PIRLS Of Wisdom: The What, Where, When And How Of The International Reading Literacy Study In South Africa

TABLE OF CONTENTS

INTRODUCTION

The importance of literacy has become evident in the 50 years since the United Nations declared it to be a basic human right along with the right to adequate food, health care and housing. Literacy education has indeed become a tool to help address what might be perceived to be more pressing needs for food, health care and housing.

The United Nations Literacy Decade was declared for 2003 to 2012. According to UNESCO statistics, about 861 million people (or about 20% of the world's adults) cannot read or write or participate fully or optimally in the organization and activities of their societies. Of these illiterate adults, 70% live in Sub-Saharan Africa, Southern and Western Asia, Arab countries and North Africa, while two thirds are estimated to be women (http://portal.unesco.org/education/en/ev.php).

For both industrialized and developing countries literacy education is near the top of the policy agenda. UNESCO estimated that by the turn of the century approximately 1 billion illiterates remain worldwide, while the prospects of a radical improvement seems to be unlikely. With these low literacy levels across the globe, the relative costs and benefits of literacy programs are as yet poorly understood. Yet, literacy is of central importance to development (http://www.literacyonline.org/explorer/overview.html).Increasingly, it is correlated with higher levels of income and job productivity.

A wide variety of projects have been set up around the world to promote literacy on different levels and for different contexts. The remainder of this document will provide some detail into the Progress in International Literacy Study (PIRLS) with specific focus on its application on Grade 4 and 5 learners in the South African context.

1   PROGRESS IN INTERNATIONAL READING LITERACY (PIRLS)

PIRLS is an international comparative evaluation of reading literacy of Grade 4 (9 year-old) learners involving more than 40 countries. It is run under the auspices of the International Association for the Evaluation of Educational Achievement (the IEA). As an organization, the IEA undertakes international studies that benchmark performance of school-going children in mathematics, science, civic education, information, communication, technology and reading to name a few. Currently, 46 countries are involved in this collaborative analysis of children's reading literacy and the factors that influence reading acquisition.

PIRLS 2006 is the second, after PIRLS 2001, in a five-year cycle of assessment that measures trends in children's reading literacy achievement and policy and practices related to literacy (http://www.iea.nl/iea/hq/index.php). PIRLS aims to provide trends and international comparisons on:

- The reading achievement of Grade 4 learners.
- Learners' competencies in relation to goals and standards for reading education.
- The impact of the home environment and how parents foster reading literacy.
- The organization, time and reading materials for learning to read in schools.
- Curriculum and classroom approaches to reading instruction.

According to Campbell, Kelly, Mullis, Martin and Sainsbury (2001), PIRLS focuses on three aspects of reading literacy namely:

- Processes of comprehension.
- Purposes for reading.
- Reading behaviours and attitudes.

Processes of comprehension refer to ways in which readers construct meaning from text. Readers focus on and retrieve specific ideas, make inferences, interpret and integrate information, while also examining the text features. On the other hand, purposes for reading refers to two types of reading that account for most reading young learners do, namely reading for enjoyment and reading to acquire and use information (http://nces.ed.gov/surveys/pirls/more.asp). Subsequent sections of this paper will pay particular attention to the types of reading comprehension and the purposes for reading found in the PIRLS assessment.

Participating countries for PIRLS 2006 are:

Albania	Latvia
Austria	Lithuania
Belarus	Macedonia
Belgium (French)	Moldova
Bulgaria	Morocco
Canada (Ontario and Quebec)	The Netherlands
China	New Zealand
Chinese Taipei	Nicaragua
Czech Republic	Norway
Denmark	Qatar
Egypt	Poland
England	Romania
Estonia	Russian Federation
France	Scotland
Georgia	Singapore
Germany	Slovak Republic
Hong Kong	Slovenia
Hungary	South Africa
Iceland	Spain
Indonesia	Sweden
Iran	Switzerland
Israel	United States
Italy	
Kuwait	

2   PIRLS FRAMEWORK FOR LITERACY

In naming its 1991 study, the IEA decided to join the terms literacy and reading to convey the notion that literacy includes the ability to reflect on what is read and to use it as a tool to achieve personal and societal goals. Thus, according to Campbell et al (2001), the framework for literacy that applies to PIRLS is as follows:

> '...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 and for enjoyment.' (Campbell et al, 2001:3).

With this definition of reading literacy, the PIRLS framework takes the stance that reading literacy is a constructive and interactive process. According to Brinkley and Kelly (2003) the reader is now regarded as actively constructing meaning and as knowing effective reading strategies. Such readers have positive attitudes towards reading and read for the purposes of recreation and information acquisition. Meaning is constructed in the interaction between reader and text in the context of a particular reading experience. Reading implies that the reader brings with him or her a repertoire of knowledge, skills, cognitive and metacognitive strategies.

This framework for reading literacy acknowledges that reading is a constructive and interactive process involving interaction between the reader and the text. The context of reading is an important element in how readers create meaning and the skills and strategies they use in order to do so. It also acknowledges that the structural elements of a text will influence a reader's strategies. In short, PIRLS conveys the notion that reading involves developing an understanding of text, thinking about it and reading various texts for many different purposes.

3 ASPECTS OF READING LITERACY

As mentioned earlier, PIRLS focuses on three aspects of reading literacy namely:

- Processes of comprehension.
- Purposes for reading.
- Reading behaviours and attitudes.

The following section will pay particular attention to the processes of comprehension and purposes for reading as set out by the PIRLS framework.

3.1 PROCESSES OF COMPREHENSION

The PIRLS assessment examines the processes of comprehension as well as purposes for reading. These two aspects do not function in isolation from each other, and they form the basis of the written test of reading comprehension.

According to the PIRLS Assessment Framework and specifications for the 2006 study, readers construct meaning in different ways when faced with the task of reading. They focus on and retrieve specific ideas, they make inferences, interpret and integrate information and ideas as well as evaluate and examine text features.

These four types of comprehension processes are used in the PIRLS assessment to develop the comprehension questions derived from reading passages that are presented to learners. A range of questions, each dealing with a particular process, enables learners to demonstrate their abilities and skills in constructing meaning from written text. PIRLS distinguishes between the following comprehension processes:

3.1.1 FOCUS ON AND RETRIEVE EXPLICITLY STATED INFORMATION

When focusing on and retrieving explicitly stated information, learners use various ways to locate and understand content that is relevant to the question posed. Retrieving appropriate text from a reading passage not only means that the learners have to understand what is stated in the text, but to also ascertain how that information is related to the information sought.
Reading tasks that may exemplify this type of comprehension process may include:

- Identifying information that is relevant to the specific goal of reading.
- Looking for specific ideas.
- Searching for definitions, words or phrases.
- Identifying the setting of a story (e.g. in terms of time or place).
- Finding the main idea when explicitly stated.

3.1.2 MAKING STRAIGHTFORWARD INFERENCE

Constructing meaning from text requires of readers to make inferences about ideas or information not stated explicitly in the text. Making these inferences allows the learner to move beyond what is stated in the text and to fill in the 'gaps' in meaning. Some of these inferences might be straightforward, meaning that they are mostly contained in information that is contained in the text. Although the ideas might be explicitly stated, the learner still needs to make the connections between them, thus meaning must be inferred.

Reading tasks that might exemplify this type of text processing include the following:

- Inferring that one event caused another event.
- Concluding the main point by making a series of arguments.
- Determining the referent of a pronoun.
- Identifying generalizations made in the text.
- Describing the relationship between two characters.

3.1.3 INTERPRET AND INTEGRATE IDEAS AND INFORMATION

During this process the learner is processing text beyond the phrase or sentence level. In this case, the learner might focus on local or global meaning, or may relate details to overall themes and ideas. This is therefore an interpretive process, where learners attempt to construct a more specific or complete understanding of the text by integrating personal knowledge and experience with meaning found in the text.

Reading tasks that may exemplify this type of text processing include the following:

- Discerning the overall message or theme of a text.
- Considering alternative actions by characters.
- Comparing and contrasting text information.
- Inferring a story's mood or tone.
- Interpreting a real-world application of text information.

3.1.4 EXAMINE AND EVALUATE CONTENT, LANGUAGE AND TEXTUAL ELEMENTS

This process of comprehension entails a shift in focus from constructing meaning to critically considering the text itself. This allows for reflecting on textual elements, such as structure and language in order for the learner to examine how meaning is presented. During this process, the learner should draw on his or her knowledge of text genre and structure, an understanding of language conventions, reflection on the author's devices to convey meaning, purpose, perspective and skill. In essence, this process entails weighing of the learners' understanding of the text against their understanding of the world.

Reading tasks that may exemplify this type of text processing include the following:

- Evaluating the likelihood that the events described in the text could really happen.
- Describing how the author devised a surprise ending.
- Judging the completeness or clarity of information in the text.
- Determining an author's perspective on the central topic.

3.2 PURPOSES FOR READING

The PIRLS assessment focuses on two purposes of reading, namely:

- Reading for literary experience.
- Reading to acquire and use information.

These two purposes for reading account for most of the reading done by young learners in and out of school. Although the PIRLS assessment distinguishes between these two purposes for reading, the underlying processes and strategies readers use for both are very similar.

Each of these purposes for reading is often associated with certain types of texts. For example, reading for literary experience is often associated with fictional material, while reading to acquire and use information is more likely to be associated with informative articles and instructional texts. Although the PIRLS assessment takes the form of fictional passages when reading for the purposes of literary experience and articles for the purposes of reading to acquire and use information, the purposes for reading do not align strictly with these types of texts. Because tastes and preferences vary so widely, almost any text could meet either purpose.

3.2.1 READING FOR LITERARY EXPERIENCE

In literary reading, the reader engages with the text to become involved in imagined events, settings, actions, consequences, characters, atmosphere, feelings and ideas. The main form of literary texts when reading for literary experience in PIRLS assessments is narrative fiction.

3.2.2 READING TO ACQUIRE AND USE INFORMATION

With these types of passages, the learner does not engage in imagined worlds, but with aspects of the real world by means of informational texts. By means of informational texts, the learner can understand how the world is and has been and why things work the way they do. These passages are not only aimed at the acquisition of knowledge and information, but also to assess the learner's ability to use reasoning.

4 WHY UNDERTAKE PIRLS IN SOUTH AFRICA?

South Africa has 6 million adults over the age of 16 years who have never attended school and cannot read or write. According to an electronic document produced by the World Bank, this translates to an almost 15% illiteracy rate among South Africans, ages 16 and above. In addition, it seems that this disadvantaged population is functionally illiterate and cannot contribute as effectively to the economy.

Since 1994, South Africa has been undergoing radical social, political, economic and cultural changes. Changes on the education front included that of the new curriculum with the introduction of an outcomes-based system of education. According to Zinn (2000) other changes also included the introduction of a single Department of National Education, replacing the 19 different education departments of the past era. The rationalization of the civil service drained the teaching core of thousands of valuable, experienced teachers.

Despite national efforts, South African school learners are repeatedly failing grades or leaving school. Almost half of learners who drop out of the system can be attributed to a lack of basic learning skills, more specifically, a lack of adequate language skills.

A study undertaken by the Department of Education during 2003 on literacy levels among grade 3 learners showed that 61% of children cannot read or write at the appropriate level for their age. This is supported by the fact that up to 18.5% of learners in some provinces already fails at this level and has to repeat grade 3. As reading literacy is a major tool for enabling all other learning, these children have little hope for coping in later grades unless urgent and effective intervention takes place.

The implication of poor literacy levels among young learners is that they not only leave primary school illiterate, but that the trend continues as they enter secondary school.

The question that also arises is whether South Africa suffers a unique problem or whether other developed and developing nations also experience similar problems related to low levels of language and learning skills.

PIRLS 2006 aims to answer the following questions:

1. How well do fourth grade learners read?
2. How do students in one country compare with the students in another country?
3. Do fourth-grade learners value and enjoy reading?
4. Internationally, how do the reading habits and attitudes of learners vary?

In addition to these questions addressed in the international study, South African researchers will strive to address the following:

1. How well do grade 4 learners from different provinces read?
2. How do grade 5 learners compare to grade 4 learners in reading?
3. How do reading habits and attitudes of learners differ in terms of age, gender and social background?
4. How are young children taught to read? How do instructional practices in one province compare with those in another province?
5. How do adult learners perform on the grade 4 test and how does this compare to learners in the formal sector?
6. What is needed to improve the reading literacy of young children in South Africa?
7. What is needed to improve opportunities for adult learners in South Africa?

Potential advantages of PIRLS for South Africa are that it could provide a comparative basis to benchmark progress in reading literacy. It should also be kept in mind that PIRLS is a systemized vehicle to derive nationwide empirical data that could be used to inform decisions on curriculum and language policy. As a large-scale study, it can also provide opportunities for collaborative partnerships, networks and forums with the international community, individuals and organizations from diverse contexts.

Under the auspices of the IEA's international expertise and experience in evaluation and assessment, PIRLS has the following advantages:

- The potential to contribute to capacity building amongst local researchers in large scale, comparative studies.
- Tried and tested conceptual, methodological and analytical frameworks for large scale research designs.
- The provision of useful management and administrative templates and systems required for large-scale studies.
- The availability of expertise in item construction and the development of scoring guidelines.

In addition, PIRLS data derived from parent, teacher, principal and learner questionnaires have the potential to provide indicators on reading habits of learners, insights into the relationships between socio-economic conditions and reading literacy, as well as language curriculum practices at school, district and

provincial and national level. In addition, valuable information could be gained into the utilization of resources for literacy development, insights into the teaching practices to promote reading literacy and indicators on how individual schools, districts and provinces support literacy development. Lastly, experience and expertise derived from participation in the PIRLS study may be applied to designing national exit level examinations, as well as provide regular contextual data on teaching and learning experiences to inform policy development.

Despite the many advantages for South Africa in participating in PIRLS, a number of potential disadvantages should also be highlighted. Firstly, PIRLS is conceived and benchmarked on a distinctly Euro-American standard with a Western worldview. Sentiment among some countries (especially those from Asia and the Middle East) about what constitutes appropriate 'standards' are routinely dismissed in favour of Euro-American standards. Secondly, it seems that the difficulty levels of test items are highly contentious, with considerable dissent amongst countries on the suitability of such items for their respective countries. Finally, the development of assessment instruments in English undermines the commitment to multilingualism. The existence of cultural and contextual biases in test items are therefore of consequence.

5 CURRENT STATUS OF THE PIRLS PROJECT IN SOUTH AFRICA

5.1 DESIGN ISSUES: INCLUSION OF NATIONAL OPTIONS

For the purposes of undertaking PIRLS in South Africa, several additional elements have been included in the South African project to accommodate aspects that are unique to our educational environment. These additional aspects are referred to as national options, since their inclusion in the project bears importance for our own, national reporting and include aspects that would not form part of the international part of the study.

The South African team decided to include three such national options, namely:

1. Assessing learners for English Second Language proficiency.

Learners were not only tested in their home language, but were also tested by means of an English Second Language test. This instrument was developed in collaboration with Grade 4 teachers and aims to assess learners' proficiency in reading English as an additional language. Learners in South Africa begin their schooling through the medium of their mother tongue (one of the official 11 languages) and the medium only changes to either English or Afrikaans at the beginning of grade 4. The transition in the language of learning is seen as the root cause for many learners struggling to access information within the classroom. For the majority of learners (more than 70%), this additional language (usually English) is experienced as a foreign language as they seldom speak or hear the language outside the classroom. This is especially true in rural areas.

2. Including Grade 5 learners for assessment.

The South African team tested grade 4 and 5 learners in all 11 official languages. The rationale for including grade 5 learners is to study the progression in reading ability from grade 4 to grade 5, given the transition of learners in the languages of learning in grade 4.

3. Assessing ABET learners using the PIRLS instruments.

The purpose of extending the PIRLS 2006 study to incorporate adult learners would be to determine the level of reading literacy amongst those adults attending Adult Basic Education and Training in public learning adult centers. This phase of the project will only be undertaken in 2006 and is still in a conceptual phase.

5.2 DATA COLLECTION

The first round of data collection for PIRLS 2006 took place during the field test in April 2005. During this field test, a convenience sample of 32 schools agreed to participate. Apart from collecting data on 12 proposed reading passages, the aim of the field test was also to identify possible problems where prescribed procedures as received from the international study centre proved to be impractical or problematic.

Following on the results of the field test, problematic reading passages were eliminated from inclusion in the main study – problematic passages included those with unfavourable item statistics, gender bias and passages that proved to be problematic to translate for more than one country. This resulted in a total of 6 passages (3 assessing reading for enjoyment and 3 assessing reading for information) that were deemed to be suitable for inclusion in the PIRLS assessment. Apart from these selected passages, 4 trend passages were also included. These passages were used during the 2001 cycle of assessment. With their inclusion, it is aimed to provide countries that have taken part in the 2001 assessment the opportunity to look for any trends in their levels and performance of reading literacy. For a country like South Africa, which is taking part in PIRLS for the first time in 2006, these trend passages will only become valuable during the next cycle of assessment in 2010.

Data collection for the PIRLS main study took place during October and November 2005. A nationwide sample of 441 schools was selected to participate in the study. Schools were selected from all 9 provinces and included learners from schools in all 11 official languages.

To date, data collection took place in 97% of the intended sample of schools. This means that approximately 125 000 assessment instruments and contextual questionnaires have been returned from the field.

5.3 TRANSLATION OF TEST MATERIAL

Of the participating PIRLS countries, South Africa proved to have the most complex situation by far in terms of the number of indigenous languages. Contextual questionnaires and assessment instruments were translated into all 11 official languages and followed the route of one round of translation being followed by a round of back translations, as well as international translation verification as done by the international study centre.

Despite stringent translation procedures, language and cultural complexities highlighted the importance of acknowledging diverse cultures in cross-national studies of this nature. Some of the challenges faced during the translation process include:

- Technical terms used in especially some of the informational passages would not be recognised by learners. For example, the Zulu word for 'hammerhead shark' or 'great white shark' are not known at all. Instead, these were only changed to 'i-hammerhead shark' and 'i-great white shark', since learners are more likely to recognize it.
- Many of the English expressions tend to get lost in translation. For example, in the reading passage called 'Unbelievable Night' reference is made to Anina, who had a fright and 'was frozen to the spot'. In this case, 'frozen to the spot' is an English expression and although it was literally translated into the African languages, it lost quite a bit of meaning, since this is not a commonly used expression in these languages.
- Some concepts were difficult to even describe to the translators. For example, in the story 'Flowers on the roof', an Icelandic story, reference is made to grass that was being planted on the rooftop. In Africa, however, this is completely foreign and our translators understood this as being a thatch roof, something more familiar to our context.

6 THE WAY FORWARD

Earlier in this document it was mentioned that 61% of children couldn't read or write at the appropriate level for their age. As reading literacy is a major tool for enabling all other learning, these children have little hope for coping in later grades unless urgent and effective intervention takes place.

With the participation in PIRLS 2006, it is expected that a number of key questions will be answered. Of importance would be a comparative analysis of the 11 official languages and learners' performance in each respective language. Data collected might also enable further, in-depth exploration into the factors that promote reading literacy, so as to enable any interventions to be focused around such identified factors. In addition, PIRLS data would enable a detailed analysis of teacher education, comparative analyses per province, as would be a comparative analysis in establishing the exact relationship between learner performance in home language and performance in English Second Language tasks.

REFERENCES

Brinkley, M. & Kelly, D.L. (2003). **A Comparison of the NAEP and PIRLS Fourth Grade Reading Assessments.** [Online]. Available: http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=200310. [2004, July 07].

Campbell, J.R., Kelly, D.L., Mullis, I.V.S., Martin, M.O. & Sainsbury, M. (2001). **Framework and Specifications for PIRLS Assessment 2001.** [Online]. Available: http://www.iea.nl/iea/hq/index.php?id=96&type=1. [2004, July 07].

Literacy and International Development [Online]. Available: http://www.literacyonline.org/explorer/overview.html. [2004, July 07].

Progress in International Reading Literacy Study (PIRLS) 2006. [Online]. Available: http://www.iea.nl/iea/hq/index.php?id=96&type=1. [2004, July 07].

UNESCO Institute for Statistics. [Online]. Available: http://www.uis.unesco.org/ev.php?ID=5013_201&ID2=DO_TOPIC. [2004, July 07].

UNESCO Institute for Statistics. [Online]. Available: http://portal.unesco.org/education/en/ev.php. [2004, August, 10].

Zinn, S. (2000). **Information Literacy in South Africa: Making strides with Information and Communication Technology.** [Online]. Available: http://www.iasl-slo.org/zinn2000.html. [2004, July 07].