PIRLS 2006

Progress in International Reading Literacy Study 2006

SUMMARY REPORT

SOUTH AFRICAN CHILDREN'S READING LITERACY ACHIEVEMENT

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PREFACE

The Progress in International Reading Literacy Study (PIRLS) 2006 in South Africa was conducted by the Centre for Evaluation and Assessment (CEA) at the University of Pretoria, under the auspices of the International Association for the Evaluation for Educational Achievement (IEA). This study, conducted in 11 official languages, was the largest, most ambitious and complex national design within an international comparative study ever undertaken. Senior colleagues at the IEA were concerned that a project of this complexity and scale could not be implemented successfully under such diverse conditions as those experienced in South Africa.

The project, however, met the high standards set by the IEA in large part due to the support of various bodies:

The support of the Department of Education, from the beginning of the project, was critical.

❑ The newly appointed Education Minister, Mrs Naledi Pandor gave her consent at the outset of the project as reading literacy is one of her personal priorities. The Department recognized reading literacy and language in education as one of the most important priorities in education.

❑ The then Acting Director-General, Dr Cass Lubisi, Deputy-Director General, Palesa Tyobeka, and their officials assisted the project by providing essential information and support.

❑ Provincial and district officials assisted with data collection in each province.

❑ Many schools across the country allowed assessment to be conducted in their schools. The co-operation from the school principals, teachers and the learners was outstanding and enabled the data collection to be undertaken in an excellent manner.

The funding support given by The Royal Netherlands Embassy (RNE) and the National Research Foundation (NRF):

❑ The Royal Netherlands Embassy was supportive and exceptionally generous and the NRF provided funding for students undertaking their Master's and Doctoral degrees. Without this funding, the project could never have been implemented and gratitude is extended in particular to Cornelius Hacking and Lebogang Molai for their generous and helpful manner in which they assisted the research team.

The CEA's international partners were supportive right from the inception of the project.

❑ The leadership of the IEA, Seamus Haggerty, Hans Wagemaker and Barbara Malak-Minkiewicz, offered advice and support throughout and really sought to assist this project. The Study directors, Ina Mullis and Mick Martin, constantly encouraged the team, providing additional support when necessary being

It gives me pleasure to present this summary report which is a precursor to the full national report which will be available in 2009.

Sarah Howie
Director: CEA
Co-National Research Coordinator: PIRLS 2006   28 November 2007

CHAPTER 1

INTRODUCTION

This report represents a summary of some of the key findings from South Africa's participation in the Progress in International Reading Literacy Study (PIRLS), which took place in South Africa between 2004 and 2007. Data analyses are still underway and will be included together with explanatory variables in the full national report to be released in 2009. The primary focus of this report is to provide an overview of the main learner achievement findings in reading literacy as well as to highlight some interesting findings with regard to the contextual data that were also collected.

The release of the PIRLS findings is an opportune one. The data were collected just more than a decade after a transition to a new government. Whilst it takes time for a historically fractured and newly integrated national system to reconstruct, these data serve as the first baseline data in all 11 official languages with international comparative data and benchmarks.

At the time of the PIRLS 2006 data collection, Pretorius and Ribbens pointed out that "neither in the past or in the present have there been national assessment procedures for monitoring reading and determining whether learners are reading at their appropriate motivational levels" (2005, p.139). On this basis, they further stated that it had been difficult officially to determine to what extent learners have reading problems and whether the education system is delivering on its mandate to produce literate learners.

Not only do Pretorius and Mampuru (2007) report that comparatively (to English-speaking countries) little research on literacy development exists on the African continent, they also argue the need for more South African-based research. The PIRLS 2006 comprehensive research design and rigorous technical standards for data collection goes some way to addressing the concerns of the authors above. The Reading Literacy Research Programme at The University of Pretoria is a direct response to the need for large-scale data in South Africa.

In the rest of this chapter, a description of the International Association for the Evaluation of Educational Achievement's (IEA) reading literacy studies is given. This is followed by an overview of the PIRLS 2006 project, the implementation in South Africa and a list of participating countries. Finally, the overall structure for this report is provided.

1.1 Background to the PIRLS Studies

The first international comparative reading literacy study with 32 participating education systems was initiated by the International Association for the Evaluation of Educational Achievement (IEA) in 1991. This study was followed by the Progress in International Reading Literacy Study in 2001 with 35 countries. PIRLS 2006 thus represents the third study of its kind under the auspices of the IEA and enables countries which participated in 1991 and 2001 to identify long term trends and to monitor their system's developments in reading and education over a period of time. All three studies focused on two purposes of

reading: (1) reading for literary experience and (2) reading to acquire and use information. Details of the contents of the assessment and contextual instruments are contained in this report (see Chapter 3). The target population tested in these studies was Grade 4 in most countries.

1.2   PIRLS 2006 in South Africa in brief

The PIRLS 2006 project was established in South Africa by the Centre for Evaluation and Assessment in 2004 and permission was received from the Minister of Education and HEDCOM during early 2005. Funding was then acquired from the Royal Netherlands Embassy and the National Research Foundation in 2005 to formally embark on the study. The pilot study was implemented in May 2005 in a sample of 38 schools. The main study, comprising 441 schools, was conducted in October and November 2005 with the last schools being tested in January 2006. Learner testing occurred in all 11 official languages in Grades 4 and 5 and contextual questionnaires were completed by learners, parents, teachers and principals. In South Africa, a national assessment on reading in English, based on the South African curricula, was also administered to Grade 4 and 5 learners. The data were captured, cleaned and submitted to the International Data Processing Centre in Hamburg, Germany in 2006. The final international data were received by the South African researchers in mid-September 2007.

1.3   Education Systems participating in PIRLS 2006

A total of 40 countries and 45 education systems (e.g. Belgium - Flemish) participated. Table 1.1 depicts all the participating countries and education systems.

Table 1.1   PIRLS 2006 participating countries and education systems

PIRLS 2006 & 2001		PIRLS 2006
Bulgaria	Macedonia	Austria
Canada, Ontario	Moldova	*Belgium (Flemish)*
Canada, Quebec	Morocco	*Belgium (French)*
England	Netherlands	*Canada, Alberta*
France	New Zealand	*Canada, British Columbia*
Germany	Norway	*Canada, Nova Scotia*
Hong Kong SAR	Romania	Chinese Taipei
Hungary	Russian Federation	Denmark
Iceland	Scotland	Georgia
Iran	Singapore	Indonesia
Israel	Slovak Republic	Kuwait
Italy	Slovenia	Luxembourg
Latvia	Sweden	Poland
Lithuania	United States	Qatar
		South Africa
		Spain
		Trinidad and Tobago

Participating countries are widely distributed across the regions of the world, with most countries being from the Northern Hemisphere, and none from South America.

South Africa had the 9th largest population of the 45 and 6th largest geographical area. It has one of the most rural-based populations of the group (Mullis, Martin, Kennedy & Foy, 2007). There are a few characteristics that make South Africa exceptional. The first is the lowest life expectancy at birth of 46 years and the second is the highest infant mortality rate (53 per 1000 live births). The third exception was having the highest learner: teacher ratio. Economically however, South Africa was only the 10th poorest (U$2750) and was average in terms of the percentage of GDP and public expenditure on education.

1.4   Outline of this Report

This summary report is structured in the following way: Chapter 2 provides a brief overview of important issues related to language policy and curricula at the primary school level. In Chapter 3, a synopsis of the methodology used in this study is given. The achievement results for the South African learners are presented in Chapter 4 with selected international comparative data. Chapter 5 outlines the achievement benchmarks used in the study and the South African learners' performance in reading literacy. In Chapters 6 to 10 summaries of key findings emanating from the parent, teacher, learner and principal background questionnaires are presented. Finally, the way forward is outlined in Chapter 11.

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CHAPTER 2

READING CURRICULUM AND LANGUAGE POLICIES IN SOUTH AFRICA

Lisa Zimmerman and Surette van Staden

2.1   The South African Education System

In the last decade, the South African educational system has undergone extensive change, and the government has attempted to improve educational infrastructure and resources. The new system is based upon the principles of *equity, quality* and *access*. The policies reflect high aspirations which are challenging given the realities of the South African context. The focus of PIRLS resonates with the principle of *quality* and therefore, serves as one set of indicators that may address the extent of the *quality* of education provided to children in primary school in South Africa.

Of relevance to PIRLS 2006, was the formation of the General Education and Training Band (GET) which represents formal education and includes learners from a reception year up to Grade 9 (HSRC, 1995). The GET is structured as three phases, namely the Foundation Phase (Grades R-3), the Intermediate Phase (Grades 4-6) and the Senior Phase (Grades 7-9), which together constitute the compulsory education component of the education system.

In March 1997, the former Minister of Education, Sibusisu Bengu announced the launch of Curriculum 2005, which marked a departure from content-based teaching and learning to Outcomes Based Education (OBE). OBE is characterized as a learner-centred approach, in which the emphasis is not on what the teacher wants to achieve, but rather on what the learner should know, understand, demonstrate and become (Botha, 2002). As such, the key elements of an OBE system are the development of a clear set of learning outcomes around which all other components can be focused, as well as the establishment of conditions and opportunities within the system to enable and encourage learners to achieve the set outcomes (Spady, 1994). The introduction and implementation of this system was not without opposition and challenges (Jansen, 1999). However, Curriculum 2005, based on OBE principles, came under review as a result of the Department of Education's appointment of the Policy Review Committee. An outcome of the committee's review was that a managed process of phasing out Curriculum 2005 and phasing in the Revised National Curriculum Statement (RNCS) was undertaken.

2.2 Foundation Phase and Intermediate Phase Reading Curriculum

2.2.1 Overall Expected Outcomes

The developmental outcomes for learners from Grade R to 9, outlined in the Revised National Curriculum Statement Grades R-9 (DoE, 2002a), envisage learners who are able to reflect on and explore a variety of strategies to learn more effectively, while also being able to participate as responsible citizens in the life of local, national and global communities.

The overall expected outcome in terms of the reading curriculum for the Language Learning Area specifically states that: "The learner is able to read and view for information and enjoyment, and respond critically to the aesthetic, cultural and emotional value of texts" (DoE, 2002a, p.20). This so-called "reading and viewing" outcome is placed together with other expected language outcomes associated with overall language competency, namely: (1) listening, (2) speaking, (3) writing, (4) thinking and reasoning, (5) language structure and use (DoE, 2003a).

PIRLS 2006 assessed learners who had just completed Foundation Phase schooling, that is, learners in Grade 4, the first year of the Intermediate Phase. As such, it is pertinent to explicate both Foundation and Intermediate Phase RNCS documents as they pertain to the development of learners' language and literacy development, and their guidelines for the development of reading specifically.

2.2.2 The Literacy Curriculum for the Foundation Phase

Learning activities during the Foundation Phase are built around Literacy, Numeracy and Life Skills. According to policy, one additional language is introduced in Grade 2. The RNCS highlights that the most important task of the Foundation Phase teacher is to ensure that all learners learn to read (DoE, 2003b, p.45). Forty percent of teaching time in the Foundation Phase therefore, is allocated to literacy. It is recognised that all learners need to be taught strategies that help them to read with understanding and which help them to unlock the code of written text. Furthermore, they must know how to locate and use information, to follow a process or argument, summarise, build their own understandings, adapt what they learn and demonstrate what they learn from their reading in the learning process. A "balanced approach" to literacy development is used in the curriculum as it begins with children's emergent literacy, thereafter involving them in reading "real" books, writing for genuine purposes and giving attention to phonics (DoE, 2002b, p.23). At Grades R to 3 levels, reflecting outcome expectations, assessment standards for the learning outcome "Reading and viewing" (DoE, 2002b, pp.32-33) require the following of the learner:

- ❑ is able to use visual clues to make meaning (Grades R-3)
- ❑ is able to role-play reading (Grades R-1);
- ❑ is able to make meaning of written text (Grades R-3);
- ❑ starts recognising and making meaning of letters and words (Grade R);
- ❑ begins to develop phonic awareness (Grade R);

- ❑ develops phonic awareness (Grades 1 and 2);

- ❑ consolidates phonic awareness (Grade 3);

- ❑ recognises letters and words and makes meaning of written text (Grade 1);

- ❑ reads for information and enjoyment (Grades 1-3);

- ❑ recognises and makes meaning of words in longer texts (Grade 2); and

- ❑ reads texts alone, and uses a variety of strategies to make meaning (Grade 3).

2.2.3 The Intermediate Phase Language, Literacy and Communication Learning Area

Once the learner progresses to the Intermediate Phase, learning activities focus on eight learning areas. Twenty six hours and thirty minutes of contact time for the formal teaching of these learning areas is allocated per week. The largest percentage of this teaching time, 25%, has been allocated to the Language Learning Areas specifically. This includes the learner's home language or first language of learning and teaching as well as the learner's first additional language. Learners consolidate and extend their literacy skills use over a wider range of texts than during the Foundation Phase (DoE, 2002c). Specific learning outcomes for the Language "reading and viewing" outcome acknowledges that the "reading of South African and international fiction and non-fiction is necessary for learners' emotional and personal growth, for language development, for literacy, for understanding of values, and for enjoyment" (DoE, 2002c, p.56). At Grade 4, assessment standards (DoE, 2002c) dovetail with the kind of reading activities that are expected of learners in the PIRLS assessments (see Chapter 3). For instance, the learner needs to be able to:

- ❑ read a variety of texts for different purposes using a variety of reading and comprehension strategies;

- ❑ view and comment on various visual texts;

- ❑ describe their feelings about texts giving reasons;

- ❑ discuss how the choice of language and graphical features influence the reader;

- ❑ identify and discuss aspects such as central idea, character, setting and plot in fiction texts;

- ❑ infer reasons for the actions in a story;

- ❑ recognise the different structures, language use, purposes and audiences of different types of texts;

- ❑ identify and discuss values in texts in relation to cultural, moral, social, and environmental issues;

- ❑ understand and respond appropriately to information texts;

- ❑ interpret simple visual texts, and

- ❑ select information texts for own information needs (DoE, 2002c, pp.72-77).

2.2.4   Policies on Language in Education

Language policies are elaborated upon in this section since these policies have bearing on the current state of reading achievement among Grade 4 learners in South African schools. Two policies are of significance, as outlined in The South African National Educational System Language Policy (1997), namely:

❑ The Norms and Standards regarding Language Policy published in terms of Section 6 (1) of the South African Schools Act, 1996.

❑ The Language in Education Policy in terms of Section 3 (4) (m) of the National Education Policy Act, 1996 (Act 27 of 1996).

The Norms and Standards with regards to Language Policy, aims to protect, promote, fulfil and extend the individual's language rights and means of communication in education (The South African National Educational System Language Policy, 1997).

The South African National Educational System Language Policy (1997) or LiEP, aims to promote multilingualism and the development of all 11 official languages specified in the South African Constitution. These languages include English, Afrikaans, isiNdebele, isiXhosa, isiZulu, Sepedi, Sesotho, Setswana, SiSwati, Tshivenda, and Xitsonga each of which function as majority languages within different regions of the country (Baker & Prys Jones, 1998).

The underlying principle of LiEP (1997) is to maintain home language(s), whilst providing access to the effective acquisition of additional languages. LiEP is based upon the recognition that South Africa is a multilingual society and the assumption that mother tongue is the most appropriate language of learning. The Department of Education therefore, follows an additive approach to bilingualism from a mother tongue base to the incorporation of an additional language. In terms of languages as school subjects, the LiEP includes the following for the Foundation and Intermediate Phases:

❑ All learners shall be offered at least one *approved language* (in optimum circumstances the mother tongue) as a subject in Grades 1 and 2.

❑ English is also introduced as an *additional language* for African language learners in Grade 1 or 2.

❑ From Grade 3 onwards, all learners continue with the one *approved language* and, in line with the additive bilingual model, at least one *additional approved language* as a subject.

❑ The additional language for African language learners then becomes the Language of Learning and Teaching (LoLT) in Grade 4 (Pretorius & Mampuru, 2007).

The LoLT in Grade 4 results in more than 80% of learners being taught in a second language, mostly English, a language spoken by less than 10% of the population (Howie, 2003). As Heugh (2006, p.9) affirms, most learners who have to make the transition to "reading to learn" in Grade 4 "simply fall into the gap between learning in the mother tongue and learning through a second language of education, English". Heugh (2006) argues that this early exit from a first language to a second medium of instruction at this

point is actually a weak bilingual model, as an additive approach should involve at least six to eight years of first language education together with good provision of the second language, followed by dual medium education in the latter years. Recently, planned alterations to the current LiEP have been announced (Pandor, 2006). Amendments to the policy may lead to the promotion of a further two years of mother tongue education. In effect, this will mean that the switch to English will now more than likely occur at the beginning of the Grade 7 year of schooling for those learners who have been learning in languages other than English or Afrikaans from the beginning of formal schooling. This shift in policy is in line with a large corpus of research into bilingual education "best practices" (Alidou, Boly, Brock-Utne, Diallo, Heugh, & Ekkehard Wolff, 2006).

2.3   Summary

Curriculum, language and reading policies have greatly influenced and continue to affect educational provision for South African children. Outcomes-based education has played a central role in influencing teaching methodology. Policies for the Foundation and Intermediate phases explicate what is required at these levels. The RNCS (DoE, 2003b) highlights the fact that the most important task of the Foundation Phase teacher is to ensure that all learners learn to read. The outcome expectations and assessment standards for the learning of reading are listed (see earlier in chapter). However, these policies as they pertain to learners' reading development at both the Foundation Phase and Intermediate Phase may not be explicit enough to provide the level of support that teachers require to guide their classroom reading instruction practices.

A critical factor impacting on South African learners is the language of learning. The Language in Education Policy (Act 27 of 1996) and the Norms and Standards regarding Language Policy are critical in shaping what curriculum frames the learning experiences in our schools. Again while the policy is in line with international trends and the research on bilingual and multilingual education, many learners do not make the transition required from learning to read to reading to learn and teachers, in general, do not know how to help their learners bridge the gap (Heugh, 2006).

Certainly background factors, school factors and teaching and learning methodologies impact on the reading process. The three interrelated factors impacting on performance, the home, the school and the individual learner are investigated in the PIRLS studies. In the PIRLS 2001, a strong relationship was found between fourth grade reading achievement and home environments for almost every country. Greater reading proficiency was found where parents reported engaging in literacy activities before their children started school. Howie (2006) reports a number of factors specifically related to learners in South African classrooms, most notably the lack of subject matter knowledge and the perceived lack of resources. Factors such as reading motivation and reading related self-perception are significant factors. The PIRLS studies incorporate these factors in their research design enabling the monitoring of the effects of different variables on reading.

CHAPTER 3

CONCEPTUAL FRAMEWORK AND RESEARCH DESIGN

Sarah Howie and Elsie Venter

In order to conduct an international comparative study of this magnitude, consideration needs to be given to the methodology used, therefore the focus of this chapter is on the research design and methods utilised in the PIRLS 2006. A short description is provided regarding the conceptual framework, research questions, study design and instrumentation, populations and sampling, scales and indicators, data collection and data quality and reporting.

3.1 Conceptual Framework and Research Questions

In PIRLS 2006, reading literacy is defined as:

> *the ability to understand and use those written language forms required by society and/or valued by the individual. Young readers can construct meaning from a variety of texts. They read to learn, to participate in communities of readers in school and everyday life, and for enjoyment (Mullis, Kennedy, Martin & Sainsbury, 2006, p.3).*

As such, it is recognised that a child's reading literacy develops within a specific context. The PIRLS 2006 conceptual framework represents the relationship of a child's reading literacy with their attitudes and behaviours which are in turn situated within the home-school-classroom context. This home-school context lies within a specific community and national context. The conceptual framework hypothesises that reading literacy develops and may be enhanced because of these relationships.

Three aspects of learners' reading literacy are focused on in PIRLS:

❑ purposes for reading;

❑ processes of comprehension; and

❑ reading behaviours and attitudes.

The written assessment used the *purposes* for reading and the *processes of comprehension* as the foundation. The two purposes for reading, *reading for literary experience* and *reading for the use and acquisition of information* each comprise 50% of the assessment. Within each of these two purposes, four processes of comprehension are identified (Mullis et al., 2006). The learner is required to:

❑ focus on and retrieve explicitly stated information;

❑ make straightforward inferences;

❑ interpret and integrate ideas and information; and

❑ examine and evaluate content, language, and textual elements.

PIRLS 2006 addresses the following research questions:

❑ How well do fourth grade learners read? How do learners from one country compare with learners in another country?

❑ Do fourth grade learners value and enjoy reading? How do the reading habits and attitudes of learners from one country compare with learners in another country?

❑ How are young children taught to read? How do instructional practices in one country compare with those in another country?

❑ Where should effort and resources be directed to improve the reading literacy of young children?

In addition to the questions addressed in the international study, South African researchers are striving to address the following specific research questions for South Africa:

❑ How well do Grade 4 and 5 learners from different language groups read?

❑ What difference is there in the development of reading skills and knowledge of Grade 5 learners compared to Grade 4 learners?

❑ How do reading habits and attitudes of learners differ in terms of age, gender and social background?

❑ How are young children taught to read? How do instructional practices in one province compare with those in another province?

❑ How well do Grade 4 and 5 learners read in English as an additional language?

❑ What is needed to improve the reading literacy of young children in South Africa?

3.2   Study Design and Instrumentation

PIRLS 2006 was designed as a survey and consisted of assessment instruments and background questionnaires. The stipulated requirement was that assessment instruments had to be administered in the language that children had been taught to read in and had been reading in for a minimum of four years. In South Africa, this manifested as the language of learning and teaching used by the school from Grade 1.

3.2.1   Background Questionnaires

Background questionnaires addressed *reading behaviours and attitudes.* The questionnaires were designed to collect information about the learner's home and school experiences in learning to read. The learner questionnaires targeted learners' attitudes towards reading and reading habits. Questionnaires given to teachers and school principals were aimed at gathering information about the learner's school context, whilst parent questionnaires were administered to ascertain the learner's home context.

3.2.2 Assessment Instruments

The reading assessment instruments included fourth grade level stories and informational texts taken from different countries. *Processes of comprehension* and *purposes for reading* form the basis of the written test used in PIRLS for reading comprehension. Learners were expected to engage in a full repertoire of reading strategies, including retrieving and focusing on specific ideas, making simple and more complex inferences and examining and evaluating text features. Passages were followed by multiple-choice and free-response format questions about the text.

All the PIRLS 2006 instruments were developed and prepared in English by two international committees working with the International Study Center (ISC) at Boston College, USA and with contributions by National Research Coordinators (NRCs) of participating countries.

3.2.3 Scales

There are five reading scales: an overall reading literacy scale, two separate scales involving the purposes for reading, namely literary experience and to acquire and use information, and finally two additional scales for reading comprehension processes: a) retrieving and straightforward inferencing and b) interpreting, integrating and evaluating (Mullis et al., 2007).

In order to ensure a balance of different types of texts, which represents the spread of reading materials children are exposed to, and to construct the above-mentioned scales, a matrix assessment design was followed. Reading passages and the accompanying items (questions) were divided into groups or blocks. Five literary passages (L1 – L5) and five informational passages (I1 – I5) were constructed. Ten blocks were then distributed across 13 different test booklets.

3.2.4 Translation

Participating countries translated the assessment instruments into their local languages of instruction. The International Study Center (ISC) stipulated translation procedures to ensure standardisation of instruments across countries. Such a translation procedure is needed in order for valid comparisons to be made. The translation process ensured equivalence in passages and items across languages, while at the same time acknowledging that differences in expressions could occur across countries.

3.2.5 Translation of Instruments in South Africa[1]

For the South African context, the assessment instruments had to be contextualised and translated into all 11 official languages. Professional translators, most of whom are registered with the South African Translators' Institute (SATI), were appointed to ensure translations of a high standard for all the languages. In terms of the background questionnaires, only the parent and learner questionnaires were translated from English

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[1] A more detailed account of the translation process is included in the full national report in addition to a chapter in the PIRLS 2006 SA Technical report due in 2008.

into the other 10 official languages. This was done with the assumption that most teachers and school principals were in all likelihood able to speak, write and understand English or Afrikaans, as required by their teacher training qualifications.

On completion of the translation process of assessment instruments and background questionnaires for all the official languages, the instruments were scrutinised through a process of international translation verification. In order to adhere to strict quality control measures, all translated assessment instruments and questionnaires were submitted to the secretariat at the International Association for the Evaluation of Education Achievement (IEA). To ensure standardisation of instruments across countries, the secretariat appointed independent translation verifiers to assure quality and verify translated instruments for each country participating in PIRLS 2006.

3.2.6   Population and Sampling

PIRLS 2006 required that "(t)he target grade should be the grade that represents four years of schooling, continuing from the first year of ISCED Level 1" (Mullis et al., 2006, p.7). ISCED Level 1 refers to the primary or first stage of basic education as presented in the International Standard Classification of Education developed by the Institute for Statistics of UNESCO (1997). All other countries, therefore, included one study population based on this criterion. In South Africa, the above requirement translated into two populations namely Grade 4, which was the first population and was later joined by a second population as one of the national options included in the study.

A three-stage stratified cluster sampling design was employed in PIRLS 2006 (Foy & Joncas, 2007). Schools were sampled proportional to the size of the target class during the first stage of the sampling. Within the sampled schools, random sampled classrooms constituted the second stage sampling units. The third stage sampling units were all the learners in the sampled classrooms. Pseudo-classes (combined classes) were constructed in the case of too small classrooms.

Initially, schools in South Africa were sampled that had at least instruction up to Grade 4 level. After sampling for Grade 4 had taken place, it was decided to also include a second population, that of Grade 5 learners, in the study. This decision was taken due to concerns about Grade 4 being a transition phase in schooling and out of a desire to examine the progress or differences in reading knowledge and skills from Grade 4 to 5. Schools were sampled according to province and language to create 62 explicit strata. Implicit stratification according to region followed to create 250 implicit strata. Originally 441 schools were sampled, but only 429 (98.5%) schools were eligible for inclusion in the study at Grade 4 level; for Grade 5 the corresponding figure was 397 (96.5%). In Grade 4, 16 073 learners participated in the PIRLS 2006 and in Grade 5, 14 657 learners participated. In each school, an intact class was sampled and all the learners present on the day of testing were included in the sample.

3.2.7   Data Collection

PIRLS 2006 in South Africa is the most complex internationally comparative study ever undertaken within the ambit of any international comparative study conducted to date.

The magnitude of PIRLS in South Africa provided many logistical challenges. Great care had to be taken in preparing the instruments, overseeing the printing process and managing the packing process of instruments for two grades and 11 languages as there were 213 different instruments involved.

A market research company was appointed to conduct the main data collection. Training was provided to the fieldworkers to ensure a standardised procedure and compliance with the strict guidelines for testing and data collection by the IEA. The fieldwork took place from October 2005 with the last batch of schools' data being collected at the end of January 2006. Where deviations occurred in the field, these were recorded. In order to ensure consistency in the fieldwork within and between countries and to ensure compliance with IEA/PIRLS 2006 data collection guidelines and standards, a monitoring process was put into place. An International Quality Control Manager was appointed to act as an external, objective observer of the process in each country. It was also the responsibility of each National Research Centre to appoint National Quality Control Officials. In South Africa, monitoring occurred in 8% of the sampled schools.

3.3 Data Quality and Reporting

Several quality control check points were put in place to ensure the highest data quality. The instrument unpacking process and the dispatching of instruments to professional data capturers required stringent procedures. The IEA made a data capturing program, WinDEM, available to capture and verify the data. South Africa used ASCII data, accessed it with SAS and then converted it into the WinDEM software. Although the IEA only required a 5% verification rate, South Africa's data were 100% verified. Data were cleaned and cross-checked according to IEA requirements.

All data recordings and national adaptations of international variables were recorded in the National Adaptation forms and submitted to the Data Processing Center (DPC). The DPC subsequently performed more consistency checks and the final data were released during September 2007.

3.4 Summary

The IEA stipulates technical standards for conducting international studies. Rigorous standards directed all aspects of the study, from the curriculum framework and research questions to the quality assurance of the data and the reporting. These pertain especially to sampling as it is critical for the design of the study and the reporting thereof. The data collection phase, given the extent of the country and the remote position of some of the rural schools, presented challenges for the South African researchers.

However, the biggest challenge presented was that of contextualising and translating the items into the 10 additional official languages. Independent translation verifiers were assigned to quality-assure and verify translated instruments. Although no translation is without problems, the South African study was acknowledged internationally for the quality of translation procedures in PIRLS 2006.

CHAPTER 4

SOUTH AFRICAN LEARNERS' PERFORMANCE IN READING ACHIEVEMENT

Elsie Venter and Sarah Howie

PIRLS 2006 is an international comparative study. The performance of the South African Grade 4 and 5 learners is compared to the performance in reading literacy of participating countries. This chapter explores the learners' achievement scores against a few selected reference countries and in terms of the variables gender, test language and home language.

4.1   South Africa's Overall Performance compared Internationally

4.1.1   International Results

Figure 4.1 presents the distributions of achievement results of all 45 education systems. The participants are listed in descending order of average reading achievement. An average of 500 points with a standard deviation of 100 points was obtained through the use of Item Response Theory scaling and the participants' achievement is depicted relative to this international mean.

The figure shows the ranges in performance for the middle half of the learners (25th to 75th percentiles) and the extremes (5th and 95th percentiles). By the fourth year of schooling, albeit to differing degrees, every participating country in PIRLS 2006 had a percentage of learners who were good readers and also a percentage of learners who exhibited difficulties in reading. Approximately a 250-point difference existed in a majority of countries between the lowest and highest achievers (5th and 95th percentiles). According to Mullis et al., (2007, p.38), "the range in achievement in most countries is comparable to the difference in average achievement (263 points) between the highest performing country, the Russian Federation, and the lowest performing country, South Africa[2]".

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[2] Mullis et al. (2007:29) report that South Africa and Luxembourg, because of the "challenges of multiple native languages and languages of instruction", tested the fifth grade, even though the learners were older.

Countries	Reading Achievement Distribution		Average Scale Score	Years of Formal Schooling*	Average Age	Human Development Index**
2a Russian Federation		●	565 (3.4)	4	10.8	0.797
Hong Kong SAR		●	564 (2.4)	4	10.0	0.927
2a Canada, Alberta		●	560 (2.4)	4	9.9	0.950
Singapore		●	558 (2.9)	4	10.4	0.916
2a Canada, British Columbia		●	558 (2.6)	4	9.8	0.950
Luxembourg		●	557 (1.1)	5	11.4	0.945
2a Canada, Ontario		●	555 (2.7)	4	9.8	0.950
Italy		●	551 (2.9)	4	9.7	0.940
Hungary		●	551 (3.0)	4	10.7	0.869
Sweden		●	549 (2.3)	4	10.9	0.951
Germany		●	548 (2.2)	4	10.5	0.932
† Netherlands		●	547 (1.5)	4	10.3	0.947
†2a Belgium (Flemish)		●	547 (2.0)	4	10.0	0.945
2a Bulgaria		●	547 (4.4)	4	10.9	0.816
2a Denmark		●	546 (2.3)	4	10.9	0.943
Canada, Nova Scotia		●	542 (2.2)	4	10.0	0.950
Latvia		●	541 (2.3)	4	11.0	0.845
†2a United States		●	540 (3.5)	4	10.1	0.948
England		●	539 (2.6)	5	10.3	0.940
Austria		●	538 (2.2)	4	10.3	0.944
Lithuania		●	537 (1.6)	4	10.7	0.857
Chinese Taipei		●	535 (2.0)	4	10.1	0.910
Canada, Quebec		●	533 (2.8)	4	10.1	0.950
New Zealand		●	532 (2.0)	4.5 - 5.5	10.0	0.936
Slovak Republic		●	531 (2.8)	4	10.4	0.856
† Scotland		●	527 (2.8)	5	9.9	0.940
France		●	522 (2.1)	4	10.0	0.942
Slovenia		●	522 (2.1)	3 or 4	9.9	0.910
Poland		●	519 (2.4)	4	9.9	0.862
Spain		●	513 (2.5)	4	9.9	0.938
2b Israel		●	512 (3.3)	4	10.1	0.927
Iceland		●	511 (1.3)	4	9.8	0.960
PIRLS Scale Avg.			**500**	–	–	–
Moldova, Rep. of			500 (3.0)	4	10.9	0.694
Belgium (French)			500 (2.6)	4	9.9	0.945
‡ Norway			498 (2.6)	4	9.8	0.965
Romania		⊖	489 (5.0)	4	10.9	0.805
2a Georgia		⊖	471 (3.1)	4	10.1	0.743
Macedonia, Rep. of		⊖	442 (4.1)	4	10.6	0.796
Trinidad and Tobago		⊖	436 (4.9)	5	10.1	0.809
Iran, Islamic Rep. of		⊖	421 (3.1)	4	10.2	0.746
Indonesia		⊖	405 (4.1)	4	10.4	0.711
Qatar		⊖	353 (1.1)	4	9.8	0.844
Kuwait		⊖	330 (4.2)	4	9.8	0.871
Morocco		⊖	323 (5.9)	4	10.8	0.640
South Africa		⊖	302 (5.6)	5	11.9	0.653

100   200   300   400   500   600   700

Percentiles of Performance
5th   25th   ▮ 75th   95th
95% Confidence Interval for Average (±2SE)

● Country average significantly higher than PIRLS scale average

⊖ Country average significantly lower than PIRLS scale average

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

* Represents years of schooling counting from the first year of ISCED level 1.

** Taken from United Nations Development Programme's *Human Development Report 2006*, p. 283-286, except for Chinese Taipei taken from Directorate General of Budget, Accounting and Statistics, Executive Yuan, *R.O.C. Statistical Yearbook 2005*. Data for Belgium (Flemish) and Belgium (French) are for the entire country of Belgium. Data for England and Scotland are for the United Kingdom.

† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

NOTE: See Exhibit C.1 for percentiles of achievement in reading.

Figure 4.1   Distribution of Reading Achievement

PIRLS SA 2006

Only 10 education systems fell below the international mean, including South Africa. The top performing countries, the Russian Federation, Singapore, Luxembourg and Italy represent diverse regions of the world. A mere 55 points represents the difference between all the countries above the international mean. However, there is a 187 points difference between the countries/systems below the mean. The majority of countries tested learners who had had four years of schooling. The exceptions were Luxembourg (which tested Grade 5 children in a second language for 97% of children), New Zealand, Scotland, Trinidad and Tobago, and South Africa. The youngest learners were tested in Italy (average age 9.7 years) who despite this, ranked in the top five countries and the oldest learners were the South African learners. The highest Human Development Index was found in Iceland (.960) and the lowest in Morocco (.640).

4.1.2   Overall Performance compared to Reference Countries

South Africa's average achievement in reading literacy at the Grade 4 and 5 levels is depicted in Figure 4.2 relative to that of certain reference countries. The reference countries were chosen for specific reasons. To elaborate, Morocco was the only other African country taking part in PIRLS 2006. Hong Kong SAR is a former British colony and faces a language issue having predominately English second language learners. New Zealand and The Netherlands, like South Africa, both engage in outcomes based education. The Russian Federation achieved the top score in PIRLS 2006, whilst Sweden, Luxembourg and Singapore were also top performers and both offer education in more than two languages. England and the United States of America were chosen for their general educational interest. Kuwait, Iran and Trinidad and Tobago were amongst the lowest performers in the study and face similar challenges in terms of their educational contexts.

South Africa achieved the lowest score of all 45 education systems. There was a 49 point difference between the two South African grades tested. The South African Grade 4 learners achieved an average score of 253 (SE=4.6) and the Grade 5 learners, an average score of 302 (5.6). It is evident from Figure 4.2 that both these scores fall far below the fixed international average of 500. The only two countries that were close to 300 are Morocco (323, 5.9) and Kuwait (330, 4.2). Both these countries tested in Arabic, a language which is different to the local dialect spoken in more than 50% of homes in these countries. Both New Zealand (532, 2.8) and The Netherlands (547, 4.4) performed better than the international average.
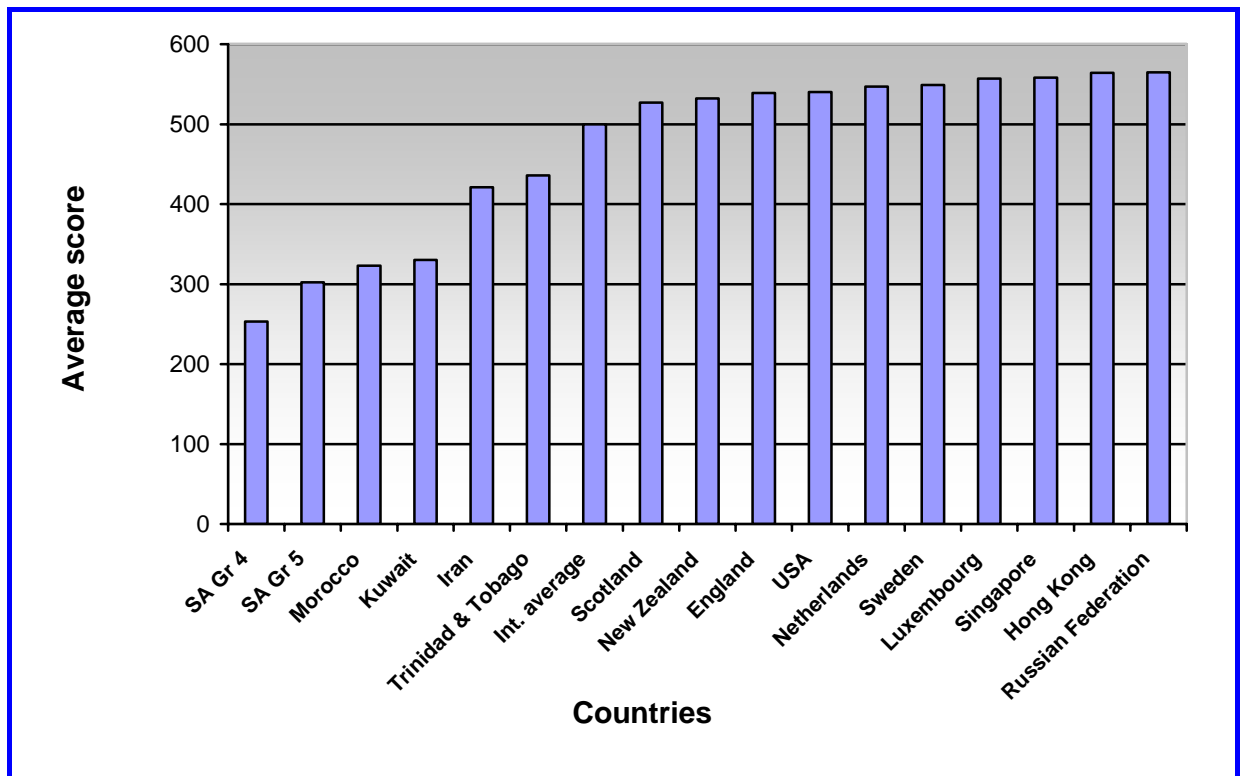
Figure 4.2 South African Learners' Overall Performance compared to certain Reference Countries

4.2   South Africa's Overall Performance Nationally by Test Language

The test was administered in all 11 official languages. The sample was designed specifically for the analysis per language, which significantly inflated the size of the sample. In this section, the analysis of the results is presented by test language combined with the performance by gender, home language and reading purpose.

4.2.1   Performance by Test Language and Gender

Internationally, girls out-performed boys in every instance. Internationally, Grade 4 girls scored at 509 (0.6) and the boys attained an average score of 492 (0.6). This was also the case in South Africa. In South Africa, Grade 5 girls had an average achievement score of 319 (6.3), scoring 36 points more than the Grade 5 boys (283, 5.5). The difference between the South African Grade 4 girls' average achievement score of 271 (5.0) and the average achievement of 235 (5.0) of the boys in Grade 4 is also 36 points. This gender difference is amongst the highest in the world.
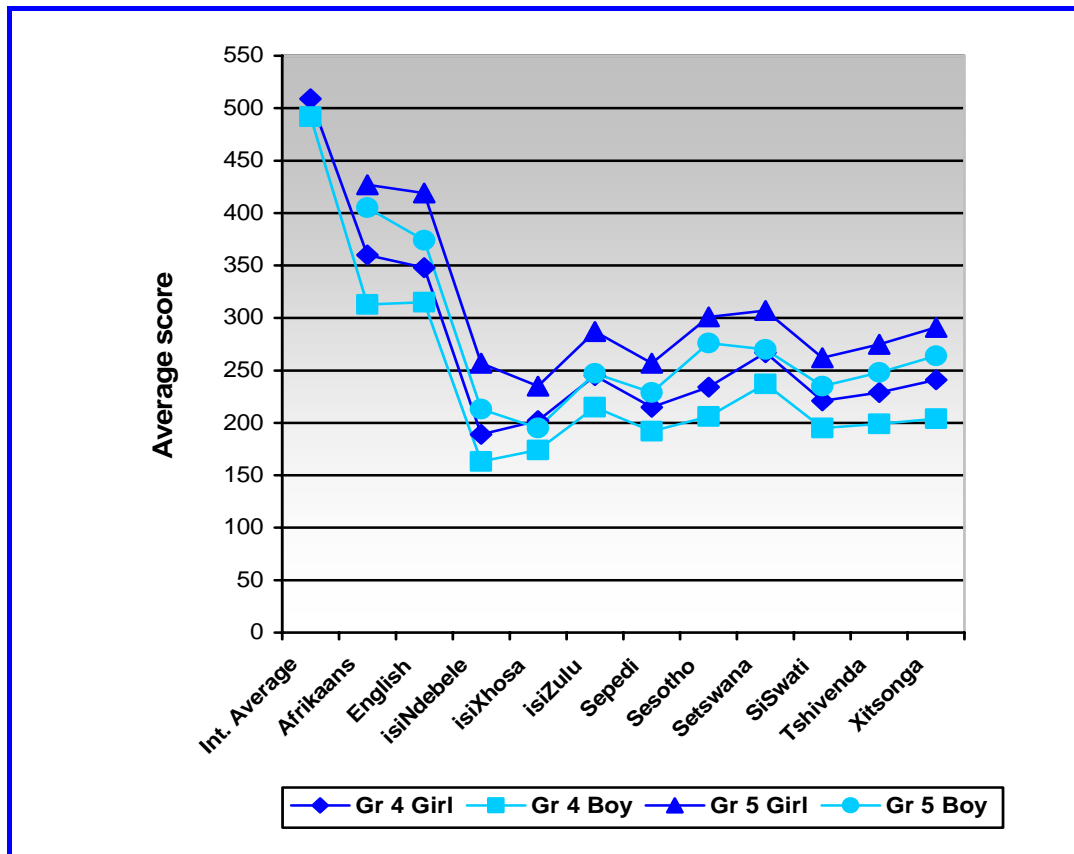
Figure 4.3   Average achievement according to Test Language and Gender per Grade

In an analysis per language of all the 11 official languages, the learners who wrote the assessment in Afrikaans achieved the highest scores, with the Grade 5 girls achieving an average of 427 (11.6). It is important to note though, that this average score is 81 score points below the international average for the Grade 4 girls. Learners writing the assessment in English achieved the next highest scores. It is also noteworthy that the top average performance in any African language was achieved by Grade 5 girls in Setswana (307, (12.2)). However, this score is below that of the lowest performers in the English group, namely Grade 4 boys who achieved an average reading literacy score of 315 (18.4).

A pattern emerges when analysing the South African data by the 11 official languages and gender (depicted in Figure 4.3). In most cases, the exception being isiXhosa, a pattern emerges that shows a consistent progression in achievement from Grade 4 to Grade 5 with the lowest performers being the Grade 4 boys, and the highest being the Grade 5 girls. In isiXhosa, the Grade 4 girls marginally outperformed the Grade 5 boys.

4.2.2   Performance by Test Language and Home Language

In order to further disentangle the impact of different languages in reading literacy achievement, learners' home languages were also considered. As a result of the change in migration patterns in South African schools over the past 15 years, many Black African vernacular learners attend a school where English is the medium of instruction, and therefore, they receive tuition in a second language. An analysis was done by test

language and by grade for two groups: the first being where the test language and the home language coincided; the second being where the home language was different to the test language. Figure 4.4 represents a comparison of the performance of the learners whose test language coincided with home language and learners whose test language differed from the language they primarily speak at home.
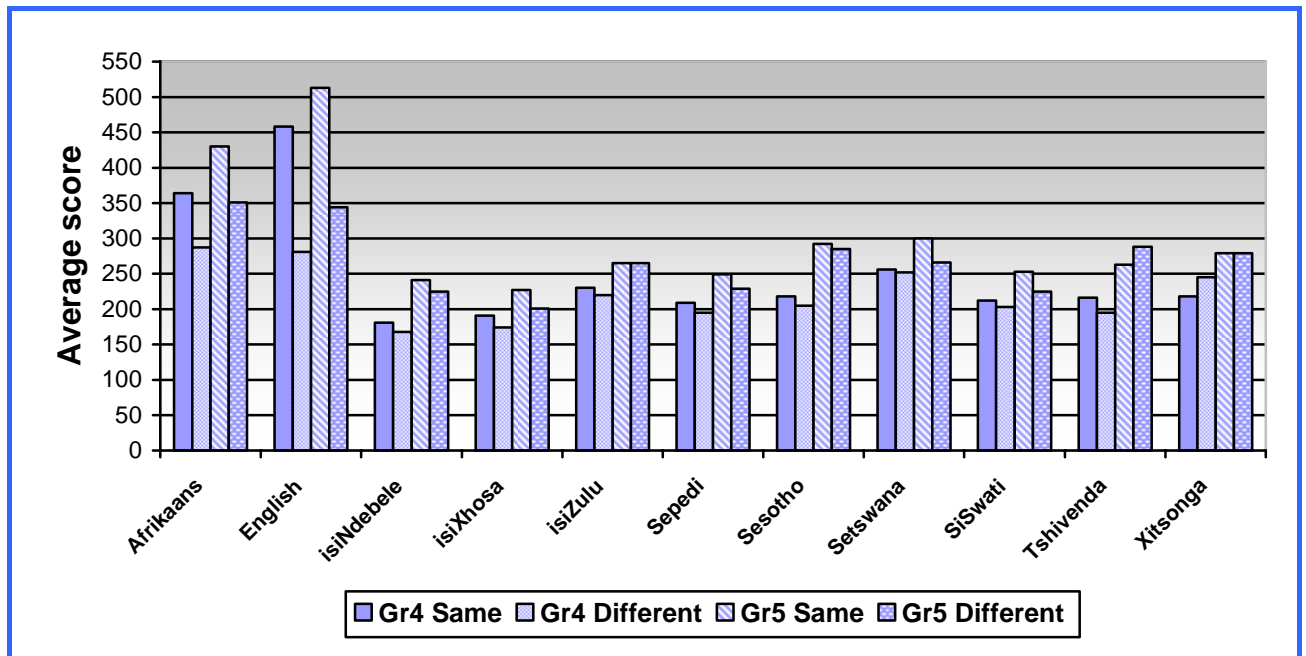
Figure 4.4   Learners' Performance and Test Language correspondence to Home Language by Grade

English home language learners, who wrote the assessment in English, are the best-performing group with an average achievement score of 458 (19.0) in Grade 4 and 513 (13.6) in Grade 5. Afrikaans home language learners, who wrote the test in their home language, achieved an average score of 364 (13.5) in Grade 4 and 430 (14.1) in Grade 5. Second language English or Afrikaans learners also achieve higher than learners learning in other official languages.

Where the test was administered in English and in Afrikaans, the difference between first and second language learners was greatest. The distinction between home language as test language and home language, different to test language, was much smaller amongst the African languages. In addition, a lower percentage of learners, who wrote the assessment in an African language, do not speak the same language at home. There is no substantial difference in achievement when this occurs. However, Grade 5 Tshivenda learners obtained higher scores when they wrote in a second language and the situation is reversed in that the test language, correspondent to the home language, did not provide the learners with any advantage.

4.2.3   Performance by Reading Purpose and Test Language

The assessment framework of PIRLS 2006 (Mullis et al., 2006) included two umbrella purposes for reading:

❑ Reading for literary experience; and

❑ Reading to acquire and use information.

The literary texts were fictional stories where learners could engage with the events, character's actions and feelings, setting, and ideas as well as the language itself. The informational passages dealt with aspects of the real universe, and covered a variety of content and organisational structures. In addition to prose, each one involved some variety in format, by including features such as photographs, illustrations, text boxes, maps, and diagrams (Mullis et al., 2007).

Figure 4.5 depicts the average achievement in reading for literary purposes and in reading for informational purposes for Grade 4 and 5 learners and also according to test language[3] (Mullis et al., 2007).
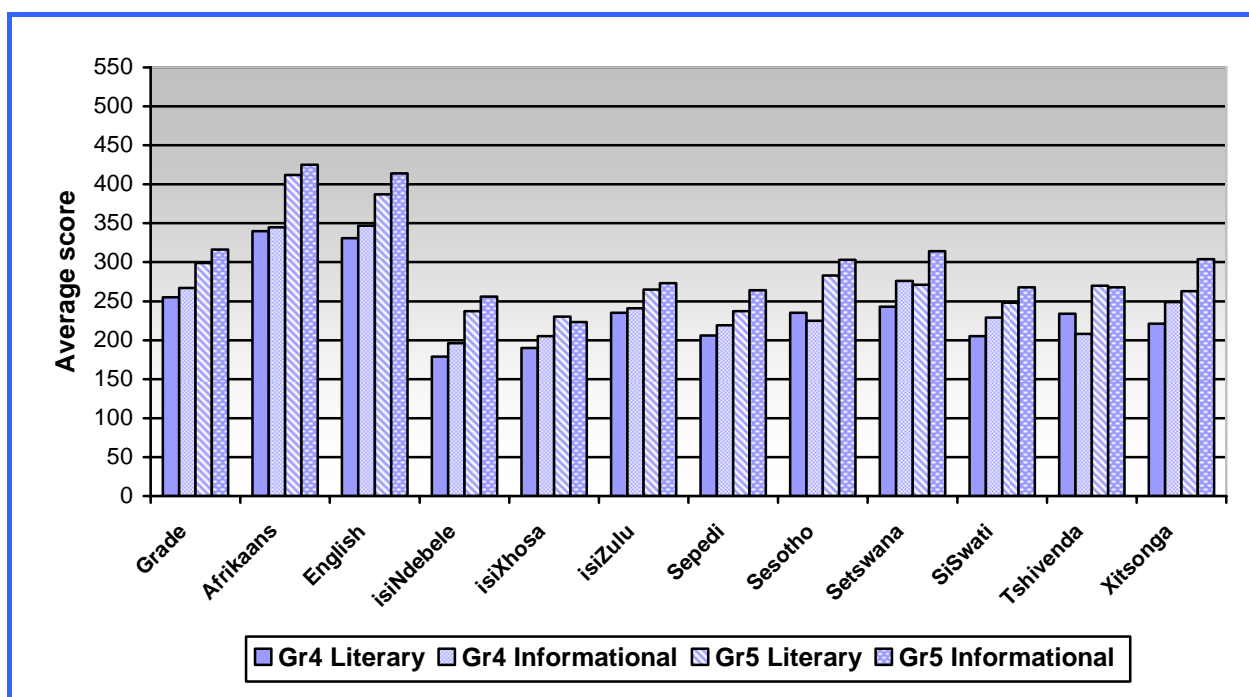
Figure 4.5   Reading Purposes by Grade and Test Language

In general, South African learners performed better on the scale for informational purpose, and, this formed a distinct pattern in both grades and the test languages. The exceptions to this pattern are in isiXhosa, Sesotho, Setswana and Tshivenda. Setswana, Sesotho and Xitsonga are the only test languages (apart from Afrikaans and English) where an achievement score for the informational purpose of higher than 300 points was attained, although only at Grade 5 level.

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[3] The two numerical scale scores are not directly comparable, since they represent different underlying constructs, and the assessments may have different difficulty levels. However, to allow comparison of the relative performance of each grade and test language group for each purpose, the international average for each purpose was scaled to be 500, the same as the overall international average. This makes it possible to examine relative strengths and weaknesses of countries by comparing the relative positions of the cohorts on the two scales.

4.3   Summary

South African learners achieved the lowest score of the 45 participating education systems. The South African Grade 5 learners did not reach the international average score of 500. There appears to be significant progression across all languages as the scores in Grade 5 are significantly higher than Grade 4 implying that learners may have made considerable progress since Grade 4, albeit on an assessment aimed at Grade 4 learners. PIRLS 2006 is a cross-sectional study involving two different cohorts, therefore, some caution is needed in the interpretation of the results. What is clear is that there is a significant difference in performance between the two grades.

CHAPTER 5

SOUTH AFRICA'S PERFORMANCE ON INTERNATIONAL BENCHMARKS

Elsie Venter, Surette van Staden and Cecilia du Toit

The PIRLS 2006 assessment measures learners' reading achievement on a variety of literary and informational reading passages. Questions about the reading passages each target selected processes of comprehension. These processes, as stated before, include learners' abilities to:

❑ Focus on and retrieve explicitly stated information

❑ Make straightforward inferences

❑ Interpret and integrate ideas and information

❑ Evaluate and examine content, language and textual elements

The aim of benchmarks is to provide fairly detailed qualitative descriptions of learners' performance on a scale in relation to each of the questions asked. With the international average set at 500, the range of performance shown by learners is represented by four benchmarks. The *Advanced International Benchmark* is set at 625, followed by the *High International Benchmark* at 550. The *Intermediate International Benchmark* is set at 475 with the *Low International Benchmark* set at 400. The descriptions of each of these benchmarks are cumulative, meaning that learners who were able to reach the higher benchmarks can also demonstrate the knowledge and skills expected at the lower benchmarks.

It should be noted that reading performance in the PIRLS 2006 assessment was influenced by the level of sophistication of the comprehension that is required, the length and complexity of the text, and the likelihood that learners are familiar with the reading content and structure. The PIRLS 2006 texts varied in length, syntactic complexity, vocabulary use, abstractness of ideas, physical layout and organisational structure. The benchmarks were developed on the basis of these particular texts and are intended to explain differences in achievement on the PIRLS 2006 assessment. The descriptions provided by each benchmark, therefore, do not encompass all reading situations encountered by fourth-grade learners, but should only be interpreted in light of the PIRLS 2006 assessment.

5.1 Performance by Language on International Benchmarks

When looking at the processes of comprehension as assessed by PIRLS 2006, it would appear that focusing on and retrieving explicitly stated information would be an easier task to accomplish than interpreting and integrating ideas and information. The four comprehension skills, therefore, seem to follow a hierarchy from easiest to more difficult, requiring the learner to perform increasingly complex reading tasks. However, it is not

always the case that interpretive questions are by default more difficult than tasks that merely require the learner to focus on and retrieve information explicitly stated in the text. Comprehension processes necessarily may vary for each learner according to their experiences. For example, understanding vocabulary use may be explicit for one learner, while interpretation is more explicit for another. Nevertheless, the PIRLS 2006 international report states clearly that the descriptions for comprehension processes are based on what the PIRLS 2006 Reading Development Group (RDG) believed to be true for most learners when attempting to answer a question.

Achievement on international benchmarks is put into context by the PIRLS 2006 International report. In general, countries with the highest average achievement had greater percentages of learners reaching each benchmark than countries who on average had lower achievement. For example, learners from the highest achieving countries (like the Russian Federation and Singapore) were almost all able to reach the Low International Benchmark with between 97 and 98% doing so, and a further 86 to 90% of their learners being able to reach the Intermediate International Benchmark. Three-fifths of learners from these countries (between 58 and 61%) were able to reach the High International Benchmark, while nearly one-fifth of learners from these countries (19%) reached the Advanced International Benchmark. In stark contrast only 1 to 2% of learners from lower achieving countries (like Iran and Trinidad and Tobago) were able to reach the Advanced International Benchmark. Only 2% of South African Grade 5 learners were able to attain this.

The following sections will provide detail on South African learner reading achievement per language on each of the four benchmarks. Figure 5.1 is a representation of the South African learners' attainment of the international benchmarks for reading achievement.

5.1.1   Achievement at the PIRLS 2006 Low International Benchmark

The *Low International Benchmark* is set at 400 points on the PIRLS reading achievement scale and describes basic reading skills and strategies. Learners who are able to reach the Low International Benchmark are generally able to recognise, locate and reproduce information that was explicitly stated in texts, especially if the information was placed at the beginning of the text. Learners who are able to reach the Low International Benchmark also show some success in answering questions related to making straightforward inferences.

The international median for learners that reached the low benchmark is 94% with 98% (standard error = 0.5) of learners in the top performing country, the Russian Federation, reaching this benchmark. In South Africa, 13% (0.5) of Grade 4 and 22% (0.2) of Grade 5 learners reached the Low International Benchmark.

Figure 5.1 shows percentages for reading achievement at the low benchmark as obtained for each of the language groups in South Africa.

Countries	Percentages of Students Reaching International Benchmarks	Advanced (625)	High (550)	Intermediate (475)	Low (400)
International Median		7	41	76	94
Grade 4		1 (1.5)	3 (2.0)	7 (1.1)	13 (0.5)
Grade 5		2 (1.1)	6 (1.6)	13 (0.8)	22 (0.2)
Gr4 Afrikaans		1 (1.4)	8 (2.3)	22 (1.8)	37 (1.0)
Gr5 Afrikaans		5 (1.3)	17 (1.6)	35 (1.0)	55 (0.3)
Gr4 English		3 (1.1)	10 (1.9)	23 (1.1)	36 (0.5)
Gr5 English		5 (0.9)	18 (1.3)	36 (1.1)	52 (0.7)
Gr4 isiNdebele		0 (0.6)	0 (0.8)	0 (0.5)	1 (0.2)
Gr5 isiNdebele		0 (1.0)	0 (1.6)	0 (0.8)	4 (0.2)
Gr4 isiXhosa		0 (0.9)	0 (1.8)	0 (1.4)	1 (0.5)
Gr5 isiXhosa		0 (1.4)	0 (1.8)	0 (1.3)	4 (0.4)
Gr4 isiZulu		0 (0.7)	0 (1.0)	1 (1.0)	5 (0.6)
Gr5 isiZulu		0 (1.0)	0 (1.2)	1 (1.0)	8 (0.4)
Gr4 Sepedi		0 (1.2)	0 (2.0)	0 (1.4)	2 (0.6)
Gr5 Sepedi		0 (0.8)	0 (1.4)	1 (1.0)	4 (0.4)
Gr4 Sesotho		0 (0.9)	0 (1.6)	0 (0.8)	2 (0.3)
Gr5 Sesotho		0 (0.9)	0 (1.5)	2 (1.0)	11 (0.4)
Gr4 Setswana		0 (1.0)	0 (1.3)	1 (1.3)	6 (1.2)
Gr5 Setswana		0 (0.8)	0 (1.4)	3 (1.4)	14 (0.8)
Gr4 SiSwati		0 (0.8)	0 (1.5)	0 (1.2)	1 (0.4)
Gr5 SiSwati		0 (0.6)	0 (1.5)	1 (1.3)	5 (0.9)
Gr4 Tshivenda		0 (0.9)	0 (1.5)	0 (1.1)	3 (0.4)
Gr5 Tshivenda		0 (0.6)	0 (1.5)	1 (0.9)	8 (0.2)
Gr4 Xitsonga		0 (0.7)	0 (1.3)	0 (1.0)	3 (0.4)
Gr5 Xitsonga		0 (0.5)	0 (1.2)	1 (1.1)	9 (0.7)

Percentage of students at or above Advanced Benchmark
Percentage of students at or above High Benchmark
Percentage of students at or above Intermediate Benchmark
Percentage of students at or above Low Benchmark

Advanced Benchmark = 625
High Benchmark = 550
Intermediate Benchmark = 475
Low Benchmark = 400

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.
NOTE: The International Median does not include the results from the Canadian provinces.

Figure 5.1   Percentages of South African Learners reaching the PIRLS 2006 Benchmarks of Reading Achievement

At Grade 4 level, 37% (1.0) of Afrikaans learners and 36% (0.5) of English learners reached the Low International Benchmark. These percentages rise steadily to 55% (0.3) and 52% (0.7) respectively for Grade 5 learners. Across the African languages, the percentage of learners who reach this benchmark is significantly lower, with only 1% (0.2, 0.4) of isiNdebele and SiSwati learners reaching this benchmark at Grade 4 level with a slight increase to 4% (0.2) and 5% (0.9) at Grade 5 level. However, 11% (0.4) of Sesotho learners and 14% (0.8) of Setswana learners in Grade 5 reached the lowest international benchmark. It is heartening to see that, despite low percentages of learners who are able to reach the Low International Benchmark, a steady rise in percentages from Grade 4 to Grade 5 is apparent for all the languages. What is of concern is that almost half of the learners tested in English and Afrikaans and more than 80% of learners tested in African languages, have not attained "basic reading skills and strategies".

5.1.2   Achievement at the PIRLS 2006 Intermediate International Benchmark

The PIRLS 2006 *Intermediate International Benchmark* is set at 475 points and represents learners with some reading proficiency. With regards to reading stories, learners are able to understand the plot at a literal level and are able to make some inferences and connections across texts.

Internationally, the median percentage of learners reaching the intermediate benchmark is 76%, and, in The Russian Federation, 90% of their learners reached this benchmark. Overall, 7% (1.1) of Grade 4 learners in South Africa reached the intermediate benchmark. For Grade 5, 13% (0.8) of learners reached this benchmark.

Afrikaans and English Grade 4 learners were able to reach the Intermediate International Benchmark in 22% (1.8) and 23% (1.1) of cases respectively. Only 1% of isiZulu and Setswana Grade 4 learners were able to reach this benchmark, with the remaining learners from African languages not being able to reach it at all at Grade 4 level. Only at Grade 5 level are 1% of Sepedi, Xitsonga, SiSwati and Tshivenda learners able to reach this benchmark, followed by 2% of Sesotho learners. For isiNdebele and isiXhosa, no learner is able to reach the intermediate benchmark in Grade 5. In conclusion between 78% and 100% of the learners tested across the 11 languages would not have attained some reading proficiency.

5.1.3   Achievement at the PIRLS 2006 High International Benchmark

An average score of 550 points describes the *High International Benchmark* where learners are considered to be competent readers. Tasks learners can perform at this benchmark include the ability to retrieve significant details embedded across the text and the ability to provide text-based support for inferences. In terms of informational texts, learners are able to make inferences and connections and can navigate their way through text by making use of organisational features. At this level, learners have the ability to recognise main ideas, some textual features and elements, and are able to begin to integrate ideas and information across texts.

Internationally, 41% of learners reached the high benchmark and 61% (2.0) of the Russian Federation learners reached this benchmark. Overall, the percentage of learners on the high benchmark for South African learners is at 3% (2.0) for Grade 4 and 6% (1.6) for Grade 5. Figure 6.1 provides information on reading achievement on the High International Benchmark per language.

A total of 8% (2.3) of Afrikaans and 10% (1.9) of English learners are able to reach the High International Benchmark at Grade 4 level. This percentage increased in Grade 5 to 17% (1.6) of Afrikaans learners and 18% (1.3) of English learners. Of note is the fact that none of the African language learners were able to reach the High International Benchmark either at Grade 4 or at Grade 5 level.

The findings suggest that at most, 17 to 18% of learners in only two languages in South Africa, would be considered competent readers. Of grave concern is that none of those tested in African languages could be considered as competent readers.

5.1.4   Achievement at the PIRLS 2006 Advanced International Benchmark

At the *Advanced International Benchmark,* learners achieve a score of 625 points and are able to respond fully to the PIRLS 2006 assessment. This means that learners 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.

The median percentage of learners reaching the advanced benchmark internationally is 7% and, in the Russian Federation, 19% (1.5) of the learners reached this benchmark. Only 1% (1.5) of learners in Grade 4 and 2% (1.1) of learners at Grade 5 reached the Advanced International Benchmark in South Africa. The picture painted by the Advanced International Benchmark is very similar to that of the High International Benchmark where none of the African language learners are able to reach this benchmark. Again, Afrikaans and English learners are the only language groups to reach the Advanced International Benchmark at 1% (1.4) and 3% (1.3) respectively at Grade 4 level. For both languages, these percentages increase to 5% (0.9, 1.3) at Grade 5 level.

5.2   Summary

The benchmarks provide valuable insights into the performance of learners in the assessment. These descriptions provide a better understanding of what children can do at a variety of performance levels.

The disparity in terms of the vast percentages of children in other countries reaching the top two benchmarks and those from South Africa clearly indicates that substantial intervention is needed to improve South African learners' reading literacy.

Only 17 to 18% of English and Afrikaans learners in either grade could reach the High and Advanced International Benchmarks, rendering this small group the only South African learners who could be considered competent readers. The majority of learners, more than half of the English and Afrikaans speaking learners and over 80% of African language speakers in South Africa, do not even reach the lowest international benchmark, leaving these learners without basic reading skills and strategies to cope with academic tasks. Exemplary items on each benchmark should be scrutinised to gain some understanding of what the South African learners can achieve and what, in terms of reading, is still lacking. Curriculum outcome expectations should be a specific target for scrutiny in terms of applicability for the promotion of advancement of reading skills.

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CHAPTER 6

LITERACY RELATED ACTIVITIES AT HOME

Elizabeth Archer and Lisa Zimmerman

The Coleman report of 1966 highlighted the important role of home background in relation to achievement (Coleman, Campbell, Hobson, McPartland, Mood, Weinfield & Yorkl, 1966). The home most often provides initial exposure to language and literacy related activities and is recognised as a context, apart from the classroom, where children gain important foundational exposure to language and literacy tasks (Mullis et al., 2006).

In this chapter, selected findings regarding the home environment are highlighted. Specifically, findings associated with parents' responses to the PIRLS parental questionnaire are explicated. This parent questionnaire sought information about the kinds of literacy activities parents undertook with their children prior to schooling, reading resources available at home, parents' employment situations, their personal levels of educational qualification, their attitudes towards reading, the amount of time they themselves devoted to reading and languages spoken in the nuclear family unit.

6.1   Early Home Literacy Activities

Based on parents' responses to the frequency of the following activities they engage in with their child prior to entry into primary school: read books; tell stories; sing songs; play with alphabet toys (e.g. blocks with letters of the alphabet); play word games; and read aloud signs and labels, an index of Early Home Literacy Activities was calculated. Parents of 49% (0.8) of the Grade 4 and 48% (0.9) of the Grade 5 learners who participated in PIRLS 2006 indicated high engagement in early home literacy activities with their children prior to their formal schooling. This high frequency of home literacy activities is related to a higher mean overall performance in the PIRLS assessments for these learners (272, 6.5) at Grade 4 and (326, 8.0) at Grade 5, in comparison to the mean performance of their peers, whose parents had low involvement in literacy activities with their children during their preschool years (245, (5.3) at Grade 4 and 276, (5.3) at Grade 5).

6.2   Books in the Home

Fewer than 50% of South African learners in PIRLS 2006 have access to more than 10 books at home, compared to approximately 78% internationally. Furthermore, there seems to be a relationship between the numbers of books at home and the achievement of the learner. Learners with more books achieved higher scores (321 (17.0) at Grade 4 and 360 (16.4) at Grade 5 for learners with access to 51 to 100 books) in comparison to those who did not (239 (3.9) at Grade 4 and 285 (4.2) at Grade 5 for those with access to less than 10 books). The value of learners having access to a large variety of children's literature at home is also exemplified by the higher mean overall performances of learners in the PIRLS assessments in correspondence to the increasing amounts of books that

their parents indicated as being accessible to them. This relationship was also found internationally.

6.3 Parental Education

Parents of 26% (0.9) of Grade 4 and 26% (1.2) of Grade 5 learners did not have a basic school exit qualification in comparison to 8% (0.1) internationally. Another 13% (0.6) of Grade 4 learners and 14% (0.7) of Grade 5 learners' parents never matriculated. Internationally, 25% (0.2) of learners had parents who reported having completed degree qualifications or higher. South African learners (16% (1.2) at Grade 4 and 17% (1.4) at Grade 5) whose parents reported having degree qualifications or higher had better overall mean scores (378 (14.2) at Grade 4 and 450 (14.3) at Grade 5) than learners whose parents had not completed degrees. As an illustration of the difference in scores, for the 26% (0.9) (1.2) of Grade 4 and 5 learners with parents who reported only having completed some primary school, lower secondary school or having completed no school at all, their mean scores are 218 (4.1) at Grade 4 and 260 (5.2) at Grade 5.

6.4 Parental Employment

Parents of Grade 4 and 5 learners were asked to indicate the nature of their employment. Roughly one-fifth of the Grade 4 (20%, 1.1) and Grade 5 (22%, 1.2) learners had parents who both worked on a full-time basis. Internationally, 36% (0.2) had parents who were full-time workers. The mean overall performances of these learners were higher in comparison to learners in families where only one parent was working full-time for pay, or where both parents worked less than full-time for pay or in other situations. Learners of parents who worked fewer hours or less frequently also achieved lower scores.

6.5 Parental Reading

There was a similar distribution of learners at both Grade 4 and Grade 5 in terms of their parents' personal reading activities at home. The estimated amount of reading that parents did per week at home, be it *less than an hour a week*, *between 1 and 5 hours per week* or *more than five hours per week*, appears to be related to learners' overall performance in that learners of parents who reported spending an hour or more reading per week had higher performances than those whose parents spent less than an hour a week reading. Internationally 37% (0.2) of learners had parents who reported reading more than five hours per week which is consistent with local reports reflecting 34% (0.6) of Grade 4 learners and 36% (0.7) of Grade 5 learners.

6.6 Parents' Beliefs about Reading

Parents and other family members impart their own beliefs about reading which in turn shape how children are exposed to and experience text (Mullis et al., 2006). Parents were asked about their beliefs with regard to reading and an index was compiled. Thirty-five percent (1.0) of Grade 4 and 36% (1.1) of Grade 5 learners whose parents had a high regard for reading, had mean performances 73 points higher at Grade 4 level and 82 points higher at Grade 5 level than their peers whose parents' attitudes towards reading were recorded as being less positive in nature.

6.7 Parents' Language at Home

Over three-quarters of the learners had at least one parent who spoke the language of the PIRLS assessment they completed. Despite this, 22% (1.3) of Grade 4 learners and 21% (1.4) of Grade 5 learners had parents who did not speak the language in which they completed the PIRLS assessments. Intriguingly, whether a parent spoke the language of the test or not, hardly appeared to produce any differences in mean learner performances for the learners with parents divided into these two categories.

6.8 Summary

Despite the inclusion of only a few highlights in this chapter, some early indications of relationships appear, although as yet untested. South African learners with educationally advantaged parents, dual-income parents or parents with access to more literary resources for learners appear to have a better chance at succeeding in achieving literacy than their less resourced peers. Furthermore, parental engagement in educationally stimulating activities prior to their child's entrance into formal schooling would appear to be beneficial for their later scholastic performance in reading literacy. Higher parental regard for reading activities and more interaction with text for their own personal reading purposes also seem to have a positive influence on learner performance. Lastly, there is hardly any variation in mean learner performance when the language of testing used either does or does not correspond with the language of the home, suggesting a strong mediating role by the school.

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CHAPTER 7

LEARNERS' READING ATTITUDES, SELF-CONCEPT AND OUT OF SCHOOL ACTIVITIES

Surette van Staden and Sarah Howie

The types of literacy activities learners engage in at home and at school may encourage and reinforce positive reading attitudes. The establishment of positive feelings and attitudes learners should foster for reading is included as an educational outcome in most reading curricula. Reading broadens learners' knowledge, comprehension skills and experiences of different types of literature, and, learners who enjoy reading, are much more likely to engage in reading related activities more frequently.

In this chapter, findings related to learners' attitudes to reading, learners' self-concept and their out-of-school activities as derived from the learner questionnaires they completed, are presented.

7.1   Trends in Learners' Attitudes towards Reading

Learners responded to a number of questions in the Learner Questionnaire in order to ascertain their attitudes towards reading (in the form of a 4-point Likert scale ranging from *disagree a lot* to *agree a lot*.) Internationally, Grade 4 learners in 2006 generally had positive attitudes towards reading. In line with international patterns, South African learners' attitudes toward reading (for both Grade 4 and Grade 5) were moderately positive to very positive. Learners with very positive attitudes toward reading tended to achieve higher scores (average achievement of 316 (1.0) for Grade 4 and 356 (0.9) for Grade 5 respectively) in the reading assessment tasks of PIRLS 2006 than those whose attitudes were scored as more negative.

7.2   Trends in Learners' Reading Self-Concept

Based on responses to a number of questions in the learner questionnaire, an index with three categories was devised (high, medium and low) to provide indications of learners' thoughts and feelings regarding themselves as readers. Internationally, learners generally regarded themselves as good to moderately good readers. On average internationally, almost half of the learners (49%) were at the high level for reading self-concept. South African learners are in accordance with this pattern. For both Grade 4 and Grade 5 learners, the majority indicated high (meaning positive) to medium reading self-concepts with 95% of the Grade 4 and Grade 5 learners being between the high and medium category. There is, therefore, a very small percentage of learners who report having a low self-concept. Learners, reporting generally high reading self-concepts, on average achieved substantially higher scores in the PIRLS 2006 reading assessment. Conversely, learners who responded negatively to statements of reading self-concept, on average achieved much lower scores than their high and medium ranking counterparts.

In the next section, findings related to the learners out of school activities on reading habits are presented.

7.3 Learners' Out of School Activities related to Reading

7.3.1 Learners' Reading of Stories or Novels

Patterns in learners' reading of stories or novels outside of school were gleaned from the Learner Questionnaire. Internationally, nearly one-third of learners (32%) report reading stories or novels everyday or almost everyday. In South Africa 40% (1.0) of Grade 4 and 39% (1.0) of Grade 5 learners reported reading stories or novels everyday or almost everyday. It should be noted that for both Grade 4 and Grade 5 learners, there is not a marked difference in average reading achievement for learners who report that they read everyday or almost everyday, once or twice a week or once or twice a month. There is, however, a difference of at least 10 average achievement points between Grade 4 learners who reported never to read and those who reported reading most frequently. The same occurrence is observed for the Grade 5 learners, with an average achievement difference of 13 points between learners who report never reading and those who reported engaging in frequent reading of stories and novels.

7.3.2 Learners' Reading for Information

Learners were asked about the frequency with which they read different types of material for informational purposes outside of school. Again, an index was constructed based on learners' responses on items on a 4-point Likert scale. Whilst 37% (1.3) of Grade 4 learners and 36% (1.1) of Grade 5 learners reported that they read stories and novels everyday or almost everyday, as many as 43% (0.8) Grade 4 and 44% (0.7) Grade 5 learners only read once or twice a week for informational purposes outside of school. South African learner reports on reading for information are in line with international patterns. Internationally, reading for information was more intermittent compared to literary reading, which occurred for many learners on a daily or at least weekly basis.

7.3.3 Learners' Reading of Stories or Articles

As part of everyday experiences outside of school, learners may be exposed to a wide variety of texts ranging from magazines, books, newspapers or text in electronic format as found on television subscripts and the Internet.

Approximately a third of South African Grade 4 and Grade 5 learners (37.1%, 1.4 and 33.2%, 1.6 respectively), indicated not spending any time reading on the Internet. There is not a marked difference in average achievement when comparing reading on the Internet to reading from books or magazines. The only difference in achievement occurred for Grade 4 learners who obtained a higher average achievement when spending *5 hours or more* reading books and magazines as opposed to spending *5 hours or more* reading from the Internet.

7.3.4 Learners' Reading for Fun

The occurrence of learners' reading for fun outside of school is linked to learners' attitudes toward reading and the frequency with which they engage in reading.

Reading for fun was reported most frequently in the international report by countries such as the Russian Federation, Germany, Lithuania, Moldova and Canadian provinces of Alberta and British Columbia. South African learner percentages are consistent with international averages of 40% where learners indicated reading for fun everyday or almost everyday. Forty-nine percent (1.1) Grade 4 and 46% (0.9) Grade 5 learners reported reading for fun everyday or almost everyday. Average reading achievement for Grade 4 learners varied between 250 and 269 on all reported frequencies of reading for fun. The Grade 5 reading achievement averages show similar patterns.

7.4   Summary

Enjoyment and early success in reading help to foster learners' positive attitudes towards reading and their self-concepts in relation to their reading abilities. Reading self-concept enhancement and more positive attitudes, in turn, may lead to more active engagement by the learner in further reading tasks. This is specifically brought home by the fact that South African learners, considered to have a positive attitude towards reading, had higher achievement in the PIRLS 2006 than their counterparts without such positive views of reading. Moreover, whilst it is potentially heartening that a majority of South African learners have positive reading self-concepts and many report reading for fun, one also has to view these positive outcomes with an element of scepticism. The data seem to suggest that a level of social desirability is present. With so many learners without access to books and many experiencing reading problems it is likely to impede self-concept, therefore these data should be treated with caution. One can further project that in considering South African learners' overall poor performance in the PIRLS assessment, it is likely that a vicious cycle of negative experiences presently exists which impacts on both reading self-concept and attitudes. The negative attitudes of our learners can only be addressed via comprehensive system reforms that allow them to experience more reading successes.

Reading for informational purposes is not a frequent activity for many South African learners, whereas many report reading novels or stories on a daily basis. This does not make a marked difference when compared to those learners who read less frequently, if at all. Again, this could reflect learners' awareness that they should be reading, therefore invoking responses of a socially desirable nature.

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CHAPTER 8

SCHOOL CURRICULUM AND ORGANISATION FOR TEACHING READING

Caroline Long and Lisa Zimmerman

The teaching and learning of reading begins with early literacy skills in the Foundation Phase, skills which have in some cases, been addressed in the pre-school years. This chapter, then, focuses on the structures in place in the school curriculum within which successful reading instruction can take place. Information regarding the implemented reading curriculum and the grade by grade strategy for the development of reading comprehension is regarded as important in the broader framework for teaching reading. This relates to the formal curriculum where the time allocated for reading instruction at Grades 4 and 5 and the organisation of the classroom for reading instruction is of critical importance.

This chapter reports specifically on the school learner population in terms of pre-primary education and school readiness upon entrance into the formal schooling system, the emphasis on reading in the curriculum and the organisation of classes for reading instruction. The information in this chapter was collected through questionnaires given to school principals, teachers and parents. The learner remains the unit of analysis and results are presented in terms of the percentage of learners about whom the data is collected.

8.1   How well are Learners prepared to learn to Read?

8.1.1   Pre-School Experience

Almost all countries in the PIRLS study have structures in place which enable children to make the transition from home to formal schooling. Eighty percent of countries make provision for at least one year of schooling prior to formal schooling. In South Africa reports from parents of Grade 4 and Grade 5 learners in the study indicate that over 80% attended some form of pre-school, though not specifying what kind.

Internationally reading achievement was lowest amongst learners who did not attend pre-school (a reading score of 455) and highest amongst those who attended for three or more years (a reading score of 510) (Mullis et al., 2007, p.158). The reports from the South African sample show a greater mean achievement, that is 259 (5.3) for the 86% (0.6) of learners who attended at least one pre-school year, than for the 14% (0.6) that is 236 points (5.1) who did not attend pre-school. There is not a substantial difference in achievement for learners who spent one year compared with those who spent 3 years at pre-school.

8.1.2   Age at which Formal Schooling begins

The international data show that formal schooling begins as early as five or younger (four countries) or as late as seven or older (12 countries) for the majority of learners (Mullis et al., 2007). However, in 18 countries the age of formal school entry for the majority of learners is six years. Reports from parents in South Africa indicate that 35% (0.9) start school at age 6, and 41% (0.7) start school at 7 years of age, another 12% (0.5) start at 8 years and older and a further 12% (0.6) start school at 5 or younger. Those learners who started school at ages 6 and 7, achieved higher performance outcomes, a score of 331 (8.9) and 310 (5.2) points respectively, than learners who started school either younger, a score of 270 (7.0) points, or older, a score of 245 (4.9) points.

8.1.3   Early Literacy Skills

According to the parent reports, the majority of South African children spend over two years in pre-school. In spite of this, most principals indicated that the majority of their learners did not have pre-reading skills when entering school. Both parents and principals were asked about the early literacy skills (recognise most of the alphabet, write letters of the alphabet, read some words, write some words and read sentences) of learners entering school. Internationally the distribution of learners across the categories *very well*, and *not very well* were about a third each, the category *moderately well*, about a quarter and *not at all*, about 12% (Mullis et al., 2007). In South Africa 46% (0.8) reported that learners could perform early literacy skills very well. Two-thirds of the principals of Grade 4 and 5 learners however, reported that less than 25% of the learners had early literacy skills. Internationally on average, the correlation of learners having early literacy skills with performance in Grade 4 was high. The South African data reflects that learners, having early literary skills as reported by their parents, achieve substantially higher scores, in relation to their peers, who were reported as not having early literary skills.

8.2   How much is Reading emphasised in the School Curriculum?

8.2.1   School Reading Policy

Principals were questioned on whether their schools have *written statements of the reading curriculum*, *informal initiatives to encourage reading* and *school based programmes*. Internationally on average, four-fifths of learners were taught in schools that had informal initiatives at their schools. Over half of the learners were in schools with school-based reading programmes and half were at schools with reading programmes that were coordinated across the grades.

In South Africa, more than a third of learners attended schools that have *a written statement of the reading curriculum* to be taught in schools and two-thirds attend schools that report that they have *informal initiatives to encourage reading* at their schools. About 50% of learners attend schools which have *school-based programmes* and *guidelines for teachers on the teaching of reading*. The data shows that learners are likely to achieve better scores, a mean of 264 (10.1), when their schools report that they have their own statement of a reading curriculum than when principals report no written statement of a reading curriculum, a mean of 246 (6.6). The achievement is higher for learners whose schools have informal initiatives to encourage reading, a mean of 268 (7.1), than in

schools where principals have reported that there are no informal initiatives, a mean of 217 (8.0).

8.2.2   Instructional Time

Internationally on average, Grade 4 teachers reported that 30 percent of instructional time is devoted to language instruction and 20 percent to instruction in reading (Mullis et al., 2007, p.178). Again on average, about 25% of learners internationally are taught reading for more that 6 hours a week (Mullis et al., 2007, p.178). According to teachers' reports in the South African study, 10% (1.9) receive reading instruction for more that 6 hours per week, 18% (2.7) for between 3 and 6 hours and 72 % (2.7) for less than 3 hours per week.

A third of South African Grade 4 teachers reported that reading instruction was given every day. Most of the Grade 5 teachers reported that reading took place 3 to 4 days a week. The PIRLS 2006 study shows little relationship between hours of teaching instruction and achievement due to complex factors such as instructional time "not always spent in effective productive ways" (Mullis et al., 2007, p.178).

8.2.3   Class Size and Teacher Activities

The class size for reading and language instruction was reported in South Africa as 42 (0.8) on average for Grade 5. This is higher than the international average class size of 24 children in a class. In fact, the average South African class size was the highest of the participating countries (Mullis et al., 2007, p.8). According to the PIRLS data, 81% (2.4) of learners are in classes over 31, 16% (2.4) are in classes with 21-30 learners, and three percent in classes smaller than 20. The mean achievement of learners in classes of 21-30 learners was 355 (21.7) points, and 292 (6.3) points for learners in classes greater than 30.

Grade 4 and 5 teachers reported that they spent slightly less than 50% of their total time on whole class teaching. The remaining time was allocated to working with individuals in small groups approximately 10%, approximately 20% on administrative duties, approximately 10% for maintaining discipline and approximately 10% was ascribed to other duties. The additional duties, over and above the core teaching function required by teachers, impact on the amount of time they can devote to preparation and teaching.

8.2.4   When are Reading Skills and Strategies introduced in particular Grades?

Principals were asked, "At which grade do the following skills and strategies first receive a major emphasis in instruction in your school?" Twelve reading strategies based on current reading theories were listed for consideration.

The first three skills or strategies are introduced to more than 50% of learners at the Grade 1 level in the majority of cases, that is, *knowing letters* (1) in 89% (1.7) of schools*, knowing letter-sound relationships* (2) in 82% (2.2) and *reading words* (3) in 77% (2.3) of schools (see Figure 8.1).

The strategy *reading isolated sentences* (4) is introduced at Grade 1 in 48% (2.4) of schools and in Grade 2 in 33% (2.8) of schools. *Reading connected text* (5) is introduced at Grade 2 by 34% (3.0) and at Grade 3 by 30% (2.7). However, *identifying the main idea*

of text (6)*, explaining or supporting understanding of text* (7)*, comparing text with personal experience* (8)*, comparing different texts* (9) *and making predictions about what will happen next* (10), are for the majority of cases, first introduced only at Grade 4, while the most complex strategies *making generalisations and inferences* (11) and *describing the style and structure of text* (12), are in the majority of cases, not taught at these grades.
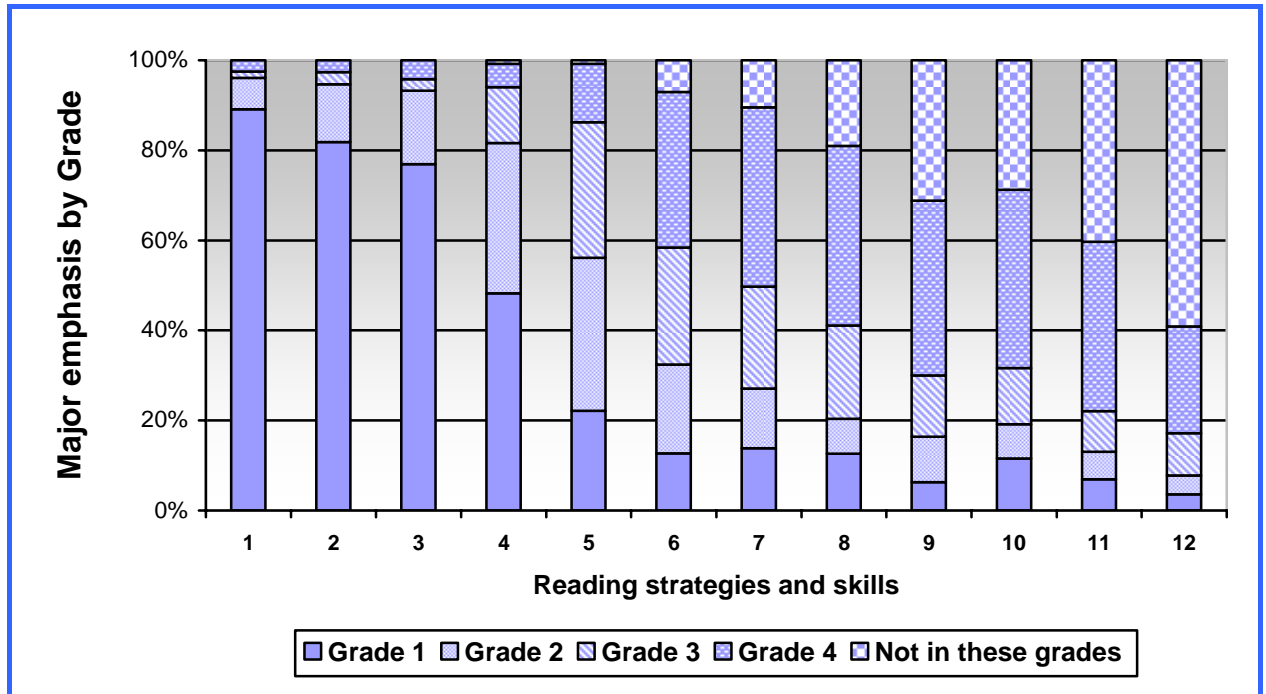

Figure 8.1   Grade by which Reading Skills and Strategies are first introduced in Schools

Additional data from PIRLS 2006 raises some interesting questions about the grades at which these skills and strategies are introduced. The learners for whom the more complex reading strategies are first introduced and emphasised in Grade 1 (in all except describing style and structure), achieved the highest number of points as compared to the learners for whom the skill is only introduced in Grade 4. See the Figure 8.2 below.

Note that for seven of the eight reading strategy categories, shown in Figure 8.2, the reading achievement for learners, for whom the skill was introduced in Grade 1, achieved higher than for those learners for whom these strategies were introduced in later grades. The question which requires further investigation, is whether the traditional emphasis on *knowing letters, knowing letter-sound relationships and reading words* in Grade 1, and the relegating of skills like *identifying the main idea* and *making predictions about what will happen next* to Grade 4, is optimal for learners' reading comprehension development. Indeed, a balanced approach as required by the RNCS (DoE, 2002a), which uses both the whole language, or 'top down' model and the decoding-emphasis or 'bottom-up' model for reading instruction necessitating the introduction of these skills simultaneously, is something which is not evident in this data. This is in line with international trends and supported by recognised approaches in the teaching of reading (Pressley, Allington, Wharton-McDonald, Block & Morrow, 2001), where the more advanced skills are introduced earlier.
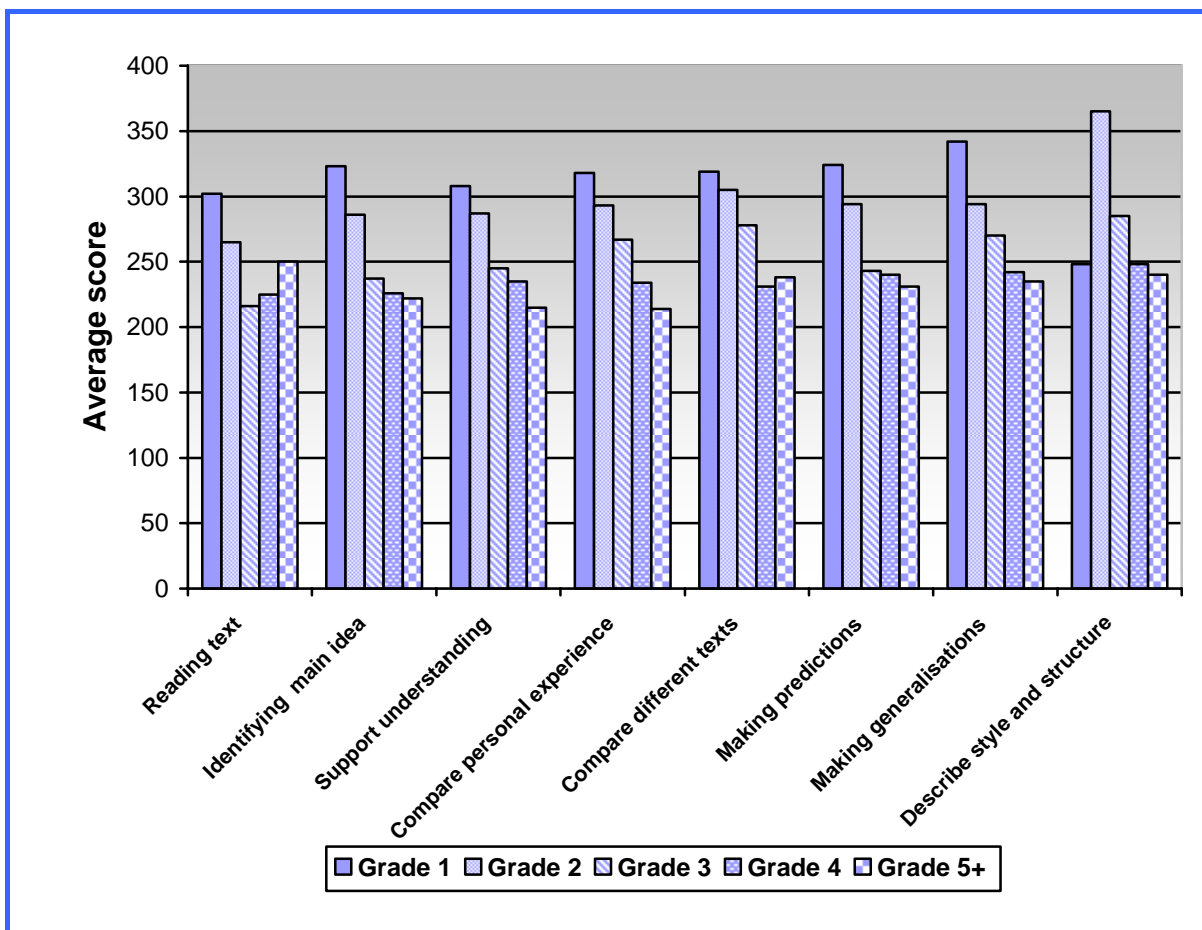
Figure 8.2   Achievement according to Introduction of Reading Strategies by Grade

8.3   Summary

Both the national and the international data indicate that preparation for formal schooling is important. The disturbing fact reflected in the South African data, is that the length of time a learner spends at pre-school does not seem to have a substantial impact on later school achievement. This almost certainly points to the fact that the quality of what is termed pre-school education varies enormously in South Africa and therefore suggests that one year of quality pre-school education is as good or better than three years of poor quality provision.

Furthermore, it appears from the data that there is an optimal age of six to seven years for entry into schooling when it comes to predicting reading achievement at Grade 4 and 5 level in the South African education system. This probably points to greater levels of school readiness at this age, than for younger learners entering school.

Internationally on average, the class size is 24 learners. In South Africa, class size ranges from a minimum of 17 to a maximum of 42. Class size also has a bearing on achievement among the South African Grade 4 learners. The 81% (2.4) of learners in class sizes of 31 or more achieve on average 292 (6.3) points. The 16% (2.4) of learners in class sizes of

21 to 30 achieve on average 355 (21.7) points. The 3% (0.8)[4] of learners in classes of less than 21 do poorly (244). It could be hypothesised that it is not class size but socio-economic status (SES) that matters in the teaching and learning of reading; however, in the South African context large class sizes need to be taken into consideration.

The twelve reading skills and strategies, identified by current research as central to the learning of reading, are given emphasis at particular grades. The South African data shows that the introduction of these reading skills and strategies follows the progression that is internationally regarded as good practice. However, when comparing with international data, South Africa lags behind in introducing these skills. Internationally, the more complex skills are introduced earlier. The performance of learners for whom the more advanced skills are introduced in Grade 1 are substantially better than for learners for whom the strategies are introduced only in Grade 4 or later.

Internationally, parent perception of early literacy skills at school entrance correlates with achievement at Grade 4 level. This is also so with South African parents, that is those learners whose parents said they had very good pre-literacy skills, scored higher than their counterparts whose parents reported that they had moderate or no pre-literary skills. However, in comparison with international results, the South African Grade 4 learners' performance is much lower. The question raised by this factor is whether the expectation of parents and indeed the whole system, is too low.

The amount of time spent on reading instruction does not correlate with performance either in South Africa or internationally - PIRLS 2006 explains this as the quality of reading instruction rather than the quantity.

The above can be summarised into two issues, that of expectation of our learners and the concomitant quality of reading instruction.

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[4] This 3% requires further investigation, but could be related to rural schools.

CHAPTER 9

TEACHERS AND READING INSTRUCTION

Lisa Zimmerman and Caroline Long

This chapter centres on the role of the teacher in assisting learners in the development of reading literacy. As Smyth and Hattam (2002) point out, teachers are often seen as the public face of the much wider educational system and its reforms. Indeed, learners' daily classroom activities are likely to have more direct impact on their reading development than the school environment itself (Mullis et al., 2006). Moats (1999) affirms this by arguing that classroom teaching for reading instruction needs to be considered as the critical factor in preventing reading problems and must, therefore, be the main focus for change. As such, it is meaningful to elucidate the professional backgrounds and reading instruction practices of the Language Learning Area teachers whose learners completed the PIRLS assessments.

Data were collected by means of the PIRLS teacher questionnaire, which sought information about teachers' preparation to teach and their actual reading instruction practices. As sampling for the teacher questionnaires was based on participating learners, the findings for teachers reflect the percentage of learners taught by Grade 4 and 5 Language Learning Area teachers, according to these teachers' reported demographic and qualification backgrounds. Thereafter, the reading resources that these teachers reported having access to, and making use of in their teaching practices, are considered. The reading instruction strategies utilised by these educators are then outlined, with specific reference to approach to reading development, follow-up reading activities used, and the assessment and monitoring of learner reading progression.

9.1   Teacher Background, Training and Preparation

The Language Learning Area teachers of the Grade 4 and 5 South African learners who completed the PIRLS assessments, had a mean of 15 years (0.5) of teaching experience altogether, which is two years lower than the international mean of 17 years (0.1). On average, Grade 4 teachers had taught for six years (0.4) and the Grade 5 teachers also for an average of six years (0.3).

The age ranges of teachers who taught both the Grade 4 and Grade 5 learners were obtained. Less than 1% (0.6, 0.4) of both Grade 4 and 5 learners were taught by teachers under the age of 25 years and a further 4% (1.4) and 3% (1.2) of Grade 4 and Grade 5 learners were taught by teachers between the ages of 25 to 29 years. Internationally, 15% (0.4) of learners were taught by teachers under the age of 30 years. The mean achievement for those Grade 4 (461, 52.4) and 5 (484, 2.5) learners taught by teachers under the age of 25 years, Grade 5 (418, 28.8) learners taught by teachers between the ages of 25 and 29 years and learners in Grade 4 (432, 64.7) with teachers over the age of 60 years, were higher than the means for any of the other learners in accordance with their teachers' ages.

9.2　Teachers' Formal Education and Training

Most learners (60%, 3.2) were taught by teachers with a teaching certification from the now disbanded teacher training colleges or a post-matric certificate. A further 21% (2.8) of learners were taught by teachers with a degree or Technikon diploma. For the just over 14% (1.8) of learners with language teachers who reported having postgraduate degrees, there is an improved overall mean performance in comparison to those learners whose teachers did not have postgraduate qualifications. The highest percentage of South African learners (41%, 3.7), were taught by teachers with a 3-year college diploma.

Teachers were asked about the extent of exposure to various knowledge domains linked to reading instruction. The majority of Grade 4 and 5 learners had teachers whose training had emphasized *Language*, *Literature*, *Pedagogy/teaching reading*, *Psychology*, *Children's language development*, and *Second language learning*. Across participating countries, the majority of learners had teachers whose studies had emphasised a combination of *Language, Pedagogy* and *Literature.* Approximately half of both South African Grade 4 (50%, 3.2) and Grade 5 (56%, 3.3) learners had teachers who reported teacher training with *Second language learning* as an area of emphasis.

Half of Grade 4 and Grade 5 learners had teachers who had not received any training in *Special education*, rendering this topic area in training as the least chartered for teachers. *Remedial reading* was demarcated as a topic area for which 40% (3.2) of Grade 4 learners and 38% (3.1) of Grade 5 learners had teachers who reported only having been given an overview or introduction to the topic during training. Similarly, 39% (3.1) of Grade 4 and 41% (3.3) of Grade 5 learners had teachers who had absolutely no exposure to *Remedial reading*.

9.3　Instructional Materials and Technology

Textbooks were the reading materials that were most often used by Language teachers for reading instruction purposes in both Grades 4 and 5. This is reflected in the 57% (2.6) of Grade 4 learners and 53% (3.7) of Grade 5 learners whose teachers reported using textbooks *every day or almost every day*. Most notably, those learners whose teachers indicated that textbooks were used *never or almost never*, had higher overall mean performances at both grade levels (380, 45.4) at Grade 4 and (374, 56.8), as did their peers whose teachers reported only using textbooks *once or twice a month* in comparison to the achievement of the majority with daily exposure (239, 5.6 at Grade 4 and 297 (7.8) at Grade 5). Internationally, 77% (0.4) of participating countries used textbooks as a basis for reading instruction.

Fifty-five percent (2.7) of South African Grade 4 learners and 48% (3.3) of Grade 5 learners use reading series *once or twice a week*. However, the use of a reading series *every day or almost every day* is associated with a slightly improved performance for 17% (2.2) of Grade 4 and 14% (2.5) of Grade 5 learners in comparison to the overall mean performances of their peers who did not use a reading series every day, if at all.

Only 12% (1.8) of Grade 4 and 13% (2.2) of Grade 5 learners had teachers who reported using a *variety of children's books* for reading instruction *every day or almost every day* as part of their teaching practices.

The use of computer software does not feature as a resource for reading instruction, with teachers reporting 90% (1.5) of their Grade 4 learners and 87% (2.1) of Grade 5 *never or almost never* using it. Nevertheless, it is notable that for those Grade 4 and 5 learners (5%, 1.0 and 6%, 1.5) whose teachers indicated making use of computer software for reading instruction *once or twice a week* and the 5% (1.0) of Grade 4 and 5% (1.3) of Grade 5 whose teachers reported use "once or twice a month", their overall mean achievement scores are amongst the highest of all the mean achievement scores in association with reading instruction materials listed.

9.4   Instructional Strategies and Activities

9.4.1   Decoding Strategies and Understanding of Vocabulary

Reading skills, specifically lower-level processing or decoding strategies, in South African schools are developed during the Foundation Phase of schooling. Thereafter, in the Intermediate Phase, learners' reading as a language and information-processing skill, is largely presumed to be developed as learners are expected to be able to decode text (Pretorius, 2002). Mirroring 25% (0.5) of learners internationally, the smallest percentage of South African Grade 4 learners (25%, 2.4) and Grade 5 learners (21%, 2.5) were taught decoding strategies *daily* whereas the highest percentage internationally 69% (0.5), and of Grade 4 (61%, 2.9) and Grade 5 (59%, 3.2) South African learners received teaching assistance with understanding vocabulary on a *daily* basis. No outstanding patterns in overall mean learner performance, in relation to teacher emphases on these two reading practices, are immediately apparent.

9.4.2   Classroom Reading Activities and Monitoring of Learner Progress

Teachers were asked to indicate the time they allocated to reading aloud to the whole class or having learners read aloud to the whole class, in small groups or pairs or to read silently on their own. More than half of the Grade 4 (61%, 2.9) and Grade 5 (53%, 3.4) learners had teachers who reported reading aloud to the whole class *every day or almost every day*. In fact, this is the most prominent reading activity listed by teachers, as reflected in the percentage of learners exposed. This suggests a heavily teacher-centred rather than learner-centred approach to reading instruction which may promote learner passivity in their own reading development.

For Grade 4 (21%, 2.3) and 5 (26%, 2.8) learners who read aloud in small groups or pairs *less than weekly*, their overall mean performance is higher than the mean performances of learners whose teachers indicated learner reading activities in groups or pairs. Perhaps without close monitoring by the teacher or active engagement by learners, pair or group reading with peers may not be of assistance to learners in their reading development.

Only 40% (2.6) of Grade 4 and 43% (3.2) of Grade 5 learners reportedly did silent reading *once or twice a week* as compared with 59% of learners who did so, on a daily basis, internationally. The value of silent reading is suggested by the highest overall mean performance of all the response categories for those Grade 4 (25%, 2.4) and 5 (21%, 2.5)

learners whose teachers stated that they got them to read silently on their own *every day or almost every day*. Of concern for learners' further literacy development is that 54% (1.3) of South African Grade 4 and 57% (1.2) of Grade 5 learners indicated that they *never or almost never* read independently in class and a further 31% (.9) of Grade 4 and 30% (.8) of Grade 5 learners reported only reading independently *once or twice a month*.

Participating teachers were also asked about the level of emphasis that they placed on specific sources to monitor their learners' progress in reading. Major emphases are placed on teachers' use of their own professional judgement (61% (3.0) at Grade 4 and 61% (3.4) at Grade 5) and classroom tests (63% (3.0) at Grade 4 and 57% (3.1) at Grade 5) to monitor learners' reading progress. Whilst not receiving major emphasis at either grade, 48% of Grade 4 learners and 47% of Grade 5 learners had teachers who placed some emphasis on the use of diagnostic tests to aid in monitoring learners' reading progress. Only a small percentage of learners (10% at Grade 4 and 12% at Grade 5) had teachers who placed major emphasis on monitoring via national or regional tests.

9.5 Summary

South African learners' performance in the PIRLS assessments accentuates the need for reading instruction practices aimed at addressing the difficulties South African learners encounter in both the Foundation and Intermediate Phases. The teacher data, considered in this chapter, particularly highlights the need for Intermediate Phase teachers' continuing professional development to assist learners with the further development of their literacy skills in the latter primary grades. This is important, as the low overall mean performances of learners, in relation to these teachers' qualifications, perhaps suggests that the qualifications that teachers do have, have not prepared them to teach reading literacy or that, for whichever reasons, these teachers are not able to implement strategies they have gleaned from professional training to the most effective level.

In addition, the data considered is based on Language teachers' reading literacy instruction practices. The PIRLS 2006 findings suggest a need for collaboration of all teachers presenting content areas in the Intermediate Phase in the monitoring and improvement of learners' reading literacy as well as more communication and collaboration between Foundation and Intermediate Phase teachers for these purposes.

The inclusion of content addressing the literacy teaching of second language learners in pre-service and in-service teacher education programmes is of central importance. Indeed, the complex multilingual nature of the South African learner cohort, demands that all teachers should have a thorough theoretical and practical understanding of how to address the language and literacy needs of second language learners.

It can also be argued that, in consideration of the poor levels of reading performance of young learners during the Intermediate Phase as documented in the results of this specific study, it is crucial for Intermediate Phase teachers to be able to identify and provide learning support to those learners experiencing reading difficulties, skills which can be obtained from a sound working knowledge of topics that form part of training in remedial reading.

The findings also lead to queries about the quality of reading materials and how these reading materials are used in the Intermediate Phase. Specifically, it seems that more investigation is needed into the quality of textbooks at the Intermediate Phase and/or the quality of teaching using textbooks as the main source for reading instruction.

The importance of continuing exposure to children's books in the Intermediate Phase is suggested by the higher achievement of learners who experience a variety of children's books in comparison to learners who hardly use a variety of books or the small percentage of learners with exposure *every day or almost every day*. Then again, it is plausible that this improved performance may be due to other factors too, such as the small number of learners who experience a rich encounter with a variety of children's literature who are likely from educationally advantaged backgrounds where these resources and others are more readily available than in other socio-economic contexts.

Given the low mean performance of learners in the PIRLS, the quality and level of cognitive challenge of the classroom tests that the majority of teachers use for monitoring learners' progress and which should place emphases on the type of reading comprehension exercises that are present in the PIRLS assessments, is debatable. To elaborate, investigation is needed into whether these tests give learners the opportunity to answer comprehension questions that require them to focus on and retrieve explicitly stated information, make straightforward inferences, interpret and integrate ideas and information, and examine and evaluate content, language, and textual elements.

Generally, the improved mean learner performance from Grade 4 to Grade 5 does suggest that teachers are managing to assist their learners in this development, although more contextualized research is needed to explore which teaching strategies are leading to improved learner reading literacy performance.

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CHAPTER 10

SCHOOL ENVIRONMENTS

Vanessa Scherman and Sarah Howie

While the home environment provides enrichment opportunities and support for literacy, the school environment is the primary setting for formal learning and educational activities (Mullis et al., 2003, p.223).

Several facets of the school may have an influence on how well learners perform, particularly as the school environment provides the habitat in which formal learning activities take place. In this chapter, a number of school characteristics are described with the aim of providing contextual information within which to situate South Africa's performance on the PIRLS assessment.

10.1   School Location

Schools were sampled in a way which would represent the broader population of schools in South Africa and adequately provide for the coverage of all official 11 languages (see Chapter 3). The majority of the schools indicated that they were in rural areas (62%) with the remaining 38% of the schools located in suburban (21%) and urban areas (17%). The higher than expected percentage of rural schools is a reflection of the locale of several African languages and attempts to ensure sufficient coverage of all the languages. The mean achievement for suburban schools is higher than that of urban schools and is substantially higher than rural schools by more than 100 points.

Table 10.1   Location of the Schools and Mean Achievement

Location	N	Mean Achievement and Standard Error	Percent and Standard Error
Urban	2146	350 (19.47)	17 (1.77)
Suburban	2754	381 (14.98)	21 (2.20)
Rural	9463	261 (3.75)	62 (2.04)

10.2   Demographics of Learners

The majority of the principals (74%, 2.7) in South Africa indicated that more than 50% of their Grade 5 learners were from economically disadvantaged homes. In schools where this was the case, this group of learners also scored the lowest mean score of 272 (4.4) compared to the wealthiest schools (498, 23.4). The more than 200 point difference in scores represents a huge difference in achievement. However, only 9% of South African schools fall into this category compared to 39% internationally. In the only other African country in the study, Morocco, only 47% (5.3) of the schools indicated more than 50% of their learners came from economically disadvantaged homes and the difference in scores was only 30 points (Mullis et al., 2007, pp.250-251).

Eighteen percent (2.1) of the South African principals indicated that more than 50% of the learners in their schools did not speak the language of the test as a first language. Most schools (63%) had a number of learners, approximately 0 to 10%, who did not speak the language of the test as a first language. In part, this may reflect the internal migration within South Africa, but also the number of immigrant children in South African schools.

10.3   School Resources

In this section of the chapter, a description of the school resources available at the schools that were sampled, is provided. These include an overall index of resources as well as specific resources such as availability of qualified teachers, availability of instructional materials as well as the existence of libraries in schools.

10.3.1   Availability of School Resources

The principals reported on the extent to which their capacity to provide instruction was hampered by the shortage of resources. An availability index was compiled and includes items related to resources such as qualified staff, instructional materials, physical resources as well as computers and computer software. On average, 23% (2.5) of the South African learners were in schools where instruction was hampered due to inadequacy of resources. Other countries where there were more than 20% of learners experiencing resource hindrances were Israel (23%), Chinese Taipei (34%), Qatar (46%), Russian Federation (64%), Moldova (24%), Iran (45%), Kuwait (51%), Morocco (75%) and Hong Kong (40%). In South Africa, achievement by these learners in under-resourced schools was the lowest (257, 9.1) and learners in schools where the resources were considered more adequate, achieved nearly 100 points more (350, 16.0), compared to the average 29 points difference internationally. Iran was only other country where more than 50 points difference in achievement was found (66 points).

The specific resources that were reported by approximately half of the principals as negatively affecting the capacity of the school were insufficient provision of second language teachers, lack of instructional materials, shortage of buildings and grounds, shortage of instructional space, lack of computers for instructional purposes, lack of computer software such as reading programmes, and a shortage of library books.

10.3.2   Library and Books in the Library

The majority of the schools (60%, 2.8) indicated that they do not have a school library. This could be one of the many factors that could have influenced the low performance of learners on the assessments for Grade 4 and Grade 5. Indeed, the learners in schools with a library fared better than learners in schools without a library (average reading achievement of 363 (11.6) compared to 262 (4.0), i.e. a difference of about a 100 points).

Of the schools that indicated that they do have a library at the school, about half indicated that there are more than 500 books in the library compared to 26% (3.9) with 250 or fewer books. A mere six percent reported having more than 10 000 books. Generally, learners in schools with the most books also achieved higher scores on the PIRLS assessment: 573 points (34.5) where there were the most books, compared to schools with the least books, 270 points (11.5), a massive difference of 300 points.

10.3.3 Workspace for Teachers

In terms of workspace for teachers, only 16% (2.1) of the principals indicated that there were separate workspaces available for teachers outside of the classroom compared to 27% (0.5) internationally. Typically most South African teachers had working space in the classrooms and this was also the most common practice internationally (81%).

10.4 Home/School Partnerships

The majority (97%) of the principals indicated that parent-teacher meetings took place at least once a month up to six times a year. Overall, half (51%, 2.7) of the principals indicated a high involvement[5] of parents in school activities that occurred four or more times a year. This level of involvement is comparable to countries such as Scotland (46%, 4.1) and Trinidad and Tobago (45%, 4.1).

Only 21% (2.2) of principals reported a low level of parental involvement that included that they never hold teacher-parent meetings or where they did, less than a quarter of the parents attend the meetings. Schools hold events (sport, cultural) once a year or less often of which, between 0% and 25% of the parents actually attend. Furthermore, information regarding the school is sent home three times or less often, whilst written reports are sent home once a year or less often than once a year. In the latter case, this implies that parent-teacher meetings are not held, nor is information or written reports sent to parents. Other countries with high percentages (above 60%) of low levels of parental involvement are the Eastern European countries such as Moldova, Macedonia, Bulgaria, Georgia, Poland, Georgia, and other developing countries, Morocco and Indonesia.

10.5 Problems experienced at the School

Principals were asked to comment on the safety of the school and an index was compiled from a number of items on this topic. Thirty-six percent of South African principals reported high levels of safety at their schools. South Africa was amongst the group of seven countries reporting lower levels of safety at school. Thirteen percent (1.7) of South African schools fell in the *Low* category indicating that there are some serious problems regarding safety at school that need to be addressed. The learners in these schools also achieved about 80 points below schools reporting a *high* level of safety. A larger percentage of principals from Morocco (73%, 7.0), Indonesia (46%, 4.0), Kuwait (26, 3.4), Qatar (32%, 0.2) and Romania (14%, 3.0) indicated serious problems with school safety compared to South Africa.

Learner tardiness (late-coming to school) seems to be a problem with 45% of the schools indicating that this was a moderate to serious problem. More than 40% of the principals indicated that learner absenteeism was a minor problem, as well as classroom disturbances, cheating, profanity, intimidation or verbal abuse of learners and physical conflicts were considered moderate to serious problems. The most serious problem reported was considered to be drug abuse as one in five schools reported this as a

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[5] More than half of the parents attend conferences, information is sent more than seven times a year and written reports are sent four or more than four times a year.

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serious problem. One in six schools regarded vandalism and theft as serious problems. However, intimidation or verbal abuse and physical conflicts amongst learners were both considered serious problems by one in eight schools.

10.6   Teacher Satisfaction

As part of the study, teachers (of the participating learners) were asked about their satisfaction levels with regard to their teaching careers. The items were then combined to form an index. Currently more than two-thirds of the teachers (68%, 2.8) are content with their profession as a teacher, are satisfied with being a teacher at their specific school and would describe the teachers at this school as a satisfied group. Only 4% (1.0) of the teachers were dissatisfied in general with being a teacher and these teachers were also associated with the highest learner achievement scores (367, 34.6) compared to 291 (7.4) of the least satisfied teachers). There is great variation in the learners' scores amongst the dissatisfied teachers indicating that whilst some teachers are very unhappy in their profession, they nonetheless are effective teachers, possibly creating a conducive environment for learning.

10.7   Summary

More than half of South African schools in the PIRLS (2006) were situated in rural areas and the majority of principals indicated that more than half of the learners came from disadvantaged homes. Most principals indicated that inadequate resources hampered instruction, there were no libraries at 60% of the schools and most of the schools reported that teachers did not have adequate workplaces.

Only half of South African parents seem to be regularly involved in most schools and conversely, only half of the schools communicate very regularly with the parents. What is encouraging is that unlike some countries, a higher percentage of schools and parents are exchanging information about the learners.

More than one in three schools reported high levels of safety which was well below the international average of 60%. Whilst the South African percentage was not the lowest, compared to other countries, the issue of safety at schools, together with the lowest level of safety or feeling of vulnerability reported by the children has to be reviewed. Interestingly, the parents' perceptions of school safety are considerably higher than the principals and children (65%: 36%: 23%) with those most affected, the children, being most negative.

In general, teachers in South Africa seem to be more satisfied with their careers than teachers in many other countries with fewer than five percent being very dissatisfied. The data suggest that some of the most dissatisfied teachers may come from the higher achieving and better resourced schools.

CHAPTER 11

CONCLUSIONS AND REFLECTIONS

Approximately 215 000 children across 40 countries participated in the PIRLS study, making it one of the largest and most influential assessments of reading literacy in the world. In South Africa, about 30 000 children in Grades 4 and 5 from more than 400 schools participated in this study. South Africa's study was the most complex national design within an international comparative study ever undertaken with its two grade levels, 11 languages and an additional assessment in English as a national option.

PIRLS 2006 was undertaken in South Africa by the Centre for Evaluation and Assessment at the University of Pretoria, which served as the National Research Centre. The study was conducted under the auspices of the International Association for the Evaluation of Educational Achievement that was responsible for the overall research design, encompassing the reading curriculum framework and the research questions. Very specific and high standards were instituted to guide the sampling process, quality assurance of the translation phase, the contextualization of items and the data collection phase. Data cleaning and data analysis took place in both the National Research Centre (the CEA) and at the International Data Processing Centre. The outcomes of all the quality assurance processes indicate that the data and the processes involved in the conduct of the study are both valid and reliable.

Whilst this report is only a summary of the main national report and in particular, focuses primarily on the Grade 5 learners[6], some of the key findings are summarized below. The full elaboration, interpretation and possible explanations for these findings will be included in the national report to be released in 2009. The full report will also include additional data from the teacher education study currently being conducted as well as the national assessment data for the English assessment based upon the national curriculum. Furthermore, recommendations based upon the elaborated findings will be included.

In this summary report, the following key findings are listed and some reflections and implications are presented thereafter.

11.1   Key Findings

Internationally, the Russian Federation, Hong Kong SAR, and Singapore were the top performing countries at Grade 4 level. One of the lessons for South Africa perhaps is that Singapore and Hong Kong, who both participated in PIRLS 2001 and thereafter implemented systemic reforms in the reading curriculum, instructional materials and teacher education, were amongst those trend countries that made the greatest gains

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[6] As noted previously in the report, the original intention was to participate in the international study at Grade 4 level and maintain Grade 5 merely as a national option. However, the very weak performance of the South African Grade 4 learners led the IEA to request that the South African Grade 5 data be used due to the technical (measurement) difficulties for the overall international data caused by the low Grade 4 performance.

between 2001 and 2006. Two other top performing countries, the Russian Federation and Slovenia, also underwent structural changes (Haggerty, 2007).

Whilst only 7% of children internationally reached the top international benchmark, almost one-fifth of children in the Russian Federation and Singapore attained this level. In contrast, only two percent of South African learners reached this benchmark.

In South Africa, the following conclusions were drawn.

11.1.1 Learners' Achievement in Reading

❑ South African Grade 5 learners achieved the lowest score compared to Grade 4 children in the 39 other countries that participated

❑ South African Grade 5 learners were approximately 200 points below the international average score of 500 fixed for the reading literacy of Grade 4 learners internationally.

❑ There was a significant difference in achievement between Grade 4 learners and Grade 5 learners in South Africa indicating a significant progression in reading achievement across all languages from Grade 4 to Grade 5. This difference in achievement was higher in terms of the gains made in comparison with the performances of learners in Iceland and Norway.

❑ Three-quarters of South African learners were not able to reach the lowest international benchmarks and only two percent could reach the highest international benchmark.

❑ Performance across all 11 languages was below the international mean. Learners tested in all African languages achieved very low scores with 86% to 96% not reaching the lowest international benchmark compared to half of the learners writing in English and Afrikaans. Children writing the test in Afrikaans achieved the highest average score, although children whose home language was English (and who wrote the test in English) achieved the highest score overall.

❑ Despite low achievement, South African learners have generally high reading self-concepts and reading attitudes.

11.1.2 Home Background

❑ South African households have very few books in the home with half of the houses having fewer than 10 books.

❑ Few children are exposed to early reading literacy activities with their families.

❑ Parents' levels of education (as mediated through the numbers of books in the home, cultural communication with children) are strongly correlated with reading achievement.

❑ South African parents (and guardians) demonstrate relatively low levels of involvement with schools and participation in the education of their children. This has to be taken into context with the number of many child-headed households or children who live with guardians or other family members.

❑ South African children have one of the highest levels of bilingualism in the study, reflected by the large percentage of two-parent homes and speaking more than one language at home.

11.1.3 Reading Instruction

❑ In most schools, insufficient time is spent on reading activities or formal reading instruction. This is in contrast to top performing schools and more frequent reading instruction, which is related to higher achievement of South African learners.

❑ South African teachers read less often in their spare time compared to those in the highest achieving countries in PIRLS 2006.

❑ Teaching of more complex reading skills is introduced at a much later stage for South African learners than internationally where these are initiated much earlier.

❑ There are problems with the provisioning of textbooks and learning materials. Only half of the South African schools have adequate resources in terms of instructional materials. Further investigation is needed in terms of the type and quality of textbooks used in classrooms and their availability in African languages.

11.1.4 School Environment

❑ Three-quarters of the principals reported that half of their pupils or more were from economically disadvantaged homes.

❑ Nearly two-thirds of the schools had about 10% of their learners who spoke a different language to the language of the test.

❑ One in five learners attended a school where the inadequacy of the resources was reported to be hampering teaching and learning. However, there were countries where significantly more learners were negatively affected and where almost 4 out of 5 learners were affected in this way.

❑ More than half of South African primary schools do not have a library and the same percentage do not have classroom libraries either.

❑ Whilst two-thirds of parents felt that the school environment is safe, this did not concur with the perceptions of the principals nor the learners. Learners in particular, do not feel safe in general, and about 1 out of 4 Grade 5 children felt very safe at school and only one-third of principals felt that their schools are very safe.

❑ Two-thirds of teachers are satisfied with their teaching career but this feeling of satisfaction does not correlate with higher achievement.

11.2   Reflections and Implications arising from the Findings

In this summary report, a brief reflection is presented in terms of the main findings and the implications arising from some of these.

The curriculum and the language and reading policies that are in place form the background against which educational provision is shaped. It is interesting to study the curriculum and the language policies in the light of the PIRLS results. The intended curriculum (summarised in Chapter 2) reflects very closely the reading skills and strategies that are drawn from the PIRLS framework (see Chapter 8). There is, therefore, a direct alignment of the purposes of the PIRLS assessment and the assessment standards reflected in the RNCS, suggesting that what should be attained at the Grade 4 and 5 levels are in fact assessed directly by the PIRLS assessment. If the reading instruction had been in line with curriculum standards, one could have imagined that the achievement to be much higher. Furthermore, the learners were assessed in their vernaculars, so although the language of instruction can negatively influence learner performance in a second language, this does not apply for the majority of these learners. We thus need to interrogate the quality of reading instruction in schools whilst attending to the Language-in-Education Policy and its impact on non-vernacular learners.

The background factors, the home, the school and the individual learner characteristics are evident in the design of the PIRLS studies enabling the monitoring of the effects of different variables on reading. It is inevitable that the learners from educationally advantaged homes with literary resources have a better chance of achieving literacy than less resourced peers: these data confirm this. This again highlights the importance of the school in compensating for minimal home opportunities offered to children from low socio-economic backgrounds

A strong link was found between Grade 4 reading achievement and home environments for almost every country in the PIRLS 2001 study. Factors such as parents engaging their pre-school children in literacy activities, having high regard for reading activities and interacting with text themselves impact on learner results. Factors relating to learners in South African classrooms, most notably the lack of subject matter knowledge and perceived lack of resources, reading motivation and reading related self-perception appear to be significant factors in the 2006 study (Howie, 2006).

Therefore, the fact that the majority of learners came from disadvantaged homes, that the principals report that inadequate resources hamper instruction, that there are no libraries at most of the schools, all impact on performance. South Africa had one of the lowest levels of library provision amongst all the countries participating including systems which are economically more impoverished. Therefore, with the dearth of public libraries in both township and rural areas, children and their teachers lack access to the resource base that it taken for granted in many countries. This lack of access both in the public environment and in public schools will inevitably widen the gap of reading achievement now clearly visible in primary schools in South Africa, unless addressed.

Another critical factor regarding equity and poverty is school readiness and the lack thereof, amongst poor children. The international data supports the necessity for having

good quality pre-schools where the transition from home to school is fostered. However, it is obvious that unless pre-schools are providing the preparatory cognitive skills required for the transition, their effect is minimal. The provision of pre-reading skills at the start of school makes a marked difference in the Grade 4 reading results internationally and its effect on the South African learners is also present.

South African learners' performance in the PIRLS assessments reinforces the need for reading instruction practices aimed at addressing the difficulties in language and reading in both the Foundation and Intermediate Phases. The improved mean learner performance from Grade 4 to Grade 5 does suggest that teachers are managing to assist their learners in this development, although more contextualized research is needed to explore which teaching strategies are leading to improved learner reading literacy performance.

Given the PIRLS data, it would suggest that there is a need for an integrative review of all reading research in South Africa to aid in planning and educational development initiatives. Commeyras and Inyenga (2007) undertook a review of reading research in Kenya, a country with a similar history of colonial rule impacting education, comparable language of instruction issues (specifically Kiswahili mother tongue vs. English) and a similar schooling structure. As such, these authors' foci for their review, namely research into reading culture, reading materials, reading instruction, language of education, assessment and teacher development, provides a springboard for consideration of just such a review in South Africa.

Finally, it should be said that "Whatever else they do, education systems must equip young people with sophisticated literacy skills, the alternative is poverty and lost opportunities for the individual and for society" (Haggerty, 2007, p.1). Therefore, the continued and close monitoring of reading literacy in all the languages in which it is offered, is critical for the successful development of all individuals in the schooling and training systems and should be considered one of South Africa's priorities in this and the next decade.

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APPENDIX A: National Steering Committee

Carole Bloch	PRAESA
Masennya Dikotla	The Molteno Project
Cecilia Du Toit	University of Pretoria
Samantha Faure	PASA (The Publisher's Association)
Paula Gains	The Molteno Project
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Cornelius Hacking	Royal Netherlands Embassy
Sarah Howie	CEA, University of Pretoria
Cynthia Hugo	READ
Bertus Matthee	READ
Jerry Mojalefa	African Languages University of Pretoria
Lebogang Molai	Royal Netherlands Embassy
Qetelo Moloi	Department of Education
Sarah Murray	Rhodes University
Salome Muthambi	Department of Education, University of Venda
Nkidi Phatudi	University of Pretoria
Margie Probyn	ISEA, Rhodes University
Molefe Ralenala	Language Education, University of Limpopo
Jennifer Rault-Smith	Department of Education
Dudley Schroeder	PASA (The Publisher's Association)
Sibusisu Sithole	Department of Education
Palesa Tyobeka	Department of Education
Surette Van Staden	CEA, University of Pretoria
Elsie Venter	CEA, University of Pretoria
Douglas Young	Centre for Applied Lang Study & Serv in Africa, University of Cape Town

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