**

V	I	h	g	S	y	Z	W	L	N	/10
I	K	T	D	K	T	q	d	z	w	/20

h	w	z	m	U	r	j	G	X	u	/30
g	R	B	Q	I	f	I	Z	s	r	/40
S	n	C	B	p	Y	F	c	a	E	/50
y	s	Q	P	M	v	O	t	n	P	/60
Z	A	e	x	f	F	h	u	A	t	/70
W	G	H	b	S	l	g	m	i	i	/80
L	L	o	o	X	N	E	Y	p	x	/90
N	k	c	D	d	y	b	j	R	v	/100
V	M	W	q	V	l	h	g	S	y	/110

Total number of letters sounded correctly:

If time remains on stopwatch at completion, record it here (# seconds):

Tick this box if the exercise was discontinued:

2. Familiar Word Reading (WR)

Show the learner the chart of words (Chart 2).

Here is a page full of words. I would like you to read aloud as many words as you can. You will start here and move across the page. (Point to the leftmost word on the top row of the exercise, moving from left to right.) **When I say, 'Begin', you will read the words as best you can. Point to each word as you read it. If you don't know a word, skip it.**

Let's practice first. (Point to the first example word to practice the instructions given above.)

Ok, now we're ready to begin. Put your finger on the first word. Ready? Begin.

- Start the timer when the child starts.
- Strike a line through a word that the learner reads incorrectly or cannot read at all. For example: ~~sad~~
- If the learner stops for more than three (3) seconds, tell the learner to go on and strike a line through the word. For example: ~~sad~~
- If the learner corrects himself/herself, accept it as correct. (If a strike has already been made on the word, circle it to mark it correct.)
- If the entire first line has strike-through lines across all the words, stop the assessment, place a bracket (]) after the last word on the first line and make a tick mark (†) at the bottom of the exercise (in the box provided) to record that the exercise was discontinued.
- After one (1) minute, say: "**Stop**". Place a bracket (]) after the last word that the learner has read correctly.
- Count and record the number of words that the learner read correctly.
- If the learner reads all the words in less than one (1) minute, record the time remaining on the stopwatch at the bottom of the exercise (in the box provided).

FAMILIAR WORDS, CHART 2

Examples: **pot** **bell**

back	came	but	look	went	/5
what	did	be	got	me	/10

eat	do	like	there	little	/15
with	had	are	your	make	/20
put	he	see	it	the	/25
all	here	no	from	tree	/30
out	an	come	will	time	/35
my	you	too	cat	she	/40
have	some	away	down	a	/45
them	we	in	that	they	/50

Total number of words read correctly:

If time remains on stopwatch at completion, record it here (# seconds):

Tick this box if the exercise was discontinued:

3. Passage Reading (PR)

Show the learner the passage chart (Chart 3).

Now I'm going to ask you to read this story out loud. If you get stuck, skip the word and keep on reading. When I say, 'Stop', stop reading the story. I will next ask you some questions about what you have just read – so try to remember the story you're reading. You will start here. (Point to the first word of the passage.)

Ready? Begin.

- Start the timer when the child starts.
- Strike a line through words that the learner reads incorrectly or cannot read at all. For example: ~~little~~
- If the learner stops for more than three (3) seconds, tell the learner to go on and strike a line through the word. For example: ~~little~~
- If the learner corrects himself/herself, accept it as correct. (If a strike has already been made on the word, circle it to mark it correct.)
- If the entire first line has strike-through lines across all the words, stop the assessment, place a bracket (J) after the last word on the first line and make a tick mark (‡) at the bottom of the exercise (in the box provided) to record that the exercise was discontinued.
- After one (1) minute, say: “**Stop**”. Place a bracket (J) after the last word that the learner has read correctly.
- Count and record the number of words that the learner read correctly.
- If the learner reads the passage in less than one (1) minute, record the time remaining on the stopwatch at the bottom of the exercise (in the box provided).

PASSAGE READING, CHART 3

Jabu had a dog. (Q1) The dog was fat and /9
happy. (Q2) One day Jabu and the dog went out to /19
play. The little dog ran away and got lost. /28
Jabu was sad (Q3) but after a while the dog came /37
back. /38

Jabu took the dog home. When they got inside the /47

house Jabu gave the dog a bone. The little dog /57

was tired, so he slept. /62

When the dog woke up, Jabu took the dog outside /72

again to play. (Q5) /75

Total number of words read correctly: /75

If time remains on stopwatch at completion, record it here (#
seconds):

Tick this box if the exercise was discontinued:

4. Comprehension Questions

Now I am going to ask you a few questions about the story you have just read. Try to answer the questions as best you can.



If the child read only part of the story, only ask the questions related to the part that s/he has read. Enter a dash (--) in the boxes for questions not covered.

- Enter a tick (✓) for each question answered correctly.
- Leave a blank for each question answered incorrectly.
- If the learner corrects himself/herself, accept the answer as correct.
- Count and record the number of questions that the learner answered correctly at the bottom of the exercise.

Question	Answer	Correct
1 Who had a dog?	Jabu	<input type="checkbox"/>
2 Was the dog thin or fat?	fat	<input type="checkbox"/>
3 Why was Jabu sad?	the dog ran away/the dog got lost	<input type="checkbox"/>
4 What did the dog do after he got the bone?	he ate it; he slept	<input type="checkbox"/>
5 Did the story have a happy ending? Why?	Yes: the dog came back; they went home together; the dog got a bone; he slept; they played again	<input type="checkbox"/>
Total number of questions answered correctly:		<input type="text" value="/5"/>

End of assessment. Make sure you have properly recorded all information on each page of the assessment before letting the child go. Once everything is properly recorded and complete, thank the child and give him/her a pencil as a token of appreciation.



APPENDIX S: PIRLS RELEASED READING PASSAGE

RELEASED READING LITERACY ITEMS

This book contains the released Progress in International Reading Literacy Study (PIRLS) 2011 grade 4 reading assessment items. This is not a complete set of all PIRLS 2011 assessment items because some items are kept confidential so that they may be used in subsequent cycles of PIRLS to measure trends.

How Can This Set of Released Items Be Used?

In Teacher-designed Assessments. The items in this book present different ways of measuring students' understanding in various content and cognitive domains. A teacher may use these items to create an assessment according to the needs of the class after reviewing the items and selecting items of interest.

For Feedback on Student Understanding. Student responses can be scored according to the scoring information provided in the book. Items that coincide with concepts taught in class allow the teacher to gain feedback on the students' understanding of assessed concepts. For example, a teacher might decide to examine the incorrect or partially correct responses of the class. The teacher might use the items to identify particular difficulties or misconceptions experienced by individual students, which

can serve as the basis for some remedial teaching or focused practice.

To Benchmark Student Performance. The teacher might also compare the percent of students in the class who responded correctly to an item with the percent of students who responded correctly to the same item in other education systems or in the United States.

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SOURCE: PIRLS 2011 Assessment. Copyright © 2013 International Association for the Evaluation of Educational Achievement (IEA). Publisher: TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College, Chestnut Hill, MA and International Association for the Evaluation of Educational Achievement (IEA), IEA Secretariat, Amsterdam, the Netherlands.



This book contains PIRLS 2011 released passages and items for grade 4. Following the passage, each item appears on a single page, on which is provided information about the item's classification and about international student performance on the item. The items appear in the passage order, as shown in the index on the next page.

Information about item classification

Take a look at the first item on page 6. Across the top are three boxes which identify the passage,

its reading purpose (the specific topic assessed within that subject matter), and its comprehension process (the cognitive or thinking process assessed). For this item, the passage is *The Giant Tooth Mystery*, the reading purpose is *acquire and use information*, and the comprehension process is *focus on and retrieve explicitly-stated information*.

Below the row of boxes and above a boxed-in area of the page is the item label. For this item, it is *Item 1: What is a fossil*. Below the boxed-in area is the variable name, which is more commonly used to identify each item than the item label.

Correct answers are shown beneath each item. The correct answer for multiple-choice items is simply a letter code. For example, in the item R0321G01M on page 6, the letter code C is the correct answer. The correct answers for write-in or open-ended items are explained in a scoring

guide. For example, the item 2: *Why people believed in giants* (page 7) provides an example of a scoring guide, indicating the general nature of correct and incorrect responses. In some cases, partial credit may be awarded and these items will provide guidelines for fully correct, partially correct, and incorrect

responses. Sample student responses are provided for some of the constructed-response items for each scoring category.

Information about international student performance

In the table along the right-hand side of the page are the percent correct statistics for the item.

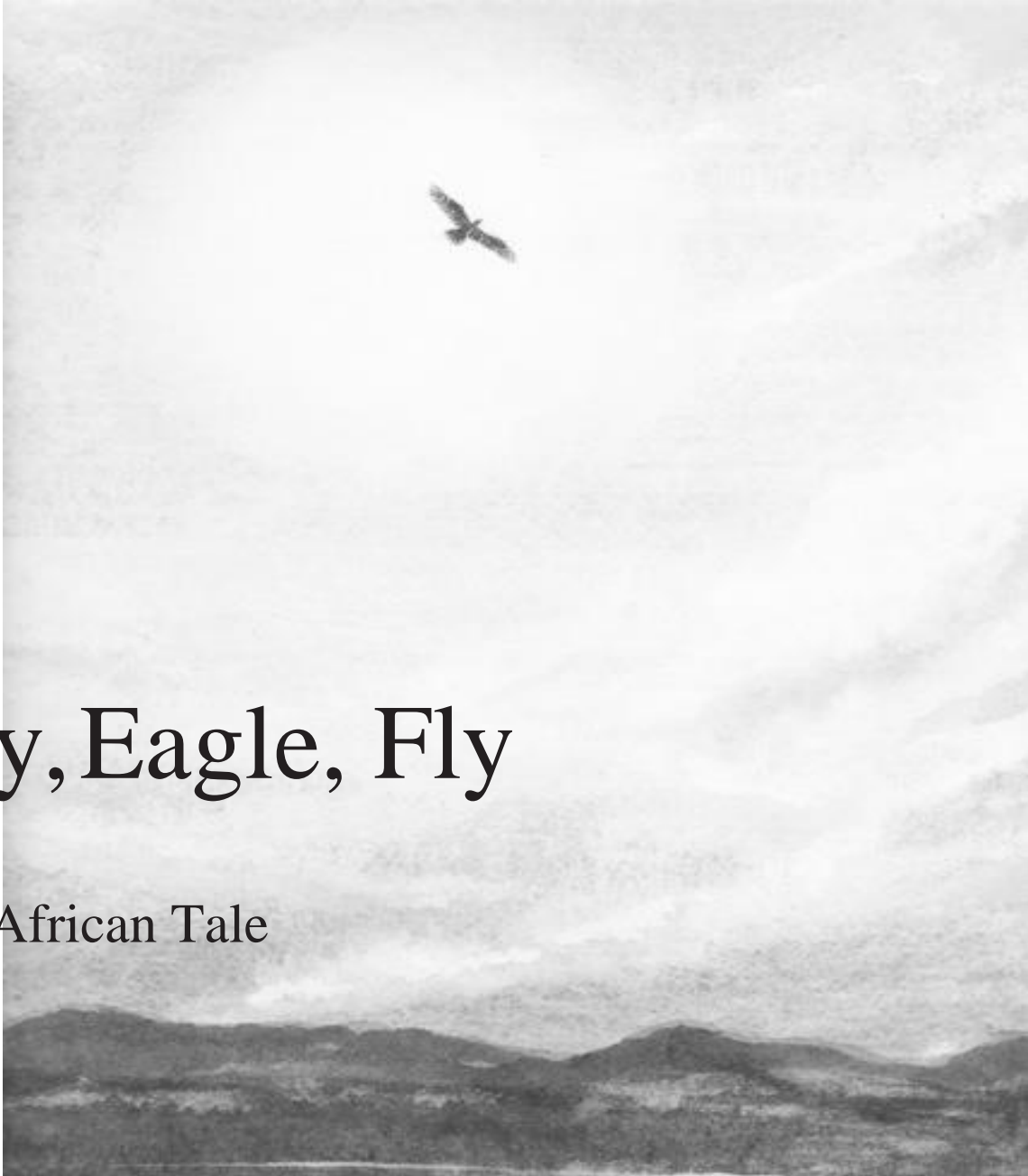
These consist of statistics on the percentage of students in each participating education system who could answer the question correctly. The lists of education systems are ordered in terms of this percentage. The international average is included as well.

To the right of some of the percent correct statistics are special symbols that indicate when an education system scored significantly higher or significantly lower than the international average. Thus, on the item **What is a fossil** as an example, an estimated 85 percent of U.S. students could correctly answer this item, a percentage that was measurably higher than the international average, after taking into account the standard of error associated with the percent correct statistic for the United States and for the international average.



Fly Eagle Fly

R021E01M	What farmer set out to look for	Low (400)	84
R021E02M	Where farmer found eagle chick	High (550)	85
R021E03M	What shows farmer was careful	Intermediate (475)	86
R021E04M	What farmer did with the chick	Intermediate (475)	87
R021E05C	Eagle chick behaved like a chicken	High (550)	88
R021E06M	How friend tried making eagle fly	High (550)	90
R021E07C	Explanation of friend's words	High (550)	91
R021E08M	Why farmer roared with laughter	Advanced (625)	93
R021E09C	Eagle taken to the high mountains	Above Advanced	94
R021E10C	Beautiful sky at dawn	High (550)	96
R021E11M	Why sun rising was important	High (550)	98
R021E12C	What farmer's friend was like	Advanced (625)	99



Fly, Eagle, Fly

An African Tale

Retold by Christopher Gregorowski

A farmer went out one day to search for a lost calf. The herders had returned without it the evening before. And that night there had been a terrible storm.

He went to the valley and searched by the riverbed, among the reeds, behind the rocks and in the rushing water.

He climbed the slopes of the high mountain with its rocky cliffs. He looked behind a large rock in case the calf had huddled there to escape the storm. And that was where he stopped. There, on a ledge of rock, was a most unusual sight. An eagle chick had hatched from its egg a day or two earlier, and had been blown from its nest by the terrible storm.

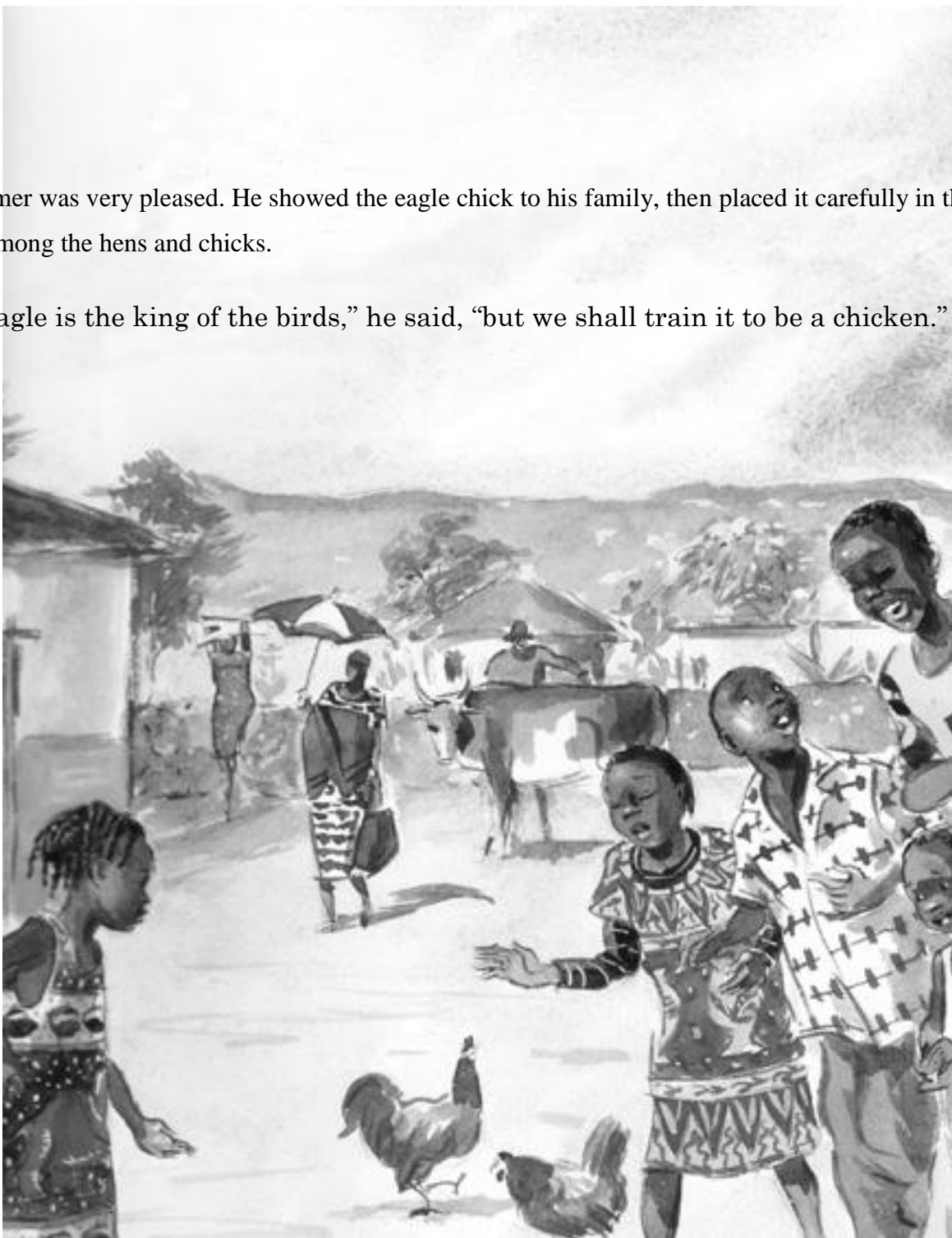
He reached out and cradled the chick in both hands. He would take it home and care for it.

He was almost home when the children ran out to meet him. "The calf came back by itself!" they shouted.



The farmer was very pleased. He showed the eagle chick to his family, then placed it carefully in the chicken house among the hens and chicks.

“The eagle is the king of the birds,” he said, “but we shall train it to be a chicken.”



So, the eagle lived among the chickens, learning their ways. As it grew, it began to look quite different from any chicken they had ever seen.

One day a friend dropped in for a visit. The friend saw the bird among the chickens.

“Hey! That is not a chicken. It’s an eagle!”

The farmer smiled at him and said, “Of course it’s a chicken. Look— it walks like a chicken, it eats like a chicken. It thinks like a chicken. Of course it’s a chicken.”

But the friend was not convinced. “I will show you that it is an eagle,” he said.

The farmer’s children helped his friend catch the bird. It was fairly heavy, but the farmer’s friend lifted it above his head and said, “You are not a chicken but an eagle. You belong not to the earth but to the sky.

Fly, Eagle, fly!”

The bird stretched out its wings, looked about, saw the chickens feeding, and jumped down to scratch with them for food.

“I told you it was a chicken,” the farmer said, and he roared with laughter.



Very early the next morning the farmer's dogs began to bark. A voice was calling outside in the darkness. The farmer ran to the door. It was his friend again. "Give me another chance with the bird," he begged.

"Do you know the time? It is long before dawn." "Come with me. Fetch the bird."

Reluctantly, the farmer picked up the bird, which was fast asleep among the chickens. The two men set off, disappearing into the darkness.

"Where are we going?" asked the farmer sleepily. "To the mountains where you found the bird." "And why at this ridiculous time of the night?"

"So that our eagle may see the sun rise over the mountain and follow it into the sky where it belongs."

They went into the valley and crossed the river, the friend leading the way. "Hurry," he said, "for the dawn will arrive before we do."

The first light crept into the sky as they began to climb the mountain. The wispy clouds in the sky were pink at first, and then began to shimmer with a golden brilliance. Sometimes their path was dangerous as it clung to the side of the mountain, crossing narrow shelves of rock and taking them into dark crevices and out again. At last he said, "This will do." He looked down the cliff and saw the ground thousands of feet below. They were very near the top.

Carefully, the friend carried the bird onto a ledge. He set it down so that it looked toward the east, and began talking to it. The farmer chuckled. "It talks only chicken-talk."

But the friend talked on, telling the bird about the sun, how it gives life to the world, and how it reigns in the heavens, giving light to each new day. "Look at the sun, Eagle. And when it rises, rise with it. You belong to the sky, not to the earth." At that moment the sun's first rays shot out over the mountain, and suddenly the world was ablaze with light.

The sun rose majestically. The great bird stretched out its wings to greet the sun and feel the warmth on its feathers. The farmer was quiet. The friend said, “You belong not to the earth, but to the sky. Fly, Eagle, fly!” He scrambled back to the farmer. All was silent. The eagle’s head stretched up, its wings stretched outwards, and its legs leaned forward as its claws clutched the rock.

Then, without really moving, feeling the updraft of a wind more powerful than any man or bird, the great eagle leaned forward and was swept upward higher and higher, lost to sight in the brightness of the rising sun, never again to live among the chickens.



Fly, Eagle, Fly by Christopher Gregorowski and illustrated by Niki Daly. Published by Simon and Schuster, New York. Text copyright © 2000 by Christopher Gregorowski and illustrations copyright © 2000 by Niki Daly. An effort has been made to obtain copyright permission.

Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Focus on and Retrieve Explicitly Stated Information and Ideas

Item 1: What farmer set out to look for

1. What did the farmer set out to look for at the beginning of the story?

- A. a calf
- B. herders
- C. rocky cliffs
- D. an eagle chick

Variable Name: R021E01M

Correct Response:	A
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Overall Percent Correct

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Education system	Percent correct
Russian Federation	99
Croatia	98
Hong Kong-CHN	97
Italy	96
Finland	96
Austria	96
Northern Ireland-GBR	96
Chinese Taipei-CHN	95
Czech Republic	95
Israel	95
Germany	95
Denmark	94
Netherlands	94
Slovenia	94
Bulgaria	94
Sweden	94
Canada	94
Lithuania	93
Portugal	93
Ontario-CAN	94
Ireland	93
France	93
Quebec-CAN	92
Georgia	92
Singapore	92
Azerbaijan	92
Alberta-CAN	92
Hungary	91
Australia	91
Florida-USA	91
Norway-GBR	91
New Zealand	91
Slovak Republic	90
Andalusia-ESP	87
Norway	90
Poland	90
United States	84
Malta	84
International average	89
Romania	88
Dubai-UAE	81
Belgium (French)-BEL	87
Spain	86
Abu Dhabi-UAE	71
Iran, Islamic Rep. of	85
Malta	84
Indonesia	82
Colombia	81
Trinidad and Tobago	81
...	74
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Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Focus on and Retrieve Explicitly Stated Information and Ideas

Item 2: Where farmer found eagle chick

2.

3. Where did the farmer find the eagle chick?

A. in its nest

B. by the riverbed

C. on a ledge of rock

D. among the reeds

Variable Name: R021E02M

Correct Response:	C
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Overall Percent Correct

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Education system	Percent correct
Russian Federation	90
Chinese Taipei-CHN	87
Northern Ireland-GBR	87
Finland	86
Denmark	86
Hong Kong-CHN	86
Netherlands	86
Sweden	82
Israel	82
Germany	82
Italy	81
Benchmarking	81
Hungary	80
Bulgaria	80
education system	79
Ireland	79
Croatia	79
Slovenia	78
Florida-USA	78
Romania	78
Canada	78
Quebec-CAN	78
Singapore	78
Lithuania	78
Ontario-CAN	77
Austria	77
Azerbaijan	78
Georgia	77
Alberta-CAN	74
England-GBR	76
United States	75
France	68
Andalusia-ESP	74
Portugal	74
Australia	66
Dubai-UAE	74
Slovak Republic	74
Poland	74
International average	73
Czech Republic	72
Norway	57
Abu Dhabi-UAE	72
Spain	71
New Zealand	70
Colombia	66
Belgium (French)-BEL	64
Trinidad and Tobago	63
Malta	62
Iran, Islamic Rep. of	61
United Arab Emirates	60
Oman	53

Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Make Straightforward Inferences

Item 3: What shows farmer was careful

3. What in the story shows that the farmer was careful with the eagle chick?

- A. He carried the eagle chick in both hands.
- B. He brought the eagle chick to his family.
- C. He put the eagle chick back in its nest.
- D. He searched the riverbed for the eagle chick.

Variable Name: R021E03M

Correct Response:	A
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Overall Percent Correct

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Education system	Percent correct
Northern Ireland-GBR	86
Chinese Taipei-CHN	86
Singapore	84
Germany	83
Austria	79
United States	78
Czech Republic	75
Portugal	74
Poland	74
England-GBR	74
Hungary	73
Lithuania	73
Slovak Republic	72
Beijing-CHN	71
Hong Kong-CHN	71
Finland	71
Israel	70
education system	70
Italy	70
Australia	69
Florida-USA	79
Ireland	69
Slovenia	68
New Zealand	70
Alaska-USA	68
Russian Federation	66
France	66
Ontario-CAN	67
Trinidad and Tobago	66
Canada	65
Andalusia-ESP	61
Colombia	64
Spain	64
International average	64
Malta	63
Croatia	63
Abu Dhabi-UAE	56
Netherlands	60
United Arab Emirates	57
Quebec-CAN	50
Azerbaijan	57
Bulgaria	56
Georgia	55
Macedonia-MK	40
Denmark	55
Saudi Arabia	54
Belgium (French)-BEL	54
Indonesia	51
Iran, Islamic Rep. of	50
Qatar	47
-	42
-	

Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Focus on and Retrieve Explicitly Stated Information and Ideas

Item 4: What farmer did with the chick

4. What did the farmer do with the eagle chick when he brought it home?

A. He taught it to fly.

B. He set it free.

C. He trained it to be a chicken.

D. He made a new nest for it.

Variable Name: R021E04M

Correct Response:	C
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Overall Percent Correct

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Education system	Percent correct
Czech Republic	97
Russian Federation	97
Croatia	97
Lithuania	97
Germany	96
Italy	96
Denmark	96
Sweden	95
Hong Kong-CHN	95
Slovak Republic	95
Chinese Taipei-CHN	95
Austria	95
Northern Ireland-GBR	95
Benchmarking	
Finland	95
Norway	95
education system	
Slovenia	94
Hungary	93
Netherlands	93
Quebec-CAN	93
Singapore	92
Bulgaria	92
Florida-USA	92
France	92
Ireland	92
Ontario-CAN	91
Alaska-USA	91
Portugal	91
England-GBR	91
Ontario-CAN	89
Poland	91
Israel	89
United States	86
Georgia	88
International average	88
Maltese-MLT	81
New Zealand	88
Romania	88
Belgium (French)-BEL	81
Dubai-UAE	87
Australia	87
Spain	85
Abu Dhabi-UAE	70
Trinidad and Tobago	83
Azerbaijan	82
Malta	80
Iran, Islamic Rep. of	80
Colombia	79
United Arab Emirates	74
Qatar-QAT	70

Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Focus on and Retrieve Explicitly Stated Information and Ideas

Item 5: Eagle chick behaved like a chicken

5. During the friend's first visit, the eagle chick behaved like a chicken. Give **two** examples that show this.

1. _____

2.

Variable Name: R021E05C

SCORING

2 - Complete Comprehension

The response identifies two ways that the eagle chick behaved like a chicken listed below.

It walks/moves like a chicken.

It eats/pecks on the ground for food like a chicken.

It thinks like a chicken.

It won't fly (returns to the chickens on the ground).

It scratches with the chickens.

1 - Partial Comprehension

The response identifies one way that the eagle chick behaved like a chicken listed above.

0 - No Comprehension

The response does not describe any of the ways listed above. It may include only a vague or circular description of how the eagle behaved.

Examples:

It acted like a chicken.

It looked like one.

It learned chicken ways.

Overall Percent Correct

	Percent
Education system	correct
Hong Kong-CHN	78 ▲
Belgium (French)-BEL	77 ▲
Singapore	74 ▲
Israel	74 ▲
Croatia	74 ▲
Finland	73 ▲
Denmark	72 ▲
Hungary	72 ▲
Northern Ireland-GBR	71 ▲
Canada	70 ▲
United States	69 ▲
Ireland	68 ▲
Netherlands	68 ▲
Sweden	68 ▲
Czech Republic	67 ▲
Russian Federation	67 ▲
Lithuania	67 ▲
England-GBR	64 ▲
Italy	64 ▲
Germany	63 ▲
Bulgaria	63 ▲
Spain	62 ▲

France	62 ▲
Chinese Taipei-CHN	62 ▲
Malta	58
Austria	57
International average	56
New Zealand	56
Slovak Republic	55
Portugal	55
Poland	55
Australia	54
Norway	50 ▼
Slovenia	49 ▼
Romania	49 ▼
Trinidad and Tobago	46 ▼
United Arab Emirates	39 ▼
Iran, Islamic Rep. of	38 ▼
Georgia	37 ▼
Qatar	36 ▼
Saudi Arabia	34 ▼
Colombia	32 ▼
Oman	27 ▼
Azerbaijan	23 ▼
Indonesia	20 ▼
Morocco	11 ▼

education system

Quebec-CAN	80 ▲
Florida-USA	73 ▲
Andalusia-ESP	69 ▲
Alberta-CAN	66 ▲
Ontario-CAN	66 ▲
Maltese-MLT	55
Dubai-UAE	46 ▼
Abu Dhabi-UAE	37 ▼

Percent higher than International average

Benchmarking

Item 5: Eagle chick behaved like a chicken (continued)

Variable Name: R021E05C

Student Responses

Correct Response:

1. It think like an eagle and walks like a chicken.
2. Also it eats like a chicken.

Partially Correct Response:

1. He ate like a chicken.
2. He thought like a chicken.

Incorrect Response:

1. look at him in the
eye and did good.

2. He was Standing up very
Straight.

Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Make Straightforward Inferences

Item 6: How friend tried making eagle fly

6. When the farmer's friend first met the eagle, how did he try to make the eagle fly?

- A. He lifted it above his head.
- B. He set it on the ground.
- C. He threw it in the air.
- D. He brought it to the mountain.

Variable Name: R021E06M

Correct Response:	A
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Overall Percent Correct

Education system Percent
correct

Czech Republic	86 ▲
Finland	84 ▲
Northern Ireland-GBR	84 ▲
Croatia	84 ▲
Hong Kong-CHN	83 ▲
Denmark	83 ▲
Slovak Republic	80 ▲
Lithuania	79 ▲
Israel	78 ▲
Sweden	78 ▲
Italy	78 ▲
Singapore	77 ▲
Russian Federation	77 ▲
Chinese Taipei-CHN	76 ▲
Ireland	76 ▲
Bulgaria	75 ▲
England-GBR	75 ▲
Hungary	75 ▲
United States	74 ▲
Poland	74 ▲
Canada	74 ▲
Germany	73 ▲

Slovenia	73 ▲
Netherlands	72 ▲
Portugal	72
France	70
Austria	70
Georgia	70
Romania	70
International average	70
Norway	69

Australia	67
New Zealand	65 ▼
Spain	65 ▼
Iran, Islamic Rep. of	63 ▼
Belgium (French)-BEL	61 ▼
Malta	60 ▼
Azerbaijan	60 ▼
Trinidad and Tobago	59 ▼
Colombia	55 ▼
United Arab Emirates	55 ▼
Qatar	53 ▼
Saudi Arabia	52 ▼
Oman	44 ▼
Indonesia	44 ▼
Morocco	35 ▼

Benchmarking

education system

Florida-USA	77 ▲
Quebec-CAN	76 ▲
Alberta-CAN	75 ▲
Ontario-CAN	71
Andalusia-ESP	67
Dubai-UAE	61 ▼
Maltese-MLT	60 ▼
Abu Dhabi-UAE	51 ▼

Percent higher than International average Percent lower than International average



Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Interpret and Integrate Ideas and Information

Item 7: Explanation of friend’s words

7. Explain what the farmer’s friend meant when he told the eagle, “You belong not to the earth but to the sky.”

Variable Name: R021E07C

SCORING

2 - Complete Comprehension

The response interprets the meaning of both parts of the quote – “belong not to the earth” and “belong to the sky” in terms of the story.

Examples:

It is supposed to be free in the sky and not stuck on the ground.

That it was not a chicken who walked on the earth. It was an eagle and meant to fly.

1 - Partial Comprehension

The response interprets only the first or the second part of the quote.

Example:

That it was not a chicken. /It was an eagle. -OR-

The response describes the literal contrast only.

Example:

It was not a chicken but an eagle.

0 - No Comprehension

The response may provide an explanation of the quote that is vague or inaccurate, or it may provide a simple rephrasing of the quote itself.

Overall Percent Correct

	Percent
Education system	correct
Israel	66 ▲
Hong Kong-CHN	63 ▲
United States	62 ▲
Sweden	62 ▲
Netherlands	61 ▲
Russian Federation	61 ▲
England-GBR	60 ▲
Croatia	60 ▲
Hungary	58 ▲
Finland	57 ▲
Chinese Taipei-CHN	55 ▲
Ireland	54 ▲
Northern Ireland-GBR	53 ▲
Slovak Republic	53 ▲
Lithuania	52 ▲
Canada	51 ▲
New Zealand	51 ▲
Italy	50 ▲
Bulgaria	49 ▲
Germany	48 ▲
Singapore	48 ▲
Poland	46 ▲

Slovenia	44
Denmark	43
Czech Republic	42
International average	42
Australia	41
Romania	39
France	39
Belgium (French)-BEL	38
Norway	38
Portugal	37 ▼
Malta	36 ▼
Georgia	35 ▼
Austria	30 ▼
Spain	30 ▼
Trinidad and Tobago	25 ▼
United Arab Emirates	24 ▼
Iran, Islamic Rep. of	23 ▼
Qatar	21 ▼
Saudi Arabia	17 ▼
Colombia	14 ▼
Azerbaijan	13 ▼
Oman	13 ▼
Indonesia	9 ▼
Morocco	6 ▼

education system

Florida-USA	66 ▲
Ontario-CAN	57 ▲
Alberta-CAN	51 ▲
Quebec-CAN	46 ▲
Maltese-MLT	43
Dubai-UAE	32 ▼
Andalusia-ESP	30 ▼
Abu Dhabi-UAE	23 ▼

Percent higher than International average Percent lower than International average

Benchmarking

Item 7: Explanation of friend's words (continued)

Variable Name: R021E07C

Student Responses

Correct Response:

The eagle spose to fly but
not stay at the ground.

Partially Correct Response:

The father friend meant that the eagles fly
in the air.

Incorrect Response:

You should be in the sky not
the ground.

Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Interpret and Integrate Ideas and Information

Item 8: Why farmer roared with laughter

8. Why did the farmer roar with laughter during his friend's first visit?

- A. The eagle was too heavy to fly.
- B. The eagle was difficult to catch.
- C. The eagle looked different from the chickens.
- D. The eagle proved him right.

Variable Name: R021E08M

Correct Response:	D
--------------------------	----------

Overall Percent Correct

Education system Percent
correct

Hong Kong-CHN	72 ▲
Russian Federation	68 ▲
Northern Ireland-GBR	66 ▲
Singapore	63 ▲
Germany	62 ▲
Croatia	59 ▲
United States	59 ▲
Finland	59 ▲
England-GBR	59 ▲
Austria	59 ▲
Czech Republic	58 ▲
Ireland	56 ▲
Georgia	55 ▲
Portugal	54 ▲
Sweden	53 ▲
Slovenia	53 ▲
New Zealand	52 ▲
Israel	52 ▲
Canada	51 ▲
France	51 ▲
Poland	50 ▲
Azerbaijan	50

Italy	50
Australia	50 ▲
Spain	49 ▲
Lithuania	48
Slovak Republic	47

International average 46

Bulgaria	45
Iran, Islamic Rep. of	45
Chinese Taipei-CHN	44
Netherlands	41 ▼
Denmark	39 ▼
Trinidad and Tobago	36 ▼
Romania	34 ▼
Malta	33 ▼
Colombia	32 ▼
Saudi Arabia	29 ▼
Oman	28 ▼
Qatar	27 ▼
United Arab Emirates	25 ▼
Hungary	25 ▼
Norway	20 ▼
Belgium (French)-BEL	20 ▼
Indonesia	17 ▼
Morocco	12 ▼

Benchmarking

education system

Florida-USA	63 ▲
Alberta-CAN	56 ▲
Ontario-CAN	55 ▲
Andalusia-ESP	44
Quebec-CAN	39 ▼
Dubai-UAE	34 ▼
Maltese-MLT	27 ▼
Abu Dhabi-UAE	22 ▼

Percent higher than International average Percent lower than International average



Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Interpret and Integrate Ideas and Information

Item 9: Eagle taken to the high mountains

9. Why did the farmer’s friend take the eagle to the high mountains to make it fly? Give **two** reasons.

1. _____

2.

Variable Name: R021E09C

SCORING

2 - Complete Comprehension

The response provides two reasons related to the sun, the mountains as the eagle’s natural habitat, or the mountain’s height in the sky. See the list of appropriate reasons below.

To see the sun (rise)/to feel the warmth of the sun/to follow the sun.

To feel the updraft of the wind.

To be in its natural home/where it belongs/where it was found.

To get it closer to the sky/to get it higher.

1 - Partial Comprehension

The response provides one reason related to the sun, the mountains as the eagle's natural habitat, or the mountain's height in the sky as listed above.

- No Comprehension

The response may provide a reason for making the eagle fly, rather than a reason for taking it to the mountains.

The response may provide a reason that is vague or inaccurate, or it may simply repeat part of the question.

Examples:

It made it easier to fly. To make it fly.

Overall Percent Correct

	Percent
Education system	correct
Singapore	31 ▲
Hungary	30 ▲
Israel	25 ▲
Northern Ireland-GBR	24 ▲
Hong Kong-CHN	24 ▲
Canada	23 ▲
Sweden	23 ▲
England-GBR	22 ▲
Denmark	21 ▲
New Zealand	20 ▲
United States	20 ▲
Russian Federation	20 ▲
Croatia	19
Czech Republic	19
Germany	19
Ireland	19
Finland	19
Netherlands	19
France	18
Austria	18
Slovenia	17
Italy	17

Chinese Taipei-CHN 17

International average 17

Lithuania 16

Australia 16

Georgia 16

Slovak Republic 16

Qatar 15

Romania 15

Portugal 14

Poland 14 ▼

Saudi Arabia 14

Malta 13 ▼

Norway 13 ▼

Spain 13 ▼

Belgium (French)-BEL 12 ▼

Bulgaria 11 ▼

Oman 11 ▼

United Arab Emirates 10 ▼

Iran, Islamic Rep. of 9 ▼

Indonesia 9 ▼

Azerbaijan 8 ▼

Colombia 5 ▼

Morocco 3 ▼

Trinidad and Tobago —

education system

Alberta-CAN 25 ▲

Ontario-CAN 24 ▲

Quebec-CAN 21 ▲

Florida-USA 20

Maltese-MLT 16

Dubai-UAE 13 ▼

Andalusia-ESP 12 ▼

Abu Dhabi-UAE 10 ▼

Percent higher than International average
Percent lower than International average

— Not applicable

Benchmarking

Item 9: Eagle taken to the high mountains (continued)

Variable Name: R021E09C

Student Responses

Correct Response:

1. He did it because the sun would
make him fly.
2. He also did this because the eagle
will try to fill the warmth.

Incorrect Response:

1. He wanted to see
if it was a real eagle.
2. He wanted the eagle
to be happy.

Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Examine and Evaluate Content, Language, and Textual Elements

Item 10: Beautiful sky at dawn

10. Find and copy words that tell you how beautiful the sky was at dawn.

Variable Name: R021E10C

SCORING

- Acceptable Response

The response provides any of the words or phrases in the list below.

Note any of the underlined words are sufficient and other parts of the quote also may be given. Ignore minor variations

in phrasing from the text, as long as it is clear what is intended.

The wispy clouds in the sky were pink at first, then began to shimmer with golden brilliance. The sun rose majestically.

The sun's first rays shot over the mountain, and suddenly the world was ablaze with light.

Examples: Wispy pink clouds, Majestically, Golden brilliance, Ablaze with light

0 - Unacceptable Response

The response does not provide any of the words or phrases in the list above. The response may repeat words from the question.

Examples: Sunrise, Dawn, Beautiful

Overall Percent Correct

	Percent
Education system	correct
<hr/>	
Hong Kong-CHN	89 ▲
Singapore	80 ▲
Portugal	76 ▲
Russian Federation	76 ▲
Northern Ireland-GBR	75 ▲
Croatia	74 ▲
England-GBR	73 ▲
Georgia	71 ▲
Ireland	71 ▲
Israel	69 ▲
Bulgaria	69 ▲
Lithuania	68 ▲
Canada	68 ▲
United States	67 ▲
New Zealand	67 ▲
Hungary	67 ▲
Australia	64 ▲
Romania	64 ▲
Finland	64 ▲
Chinese Taipei-CHN	63 ▲
Slovak Republic	61 ▲
Slovenia	61 ▲

Denmark	61 ▲
Italy	59
Germany	57
International average	56
Austria	56
Poland	55
Malta	53 ▼
France	52
Spain	51 ▼
Sweden	48 ▼
Netherlands	48 ▼
Czech Republic	47 ▼
Norway	46 ▼
Trinidad and Tobago	46 ▼
Iran, Islamic Rep. of	43 ▼
United Arab Emirates	41 ▼
Belgium (French)-BEL	39 ▼
Saudi Arabia	35 ▼
Colombia	32 ▼
Qatar	31 ▼
Indonesia	30 ▼
Oman	30 ▼
Azerbaijan	28 ▼
Morocco	12 ▼

education system

Ontario-CAN	69 ▲
Alberta-CAN	69 ▲
Florida-USA	69 ▲
Quebec-CAN	62 ▲
Andalusia-ESP	54
Dubai-UAE	52 ▼
Maltese-MLT	37 ▼
Abu Dhabi-UAE	37 ▼

▬ Percent higher than International average
 ▬ Percent lower than International average

Benchmarking

Item 10: Beautiful sky at dawn (continued)

Variable Name: R021E10C

Student Responses

Correct Response:

majestic

Incorrect Response:

it was bitiful when it went
down.

Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Examine and Evaluate Content, Language, and Textual Elements

Item 11: Why sun rising was important

11. Why was the rising sun important to the story?

- A. It awakened the eagle's instinct to fly.
- B. It reigned in the heavens.
- C. It warmed the eagle's feathers.
- D. It provided light on the mountain paths.

Variable Name: R021E11M

Correct Response:

A

Overall Percent Correct

Education system	Percent correct
Russian Federation	79 ▲
Portugal	77 ▲
Finland	74 ▲
United States	73 ▲
Ireland	72 ▲
Northern Ireland-GBR	72 ▲
Sweden	71 ▲
Hong Kong-CHN	68 ▲
Italy	68 ▲
Lithuania	67 ▲
Hungary	66 ▲
England-GBR	66 ▲
Slovak Republic	66 ▲
Israel	65 ▲
Bulgaria	65 ▲
Romania	65 ▲
Czech Republic	65 ▲
Denmark	65 ▲
Singapore	64 ▲
Poland	63 ▲
Netherlands	63 ▲

Canada	63 ▲
Azerbaijan	62 ▲
Australia	62 ▲
Slovenia	62 ▲
New Zealand	60
Croatia	58
Georgia	58
Spain	57
International average	57
Germany	55
France	54
Austria	53 ▼
Malta	53
Belgium (French)-BEL	51 ▼
Trinidad and Tobago	51 ▼
United Arab Emirates	44 ▼
Chinese Taipei-CHN	44 ▼
Colombia	37 ▼
Indonesia	34 ▼
Qatar	34 ▼
Norway	33 ▼
Iran, Islamic Rep. of	29 ▼
Saudi Arabia	25 ▼
Morocco	23 ▼
Oman	23 ▼

Benchmarking

education system

Florida-USA	78 ▲
Alberta-CAN	70 ▲
Ontario-CAN	65 ▲
Andalusia-ESP	57
Quebec-CAN	56
Dubai-UAE	51 ▼
Maltese-MLT	48 ▼
Abu Dhabi-UAE	43 ▼

Percent higher than International average Percent lower than International average



Passage	Reading Purpose	Comprehension Process of the Task
FLY, EAGLE, FLY	Literary Experience	Interpret and Integrate Ideas and Information

Item 12: What farmer's friend was like

12. You learn what the farmer's friend was like from the things he did.

Describe what the friend was like and give an example of what he did that shows this.

Variable Name: R021E12C

SCORING

2 - Complete Comprehension

The response describes one plausible character trait (persistent, stubborn, nice, clever, friendly to animals, etc.). In addition, the response provides one example of the farmer's friend's actions that are evidence of the character trait.

Example:

He was determined. He kept trying to teach the eagle to fly.

1 - Partial Comprehension

The response provides one plausible character trait. -OR-

The response provides one example of the friend's actions that are evidence of the friend's character.

Example:

He is kind to animals.

0 - No Comprehension

The response does not provide an appropriate or accurate description of the farmer's friend's character, or provides a vague and general description that demonstrates limited comprehension of the story without further textual support. -OR-

The response may include some information from the story that has no connection to the description of the friend's character.

Overall Percent Correct

	Percent
Education system	correct
Hong Kong-CHN	59 ▲
Chinese Taipei-CHN	55 ▲
Israel	50 ▲
Russian Federation	50 ▲
Singapore	48 ▲
Ireland	46 ▲
Croatia	45 ▲
Italy	45 ▲
England-GBR	44 ▲
Austria	44 ▲
Northern Ireland-GBR	43 ▲
Czech Republic	42 ▲
United States	42 ▲
Slovak Republic	41 ▲
Sweden	40 ▲
Bulgaria	39 ▲
Portugal	38 ▲
Canada	38 ▲
Lithuania	38 ▲
Finland	38 ▲
Denmark	37 ▲

Hungary 35 ▲

International average 29

Poland 28

Australia 25 ▼

Romania 25 ▼

Georgia 24 ▼

New Zealand 23 ▼

Spain 21 ▼

Netherlands 20 ▼

Colombia 19 ▼

Belgium (French)-BEL 19 ▼

Malta 18 ▼

Iran, Islamic Rep. of 18 ▼

Trinidad and Tobago 18 ▼

France 17 ▼

Norway 15 ▼

Germany 14 ▼

United Arab Emirates 14 ▼

Slovenia 13 ▼

Qatar 12 ▼

Oman 7 ▼

Azerbaijan 7 ▼

Saudi Arabia 4 ▼

Indonesia 3 ▼

Morocco 1 ▼

Benchmarking

education system

Ontario-CAN	47 ▲
Florida-USA	42 ▲
Alberta-CAN	34 ▲
Quebec-CAN	31
Andalusia-ESP	30
Dubai-UAE	20 ▼
Maltese-MLT	17 ▼
Abu Dhabi-UAE	12 ▼

Percent higher than International average Percent lower than International average



Item 12: What farmer's friend was like (continued)

Variable Name: R021E12C

Student Responses

Correct Response:

The friend tried to convince the farmer that the eagle isn't a chicken. So the friend proved by letting the eagle fly with the sun rising.

Partially Correct Response:

He really wanted to prove that
the fake chicken was really an eagle
for example the Sirend took the
farmer and the chicken to the top
of a mountain, to prove that it
was really an eagle.

Incorrect Response:

different the
farmer thought it
was a chicken
he thought it was
an eagle.

APPENDIX T: ETHICAL CLEARANCE CERTIFICATE

FAKULTEIT OPVOEDINGSWETENSKAPPE

Notule

Vergadering

Navorsingsetiekkomitee

Datum: Donderdag 17 Maart 2016, 9:00

Plek: Seminaarlokaal 299E, gebou C6

ITEM		
Goedkeuring van etiekaansoeke wat op vorige vergadering terugverwys is		
Projekhoof	Prof R Cromarty	
Student/Span	K Steinke, A Kirsten en prof B Bantwini	
Etieknommer	NWU-00254-15-A2 (hoof projek het magtiging ontvang op die vergadering van 23 Julie 2015)	
Titel	Hoof-projek se titel: An Investigation into the provision of quality learning and teaching in the ECE and Schooling sectors in selected provinces in South Africa Sub-projek se titel: The pedagogical content knowledge of teachers and its effect on enlitterating grade 3 and 4 learners	
Werksverdeling	Me W Breytenbach Dr Christo van der Westhuizen	

Besluit

Die aansoek is aanvaarbaar in sy huidige vorm en die projek kan onmiddellik in aanvang neem / *The application is acceptable in its current form and the project can start immediately.*

- Die kwantitatiewe vraelys is verwyder soos voorgestel is. / *The quantitative questionnaire was removed as suggested by the committee.*
- Die semi gestruktureerde vraelys is nog steeds baie lank, maar daar is nie etiese probleme nie. / *The semi structured questionnaire is still very long, but there are no ethical problems.*

Notulehouer: Me E Conradie

APPENDIX U: DEPARTMENT OF BASIC EDUCATION PERMISSION LETTER



education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Enquiries: Phindile Duma

Tel: 033 392 1004

Ref: 2/4/8/759

Mrs KJ Steinke
8 York Road
Howick
3290

Dear Mrs Steinke

PERMISSION TO CONDUCT RESEARCH IN THE KZN DōE INSTITUTIONS

Your application to conduct research entitled: "THE PEDAGOGICAL CONTENT KNOWLEDGE OF TEACHERS AND ITS EFFECT ON ENLITERATING GRADE THREE AND FOUR LEARNERS", in the KwaZulu-Natal Department of Education Institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the Intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 05 April 2016 to 30 June 2017.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Miss Connie Kehologile at the contact numbers below
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report / dissertation / thesis must be submitted to the research office of the Department. Please address it to The Office of the HOD, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education.

uMgungundlovu District

Nkōsinathi S.P. Sishi, PhD
Head of Department: Education
Date: 05 April 2016

KWAZULU-NATAL DEPARTMENT OF EDUCATION

POSTAL: Private Bag X 9137, Pietermaritzburg, 3200, KwaZulu-Natal, Republic of South Africa ...dedicated to service and performance
PHYSICAL: 247 Burger Street, Anton Lembede House, Pietermaritzburg, 3201. Tel. 033 392 1004 beyond the call of duty
EMAIL ADDRESS: kehologile.connie@kzndoe.gov.za / Phindile.Duma@kzndoe.gov.za
CALL CENTRE: 0860 596 363; Fax: 033 392 1203 WEBSITE: WWW.kzneducation.gov.za

APPENDIX W: SCHEDULE OF ASSESSMENTS FOR GRADE 3 – S1(E) & S2

The table below contains a complete schedule for the Grade 3 classes at both S1(E) and S2. The details include: dates and type of reading tests administered; subtests given; numbers of learners who participated and who administered the tests. All tests for both Grades 3 and 4, both EGRA, PIRLS and Pre-PIRLS, were marked by the researcher.

SCHOOL 1:			
Grade 3			
LoLT: English	No. of Learners	Tests	
Early Grade Reading Assessment (EGRA)			
Date			Administered by:
April 2016 May 2016	34+31 (x 2 classes)	English Comprehension & Fluency	Researcher
May 2016	7 (x 2 classes)	Letter-Sound Correspondence; Phonemic Awareness; Familiar Word Reading; Non-Word Reading; isiZulu Comprehension & Fluency	Researcher
Re-Testing			
April 2017	7	English Comprehension & Fluency; isiZulu Comprehension & Fluency	Researcher

SCHOOL 2:			
Grade 3			
LoLT: Isizulu	No. of Learners	Tests	
Early Grade Reading Assessment (EGRA)			
Date			Administered by:
August 2016	38	IsiZulu Comprehension & Fluency	Researcher
October 2016	12	English Comprehension & Fluency	Researcher
Re-Testing			
April 2017	4	IsiZulu Comprehension & Fluency; English Comprehension & Fluency.	Researcher

APPENDIX X: PRE- AND POST-READING ASSESSMENTS FOR GRADES 3 & 4

a. Early Grade reading assessments Grade 3: S1(E) & S2

The results for T5, S2 Grade 3 learners have been previously discussed (see 5.10). This appendix contains details of reading assessments conducted with Grade 4 learners at S1(E) and S2, both PIRLS and Pre-PIRLS. In addition, this appendix contains tables containing the additional battery of EGRA tests conducted with Grade 3s at S1(E). The EGRA test batteries were not available in isiZulu and so could only be conducted with S1(E) as it is an English LoLT school. The battery of tests that were provided for English LoLT learners were freely available (USAID, 2009) and provided a range of sub-tests. These were: Letter-Sound Correspondence; Phonemic Awareness; Familiar Word Reading; Non-Word Reading; isiZulu Comprehension & Fluency (see Appendix W). Tables 1 and 2 below contains details of the pre-and post assessment results as well as the EGRA test battery and results for isiZulu and English.

Table 1: T2 S1(E)/3 – EGRA Assessments for additional test battery (April 2016) & post test results for English & isiZulu fluency & comprehension (March 2017)

TABLE OF EGRA ASSESSMENTS FOR TRACKED LEARNERS T2 S1(E)/3 – Pre and Post Test Results									
Learners Results May 2016								Learner Results March 3 rd 2017	
Learner Name									
T2 S1(E)/3	Initial WCPM English	Letter Sounds /110	Familiar Word Reading /50	Non-Word Reading /50	Listening /5	Phonemic Awareness /10	IsiZulu Reading /43	English WCPM & Comprehension Score	isiZulu Reading wcpm & Comprehension Score
1	145 wcpm, Comprehension = 5/5						0	165 wcpm, Comprehension = 5/5	35 wcpm, comprehension = 5/5
10	54 wcpm Comprehension = 4/5	26	45	11	3/5	10	3 wcpm Comprehension = 5/5	84 wcpm; Comprehension = 5/5	11 wcpm, comprehension = 3/5
12	43 wcpm Comprehension = 1/5	31	41	13	5/5	10	0	65 wcpm Comprehension = 4/5	17 wcpm comprehension = 5/5

Table 2: T1 S1(E)/3 – EGRA Assessments for additional test battery (May 2016) & post test results for English & isiZulu fluency &

EGRA TESTS: Tracked Grade 3									
Learners Results May 2016								Learner Results March 3 rd 2017	
Learner Name									
Tracked Learner No.	Initial English WCPM	Letter Sounds /110	Familiar Word Reading /50	Non-Word Reading /50	Listening /5	Phonemic Awareness /10	IsiZulu Reading /43	English WCPM & Comprehension Score	isiZulu Reading wcpm & Comprehension Score
3	89 wcpm; comp = 5/5	47	49	27	5/5	10	20 wcpm comp = 3/5	106 wcpm; comp = 5/5	36 wcpm, comp = 3/5
10	47 wcpm; comp = 2/5	0	33	11	2/5	8	0	86 wcpm; comp = 4/5	3 wcpm; comp = 3/4
23	30 wcpm; comp = 2/5	22	33	13	2/5	5	0	77 wcpm, comp = 4/5	17 wcpm, comp = 5/5

comprehension (March 2017)

The following section will discuss the results from the Grade 4 comprehension assessments, starting with the 2011 released PIRLS text, “Fly Eagle, Fly”.

Results for Two Grade 4 Classes at S1(E) - PIRLS Comprehension Assessments, May 2016

The PIRLS 2011 released text was given to two Grade 4 classes at S1(E) during May 2016. The test was administered by the English teacher, T3/S1, Grade 4. Subsequently, both T3 and researcher felt that this initial test was too difficult for the majority of these learners and so it was jointly decided to issue the Pre-PIRLS to the learners instead. A schedule of the dates, times, tests and administrators is provided in table 3 below:

Table 3: PIRLS and Pre-PIRLS schedule of testing Pre (May, 2016) and post assessment (April 2017) for Grade 4 classes at S1(E) & S2

SCHOOL 1:			
Grade 4			
LoLT: English	No. of Learners	Tests	
Progress in Reading Literacy Skills (PIRLS)			
Date			Administered by:
May 2016	90 (x2 classes)	English: Released 2011 Comprehension Passage, “Fly, Eagle, Fly”	Teacher
Progress in Reading Literacy Skills (Pre-PIRLS)			
October, 2016	47	English: Released 2011 Comprehension Passage, “The Lonely Giraffe”	Teacher
Post-Testing			
April 2017	8	English: Released 2011 Comprehension Passage, “The Lonely Giraffe”	Teacher
SCHOOL 2:			

Grade 4			
LoLT: English	No. of Learners	Tests	
Progress in Reading Literacy Skills (Pre-PIRLS)			
Date			Administered by:
August 2016	44	English: Released 2011 Comprehension Passage, “The Lonely Giraffe”	Teacher
Post-Testing			
April 2017	26	English: Released 2011 Comprehension Passage, “The Lonely Giraffe”	Teacher

To restate, the PIRLS contains the following question types:

- Retrieving Explicitly Stated Information;
- Making Straightforward Inferences;
- Interpreting and Integrating Ideas and Information;
- Examining and Evaluating Content, Language and Textual Elements.

The scores out of 16 are listed below in table 6 in descending order and are followed by a breakdown of the scores by question types that are answered correctly. The first group to be assessed are labelled Group 4A and the second group will be labelled Group 4B. Table 4 below contains the initial PIRLS assessments results for T3 S1(E)/4 (May 2016).

Table 4: PIRLS assessments results for T3 S1(E)/4 (May 2016)

RELEASED PIRLS TEXT 2011: "FLY EAGLE FLY" - Group Total Scores for Group 4A	
LEARNER NUMBER	
4A	TOTAL /16
1	13
2	10
3	8
4	7
5	7
6	7
7	7
8	7
9	7
10	6
11	6
12	5
13	5
14	5
15	4
16	4
17	3
18	3
19	3
20	3
21	2
22	2
23	2
24	2
25	2
26	1
27	1
28	1
29	1
30	1
31	1
32	1
33	0

Below is series of graphic analyses of the results in table 4. This consists of a series of Graphs for, T3 S1(E)/4 PIRLS, broken down according to the percentages of question types in the PIRLS answered correctly by the learners. There were 12 questions in total and the total score for the assessment was out of 15 points. This was because two of the 12 questions consisted of two parts. In the graphs, this is illustrated as two separate questions meaning that figures 7-1 and 7-4 have an added value. The values are in sequential numbers while the legend for each graph gives the actual number of the question as per the original PIRLS question paper. Out of the original 12 questions, five were basic referential questions (questions 1;2;4;and 5); two were inferential questions (questions 3 and 6); four questions required learners to interpret and integrate ideas and information (7;8;9; and 12); and two questions (10 and 11) required learners to examine and evaluate content, language and textual elements. Figure 7-1 follows.

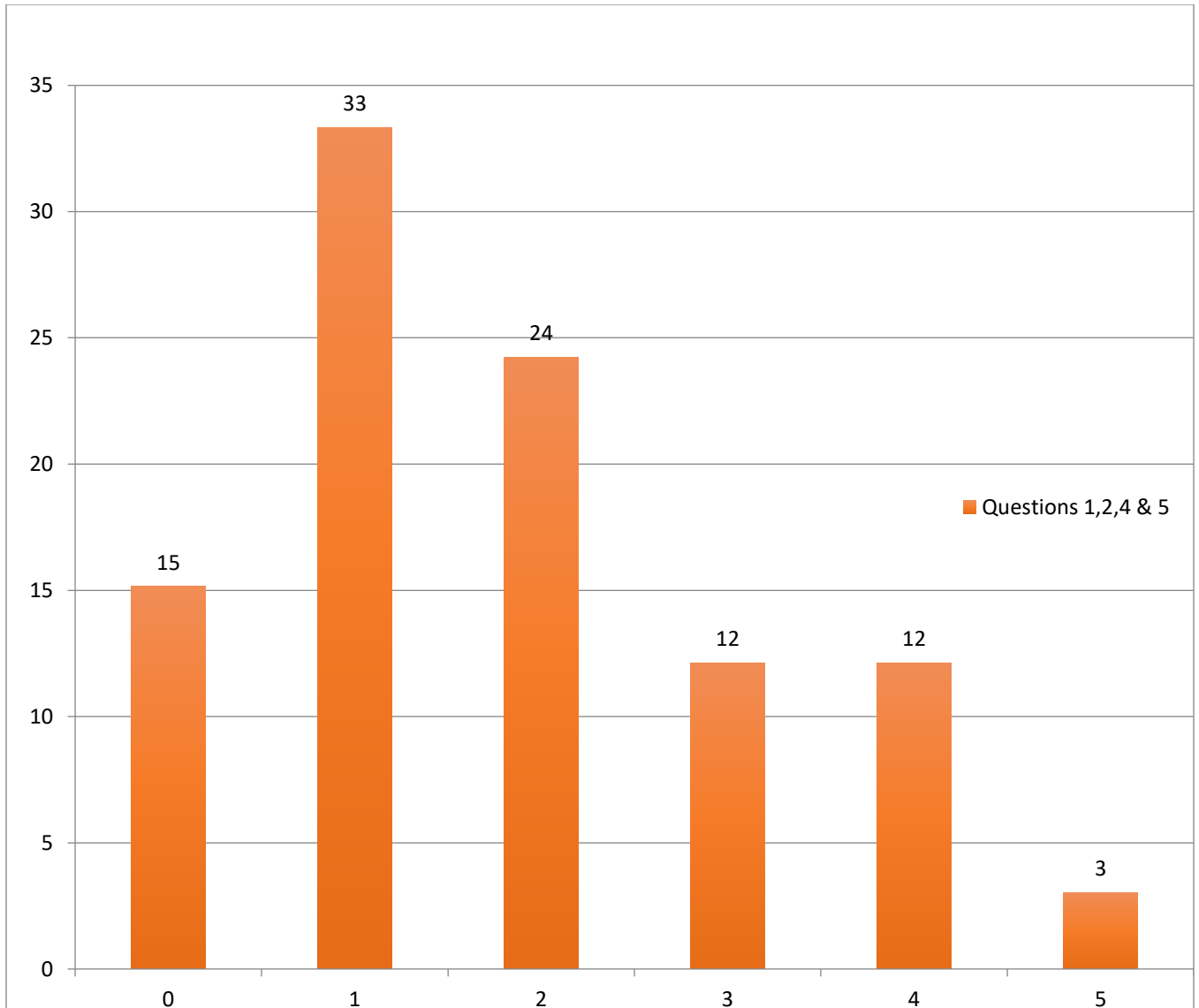


Figure 7-1: Percentage of 4A Learners who could Retrieve Explicitly Stated Information

Discussion

Figure 7-1 indicates that 15% of the assessed learners could answer no questions; 33% could answer one question; 24% answered two questions, and 12% of learners could answer 3 and 4 referential questions respectively. Only 3% could answer all five questions.

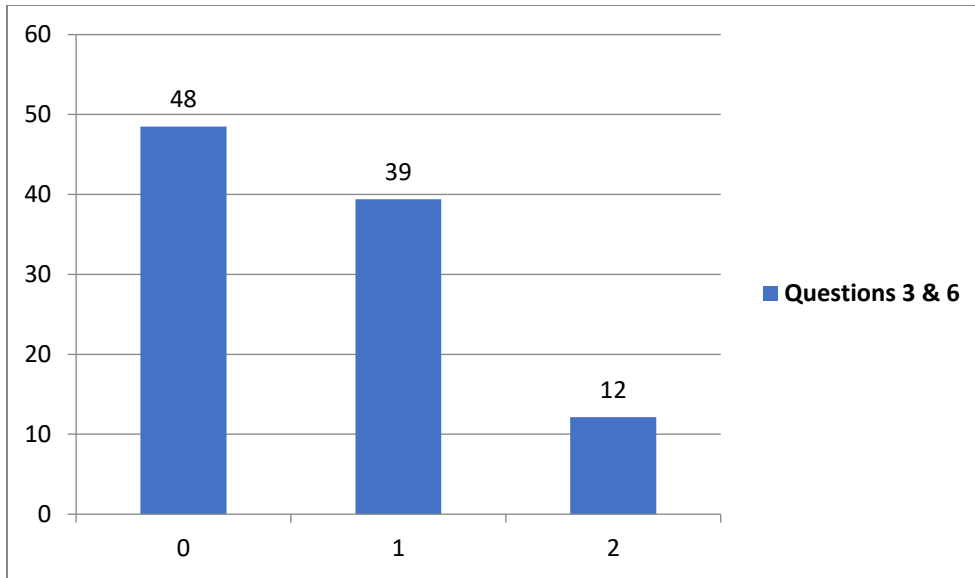


Figure 7-2: Percentage of 4A Learners who could Make Straightforward Inferences

Discussion

Figure 7-2 indicates that almost half of the learners could answer none of these question that required straightforward inferences. This leaves 39% who could answer one of the two questions and 12% who could answer both questions.

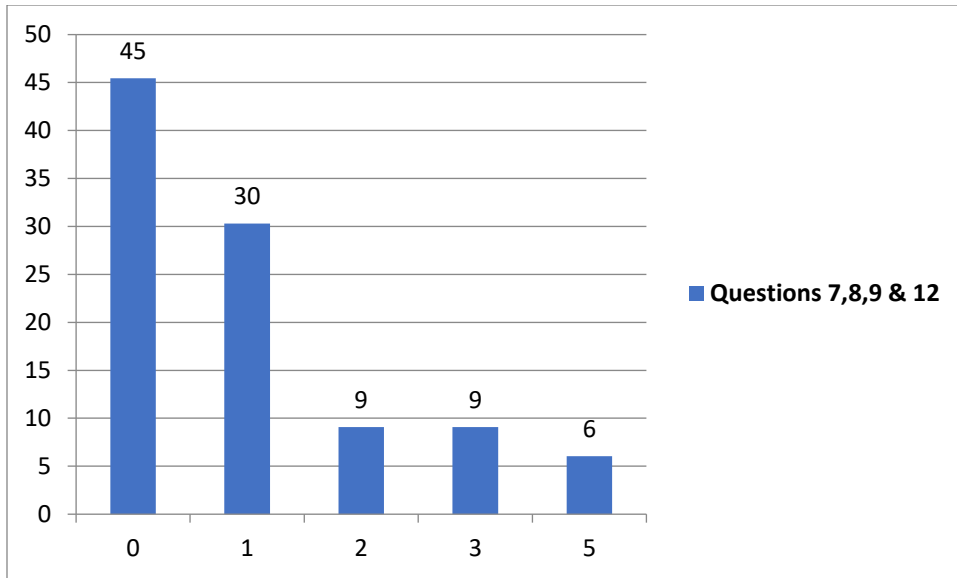


Figure 7-3: Percentage of 4A Learners who could Interpret and Integrate Ideas and Information

Discussion

Again, almost half of the learners could answer no questions that involved interpreting and integrating ideas and information. Only 30% could answer one of the four and only 9 and 6 % respectively could answer questions 9 and 12.

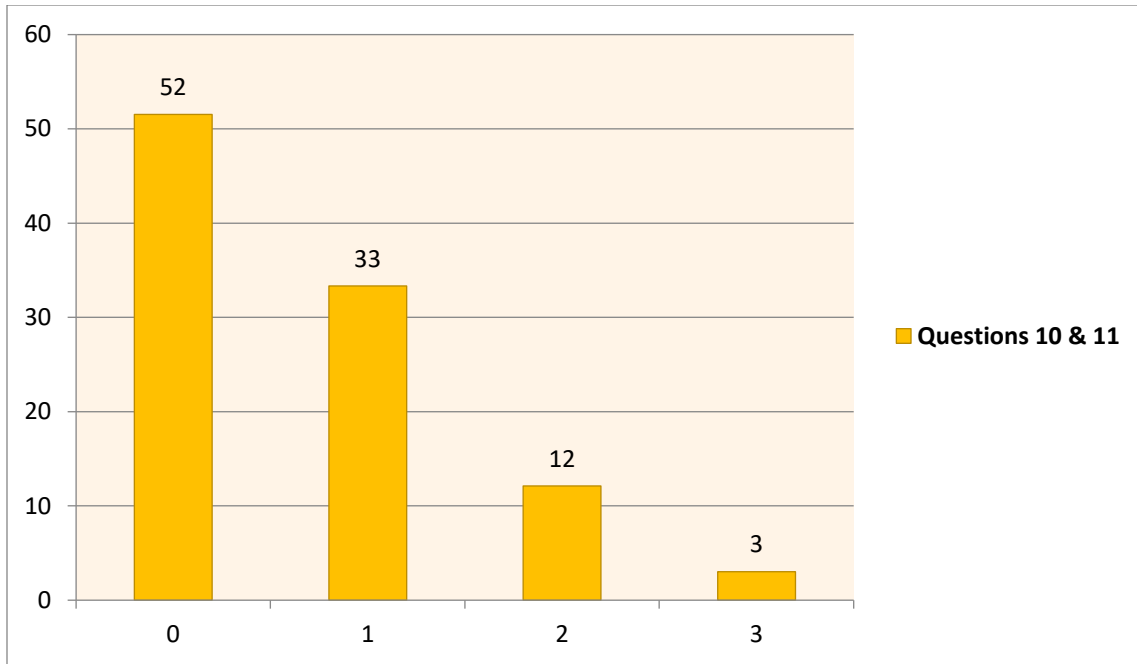


Figure 7-4: Percentage of 4A Learners who could Examine and Evaluate Content, Language and Textual Elements

Discussion

Figure 7-4 includes three questions in which learners must be able to examine and evaluate content, language and textual elements. Over 50% of learners could answer no questions and 33% could answer only one question. The remaining 12% could answer two and only 3% of the sample could answer all three questions. Table 7-1 below shows the PIRLS assessment results for T3 S1(E)/4B (May 2016).

Table 7-1: PIRLS assessment results for T3 S1(E)/4B (May 2016)

RELEASED PIRLS TEXT 2011 “FLY EAGLE FLY”	
4B	TOTAL /16
1	10
2	9
3	9
4	8
5	8
6	8
7	7
8	7
9	6
10	5
11	5
12	5
13	4
14	3
15	3
16	2
17	2
18	2
19	2
20	2
21	2
22	1
23	1
24	1
25	1
26	0

Discussion

Table 7-1 indicates that Class 4B also received very low scores for this PIRLS text. The graphs below (figures 7-5 to 7-8) for 4B, as with 4A previously, contain results according to percentages of question types answered correctly. There is a total of 12 questions.

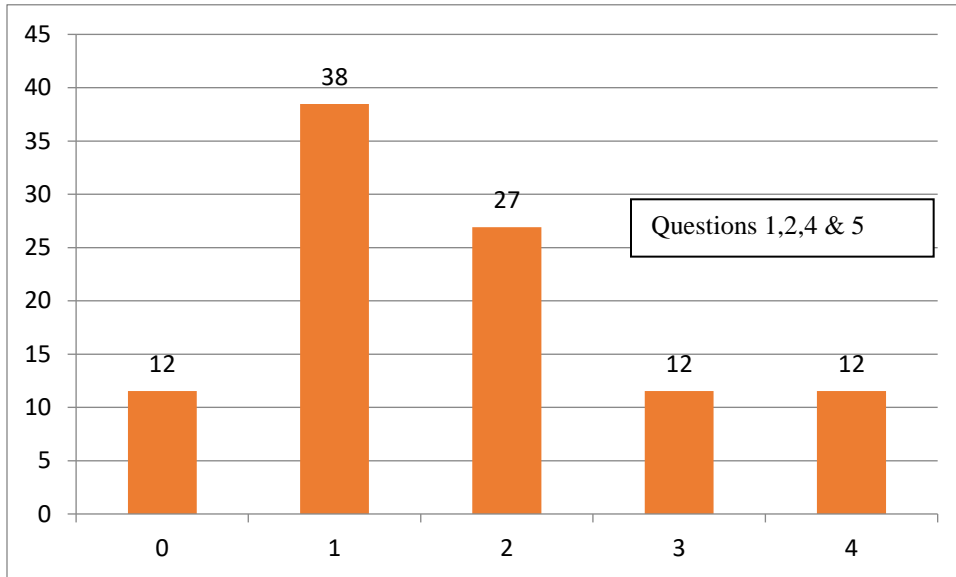


Figure 7-5: Percentage of 4A Learners who could to Retrieve Explicitly Stated Information

Discussion

Figure 7-5 indicates that 12% of learners could answer no questions that required them to retrieve explicitly stated information, while 38% could answer one question. Two questions were answered by 27% whilst three and four questions were answered by 12% of the whole 4B group.

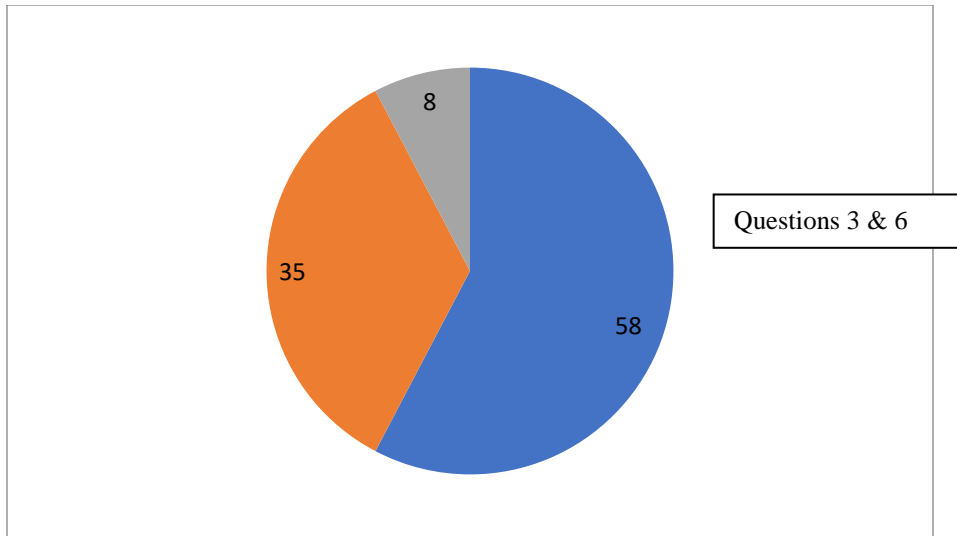


Figure 7-6: Percentage of 4B Learners who could Make Straightforward Inferences

Discussion

Figure 7-6 indicates that a total of 58% of 4B learners could answer no inferencing questions, whilst 35% could answer only one question. A total of 8% could answer both questions.

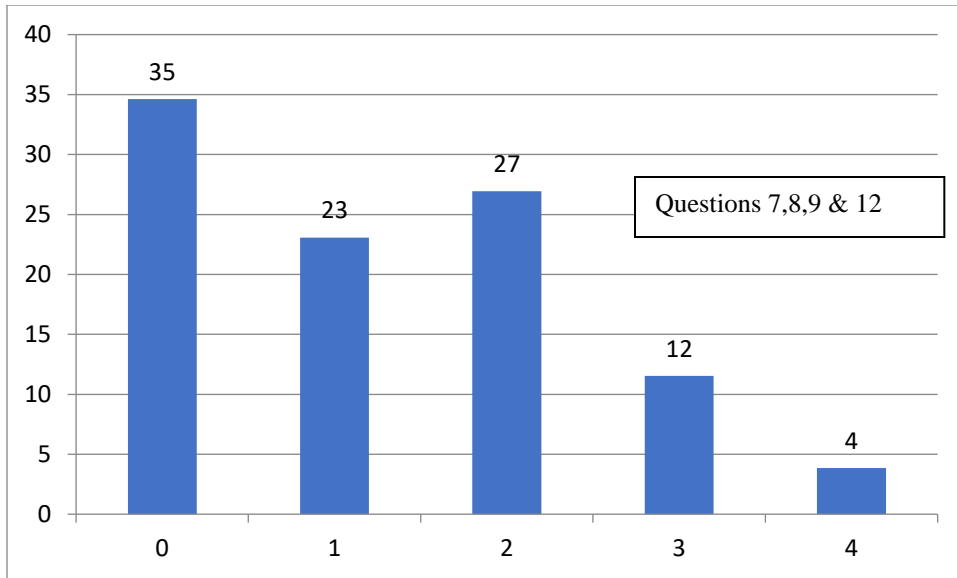


Figure 7-7: Percentage of 4B Learners who could Interpret and Integrate Ideas and Information

Discussion

Figure 7-7 above indicates that 35% of learners could answer no questions while 23% could answer only one. Twenty seven percent could answer two, 12% could answer 3 and only 4% could answer all four.

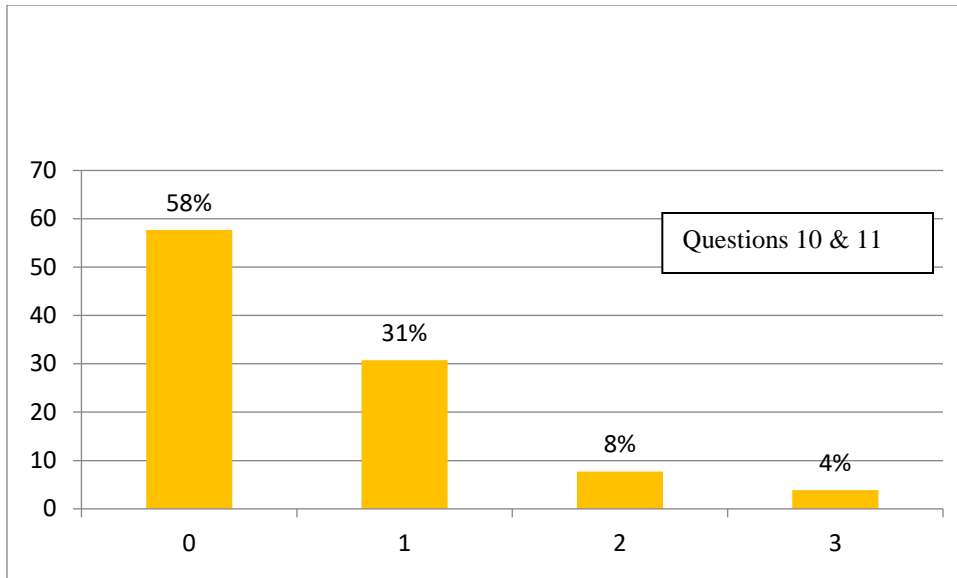


Figure 7-8: Percentage of 4B Learners who were able to Examine and Evaluate Content, Language and Textual Elements

Discussion

Figure 7-8 indicates that close to 60% of this class could not answer any questions, while only 31% could answer one. Eight percent could answer two and only 4% could answer all three questions.

Discussion of the PIRLS 2011 scores for grade 4A & 4B

The above graphic data correlates with findings from other recent studies on foundation and intermediate grade reading levels in South Africa. Van den Berg has shown that more than half of grade 2 learners in Quintile 1-4 schools are not on track (Van der Berg, 2015). Even more relevant, considering that these are grade 4 learners, is that Spaull analysed the PrePIRLS, which are easier than the PIRLS of 2011. He found that 58% of the Grade 4 sample could not read for meaning while 29% were completely illiterate (Spaull, 2016). In addition, Draper and Spaull (Draper & Spaull, 2015) analysed oral fluency in reading (ORF) in English using data from 1772 rural learners in grade 5 gathered by NEEDU in 2013. The ORF of English rural learners was very low: 41% were considered to be non-readers in English (less than wcpm) and 11% could not read a single English word from the passage. This indicates that these learners are only functionally literate in English. If one considers that analysed data from the Annual National Assessments (ANAs) indicates that Grade four results *mirror* those of Grade 12 remarkably closely (Van der Berg, 2015), the low reading levels of the learners in this assessment is cause for concern. The results for the Pre-PIRLS that were issued to these learners will now follow. The first set of results to be discussed are those of one Grade 4 class at S2.

Results for Grade 4A – Pre-PIRLS for Grade 4A Comprehension Test, English August 2016

The grade 4A learners were given a text from the released English version Progress in International Reading Literacy Study (Pre-PIRLS), in August 2016. Due to the low scores obtained by the Grade 4 learners at S1(E) in the PIRLS, it was decided to immediately provide S2 Grade 4 with the Pre-PIRLS. In addition, the learners at S2 are mainly isiZulu first language speaking so I felt that this text would be a good choice. If the Pre-PIRLS assessment had shown a ceiling effect (where the results indicate that the assessment task was too easy for the majority of learners) with Grade 4 at S2, I would then have implemented the full PIRLS assessment. However, it appeared that the Pre-PIRLS level was pitched at the correct level for both S1(E) and S2 and gives an accurate overall picture of learner ability for comparison within the groups. For this reason, so I did not believe it necessary to implement the PIRLS as well.

Regarding the choice of English text for the class, it was unfortunate that no PIRLS isiZulu texts have been released for public use. I was informed that no sharing of the South African instruments is permitted, under the instructions and auspices of the IEA. The internationally released passages are only available online in English (Howie, 2016) and time did not permit the translating of the English PIRLS passage into isiZulu. As these learners must use English as LoLT from grade 4 onwards, there is a benefit to assessing them in English as it will likely indicate their ability to cope with the demands of studying all subjects, with the exception of isiZulu, in English. The table containing the scores for one Grade 4 S2, in descending order, is below. This is followed by a break-down of graphs indicating percentages of learners who could answer specific question types, beginning with table 7-2 below.

Table 7-2: Results for T6, grade 4 S2 – Pre-PIRLS comprehension test August 2016

Released Pre-PIRLS text “The Lonely Giraffe”	
Learner Number Grade 4 S2	Score/15
1	15
2	15
3	15
4	15
5	14
6	14
7	14
8	13
9	13
10	13
11	13
12	13
13	12
14	12
15	12
16	12
17	11
18	11
19	11
20	10
21	10
22	10
23	9
24	9
25	8
26	7
27	7
28	7
29	6
30	6
31	5
32	4
33	4
34	4
35	4
36	4
37	4

38	4
39	4
40	3
41	3
42	2
43	1
44	0

Discussion

Table 7-2 indicates that learners performed reasonably well overall in this Pre-PIRLS comprehension but not so well that a ceiling effect was created. A total of 44 learners took part in the assessment. This particular class showed the widest range of literacy skills of any of the class groups in this current study. Overall the average reading abilities might be seen as quite high if one takes into consideration that this assessment was in English, which is not mother-tongue for these Grade 4 learners. One must of course keep in mind that these learners have been assessed using the pre-PIRLS. The Pre-PIRLS contains a higher percentage of basic referential questions than the PIRLS. As with the original PIRLS assessment, below is a series of graphic data for the Pre-PIRLS that breaks down the percentages of questions correctly answered according to question type

(figures 7-9 to 7-12).

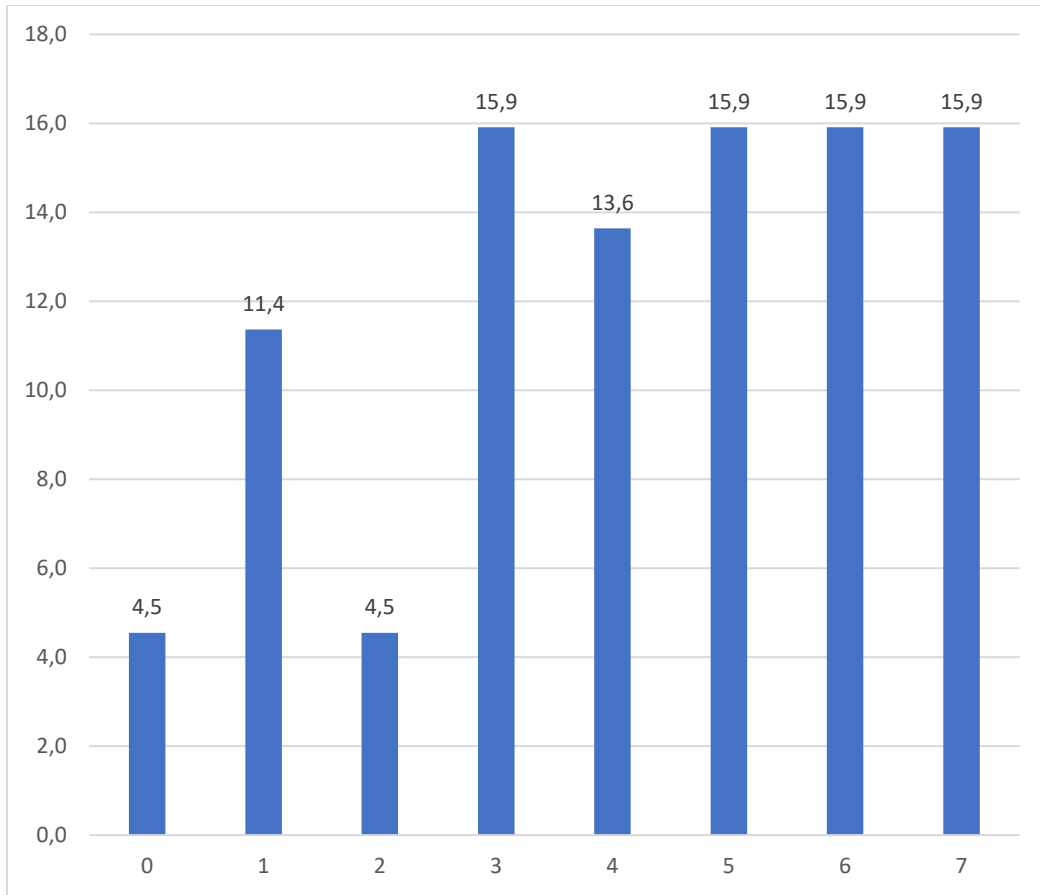


Figure 7-9: Percentage of grade 4 S2 learners who were able to retrieve explicitly stated information

Discussion

Figure 7-9 indicates that it was a small percentage that could not answer any of these basic questions. The total of learners that could answer one of the referential questions is 11.4%, those who could answer two questions is 4.5%, those answering three questions is 15.9, those answering four dips a little to 13.6 while those answering 5, 6 and 7 referential questions respectively is 15.9%.

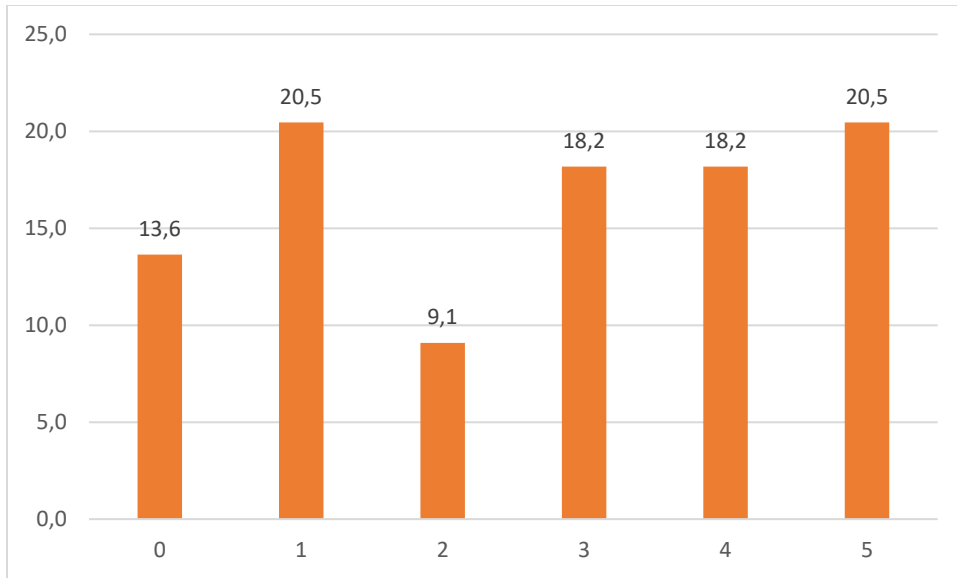


Figure 7-10: Percentage of Grade 4 S2 Learners who were able to Make Straightforward Inferences

Discussion

Inferential questions concern questions where learners must make connections between relations in the text that may not be explicitly stated. Figure 7-10 indicates a total of 13.6% of the learners could answer no inferential questions and 20.5% could answer one. A further 9.1% could answer two questions and 18.2% could answer three and four questions respectively. A total of 20.5% of the group could answer all five inferential questions.

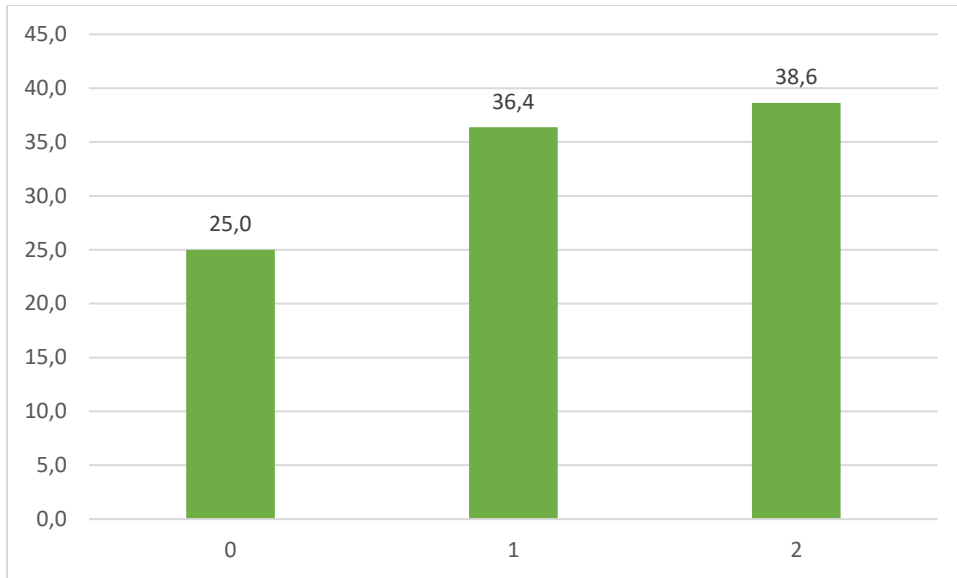


Figure 7-11: Percentage of Grade 4 S2 Learners who could Examine and Evaluate Content, Language and Textual Elements

Discussion

Questions that examine and evaluate content, language and textual elements require a higher level of reading skill. Figure 7-11 indicates that a quarter of the class (25%) were unable to answer questions that require examining and evaluating information. Figure 7-11 also indicates that a total of 36.4% of learners could answer one of the given questions and 38.6% could answer both questions.

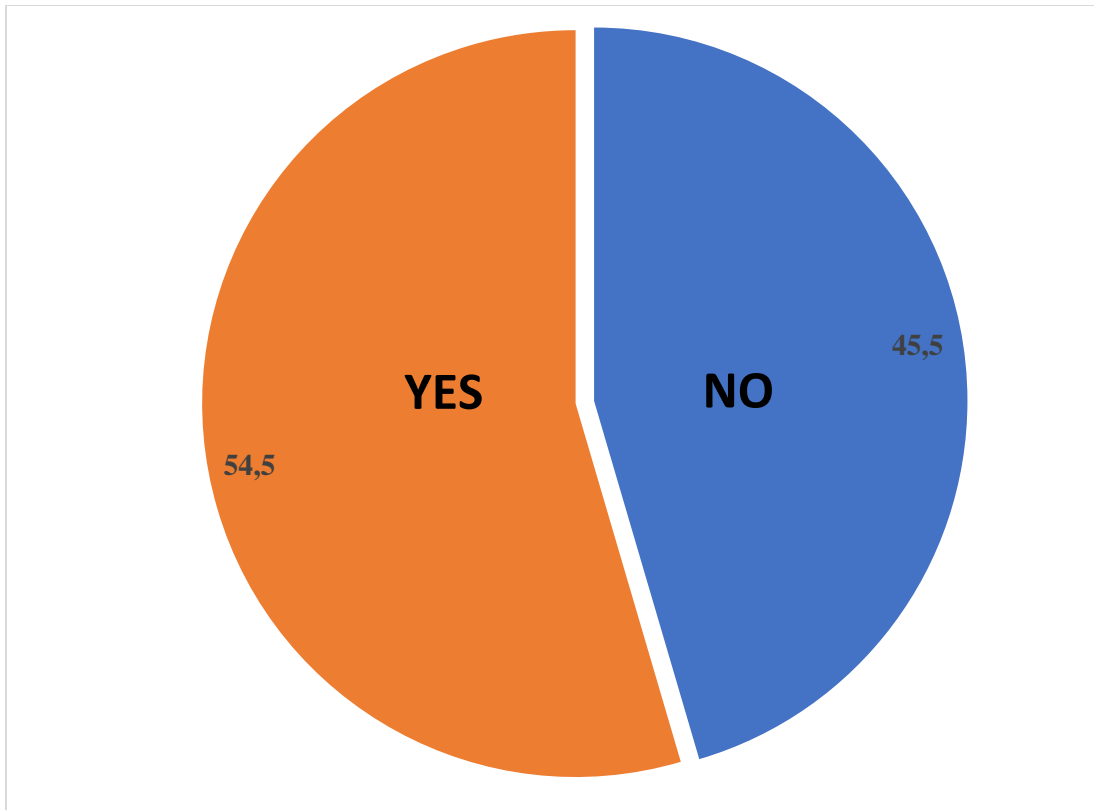


Figure 7-12: Percentage of grade 4 S2 learners who are able to interpret and integrate ideas and information

Discussion

Figure 7-12 indicates the result for one question where learners were required to interpret and integrate ideas and information. Just over half of the learners in the group (54.5%) assessed could answer this question correctly, while 45.5% were unable to. Table 7-3 below provides the results for grade 4 S1(E), Pre-PIRLS comprehension test, October 2016.

Table 7-3: Results for grade 4 S1(E) – Pre-PIRLS comprehension test, October 2016

RELEASED Pre-PIRLS TEXT “The Lonely Giraffe”	
LEARNER NUMBER GRADE 4 S1(E)	Score/15
1	13
2	12
3	12
4	12
5	10
6	9
7	9
8	9
9	9
10	9
11	9
12	9
13	8
14	8
15	8
16	8
17	8
18	8
19	8
20	8
21	7
22	7
23	7
24	7
25	6
26	6
27	6
28	6
29	5
30	5
31	5
32	4
33	3
34	3
35	3
36	2
37	2

38	1
39	1

Discussion

Table 7-3 indicates that a total of 39 learners took part in the assessment and shows that there is a wide range of literacy skills within the class. Overall the average reading abilities are a cause for concern, particularly if one considers that this assessment was the Pre-PIRLS, which may be more suitable for Grade 3 learners and that these Grade 4s have been learning in English since Grade 1. The graphic data below illustrated below breaks down the percentages of learners who could answer the various question types (figures 7-13 to 7-16).

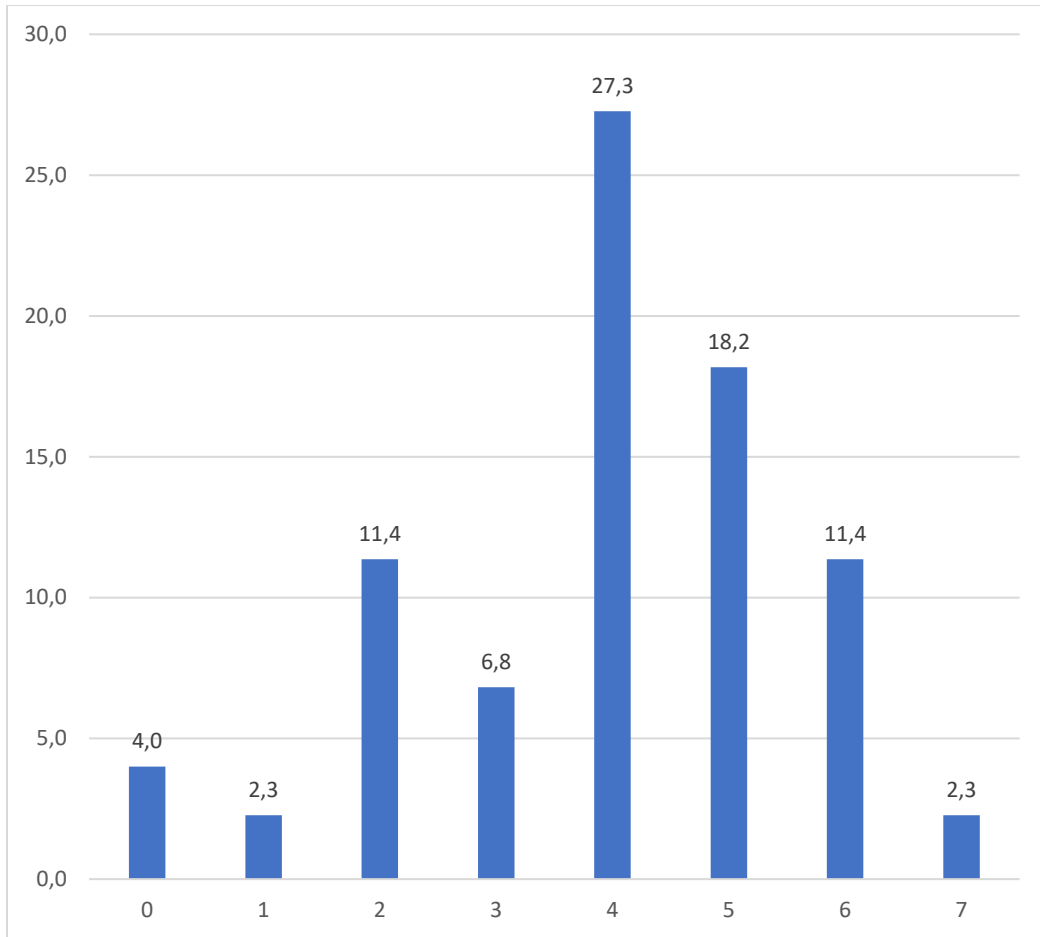


Figure 7-13: Percentage of grade 4B S1(E) learners who are able to retrieve explicitly stated information

Discussion

Figure 7-13 indicates that it was a small percentage that could not answer any of these basic questions. The total of learners that could answer one of the referential questions is 11.4%, those who could answer two questions is 4.5%, those answering three questions is 15.9, those answering four dips a little to 13.6 while those answering 5, 6 and 7 referential questions respectively is 15.9%.

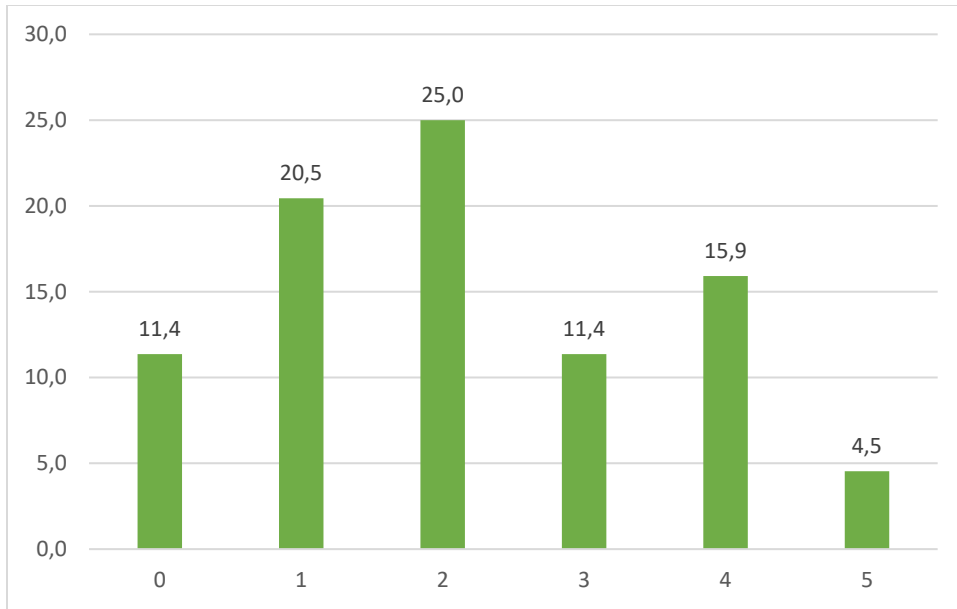


Figure 7-14: Percentage of Grade 4 S1(E) Learners who could Answer Inferential Questions

Discussion

Inferential questions concern questions where learners must make connections between relations in the text that may not be explicitly stated. Figure 7-14 indicates a total of 13.6 percent of the learners could answer no inferential questions, 20.5% could answer one; 9.1% could answer two questions and 18.2% could answer three and four questions respectively. A total of 20.5% of the group could answer all five inferential questions.

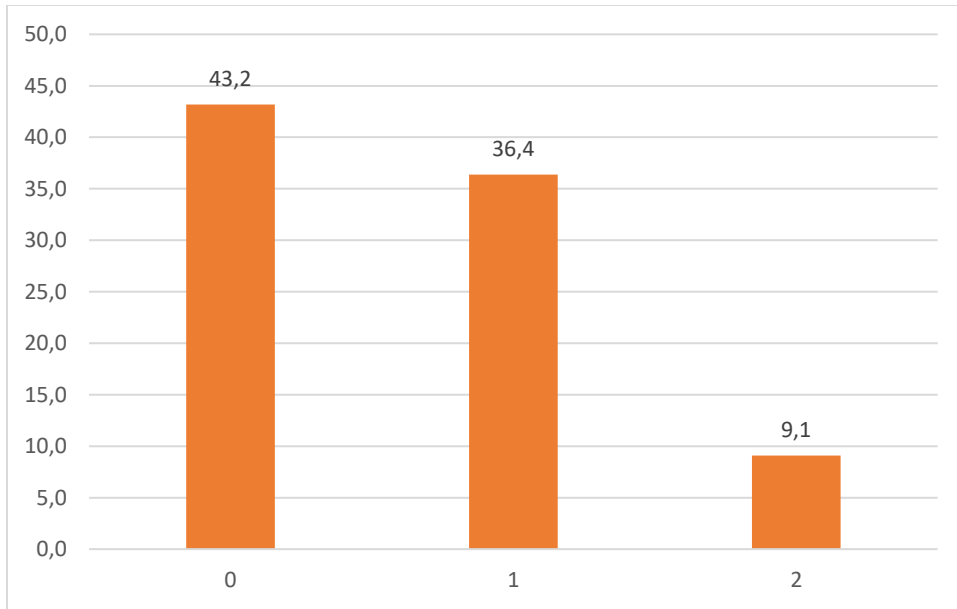


Figure 7-15: Percentage of grade 4 S1(E) learners who are able to examine and evaluate content, language and textual elements

Discussion

The question types represented in figure 7-15 require a higher level of reading skill and the scoring was considerably lower than for the previous question types. Forty three percent could answer no questions and 36% could answer only one, whilst only 9 percent could answer both questions.

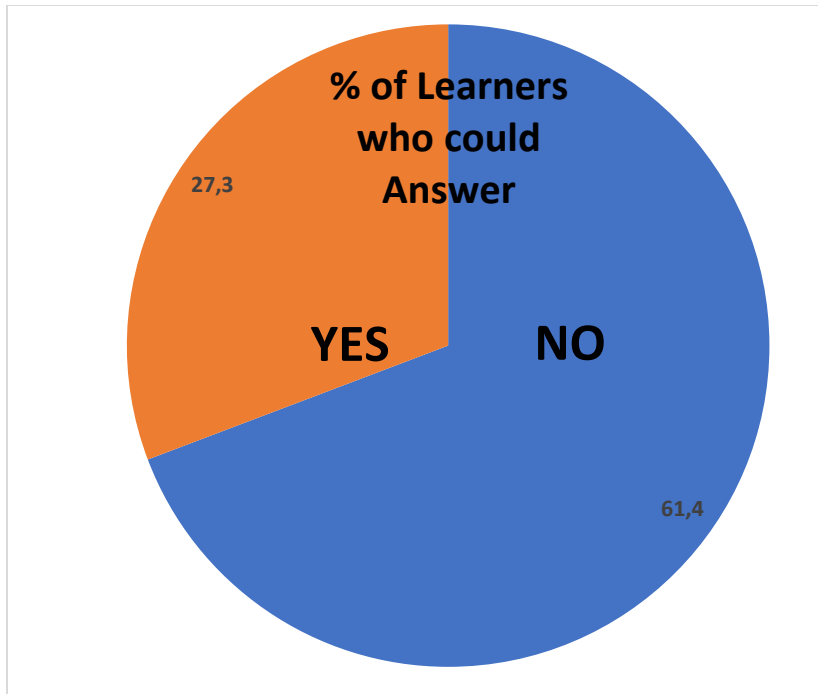


Figure 7-16: Percentage of grade 4 S1(E) learners who are able to interpret and integrate ideas and information

Discussion

The assessment consisted of only one question where learners are required to interpret and integrate ideas and information. A total of 61% were unable to answer this question, whilst 27% could answer it successfully.

Discussion of the overall scores for grade 4 S2 Pre-PIRLS comprehension

While keeping in mind that these assessments were not the PIRLS but the Pre-PIRLS, the averages are still generally higher than reading levels found in other findings from other recent studies on foundation and intermediate grade reading levels in South Africa. For example, Van den Berg has shown that more than half of grade 2 learners in Quintile 1-4 schools are not on track (Van der Berg, 2015).

Particularly relevant to this Grade 4 assessment group are the findings of Spaul (2011) in his analysis of the PrePIRLS. He found that 58% of the Grade 4 sample could not read for meaning while 29% were completely illiterate (Spaul, 2016). Figure 7-17 below (Spaul, 2016:3) illustrates:

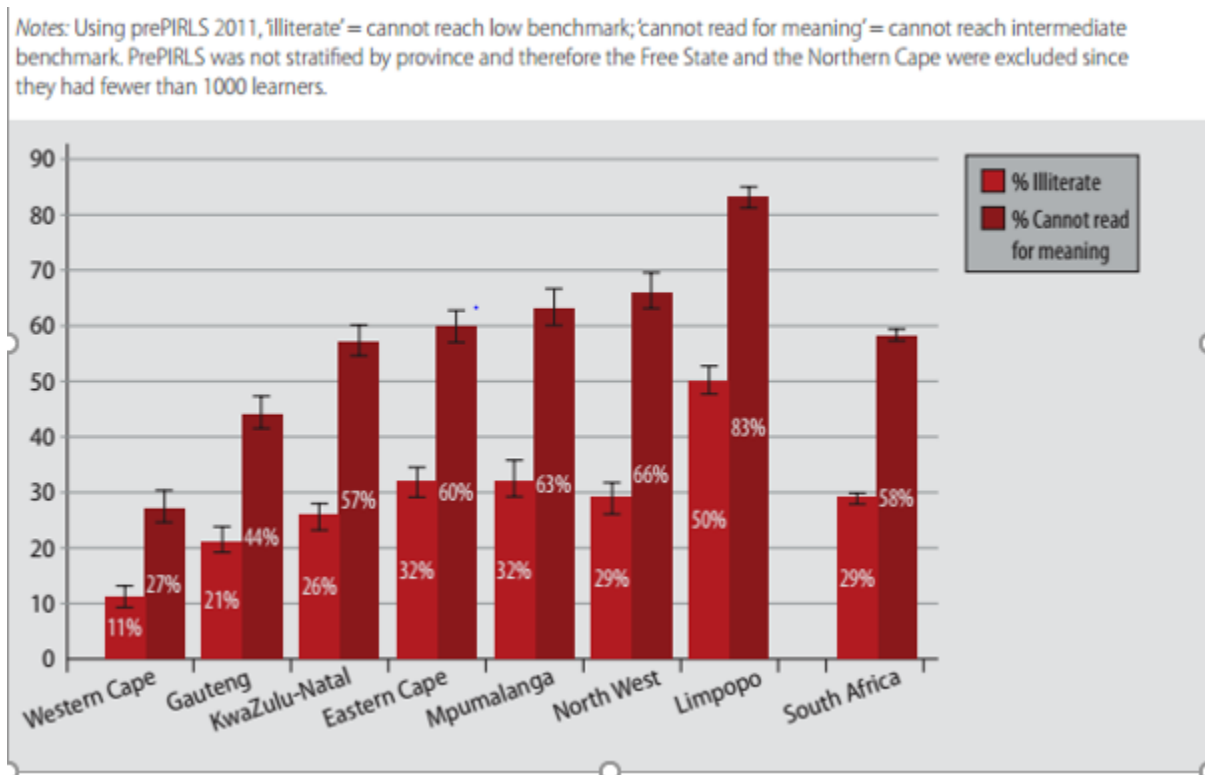


Figure 7-17: Proportion of grade 4 learners who cannot read for meaning (in the LoLT grades 1 -3)

In addition, Draper and Spaul (Draper & Spaul, 2015) analysed oral fluency in reading (ORF) in English using data from 1772 rural learners in grade 5 gathered by NEEDU in 2013. The ORF of

English rural learners was very low: 41% were considered to be non-readers in English (less than wcpm) and 11% could not read a single English word from the passage. This indicates that these learners are only functionally literate in English. In contrast, the learners in Grade 4 S2 are slightly higher than this average. However, one must again remember that the assessments provided to the learners were Pre-PIRLS and that these learners would appear to be at a disadvantage as they are required to use English as LoLT yet are not, according to the results, at a level of English language competence where their academic success can be assured. Considering that analysed data from the Annual National Assessments (ANAs) indicates that Grade four results mirror those of Grade 12 remarkably closely (Van der Berg, 2015), ongoing reading intervention programmes are recommended for these learners. The post-testing scores for Grade 4, S1(E) follow.

Post-Study Tests for Grades 4, S1(E) & S2

Like the pre-study assessments, both sets of Grade 4 tests at S1(E) and S2 were administered by the (now Grade 5) teacher and I marked them. One Grade 4 class at each school was assessed, using the same test that was given pre-study. These learners were now in Grade 5 and the classes had become mixed. This meant that, when testing a single class, I obtained a mixture of learners from previous Grade 4 classes that had completed the original Pre-PIRLS. I then selected those learners from each group that had taken the previous assessment so that I could compare their scores. This resulted in a total of eight learners being selected from S1(E) and 26 learners from S2.

At S1(E), there were some complications with the test results which meant that only six of the total of 15 questions for the eight learners could be marked with validity. However, although the sample for this group is smaller than would be desired, I felt that it still provides some indication of the growth levels when placed alongside the same post-test conducted at S2. School 2 post-study assessments provided a full set of 15 question scores. Table 7-4 below follows along with a set of graphs (figures 7-18 to 7-21) for the Grade 4 post-assessments. The graphs provide a breakdown of percentages of learners who could answer specific question types. The table and graphs below are for S1(E), Grade 4 Pre-PIRLS post-assessments. These are followed by S2, Grade 4 Pre-PIRLS post-assessments.

Table 7-4: S1(E) Grade 4 Post-Assessment Comprehension - Post-Study Assessments April 2017

RELEASED pre-PIRLS TEXT								
			TYPE OF QUESTION & NO.					
LEARNER NUMBER								
Grade 4 (Now Grade 5)	Post Test score /6 April 2017	Original Pre – PIRLS Test /15 October 2016	1 Retrieving Explicit Information	3 Retrieving Explicit Information	11 Making Inferences	13 Examining & Evaluating Information	14 Retrieving Explicit Information	15 Integrating & Interpreting Information
1	1	2	0	1	0	0	0	0
2	3	3	1	1	0	0	0	1
3	4	9	1	1	0	0	1	1
4	6	13	1	1	1	1	1	1
5	3	5	1	1	0	0	1	0
6	6	9	1	1	1	1	1	1
7	2	4	1	1	0	0	0	0
8	3	8	1	1	1	0	0	0
Average % Increase	3.5	6.6						

Discussion

Table 7-4 indicates both the pre- and post-test scores for eight learners as well as their individual scores for the six questions. Three of these questions involved retrieving basic referential, or explicit information. One involved making inferences, while Question 13 involved examining and evaluating information. The last question measured the ability to integrate and interpret information. An average was calculated across the pre- and post-test scores for both classes at S1(E) to indicate a possible increase or decrease in comprehension ability. The following findings were made:

- The Grade 4 learners at S1(E), with six learners, indicated a small rise in scores of 3.1%;
- The Grade 4 learners at S2, with 26 learners, indicated a lowering of scores of 0.5% from 9.5 to 9.0. What is interesting about the S2 drop in scores is that without exception, all the weaker learners either stayed consistent or increased. It was the stronger learners who indicated a fall in scores on the post-assessments. This phenomenon, the tendency for some learners to actually show a drop in literacy level skills in post-assessments using the same test, is not new and is an area that perhaps requires further investigation (Steinke, 2012).

The graphs below provide a breakdown of learner percentages by question type. The first graph provides the percentage of learners who could retrieve basic referential information.

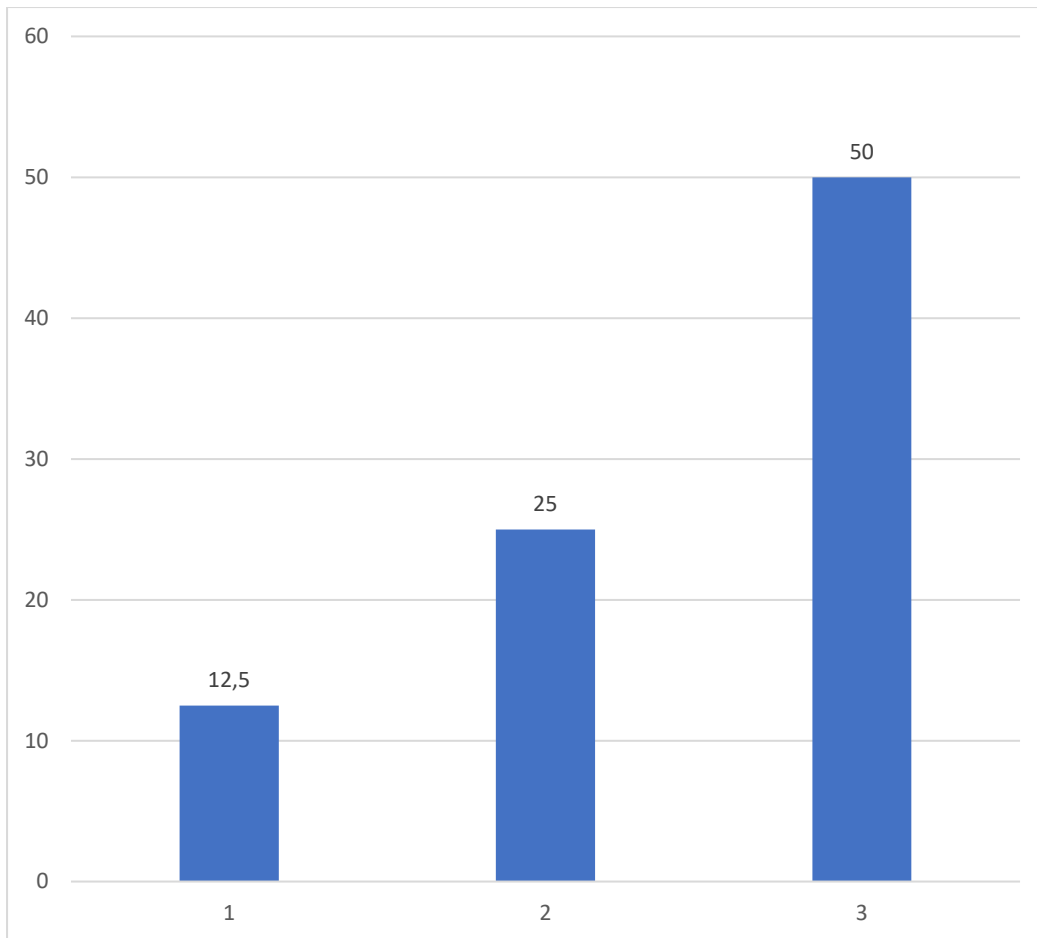


Figure 7-18: Percentage of S1(E) grade 4 post-test learners who could retrieve basic referential information

Discussion

Figure 7-18 indicates results for only three of the original 7 questions involving retrieval of basic referential information. These post-study results indicate the following: question 1 has gone up from 2.3% to 12.5%, an increase of 10.2%. Question 3 has risen to 25% from 11.4% and question 4 has gone up from 27.3% to 50%, a total of 23.3%. The next graph, figure 7-19, shows the number of learners who could answer inferential questions.

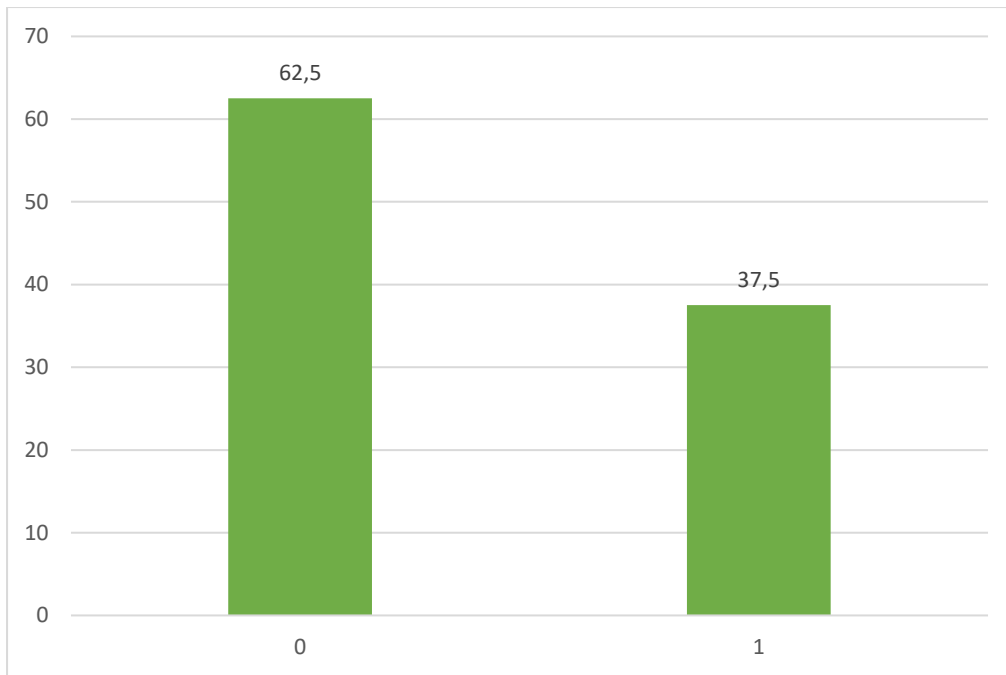


Figure 7-19: The Percentage of grade 4 S1(E) learners able to answer the inferential question

Discussion

There was only one inferential question available for figure 7-19. A total of 62.5% could not answer this question, which left 35.5% who were able to answer it successfully. Figure 7-20 below indicates the ability to evaluate and examine information.

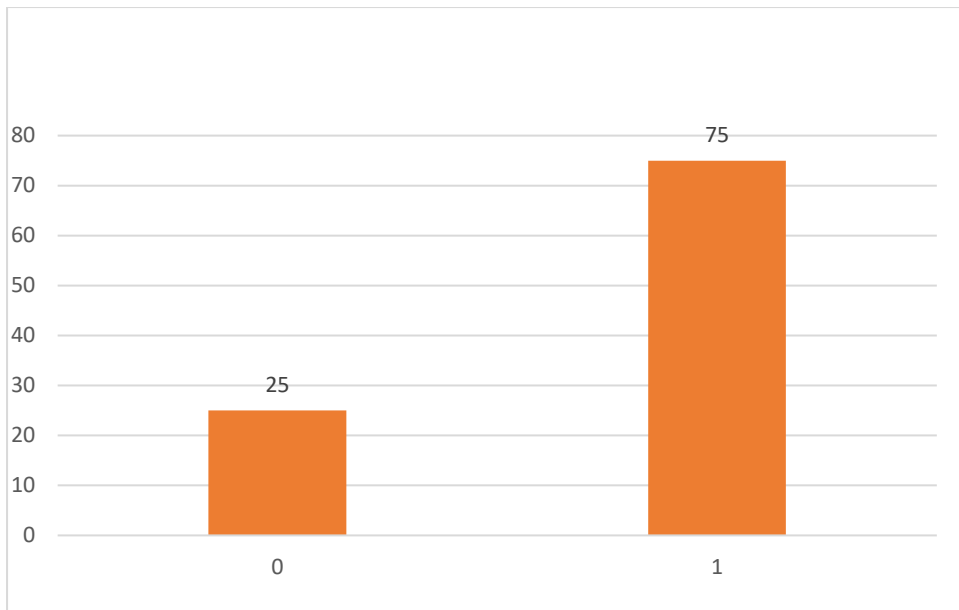


Figure 7-20: Percentage of grade 4 S1(E) learners who could answer the evaluate & examine information question

Discussion

Figure 7-20 indicates question that requires learners to examine and evaluate information. Whereas in the pre-test, 43.2% of learners could answer nothing, in this post-assessment, only 25% could not answer, which is a rise of 18.2%. Originally, 36.4% of learners could answer the question whereas now 75% were able to successfully answer it, a rise of 38.6%. The last graph, figure 7-21, indicates the percentage of learners who could integrate and interpret information.

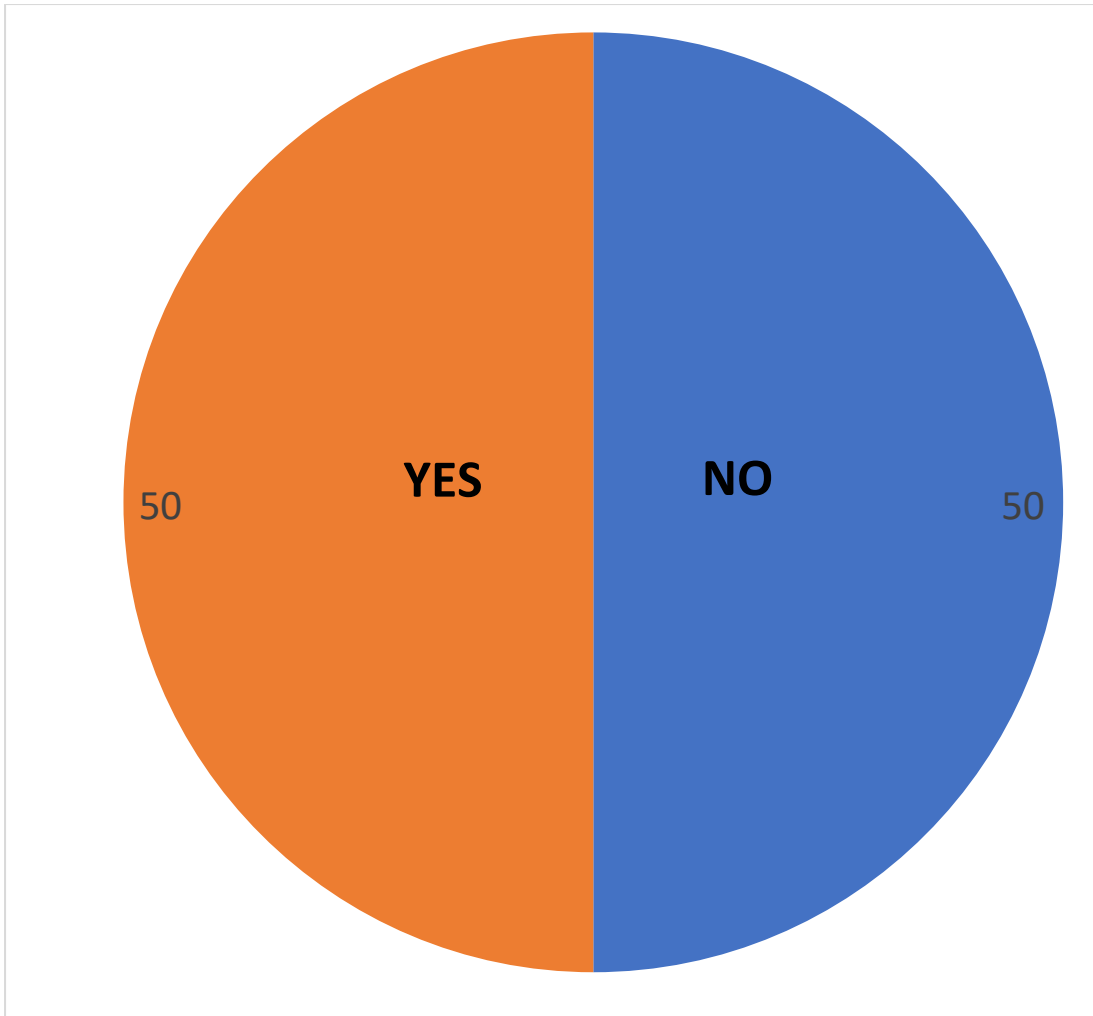


Figure 7-21: Percentage of grade 4 S1(E) learners who could answer the 'interpret & integrate ideas & information' question

Discussion

Figure 7-21 above consists of only one question, the same number as in the pre-assessment. Originally in the pre-test, 61.4% of learners could not answer the question correctly while 27.3% were able to answer. The totals are now equal at 50% for both those who could and those who could not answer correctly. Table 7-5 below provides the Pre-PIRLS post-assessment results for grade 4A, S2.

Grade 4 S2 post-assessments Pre-PIRLS original scores

Table 7-5: Results for Grade 4A – Pre-PIRLS comprehension test, S2, August 2016

RELEASED Pre-PIRLS TEXT	Pre- Test Score /15	Post-Test Score /15
LEARNER NAME 4A		
1	0	3
2	3	9
3	4	4
4	4	5
5	4	5
6	5	5
7	6	9
8	7	7
9	8	5
10	9	11
11	10	12
12	10	8
13	10	8
14	11	8
15	11	11
16	11	6
17	12	11
18	12	12
19	12	12
20	13	8
21	13	13
22	14	13
23	14	14
24	14	10
25	15	15
26	15	11
Average % Decrease	9.5	9.03

Below are a series of graphs (figures 7-22 to 7-25) breaking down the post-assessment results for the Pre-PIRLS by percentage who answered correctly for each question type.

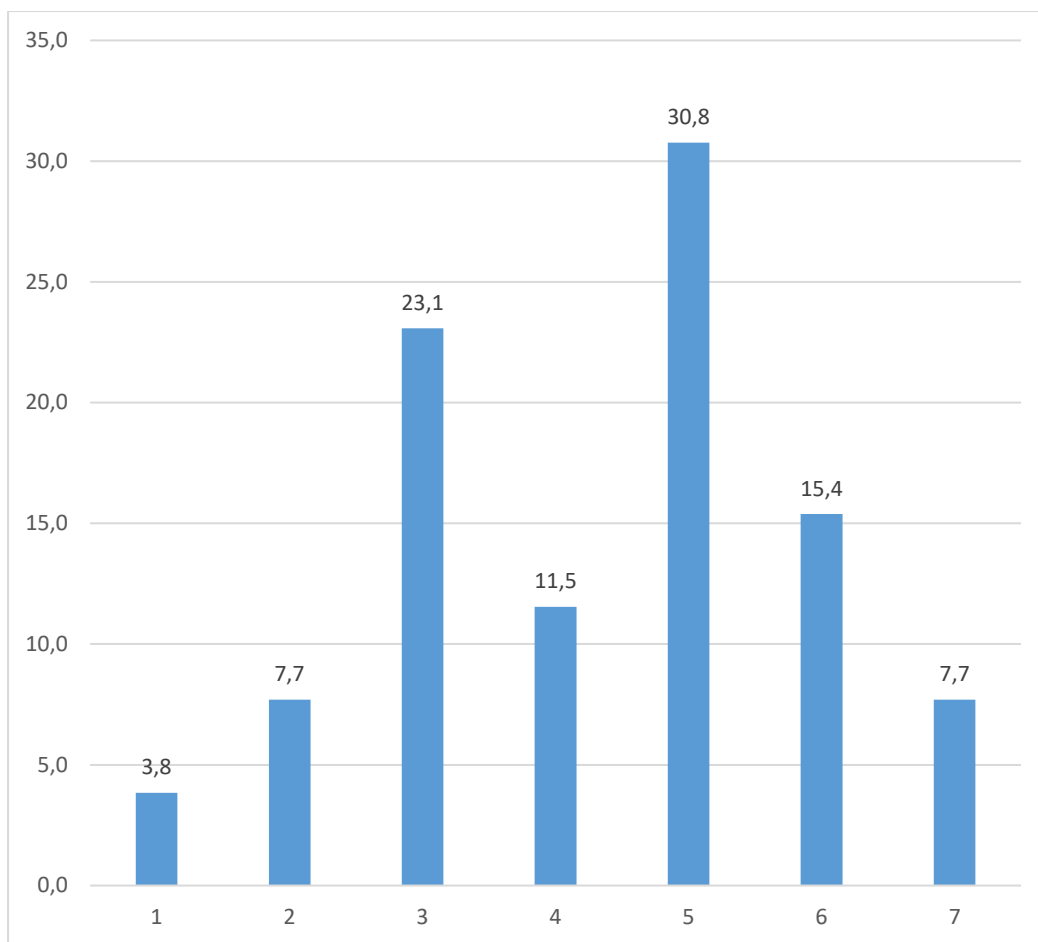


Figure 7-22: Percentage of grade 4 S2 post-test learners who could retrieve basic referential information

Discussion

Figure 7-22 above indicates the following changes between the pre- and post-test scores. Originally, 4.5% of learners could answer none of the basic referential questions. This figure has fallen to 0, meaning that all learners were now able to answer at least one question. There is a fall in percentage of in learners who could answer one question of 7.4% from 11.4% to 4% and an increase in those who could answer two questions of 3.5% from 4.5% to 8%. Twenty three percent of learners could now answer three questions up from 15.9 (an increase of 7.1) and a slight drop in the number of 1.6% in learners who could answer four questions, from 13.6 to 12%. Those who could answer five questions has risen substantially from 15.9 to 31%, a difference of 15.1. Six questions answered correctly has dropped 0.9 from 15.9% to 15%. Finally, seven questions answered correctly has dropped by 8.9% from 15.9 to 8%. The next graph indicates the % of learners who could answer inferential questions from the text.

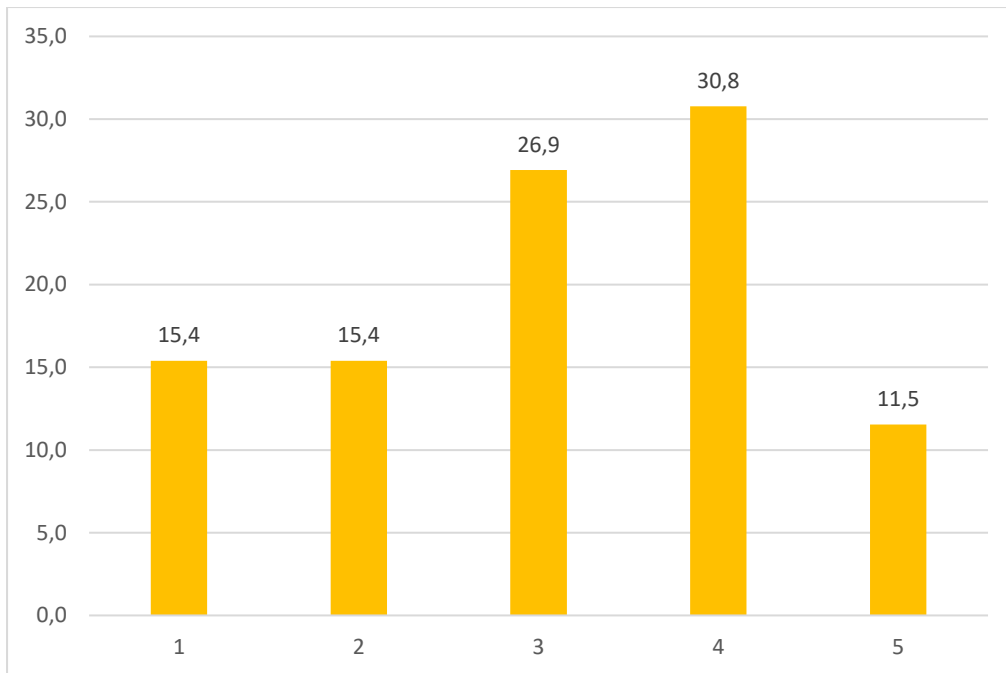


Figure 7-23: Percentage of grade 4 S2 post-test learners who could answer inferential questions

Discussion

Figure 7-23 indicates that, whereas 15.4% of learners in the pre-test could answer no questions at all, that figure is now at 0. The number who could answer one question is down from 20.5% to 15%, a figure of 5.5% and the number who could answer two is also down from 9.1 to 15%, a total of 5.9%. Three questions have risen from 18.2% to 27% while a total of 8.8% of four questions answered has risen from 18.2 to 31%, an increase of 12.8%. Finally, those who could answer all five inferential questions has gone down from 20.5 to 12%, a drop of 8.5. The next graph, figure 7-24, indicates the percentage of learners who were able to answer questions that necessitated evaluating and examining information.

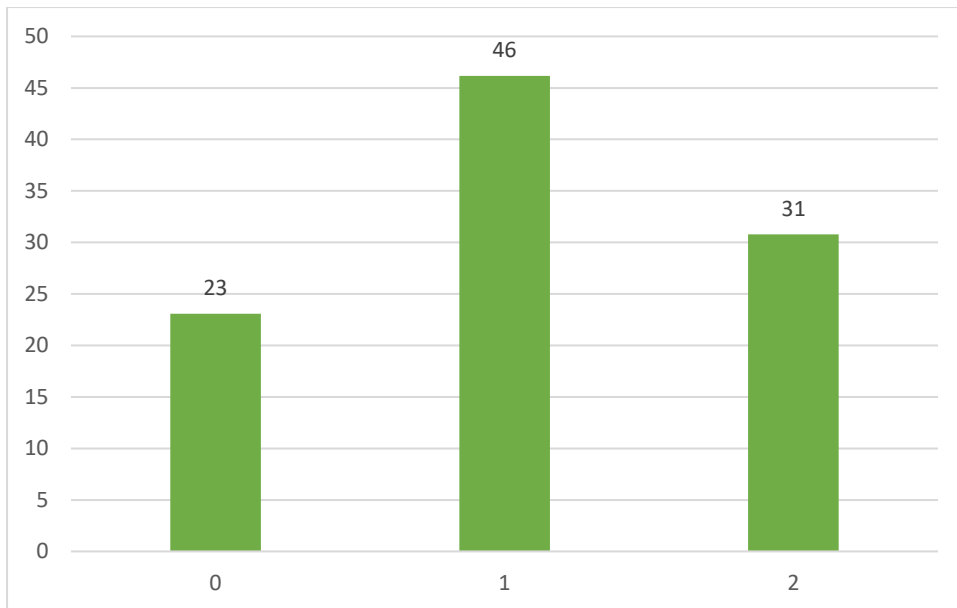


Figure 7-24: Percentage of grade 4 S2 post-test learners who could answer evaluate & examine information questions

Discussion

Originally, 25% of learners could answer none of these questions. Figure 7-24 indicates that there has been a slight rise in this score of 2% to 23%. One question answered correctly has risen from 36.4% to 46%, an increase of 9.6%, whereas both questions answered correctly has fallen by 7,6 from 38.6 to 31%. The final graph for this group, figure 7-25, provides the results of questions that require learners to interpret and integrate ideas and information.

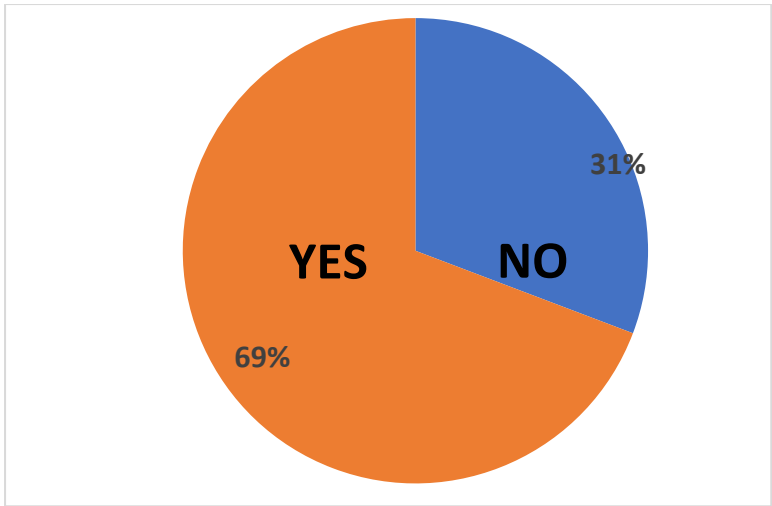


Figure 7-25: Percentage of grade 4, S2 post-test learners who could answer interpret & integrate ideas & information

Discussion

Both the pre- and post-assessment included only one type of question that required learners to interpret and integrate ideas and information. Figure 7-25 indicates that was an overall increase of 15.1% in the number of learners who were able to answer it correctly. This is an increase from 54.5% to 69.6%.