
NEEDU Reading Study 2013

The State of Reading in Grade 5 in Selected Rural Primary Schools



NEEDU

Grade 5 Reading Study

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Introduction

In 2012, NEEDU evaluators tested the reading comprehension of 642 Grade 2 learners and the oral reading fluency of 171 Grade 2 learners across 8 provinces, 14 school districts, and more than 100 primary schools. The test was conducted in nine of the 11 official languages and was done using the Early Grade Reading Assessment (EGRA) test, a test piloted by the DBE in 2007 and adapted for the NEEDU Grade 2 reading study. Although the reading tests were not fully standardised, and the data that was reported in the NEEDU 2012 National Report (2013) was offered with a word of caution, it did show that the reading fluency of the top six learners in the Grade 2 classes visited was alarmingly low. Most learners were found to be reading well below the 'average' benchmark for their grade. Similarly, the reading comprehension of the learners, tested by asking five simple questions related to a short text, was found to be poor.

In the NEEDU 2012 National Report (2013) the NEEDU team suggested that low teacher expectations, based on a limited understanding of the literacy potential of 6-9 year old children, was a major factor inhibiting the teaching and learning of reading skills in the Foundation Phase. Teachers seem satisfied to achieve low levels of text decoding, rather than treating decoding skills as the foundation from which to launch the main goal of developing increasingly sophisticated comprehension powers.

The results emanating from the Grade 2 reading study supported NEEDU's belief that reading should be the central focus of a national drive to improve the quality of basic education for all children in South Africa. The Grade 2 reading results prompted the continuation of the NEEDU focus on reading in 2013 in the development of the NEEDU Grade 5 reading study. This report presents the reading data which emerged from the 2013 study and discusses some recommendations based on those results.

This report begins with a brief discussion of literacy and the complexity of reading and reading instruction. It gives a short explanation of the difference between decoding and comprehension and the importance of oral reading fluency for understanding and interpreting what is being read. The report outlines the importance of reading norms, and in particular reading norms for a country like South Africa with the large majority of its early readers reading in a second language. Finally, before the NEEDU Grade 5 reading data is presented, the recent and current national strategies and interventions to improve learner reading proficiency are tracked, suggesting that the crises in reading in South Africa is not new, is not unknown, yet persists.

Literacy

Literacy is the ability to read both for knowledge and interest, to write coherently, and to think critically about the written word. Reading is the intellectual process of making meaning from printed text. Reading development is the key to all literacy, a progression of skills that begins with the ability to understand spoken words and decode written words, and develops towards ever fuller understanding of written text. Residual pockets of the 'reading wars' between those who advocate a phonics approach and those supporting a whole language/whole meaning approach may persist, but most students of the field would agree that both are necessary and that the acquisition of technical skills and the development of meaning interact with each other in the development of reading capacity. Few are therefore likely to dispute the Wikipedia¹ description of reading development as a process which involves a range of complex language

¹ Literacy downloaded from <http://en.wikipedia.org/wiki/Literacy> 30 March 2014

foundations including awareness of speech sounds (phonology), spelling patterns (orthography), word meaning (semantics), grammar (syntax) and patterns of word formation (morphology), all of which provide a necessary foundation for reading fluency and comprehension. At the same time the reader acquires increasing powers of comprehension, which includes the abilities to interpret printed material with critical analysis, inference and synthesis and to read between the lines; to write with accuracy and coherence; and to use information and insights from text as the basis for informed decisions and creative thought. Simply put the United Nations Educational, Scientific and Cultural Organization (UNESCO) defines literacy as the "ability to identify, understand, interpret, create, communicate and compute using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society" (UNESCO, 2004, p. 12).

Learning to Read

Reading, the focus of this report, is a complex process, requiring the coordination and integration of different knowledge bases and types of processing. The process of reading is more than just being able to decode words. Reading instruction must be explicit, and effective reading instruction is therefore critical in teaching young learners how to read. The National Reading Panel² (National Institute of Child Health and Human Development, 2000) highlighted five essential components of effective reading instruction, as follows:

- 1) phonemic awareness – instruction designed to teach children the ability to focus on, manipulate, and break apart the sounds (or phonemes) in words;
- 2) 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;
- 3) fluency – instruction, primarily through guided oral reading, that reinforces the ability to read orally with speed, accuracy, and proper expression;
- 4) 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
- 5) comprehension – instruction that teaches students to actively engage with, and derive meaning from, the texts they read.

Learning to read occurs in stages (Pretorius, 2012). In the early stages of learning to read, children learn the alphabet, letter-sound relationships, recognise high frequency words, and read simple texts containing language and thought processes within their frame of reference. Alphabetic and phonological knowledge are used to blend sounds and sound out new words that are encountered in the texts. In Grades 2 and 3 decoding skills are reinforced and the reading of simple language becomes more automated, accurate and

² In 1997, Congress asked the NICHD, through its [Child Development and Behavior Branch](#), to work with the U.S. Department of Education (ED) in establishing a National Reading Panel that would evaluate existing research and evidence to find the best ways of teaching children to read.

fluent. There is a move to a more holistic integration of information. For the majority of South African learners, early reading instruction occurs in the home language of the child.

There is a gradual increase in higher order processing skills with age. At the start of Grade 4 (about 10-11 years), the same time at which South African Grade 4 learners switch from home language instruction to instruction in a second language (either Afrikaans or English), reading becomes a tool for learning. Learners' language, knowledge, and vocabulary need to expand, as does their ability to integrate information and to think critically. By Grade 4 children should start developing more sophisticated comprehension strategies. Learning strategies such as categorising, generalising, comparing, sequencing, inferring cause and effect and summarising develop concomitantly with reading comprehension skills. Reading should become increasingly rapid and efficient. By Grades 9-12 learners considered literate should be able to read from a wide variety of texts with different viewpoints (Pretorius, 2012).

Decoding and Comprehension

A distinction is commonly made between decoding and comprehension, with the former referring to the skills required in learning and manipulating the code and 'translating' the symbols into words in a text, and the latter referring to the overall meaning assigned to a text (Pretorius, 2012). Reading comprehension comes from the interaction between the words in the text and the knowledge that the reader brings to the text during reading. Decoding enables comprehension, and children should master decoding skills by Grade 3. The NEEDU Grade 2 reading study conducted in 2012 (National Education Evaluation and Development Unit, 2013) indicated that this was unlikely to be the case for the majority of South African Foundation Phase learners.

Proficient reading depends on the ability to recognize words quickly and effortlessly, to read accurately with ease and speed. If learners use too much of their processing capacity trying to work out individual words, they are unlikely to successfully comprehend what they read. Good reading fluency, the ability to read quickly and accurately, allows the reader to automatically recognize words and "chunk" them into meaningful units. Reading fluency is important because it provides a bridge between word recognition and reading comprehension. Fluent readers recognize words quickly and comprehend their overall meaning at the same time. Problems in either oral fluency or reading comprehension will have a significant impact on a learner's ability to learn as they move through the Intermediate Phase of schooling. In recent studies in South Africa, a strong correlation was found between three measures of decoding skill and reading comprehension, and oral reading fluency emerged as a strong predictor of comprehension (Pretorius, 2012).

Large-scale assessments of reading comprehension of Grade 4 and 5 learners in South Africa have shown very low comprehension levels (Howie et al., 2008). While the last place ranking of South African learners in the PIRLS 2006 study is cause for great concern, perhaps the more significant statistic emerging from the study is the performance of learners against the international benchmarks. Only 17% to 18% of English and Afrikaans learners in either grade could reach the High³ and Advanced⁴ International Benchmarks, which

³ Set at 550 points and represents learners who are considered to be competent readers

⁴ Set at 625 points and represents learners who are able to integrate information across relatively challenging texts and can provide full text-based support in their answers. Learners are able to make interpretations and can demonstrate that they understand the function of organizational features in texts.

translates into a very small group of South African learners who could be considered competent readers⁵. The majority of learners, more than half of the English and Afrikaans speaking learners and over 80% of African language speakers in South Africa, did not even reach the lowest international benchmark⁶, leaving these learners without basic reading skills and strategies to cope with academic tasks.

A smaller, but comparable, group of Grade 5 English and Afrikaans speaking learners were tested in 2011. Overall, learners writing the test in Afrikaans or in English achieved 403 in PIRLS 2006, with a substantial increase in achievement to 421 in the PIRLS 2011 study. Statistically, however, the results in 2011 are still not significantly different to those of 2006, suggesting no real improvement in reading comprehension over the 5 years between tests (Howie et al., 2012).

SETTING READING NORMS

In order to assess the level of reading fluency of their learners, teachers need a curriculum-based measurement, a set of standardised and well-researched procedures for assessing and monitoring their learners' reading proficiency and progress (Hasbrouck & Tindal, 2006). This was one of the recommendations made by NEEDU in its 2012 National Report (NEEDU, 2013).

As early as 1992, researchers in the United States of America compiled norms for oral reading fluency (ORF) in English based on reading data from eight geographically and demographically diverse school districts in the United States. With the growing appreciation for the importance of reading fluency, new norms were developed in 2005 with greater detail, reporting percentiles from the 90th through the 10th percentile levels. A table showing the ORF norms for US students from Grade 1 to 8 is given in Appendix A.

The use of norms in reading assessments can be categorised to match four different decision-making purposes (Kame'enui, 2002 in Hasbrouck & Tindal, 2006).

- *Screening measures*: Brief assessments that focus on critical reading skills that predict future reading growth and development, conducted at the beginning of the school year to identify children likely to need extra or alternative forms of instruction.
- *Diagnostic measures*: Assessments conducted at any time during the school year when a more in-depth analysis of a student's strengths and needs is necessary to guide instructional decisions.
- *Progress-monitoring measures*: Assessments conducted at a minimum of three times a year or on a routine basis (e.g., weekly, monthly, or quarterly) using comparable and multiple test forms to (a) estimate rates of reading improvement, (b) identify students who are not demonstrating adequate progress and may require additional or different forms of instruction, and (c) evaluate the effectiveness of different forms of instruction for struggling readers and provide direction for developing more effective instructional programs for those challenged learners.
- *Outcome measures*: Assessments for the purpose of determining whether students achieved grade-level performance or demonstrated improvement.

ORF measures can be particularly useful in screening and monitoring learner reading progress. Such fluency-based assessments have been proven to be efficient, reliable, and valid indicators of reading proficiency

⁵ The test was conducted in all 11 of South Africa's official languages, and learners were tested in their preferred home language.

⁶ Set at 475 points and represents learners with some reading proficiency

when used as screening measures (Fuchs, Fuchs, Hosp, & Jenkins, 2001). By screening learners' reading fluency, teachers are more likely to be able to identify which of their learners are on track to achieve reading competency, and which need additional assistance or remedial interventions.

Reading Speeds and Language Complexity

Research has shown that the speed at which children learn to read corresponds approximately to the orthographic complexity of the language that they speak (McDougall, Brunswick, & de Mornay Davies, 2010). Regardless of language, all children who learn to read advance from being non-readers (unable to read words) to partial readers (can read some items but not others) to readers (can read all or a majority of items). In languages with transparent or "shallow" orthographies (often called phonetically spelled languages, such as Afrikaans⁷), the progression through these levels is very rapid (just a few months of learning); in languages with more complex or "deeper" orthographies, this process can take several years and varies from one language to another. In English, for example, completing the foundation steps requires two or more years, with a rate of gain of only a few new items per month of learning; in comparison, regular and transparent languages such as Italian, Finnish, and Greek require only about a year of instruction for students to reach a comparable level (Seymour, Aro, & Erskine, 2003). Given that norms for reading fluency use words correct per minute (WCPM), this has obvious implications for different languages that use different orthographies.

Reading Materials

Carefully constructed graded readers provide structured progression in reading development, guiding learners through progressively more complex texts while providing sufficient practice at each stage of the process. While the national catalogue has many books in all official languages, labelled as graded readers, a recent evaluation for the Gauteng Literacy and Mathematics Programme (GPLMS) came to the conclusion that many of these were not satisfactory, largely because they had been translated from English (SAIDE 2012).

The University of Johannesburg's Community Literacy and Numeracy Group (CLING) Project⁸ shows that in indigenous languages there is a paucity of readily accessible early literacy graded readers that introduce young children to texts that reflect their language experience and cultural environment. Inevitably, this imbalance in provision is a major factor contributing to low reading and the literacy rates which are currently of great concern in South Africa. This, together with the way in which the reading resources are developed is intensifying the problem (Katz, 2013). Katz argues that African language readers need to be developed from scratch, rather than being translated from English as is frequently the case in South Africa. Katz (2013) found that translations were implemented without any cognisance of the structural features of the African languages. Comparing the language complexity of the entry-level Afrikaans and English readers with that of the readers in African languages, Katz concluded that when translated into the vernacular, English texts lose the element of grading and result in long, often complicated words, or even phrases, made up of many

⁷ African languages also have transparent orthographies, but this is offset by the more complex morphological structures of their 'word' units

⁸ The CLING Project seeks to mobilise communities in support of literacy and numeracy. It is currently located in six disadvantaged communities in Gauteng, Limpopo and the Eastern Cape. The project works in collaboration with community researchers to understand the community and to design activities that support literacy education.

letters and syllables. Both the SAIDE Report (2012), and Katz's (2013) study conclude that the strategy of translation is problematic and that sets of graded readers, developed from scratch in each language, are a prerequisite spine for any reading programme.

Oral Reading Fluency in English Second Language Learners

To many second language readers, reading is a "suffocatingly slow process" (Anderson, 1999, p. 1); yet developing rapid reading, an essential skill for all students, is often neglected in the classroom. Data from Segalowitz, Poulsen, and Komoda (1991) indicate that the second language (L2) reading rates of highly bilingual readers are "30% or more slower than L1 reading rates". Readers who do not understand often slow down their reading rates and then do not enjoy reading because it takes so much time. As a result, they do not read much, and so continues the vicious cycle (Nuttall, 1996, in Anderson, 1999).

Conventional wisdom indicates that lack of oral English proficiency is the main impediment to successful literacy learning for young English Second Language (ESL) students, but recent evidence suggests that this may not be true. Conflicting data exist regarding the optimal or sufficient reading rate (Anderson, 1999). Some authorities suggest that 180 words per minute while reading silently "may be a threshold between immature and mature reading and that a speed below this is too slow for efficient comprehension or for the enjoyment of text" (Higgins and Wallace 1989 p 392, in Anderson, 1999). Others suggest that silent reading rates of L2 readers should approximate those of L1 readers (closer to 300 WPM), especially if the L2 is also the language of learning and teaching (LOLT), in order to come close to the reading rate and comprehension levels of L1 readers.

Some of the reading research done in the past decade suggests that L2 decoding processes are very similar to L1 decoding processes. While research into reading in an L2 is not as extensive as its L1 counterpart, an increasing number of comparative L1/L2 reading studies have been undertaken at different age levels. Pretorius (2012) argues that L2 reading theories tend to draw quite heavily on L1 reading theory, the assumption being that the underlying skills and processes involved in reading languages with similar writing systems are similar in humans across languages. If these decoding processes are similar in alphabetic languages, then there is no reason why L2 reading rates should be "suffocatingly slow". An area where differences between L1 and L2 LOLT readers may persistently occur will be vocabulary, but decoding per se should not be a stumbling block.

When setting early grade reading norms for English L2 reading it is important to specify whether the norms are for (i) ESL reading when English is just a school subject (e.g. in the case of children for whom Afrikaans is the LOLT and English a school subject) or for (ii) ESL reading when English is not only the First Additional Language (FAL) but also the LOLT, as is the case in most South African schools. In the latter case, the ability to 'read to learn' from content subject textbooks is critical for academic success, and it is desirable for such children to approximate L1 reading norms as soon as possible, especially by the time they reach high school. In the initial stages of reading in an L2 it is natural that reading will be slow, but fluency should improve with age and with frequency of practice and use – particularly if L2 reading is needed for academic success.

Setting L2 reading norms in the South African schooling context is a new and, as yet, largely unexplored terrain. One could argue that in the initial stages of L2 reading for LOLT (perhaps Grade 4 learners), reading at 30% the rate of L1 readers is not surprising or unexpected. However, as children go higher up the academic ladder (approaching the end of the Senior Phase), the gap between L1 and L2 reading for LOLT

purposes should start narrowing, and by the end of primary school/start of high school, L2 norms should preferably start approximating L1 norms. One may also argue for a fluency continuum, with L1 and L2 LOLT reading norms divergent in the beginning stages of reading, but converging by high school. The fact that most African children in South Africa seem to read equally slowly in their L1 (Howie et al., 2012) suggests that poor reading instruction is a major factor in the failure of our children to develop reading fluency. As Anderson (2009) points out, developing rapid reading is an essential skill for all students and therefore norms for L2 reading – especially when it is the LOLT – should not set the ceiling too low.

Improving Literacy in South Africa

Over the years, there have been a number of national policies, strategies, campaigns, and interventions in an attempt to address the national crisis in basic literacy. The following section traces and discusses some of those and discusses why, despite the apparent national focus on reading, the crisis remains.

Early Grade Reading Assessment

The crisis was acknowledged in South Africa in the early 2000s. Development of the Early Grade Reading Assessment (EGRA) began in October 2006, when USAID, through its EdData II project, contracted RTI International to develop an instrument for assessing early grade reading. The objective was to help USAID partner countries, including South Africa, begin the process of measuring, in a systematic way, how well children in the early grades of primary school are acquiring reading skills, and ultimately to spur more effective efforts to improve performance in this core learning skill (Hollingsworth, 2009).

EGRA is a simple, effective, and low-cost tool to measure foundation levels of student learning, including assessment of the first steps students take in learning to read: recognizing letters of the alphabet, reading simple words, and understanding sentences and paragraphs. It was developed as an individual oral assessment of students' foundation reading skills. EGRA is designed to be a method-independent approach to assessment: It doesn't matter how reading is being taught—research shows that the skills tested in EGRA are necessary but not sufficient for students to become successful readers.

In 2007, the EGRA instruments were field tested⁹ in 18 schools, in six languages, and with 315 learners. At a USAID meeting in June 2009, it was reported that the results of EGRA and other tests in South Africa showed that:

- learners are not able to read at their grade level; and
- learners perform lower than their counterparts in many other countries in Africa.

Some of the reasons put forward for the literacy failure in South Africa were:

- School governing bodies (SGBs) have the authority to determine their schools' language policies
- Many SGBs decide to use English as their Language of Learning and Teaching (LOLT)
- Many teachers are not able to communicate well in English
- Most learners choose to study non-African languages beginning in Grade 12, thereby limiting the pool of future African-language teachers
- Most universities do not have Foundation Phase (Grades R-3) teacher training programmes; few offer African-language programmes

⁹ By The Molteno Institute for Language and Literacy (MILL)

- Few teachers willingly choose to teach in Foundation Phase
- Initial and continuing teacher training programs do not focus on teaching reading
- Teachers are often not equipped to teach reading in any language, but particularly not in African languages.

Although the EGRA tests are the only available instruments for assessing reading in all 11 official languages, and the fact that they have been used successfully in a number of other developing countries (Bruns, Filmer, & Patrinos, 2011), their full development and use was not pursued by the Department of Basic Education (DBE) after 2009.

Systematic Method for Reading Success

In late 2008, at the request of the Department of Education (DoE), the Integrated Education Programme (IEP), a consortium of local and international NGOs, developed and piloted the Systematic Method for Reading Success (SMRS), designed as an easy-to-use early grade reading programme. A similar model for teaching reading had proven to be successful in Mali and Niger, to help first graders read well at their grade level in their mother tongue. The SMRS is a learning method which was developed by a University of California academic, Professor Sandra Hollingsworth. It was selected for the intervention pilot because it uses a home languages approach to teaching initial reading, and is designed for teachers who do not know how to teach reading. The development of the EGRA instrument for use in South Africa was considered a success and adopted as the evaluation instrument (pre- and post-test) for piloting¹⁰ the SMRS in 2008.

The SMRS is a fast-track reading programme developed around findings from research on learning to read. According to the research of the National Reading Panel (National Institute of Child Health and Human Development, 2000), to read well in any language, learners should begin in their home language or mother tongue, learn how to decode sounds into letters and words, and learn to read fluently with expression, with the goal of learning how to comprehend what they read. The programme is designed in a scripted format in a Teacher's Manual so that teachers with little preparation in reading instruction can teach it. SMRS is meant to be a supplementary introduction to a full literacy programme in learners' home languages. That is, it is designed so that it can easily become a 30- to 45-minute addition to the regular curriculum. At the end of the 45 lessons of SMRS, learners should be competent enough to read any grade-appropriate materials. Thereafter, the 30 minutes used for SMRS lessons should go to richer literacy instruction and informational reading. After a year of practice in their home languages, learners should be able to begin the transition to other languages successfully (e.g., English or Afrikaans in South Africa). Despite the many challenges experienced in the implementation of the SMRS programme in the three provinces, the programme was deemed a success.

Foundations for Learning Campaign

The 2008 Foundations for Learning conference spearheaded the Foundations for Learning (FFL) campaign (2008-2011) driven by the DoE to address the crisis in Foundation Phase literacy. The FFL campaign was a 4-year campaign to create a national focus to improve reading, writing and numeracy abilities of all South African children. It was gazetted in March 2008 (Department of Basic Education, 2008).

¹⁰ Pilot was done in three languages, namely Sepedi, isiZulu, and Setswana, 3 provinces, 30 treatment schools

Teaching Reading in the Early Grades – A teacher’s handbook

As part of the FFL campaign, a teachers’ handbook, *Teaching Reading in the Early Grades*, was developed. The handbook was designed to help Foundation Phase teachers teach reading. It highlighted the core elements of teaching reading and writing including: shared reading and writing; guided reading and writing; independent reading and writing activities; word-level and sentence-level work. These materials form the foundation for the current national Curriculum and Assessment Policy Statements (CAPS), although in 2012 NEEDU evaluators came across one district which continued to monitor schools and report progress as if the FFL remains a stand-alone project independent of CAPS.

The Integrated National Literacy and Numeracy Strategy

Also in 2008, the *National Reading Strategy Grades R-12 (NRS)* (Department of Basic Education, 2014) was developed as a national strategy to address the growing concern over illiteracy, and to promote a nation of life-long readers and life-long learners. The NRS provides an outline of curriculum requirements, reading activities and resources needed, grade-by-grade in the Intermediate and Senior Phases for teachers and school managers, by grade level. It gives guidance to learners, teachers, school leaders, parents and systems managers.

This was closely followed by the Integrated National Literacy and Numeracy Strategy (INLNS) (Department of Basic Education, 2011b) which was the department’s response to the need for urgency in addressing the low achievement levels of learners in literacy and numeracy as confirmed in the poor national (Annual National Assessment (ANA)), regional (Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ)), and international (PIRLS) assessments. In November 2011, the Council of Education Ministers (CEM) resolved that the INLNS should be implemented in 2012. The CEM emphasized that the strategy should be a national one that integrated all the provincial initiatives in this area. CEM further agreed that planning with provincial education departments and key stakeholders should begin in earnest, and that the strategy would target the classroom and teachers as key levers for change in learner performance and will be guided by the department’s 2012 education priorities (CAPS, ANAs and the workbooks). "Provinces, districts and school communities must focus all their energies on improving reading, comprehension, writing and counting," said Minister of Basic Education Motshekga when she met with the CEM in 2011.

Following an exhaustive 28-page contextual analysis, the INLNS turns to an 11-page reflection on the nature of the strategy before coming to a concise 9-page statement of its implementation plan. The latter is described as a high-level plan which aims to direct and integrate provincial initiatives, which in turn are expected to formulate detailed plans for districts and schools ‘down to the classroom level’. The implementation plan elaborates the targets set in the DBE’s *Action Plan* (Department of Basic Education, 2011a), prioritises areas requiring attention (teacher content knowledge, support material, quality Grade R, etc.) and lists the pre-conditions needed to implement the strategy (vacant posts filled, teacher time-on-task monitored, provisioning of districts, school nutrition, learner transport, etc.). But the INLNS stops short of recommending specific programmes for use at the classroom level, the choice of which is left to provincial departments.

During the course of 2013 NEEDU evaluators found evidence of increasing activity on the part of provincial departments in this field. In the NEEDU 2012 National Report the Literacy and Numeracy Intervention (LNI) of the Western Cape Education Department (WCED) and the Gauteng Primary Literacy and Mathematics Strategy (GPLMS) were discussed in some detail. The NEEDU 2013 National Report continues to track these

two programmes, but in addition includes descriptions of Mpumalanga's School Transformation and Reform Strategy (STARS) and the LitNum Strategy (LNS) of the KwaZulu-Natal Department of Education. Clearly, provincial interest and activity is being stimulated and directed by the DBE, through the INLNS. While LNI and GPLMS have been in existence a lot longer, have attracted significant earmarked resources from their respective provinces, and are in abundant evidence in schools and classrooms, STARS and LNS are in a much earlier stage of development. These latter two initiatives were both in the first year of their implementation in 2013, and neither had yet penetrated beyond the district level, and even there awareness of the programmes was patchy.

The INLNS is a high-level strategy, which frames the problem and sets targets, but the question must be asked whether some provinces don't need more explicit guidance on the specific classroom practice required to promote effective reading and writing in classrooms, in the face of evident and persistent teacher ineffectiveness.

Partnerships

As part of its English for Development programme, the British Council partnered with the South African DBE in various efforts to support the DBE's INLNS. The First Additional Language (FAL) project is the first to come out of this partnership, and a training course was presented to a core group of Foundation Phase English First Additional Language (EFAL) pre-service and in-service teacher trainers and subject advisors in the Certificate in Primary English Language Teaching (CiPELT) in 2012-13. The course is intended to be used as part of teacher training courses at universities. For the first time universities, national, provincial, and district subject advisors together with teacher unions, have attended a joint training course in primary English language teaching run by both UK and South African trainers. The course is intended to be extremely practical and aims to equip teachers to teach EFAL in primary schools with confidence. The course is based on global standards for teacher training in EFAL and is aligned to the South African National Curriculum.

The partnership between the British Council and the Department of Basic Education (DBE) led to a nationwide roll-out of CiPELT (Certificate in Primary English Language Teaching) targeting 100 000 teachers in the Foundation Phase (Grades 1 to 3) and an additional 100 000 in the Intermediate Phase (Grades 4 to 6). According to the Chief Directorate: Education Human Resources Development, DBE, by the end of 2013, 80 000 teachers, 180 subject advisors, and 60 lead teachers had been trained in the Teacher Union Collaboration over three years.

The NEEDU Grade 5 Reading Study

In line with a focus on the Intermediate Phase in 2013, NEEDU decided to undertake a systematic analysis of reading performance in Grade 5. Both reading fluency and reading comprehension were assessed in the 219 rural schools visited in 2013.

Development of a Reading Fluency and a Reading Comprehension Test

Grade 4 and Grade 5 textbooks were used to select two passages appropriate to Grade 5 to assess oral reading fluency with 5 accompanying oral comprehension questions. In addition, an appropriate Grade 5 level passage was selected to assess reading comprehension in the written mode, using a range of literal and inferential questions in a mixed question format. The notion of text readability was used to determine that the texts used in the test were at the right level for this age group.

Readability

Readability refers, broadly, to the ease or difficulty with which texts are read. Since the 1940s various readability formulae have been used to quantify aspects of texts that are deemed to play a role in determining the ease with which texts are read. These readability formulae invariably incorporate word length and sentence length in relation to overall text length, the assumption being that short words and short sentences are easier to read than longer words and sentences. Examples of readability formulae include the Flesch Reading Ease (RE), the Dale-Chall and the Grammatik formulae. Although the assumptions underlying the readability formulae have been criticised for oversimplifying the reading process, since there are also several text-based and reader-based factors that affect reading ease, the readability formulae continue to enjoy popularity as predictors of text difficulty.

The Flesch Reading Ease formula has been used in this analysis, primarily because it is easily available and in the educational context serves as a useful guideline for establishing consistency across texts at specific grade levels. According to Hubbard (2005: 56), the Flesch readability formula uses two factors, namely syllables per 100 words and words per sentence, fitting these into the formula:

$$RE = 206,835 - (0,846 \times \text{syllables per 100 words}) - (1,015 \times \text{words per sentence})$$

The analysis also determines the number of passive constructions used in a text. Sentences in the passive voice are considered slightly more difficult to read than sentences in the active voice. The higher the number obtained from the computation, the easier the text is regarded as being while the lower the number, the more difficult the text. The scores have been measured in terms of readability categories, as shown in Table 1 below.

Table 1: Reading Ease categories (based on the Flesch reading ease formula)

| RE score | Age/Level | For average adult reader |
|----------|-----------------------------|--------------------------|
| 90-100 | 10 years | very easy |
| 80-89 | 11 years | easy |
| 70-79 | 12 years | fairly easy |
| 60-69 | 13-14 years | standard |
| 50-59 | 15-17 years | fairly difficult |
| 30-49 | 18-21 years (undergraduate) | difficult |
| 0-29 | Graduate | very difficult |

Most academic/scientific texts and research articles fall into the last two categories of RE. One would expect Grade 4 and 5 textbooks to fall within the 90-70 range of scores.

Using US textbooks as the data base, the Flesch-Kincaid formula was used to determine the reading ease of texts written for the different grades. These scores reflect the actual grade level, e.g. a score of 6 would indicate a text appropriate for Grade 6.

This readability score does not reflect aspects such as the persuasiveness or credibility of a text or its interest level. It is to be expected that the RE score drops the more abstract and complex a topic is. The use of technical terms (e.g. *pollution*, *precipitation*) as well as general academic terms (e.g. *operates*, *features*) also affect RE.

A selection of Grade 4 and 5 textbooks across various subjects was obtained from primary schools in Atteridgeville and Mamelodi respectively. From each textbook, 4 passages were selected, one from the beginning, two from the middle and one from the end. These passages were scanned and converted into MS Word text files; all the pictures and diagrams were removed and only running text used for the readability analysis. The results are given in Table 2 and Table 3 below.

Table 2: Flesch RE in Grade 4 textbooks

| | English AL | Maths | Life Skills | Social Science | Science† |
|---------------------------|------------|-------|-------------|----------------|----------|
| Words in sample texts | 1,057 | 1,060 | 777 | 963 | 918 |
| Sentences | 105 | 101 | 58 | 74 | 76 |
| Words per sentence | 8.5 | 8.7 | 10.1 | 12.3 | 11.5 |
| Characters per word | 4 | 4.1 | 4.2 | 4.3 | 4.3 |
| Passives | 1% | 2% | 5% | 9% | 10% |
| RE | 82,8 | 75.2 | 83 | 72.9 | 76.1 |
| Flesh-Kincaid grade level | 3.8 | 4.8 | 4 | 6.1 | 5.5 |

† This textbook was entitled *Our World* (a Vivlia book), with no further indication of the content subject. It dealt with both physical geography and history topics.

The RE range of the Grade 4 textbooks was between 82-72, falling within the 'easy' to 'fairly easy' categories, while that of the Grade 5 textbooks was between 84-68, falling between the 'easy' to 'standard' categories.

Table 3: Flesch RE in Grade 5 textbooks

| | English FAL | Maths | Technology | Social Science | Physical Science |
|---------------------------|-------------|-------|------------|----------------|------------------|
| Words | 977 | 1,987 | 836 | 881 | 894 |
| Sentences | 30.3 | 165 | 64 | 63 | 71 |
| Words per sentence | 10.4 | 9.9 | 12.5 | 13 | 11.8 |
| Characters per word | 4 | 4.2 | 4.4 | 4.6 | 4.3 |
| Passives | 3% | 7% | 26% | 12% | 18% |
| RE | 84.8 | 78 | 74.7 | 68.5 | 75.9 |
| Flesh-Kincaid grade level | 4 | 4.8 | 5.9 | 6.9 | 5.6 |

As to be expected, there was a gradual decrease in RE scores from Grade 4 to Grade 5, with concomitant increases in the use of passives and more words per sentence, particularly in the content subjects. The latter textbooks also carry an increase in the use of specialist technical words as well as general academic words. It is interesting to note that across both grades the RE scores were higher (i.e. hence easier) in the English and mathematics texts than in the other content subject texts.

Selection of passages

The outcome of the readability analysis conducted here served as a guideline for steps 2 and 3, namely the selection of two passages appropriate to Grade 4 and 5 levels to assess oral reading fluency, and the selection of a passage appropriate to Grade 5 level to assess reading comprehension in the written mode.

Reading comprehension passage

Two passages were selected as the base for the written reading comprehension test. Eleven questions were asked, 5 based on the first passage, and 6 based on the second. The readability scores of the combined comprehension passages, as well as the readability score of the questions are shown in the table below.

Table 4: Readability score of combined comprehension passages

| | | | |
|----------------------|------|-----------------------------|------|
| Words: | 537 | Flesch RE: | 82.3 |
| Words per sentence: | 12.7 | Flesch-Kincaid grade level: | 4.9 |
| Characters per word: | 4.1 | | |
| Passives: | 4% | | |

Table 5: Readability score of questions

| | | | |
|----------------------|------|-----------------------------|------|
| Words: | 344 | Flesch RE: | 92.2 |
| Words per sentence: | 11.9 | Flesch-Kincaid grade level: | 3.3 |
| Characters per word: | 3.8 | | |
| Passives: | 4% | | |

Table 6: Question types

| Information process | Questions | Total Questions | Total Marks |
|--|-------------------------|-----------------|-------------|
| Retrieve explicitly stated (literal) information from a text | 1, 9, 10b | 3 | 3 |
| Make (straightforward) inferences from information given in a text | 2, 3, 4, 5, 6, 10a, 10c | 7 | 9 |
| Integrate ideas and information across the text | 7, 8 | 2 | 5 |
| Examine and evaluate the text | 11 | 1 | 3 |
| | | 14 | 20 |

Reliability of written comprehension test

Based on the learner results, a Cronbach's alpha analysis was done. Cronbach's alpha is 0.83 which indicates good reliability of the overall test. The results are shown below.

Table 7: Cronbach's alpha of test

Test scale = mean(unstandardized items)

| Item | Obs | Sign | item-test correlation | item-rest correlation | average interitem covariance | alpha |
|------------|-----|------|-----------------------|-----------------------|------------------------------|--------|
| q1 | 570 | + | 0.3431 | 0.2528 | .1206987 | 0.8403 |
| q2 | 570 | + | 0.6768 | 0.6154 | .1091658 | 0.8212 |
| q3 | 570 | + | 0.6550 | 0.5598 | .1041384 | 0.8217 |
| q4 | 570 | + | 0.7057 | 0.6103 | .0996649 | 0.8174 |
| q5 | 570 | + | 0.5132 | 0.4280 | .1142388 | 0.8312 |
| q6 | 570 | + | 0.5388 | 0.4701 | .1152269 | 0.8299 |
| q7 | 570 | + | 0.6713 | 0.5505 | .0990097 | 0.8241 |
| q8 | 570 | + | 0.6532 | 0.5780 | .1078144 | 0.8218 |
| q9 | 570 | + | 0.6706 | 0.6053 | .1086828 | 0.8212 |
| q10a | 570 | + | 0.5083 | 0.4252 | .1147178 | 0.8315 |
| q10b | 570 | + | 0.5477 | 0.4766 | .1144835 | 0.8293 |
| q10c | 570 | + | 0.4382 | 0.3516 | .1173817 | 0.8354 |
| q11 | 570 | + | 0.7355 | 0.5994 | .0901864 | 0.8259 |
| Test scale | | | | | .1088777 | 0.8384 |

Based on the item results, a few adjustments were made to the original test where questions were reported as being somewhat ambiguous: the sequence of Q1 and 2 were changed around; Q1-5 were changed to follow the first passage and Q6-11 to follow the second passage; the phrasing in Q5 was changed to make it less ambiguous/narrow the options for a correct answer; additional acceptable correct options were included in the memorandum for the 'give-reason' types of questions.

Oral Reading Fluency Passages

Two passages were chosen to test oral reading fluency. The first passage (ORF1) was 205 words long (including the title), had a Flesch Readability Ease score of 84.7, making it suitable for testing learners at the end of Grade 3. The second passage (ORF2) had 269 words (including the title) and a Flesch Readability Ease of 83.3, making it suitable for testing learners in the middle of their Grade 4 year.

Table 8: Readability score of passage (ORF 1): A traditional story - How leopard got his spots

| | | | |
|----------------------|-----|-----------------------------|------|
| Words: | 205 | Flesch RE: | 84.7 |
| Words per sentence: | 9.8 | Flesch-Kincaid grade level: | 3.8 |
| Characters per word: | 4.1 | | |

Table 9: Readability score of passage (ORF 2): A traditional story from Africa: How hare got his long ears

| | | | |
|----------------------|------|-----------------------------|------|
| Words: | 269 | Flesch RE: | 83.3 |
| Words per sentence: | 10.8 | Flesch-Kincaid grade level: | 4.3 |
| Characters per word: | 4.1 | | |
| Passives: | 4% | | |

These two passages were selected as suitable for testing learners at the start of their Grade 5 year.

Sample

Data for the NEEDU Grade 5 Reading Study was collected from most of the schools visited by the NEEDU school evaluators in 2013. In the few cases where reading data were not collected, the reasons were either associated with union disruptions to the school visits (see main NEEDU National Report 2013 for details) or owing to the absence of Grade 5 learners at the school (in the case of some multigrade schools visited in the second half of the year). It is important to note that while learners were tested in reading fluency and comprehension in every province visited, the sample was purposefully selected (following the NEEDU evaluation design, again see NEEDU National Report 2013) and therefore is not a truly representative sample of the South African education system. Since the schools visited in each province was both small in number and selected in terms of their rural location, the average scores within each set can in no way be thought of as representative of the province, or the district. That being said, the data gathered from more than 4000 Grade 5 learners provides insights into typical schools found across the country's rural regions, and should highlight the crisis in early grade reading. The data presented in this report presents a sombre yet revealing picture of the low reading comprehension levels in the Intermediate Phase, the phase in which learners should have moved from learning to read, to reading to learn.

In the first half of 2013, NEEDU school evaluators visited learners in rural (monograde) schools, accounting for 79% of the total 2013 learner sample. The remaining 21% of the sample was made up of Grade 5 learners in rural schools in which they were taught in a multigrade class arrangement in generally very small schools.

When visiting the learners in monograde classes, one entire Grade 5 class was randomly selected to be tested through a written reading comprehension test. Based on the comprehension scores, the top three, middle four, and bottom three learners were then sampled for the reading fluency test. In the case of the multigrade schools, the learner numbers were small enough to test the entire class for reading fluency, regardless of their achievement in the comprehension test.

In total, 1790 learners were tested for oral reading fluency through a one-on-one reading test. Of the 1790 learners tested on the first passage (ORF1), 878 (i.e. 49%) read sufficiently well¹¹ to be tested on a second, slightly more difficult reading passage (ORF2). Table 10: NEEDU Grade 5 Reading Sample per Province

| PROVINCE | ARRANGEMENT | DISTRICTS | SCHOOLS | GRADE 5 LEARNERS COMPREHENSION | GRADE 5 LEARNERS ORF 1 | GRADE 5 LEARNERS ORF 2 |
|----------|-------------|-----------|---------|--------------------------------------|------------------------------|------------------------------|
| EC | MONO | 4 | 29 | 1086 | 287 | 120 |
| | MULTI | 4 | 27 | 152 | 136 | 63 |
| | | | | 1238 | 423 | 183 |
| FS | MONO | 1 | 8 | 297 | 80 | 45 |
| | MULTI | 1 | 7 | 21 | 14 | 9 |
| | | | | 318 | 94 | 54 |
| GP | MONO | 2 | 15 | 630 | 150 | 72 |
| | MULTI | 2 | 4 | 35 | 28 | 23 |
| | | | | 665 | 178 | 95 |
| KZN | MONO | 2 | 16 | 580 | 161 | 68 |
| | MULTI | 4 | 25 | 224 | 178 | 71 |
| | | | | 804 | 339 | 139 |

¹¹ More than 50 WCPM

| | | | | | | |
|----------|-------|----|-----|------|------|-----|
| LP | MONO | 3 | 13 | 506 | 120 | 57 |
| | MULTI | 2 | 13 | 157 | 124 | 50 |
| | | | | 663 | 244 | 107 |
| MP | MONO | - | - | - | - | - |
| | MULTI | 1 | 8 | 85 | 75 | 36 |
| | | | | 85 | 75 | 36 |
| NC | MONO | 1 | 8 | 263 | 80 | 46 |
| | MULTI | 1 | 8 | 67 | 63 | 33 |
| | | | | 330 | 143 | 79 |
| NW | MONO | 1 | 8 | 299 | 80 | 45 |
| | MULTI | 1 | 7 | 81 | 62 | 33 |
| | | | | 380 | 142 | 78 |
| WC | MONO | 1 | 2 | 74 | 20 | 20 |
| | MULTI | 2 | 16 | 152 | 132 | 87 |
| | | | | 226 | 152 | 107 |
| NATIONAL | MONO | 15 | 99 | 3735 | 978 | 473 |
| | MULTI | 18 | 115 | 974 | 812 | 405 |
| | | | | 4709 | 1790 | 878 |

The distribution of learners sampled across the provinces was not even, with the majority of learners tested coming from the Eastern Cape, Gauteng, and KwaZulu-Natal. Only 85 learners were tested in Mpumalanga owing, to some extent, to union action in the province at the time of the school visits. As a result of this, no learners in monograde classes were tested in Mpumalanga.

shows the sample numbers in detail.

Table 10: NEEDU Grade 5 Reading Sample per Province

| PROVINCE | ARRANGEMENT | DISTRICTS | SCHOOLS | GRADE 5 LEARNERS COMPREHENSION | GRADE 5 LEARNERS ORF 1 | GRADE 5 LEARNERS ORF 2 |
|----------|-------------|-----------|---------|--------------------------------------|------------------------------|------------------------------|
| EC | MONO | 4 | 29 | 1086 | 287 | 120 |
| | MULTI | 4 | 27 | 152 | 136 | 63 |
| | | | | 1238 | 423 | 183 |
| FS | MONO | 1 | 8 | 297 | 80 | 45 |
| | MULTI | 1 | 7 | 21 | 14 | 9 |
| | | | | 318 | 94 | 54 |
| GP | MONO | 2 | 15 | 630 | 150 | 72 |
| | MULTI | 2 | 4 | 35 | 28 | 23 |
| | | | | 665 | 178 | 95 |
| KZN | MONO | 2 | 16 | 580 | 161 | 68 |
| | MULTI | 4 | 25 | 224 | 178 | 71 |
| | | | | 804 | 339 | 139 |
| LP | MONO | 3 | 13 | 506 | 120 | 57 |
| | MULTI | 2 | 13 | 157 | 124 | 50 |
| | | | | 663 | 244 | 107 |
| MP | MONO | - | - | - | - | - |
| | MULTI | 1 | 8 | 85 | 75 | 36 |
| | | | | 85 | 75 | 36 |
| NC | MONO | 1 | 8 | 263 | 80 | 46 |
| | MULTI | 1 | 8 | 67 | 63 | 33 |
| | | | | 330 | 143 | 79 |
| NW | MONO | 1 | 8 | 299 | 80 | 45 |
| | MULTI | 1 | 7 | 81 | 62 | 33 |
| | | | | 380 | 142 | 78 |
| WC | MONO | 1 | 2 | 74 | 20 | 20 |
| | MULTI | 2 | 16 | 152 | 132 | 87 |
| | | | | 226 | 152 | 107 |
| NATIONAL | MONO | 15 | 99 | 3735 | 978 | 473 |
| | MULTI | 18 | 115 | 974 | 812 | 405 |
| | | 33 | 214 | 4709 | 1790 | 878 |

The distribution of learners sampled across the provinces was not even, with the majority of learners tested coming from the Eastern Cape, Gauteng, and KwaZulu-Natal. Only 85 learners were tested in Mpumalanga owing, to some extent, to union action in the province at the time of the school visits. As a result of this, no learners in monograde classes were tested in Mpumalanga.

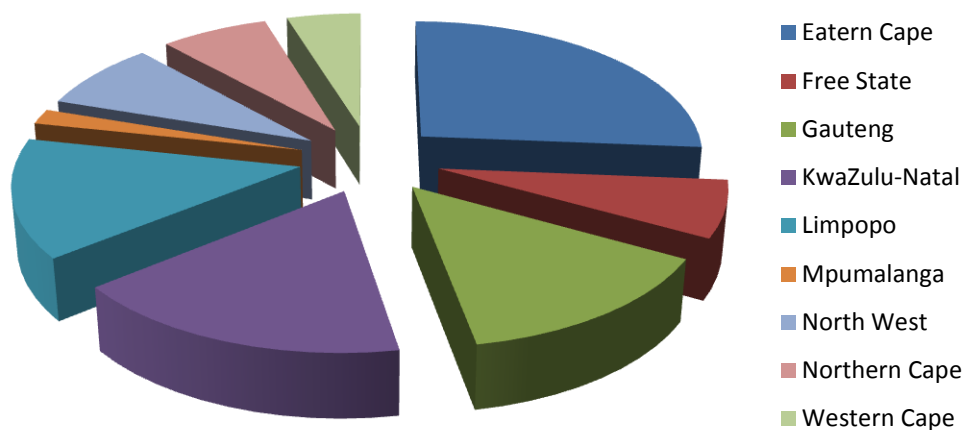


Figure 1: NEEDU Grade 5 Reading Sample per Province

Reading Comprehension

The NEEDU Grade 5 study was designed as a system diagnostic measure of Grade 5 reading comprehension and fluency. As argued above, the results are not intended to be used for the purposes of provincial or language comparisons, and the results should not be used to make general statements about the South African Grade 5 learner population.

Reading Comprehension Achievement

The written comprehension test was designed to test 4 different levels of questioning (see Table 6 in the section on Development of a Reading Fluency and a Reading Comprehension Test). The percentage of learners getting the questions correct for each level of question type is shown in Table 11 below.

Table 11: Learner achievement for different types of questions

| | % learners correct |
|--|--------------------|
| Retrieving explicitly stated information | 32 |
| Making straightforward inferences from the passage | 26 |
| Integrating ideas and information across texts | 1 |
| Examining and evaluating the text | 1 |

As few as 1% of learners tested could answer questions that required them to integrate ideas and information across texts, or to examine and evaluate text.

The average achievement scores have been represented as a frequency count, showing the numbers of learners achieving zero out of a total of 20, between 1 and 5 out of 20, and so on. This number is also reflected as a percent of the total sample. See Figure 2 for details.

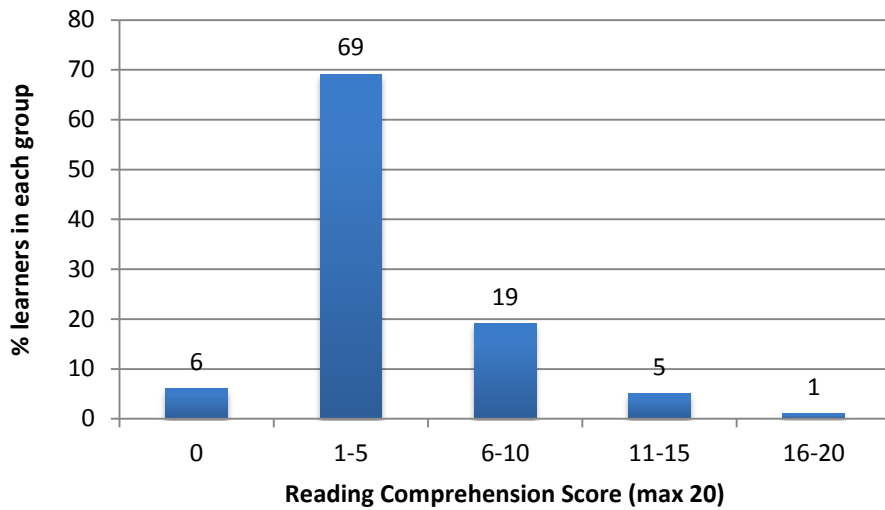


Figure 2: Frequency count of learner reading comprehension achievement

Six percent of the sample achieved a score of zero out of 20, and a further 69% achieved 5 or less on the written comprehension test. Only 6% of the sample achieved a score greater than 10 out of 20, suggesting very few learners were able to comprehend what they read. Two samples of learner responses to the first question on the assessment below show this.

1. Which word in the first paragraph tells you that the San were not tall people? (1)

The The word on th fast of san this word X

1. Which word in the first paragraph tells you that the San were not tall people? (1)

Paragraph one 4

Monograde ompared to Multigrade

The 2013 evaluation schools were purposefully selected to sample schools in rural areas in all provinces in South Africa. Schools selected in the first half of the year were rural monograde schools, and those selected in the second half of the year were rural multigrade schools. Learners attending multigrade schools made up 21% of the sample. The average comprehension achievement scores for the monograde schools and the multigrade schools per province are shown on **Error! Reference source not found.** below.

Table 12: Average learner written comprehension achievement in monograde classes compared to multigrade classes

| MONOGRADE SCHOOLS | | MULTIGRADE SCHOOLS | | Difference |
|-------------------|-------|--------------------|-------|------------|
| [20] | [%] | [20] | [%] | % |
| 4.08 | 20.41 | 4.38 | 21.88 | -1.47 |

Somewhat surprisingly, given the obvious challenges to effective teaching and learning in multigrade classes, the overall average achievement of the learners in the multigrade classes is slightly higher than their counterparts in monograde classes. As there is very little difference between the national monograde and multigrade scores, all data henceforth is reported as overall national data.

Reading Comprehension Achievement Progress

Learners were tested in all nine provinces during 10 months of 2013. A province with a large number of districts, such as the Eastern Cape, was visited six times during 2013, while provinces with fewer districts, such as those in the Cape, were only visited twice in the year. This raises the question regarding improvement in learner comprehension through the Grade 5 year, presuming reading instruction is taking place. A word of caution with this sort of analysis should be noted. The NEEDU Grade 5 reading assessment is not a panel study, i.e. it does not track the same learners throughout the year and retest them at a later stage to test progress in reading comprehension. But one may assume that in general, those learners tested at the end of the year could score higher on their comprehension test than those tested at the beginning of the year. With this caution in mind, the average comprehension scores of the learners test in each month of NEEDU visits are represented in **Error! Reference source not found.**

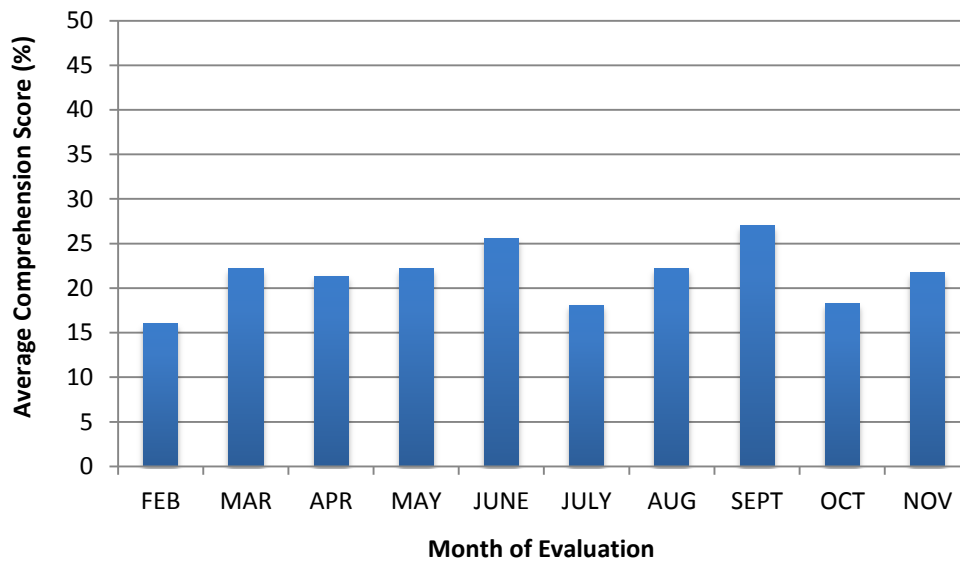


Figure 3: Achievement progress over the year

The data suggest that while there is a slight improvement in learner scores between those learners tested in February (average of 16,03%) and March (22,23%), the improvement is not maintained as the year progresses, with learners tested in October achieving a low 18,26%.

While inter-provincial comparisons are not valid (as explained above), intra-provincial progress is interesting and presented with caution. When the reading comprehension scores are disaggregated, in only two of the eight provinces (Gauteng and Western Cape) where learners were tested twice or more (excluding Mpumalanga), was any notable improvement seen. This progress (or lack of progress) is shown in Table 13. The erratic learner performance in the Eastern Cape suggests that the evidence of progress is unreliable.

Table 13: Reading achievement over the year per province

| | EC | FS | GP | KZN | LP | MP | NC | NW | WC |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| FEB | 13.29 | 21.32 | | | 16.20 | | | | |
| MAR | | 27.93 | 25.81 | 18.29 | | | | | |
| APR | | | 26.54 | | 18.18 | | | | 26.76 |
| MAY | 17.27 | | | | | | 32.34 | | |
| JUNE | 15.00 | | | | | | | 23.93 | 28.82 |
| JULY | | | | | 18.09 | | | | |
| AUG | 18.16 | | 34.43 | 18.15 | | | | 22.16 | |
| SEPT | 15.34 | | | | | | 32.09 | | |
| OCT | | | | 18.12 | | 19.71 | | | |
| NOV | 21.60 | 22.14 | | | | | | | |

As mentioned earlier, a lack of improvement in learner scores during the year, using the NEEDU sample shown above, does not suggest that learners do not learn anything during the year, but what it does suggest is that it is worth conducting a much more rigorous panel study of reading comprehension to see whether these results are indeed cause for national alarm. The particular factors which may be influencing the

improvement in the Gauteng scores has not been explored in this study, and are also worth further investigation. A similar analysis was done with the ORF scores and the results of this analysis are presented in **Appendix 1**.

Oral Reading Fluency

Curriculum-based measurement (CBM) is a well-recognised standardized procedure for assessing and monitoring learners' progress in reading, mathematics, spelling, and writing. One such method widely used for reading is the assessment of oral reading fluency (ORF), which focuses on two of the three components of fluency: rate and accuracy (Hasbrouck & Tindal, 2006). This assessment of ORF was adopted for the NEEDU Grade 5 reading study (see discussion on pages 7 and 8).

The evaluator listened to a learner reading aloud from an unpractised passage for one minute, noting errors made during reading. At the end of the minute, each error is subtracted from the total number of words read to calculate a score of words correct per minute (WCPM). WCPM has shown to be a good indicator of overall reading competence (Hasbrouck & Tindal, 2006).

The learners who were able to read at a rate of 50 WCPM or greater were asked to continue with a slightly more difficult passage in a second reading test. Details of the methodology are given in the section on Oral Reading Fluency Passages.

The average ORF for the 1790 learners tested on the first reading test was 46.64 WCPM. The highest ORF was 182 WCPM. For the 878 learners who progressed to the second passage, the average ORF increased to 79.09 WCPM and the highest score recorded (by the same learner) decreased slightly to 178 WCPM. In addition to the oral reading test, the learners were asked 5 questions pertaining to the parts of the passage that they had read to test their comprehension. The average score for the learners who read the first passage was just over 1 question correct, and this hardly improved with the learners who read sufficiently well to read the second passage. The national average scores for both the first and second ORF assessments are shown in Table 14.

Table 14: National ORF scores

| ORAL READING FLUENCY 1 | | | ORAL READING FLUENCY 2 | | |
|------------------------|----------|------------------------|------------------------|----------|------------------------|
| Average WCPM | Max WCPM | Average of Comp Qs [5] | Average WCPM | Max WCPM | Average of Comp Qs [5] |
| 46.64 | 182 | 1.34 | 79.09 | 178 | 1.54 |

For those learners who read the first passage, the learners in the Western Cape read with the greatest fluency at an average of nearly 73 WCPM, closely followed by those learners in the Northern Cape at an average of just over 60 WCPM. Learners tested in the Eastern Cape and Limpopo recorded the lowest average fluency at a rate of around 40 WCPM in both provinces. The pattern was similar for the learners tested in the second passage.

In addition to the average scores, the frequency distribution for the ORF was calculated and is represented graphically in Figure 4 below.

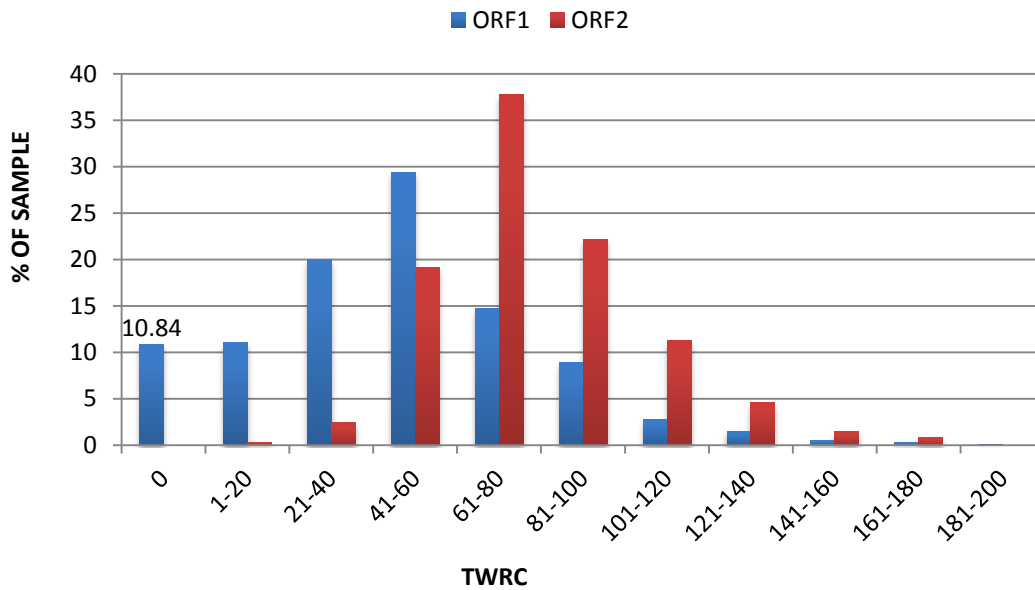


Figure 4: Frequency distribution of ORF scores for entire sample

More than 10% of the sample could not read at all. When spoken to in English, these learners did not understand what the evaluator was asking them to do. Once it was determined that they did not understand English and were unable to read the story title, they were excused from the assessment and their ORF was recorded as zero. A further 11.06% of learners could read only a few words, and at a very slow pace of 20 WCPM or less. Such learners are generally considered to be illiterate, suggesting that nearly 22% of those learners tested are illiterate. This figure is even more alarming given that English is the LOLT for these learners and that they are expected to access their subject content through the use of English textbooks. After five years of schooling, they still cannot read a word in English as FAL.

Oral Reading Fluency Progress

With the same word of caution as mentioned in the section on **Error! Reference source not found.**, the ORF scores have been plotted for the learners tested over the year. The results are shown in Figure 5. As with the reading comprehension scores, the lack of ORF progress, even for those learners who were the better readers, is cause for concern.

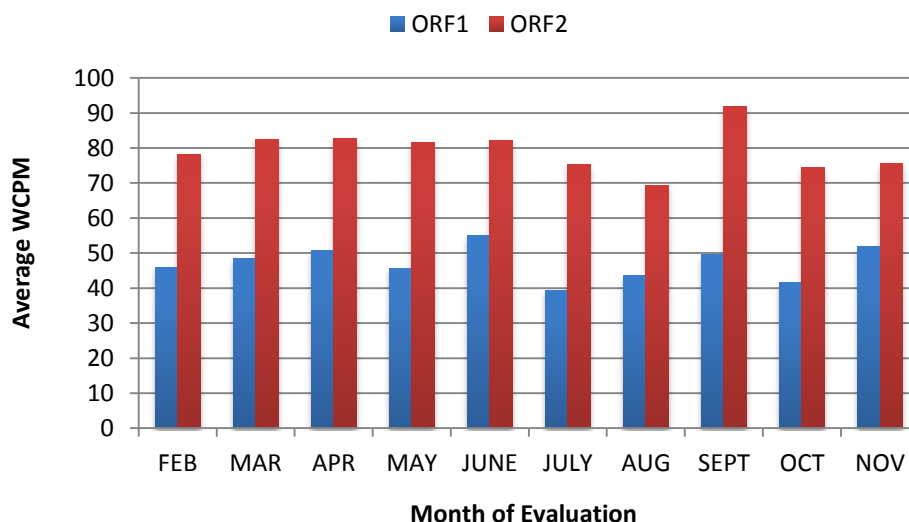


Figure 5: ORF Progress over the year

Conclusion

Reading is the process through which children learn to engage meaningfully with text. Since so much knowledge development and communication occurs through written symbol systems – verbal, numerical, algebraic, iconic and digital – this is the most important ability to be learnt in the primary school. Early success in acquiring reading skills usually leads to later successes in reading, while failing to learn to read before the third or fourth year of schooling may be indicative of lifelong problems in learning new skills. Children who fall behind in reading read less, increasing the gap between them and their peers. Later, when students need to "read to learn", their reading difficulty creates difficulty in most other subjects. In this way they fall further and further behind in school, dropping out at a much higher rate than their peers. This Matthew effect¹² has implications for the academic progress of learners as the academically rich get richer and the poor get poorer, as small differences in learning ability grow into large ones.

The average reader should be reading independently by the end of Grade 3, at a speed of around 70 WCPM. In the Intermediate Phase they should read increasingly sophisticated literature in different genres three or four times a week. This requires that teachers pay attention to each learner, assessing reading throughout the year and giving particular attention to those experiencing difficulties. Teachers should continuously raise their expectations of learners, getting them to read progressively more complex texts and to respond to increasingly challenging comprehension exercises. Particular attention must be given to developing inferential and interpretive reasoning. Children must be led to engage with 'Why' and 'How' questions.

The reading fluency of learners from a single Grade 5 class in the schools visited across all nine provinces is generally very disappointing. While there were good performances from a few learners in a few schools, the average score for reading fluency was just over 46 WCPM. Even more disturbing, more than 10% of Grade 5 learners could not read a single word.

¹² "Matthew effect," after the Bible verse found in the Gospel of Matthew: "For whosoever hath, to him shall be given, and he shall have more abundance: but whosoever hath not, from him shall be taken away even that he hath."

Similarly, the reading comprehension of most learners was found to be very poor, with 6% scoring 0, and a further 69% scoring 5% or less on the comprehension test. Overwhelmingly, the comprehension questions which produced the highest number of proficient responses required only the simplest retrieve-type response.

If the figures produced in the previous two paragraphs are reflected widely across the country – and there is every reason to believe that they are – then they announce a national catastrophe¹³. This situation strongly motivates the case that the recommendations which follow should be given the highest priority by the Ministry of Basic Education. If such a large proportion of learners can effectively not read at all in Grade 5, one has to ask what their teachers have been doing for 4 years and what school leaders and system managers have been ‘monitoring’ and ‘supporting’ and how the national department has been providing guidance to the system. Clearly, the entire ensemble has not been directed to teaching reading with any significant effect.

Recommendations

Reading programmes

The country urgently needs a programme which will enable teachers to teach literacy more effectively. The only recent contenders operating on any significant scale are the Gauteng Primary Literacy and Mathematics Strategy (GPLMS)¹⁴ and the LitNum Intervention in the Western Cape. One or more programmes have previously been piloted by the Department of Education and its successor the DBE, but not taken to scale, even when positive results were demonstrated¹⁵.

The minister must lead the search for a programme for assisting teachers to teach literacy effectively. The Department of Basic Education must establish a Directorate of Primary Literacy with the specific tasks of coordinating the research and development of a literacy programme, and directing its take-up and implementation by provinces. A fund should be allocated for investigating, developing and driving an effective reading and writing strategy for the country. At the same time, provinces should continue to test existing initiatives and experiment with models used elsewhere.

Reading norms

Every school – led by the SMT – needs to understand the reading capabilities of every child, monitoring reading fluency and comprehension regularly. National norms should be set for learner reading: fluency and comprehension levels should be defined by grade level and semester. This process should be led by the DBE, with the involvement of the tertiary sector, provincial and senior district curriculum officials. At district level training should involve HODs and lead teachers. A suggested starting point is provided in Table 15, adapted from the US norms (see Appendix 1) but should be confirmed based on empirical data collected in the South African schooling sector.

¹³ This is not a new announcement, but a restatement of a phenomenon which has been known for some time, through both international comparative tests such as PIRLS and SACMEQ, and national and provincial assessment programmes. But, although it has been known for some time, no effective remedy has been found to date.

¹⁴ The future of the GPLMS programme is uncertain owing to budget constraints.

¹⁵ As indicated earlier, the Systemic Method for Reading Success (SMRS) was piloted in three provinces in 2008/09 and shown to have a significantly positive impact on the teaching of reading in the Foundation Phase, confirming the results obtained in other African countries for the same programme. Yet the SMRS has disappeared without trace in South Africa.

Table 15: English norms for reading in LOLT, Grades 4-6

| Grade | Level of learner | Reading a story: Number of words correct per minute | | | |
|-------|------------------|---|------------------------|-----------------------|------------------------|
| | | By the end of Term 2 | | By the end of Term 4 | |
| | | First Language Reader | Second Language Reader | First Language Reader | Second Language Reader |
| 4 | Top | 145 | 116 | 180 | 144 |
| | Middle | 94 | 75 | 123 | 98 |
| | Bottom | 45 | 36 | 72 | 58 |
| 5 | Top | 166 | 133 | 194 | 155 |
| | Middle | 110 | 88 | 139 | 111 |
| | Bottom | 61 | 49 | 83 | 66 |
| 6 | Top | 177 | 142 | 204 | 163 |
| | Middle | 127 | 102 | 150 | 120 |
| | Bottom | 68 | 54 | 93 | 74 |

Note: Reading norms for South African languages have not been established. The norms shown above were derived for US children, and must be viewed with caution until a full set of South African measures has been developed. Nevertheless, in 2012 this set of norms did seem to fit across the SA reading spectrum in the FP.

Monitoring reading

Members of the SMT should monitor learner reading systematically. Learners throughout the school should be assessed annually, and the progress of weaker readers should be tracked at least quarterly. SMT members may do this by getting learners to read a story from an unfamiliar book, and to count how many words are read per minute. Comprehension should also be tested, and this aspect must constitute a component of every written test.

Appendix 1: US Reading Norms (Hasbrouck & Tindal, 2006)

| Grade | Percentile | Fall WCPM | Winter WCPM | Spring WCPM |
|-------|------------|-----------|-------------|-------------|
| 1 | 90 | | 81 | 111 |
| | 75 | | 47 | 82 |
| | 50 | | 23 | 53 |
| | 25 | | 12 | 28 |
| | 10 | | 6 | 15 |
| | SD | | 32 | 39 |
| | Count | | 16,950 | 19,434 |
| 2 | 90 | 106 | 125 | 142 |
| | 75 | 79 | 100 | 117 |
| | 50 | 51 | 72 | 89 |
| | 25 | 25 | 42 | 61 |
| | 10 | 11 | 18 | 31 |
| | SD | 37 | 41 | 42 |
| | Count | 15,896 | 18,229 | 20,128 |
| 3 | 90 | 128 | 146 | 162 |
| | 75 | 99 | 120 | 137 |
| | 50 | 71 | 92 | 107 |
| | 25 | 44 | 62 | 78 |
| | 10 | 21 | 36 | 48 |
| | SD | 40 | 43 | 44 |
| | Count | 16,988 | 17,383 | 18,372 |
| 4 | 90 | 145 | 166 | 180 |
| | 75 | 119 | 139 | 152 |
| | 50 | 94 | 112 | 123 |
| | 25 | 68 | 87 | 98 |
| | 10 | 45 | 61 | 72 |
| | SD | 40 | 41 | 43 |
| | Count | 16,523 | 14,572 | 16,269 |
| 5 | 90 | 166 | 182 | 194 |
| | 75 | 139 | 156 | 168 |
| | 50 | 110 | 127 | 139 |
| | 25 | 85 | 99 | 109 |
| | 10 | 61 | 74 | 83 |
| | SD | 45 | 44 | 45 |
| | Count | 16,212 | 13,331 | 15,292 |
| 6 | 90 | 177 | 195 | 204 |
| | 75 | 153 | 167 | 177 |
| | 50 | 127 | 140 | 150 |
| | 25 | 98 | 111 | 122 |
| | 10 | 68 | 82 | 93 |
| | SD | 42 | 45 | 44 |
| | Count | 10,520 | 9,218 | 11,290 |
| 7 | 90 | 180 | 192 | 202 |
| | 75 | 156 | 165 | 177 |
| | 50 | 128 | 136 | 150 |
| | 25 | 102 | 109 | 123 |
| | 10 | 79 | 88 | 98 |
| | SD | 40 | 43 | 41 |
| | Count | 6,482 | 4,058 | 5,998 |
| 8 | 90 | 185 | 199 | 199 |
| | 75 | 161 | 173 | 177 |
| | 50 | 133 | 146 | 151 |
| | 25 | 106 | 115 | 124 |
| | 10 | 77 | 84 | 97 |
| | SD | 43 | 45 | 41 |
| | Count | 5,546 | 3,496 | 5,335 |

References

- Anderson, N. J. (1999). Improving Reading Speed: Activities for the Classroom *English Teaching Forum*, 32(2).
- Boonzaaier, P. J. V. (2009). Baseline Report on multigrade Education in South Africa: Centre for Multigrade Education.
- Bruns, B., Filmer, D., & Patrinos, A. (2011). *Making schools work: New evidence on accountability reforms*. Washington, DC: The World Bank.
- Department of Basic Education. (2008). *Foundations for Learning Campaign: 2008-2011*. Pretoria: Government Gazette No. 30880.
- Department of Basic Education. (2011a). *Action Plan to 2014: Towards the Realisation of Schooling 2025*. Department of Basic Education. Pretoria.
- Department of Basic Education. (2011b). *Integrated National Literacy and Numeracy Strategy: A Whole School Approach*. Department of Basic Education. Pretoria.
- Department of Basic Education. (2014). How Many School Entrants Go on to Pass Matric? Retrieved 4 February 2014
<http://www.education.gov.za/Howmanyschoolentrantsgoontopassmatric/tabid/1104/Default.aspx>
- Fuchs, L. S., Fuchs, D., Hosp, M. K., & Jenkins, J. R. (2001). Oral Reading Fluency as an Indicator of Reading Competence: A Theoretical, Empirical, and Historical Analysis. *Scientific Studies of Reading*, 5(3), 239-256.
- Hasbrouck, J., & Tindal, G. A. (2006). Oral reading fluency norms: A valuable assessment tool for reading teachers. *The Reading Teacher*, 5, 636–644.
- Hollingsworth, S. (2009). The Systematic Method for Reading Success (SMRS) in South Africa: A Literacy Intervention Between EGRA Pre- and Post-Assessments: USAID.
- Howie, S., Venter, E., van Staden, S., Zimmerman, L., Long, C., du Toit, C., & Archer, E. (2008). PIRLS 2006 Summary Report: South African Children's Reading Achievement. Pretoria: Centre for Evaluation and Assessment, University of Pretoria.
- Howie, S., van Staden, S., Tshela, M., Dowse, C., & Zimmerman, L. (2012). PIRLS 2011: South African Children's Reading Literacy Achievement. Pretoria: Centre for Evaluation and Assessment.
- Katz, J. (2013). Examining why a phonic approach to the development of early reading materials in African languages is necessary in order to improve South African literacy levels: An analysis of early graded readers in isiXhosa. Masters programme: Module 11: Research project. Department of English Language and Linguistics: Rhodes University, Grahamstown.
- McDougall, S., Brunswick, N., & de Mornay Davies, P. (2010). Reading and dyslexia in different orthographies: An introduction and overview. In N. Brunswick, S. McDougall & P. de Mornay Davies (Eds.), *Reading and Dyslexia in Different Orthographies* (pp. 3-21). Hove: Psychology Press.
- National Education Evaluation and Development Unit. (2013). National Report 2012: The State of Teaching and Learning in the Foundation Phase. Pretoria: NEEDU.
- National Institute of Child Health and Human Development. (2000). Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. Washington, DC.
- Pretorius, E. J. (2012). Butterfly effects in reading? The relationship between decoding and comprehension in Grade 6 high poverty schools. *Journal for Language Teaching*, 46(2), 74-95.
- Segalowitz, N., Poulsen, C., & Komoda, M. (1991). Lower level components of reading skill in higher level bilinguals: Implications for reading instruction. *AILA Review*, 8(1), 15–30.
- Seymour, P. H. K., Aro, M., & Erskine, J. M. (2003). Foundation literacy acquisition in European orthographies. *British Journal of Psychology*, 94(2), 143–174.
- UNESCO. (2004). The Plurality of Literacy and its Implications for Policies and Programmes *UNESCO Education Sector Position Paper*. Paris: United Nation's Educational Scientific and Cultural Organisation.