NIC SPAULL

INTRODUCTION

Learning to Read and Write for Meaning and Pleasure

Learning to read and write for meaning and pleasure are arguably the two most important skills that children learn in primary school. Virtually all forms of social, civic, and economic engagement in the modern world are now mediated through text. Using the skill of reading for meaning, young adults are expected to read everything from newspapers and novels to poetry and political manifestos. It is for this reason that the global community has committed itself to ensure that by 2030 all children complete free, quality primary and secondary education that leads to relevant learning outcomes (UNESCO, 2017). Yet, a consistent body of research points to the fact that the vast majority of children in developing countries do not acquire this fundamental skill (Pritchett, 2013; Muralidharan, 2013; Spaull & Taylor, 2015). While almost all children will naturally acquire oral language (the systematic representation of meaning using speech sounds), fewer than half will learn how to read (the systematic encoding of meaning using print). Around the world reading researchers are increasingly turning their attention to early literacy in developing countries and asking why so many children don't learn to read despite their having access to formal schooling (World Bank, 2018).

The current volume brings together researchers from Latin America (Argentina and Chile), India, Southern Africa (South Africa and Zambia), and West Africa (Burkina Faso, Niger, and Senegal), providing diverse perspectives on early literacy in their respective countries. Drawing together quantitative researchers, linguists, and educationists from four continents, the book shows that irrespective of epistemologies or methodologies, all researchers stress the need for a more nuanced understanding of how early literacy unfolds in developing countries. Importantly, the majority of these researchers live and work in the countries and regions they are analysing, bringing contextual insights that may be overlooked by researchers living abroad.

READING IN DEVELOPING COUNTRIES: UNDER-RESEARCHED AND UNDER-THEORIZED

Perhaps the most important contribution of this edited volume is that it adds to an almost-non-existent body of literature on early grade reading in some of the most under-studied countries in the world, such as Burkina Faso, Niger, and Senegal (see

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chapters 3 and 12 through 16). This dearth of research on early grade reading also extends, however, throughout Asia and into the rest of Africa. Languages spoken and used in the developing world remain under-researched and under-theorized. This is true not only of minority languages in so-called 'small' countries or communities, but also of such widely spoken and widely read languages as Arabic and Hindi. A cursory bibliometric analysis of three leading international journals of reading research[1] showed that 68% of the 1,423 articles published in the last 10 years (2009–2019) focused on reading in either English or French. The combined number of articles published on reading in Arabic, Hindi, Bengali, and Swahili amounted to a mere 6% of the total. These four languages alone cover over a billion people in the developing world (Ethnologue, 2019).

This lack of research and theory is problematic when one considers the current scholarly consensus that children should first learn to read in a language they speak and understand (Snow, 2017; August and Shanahan, 2006). Emerging quantitative research from South Africa and Kenya points to the clear benefits of mother-tongue instruction in the first years of school (Taylor and von Fintel, 2016; Piper et al., 2016; but see also Piper et al., 2018, for a cautionary note). To illustrate the centrality of language in early grade reading – and to provide a helpful heuristic for analysis in this chapter – I have visualized, organized, and adapted[2] the '5 T's of early literacy' proposed by RTI (Bulat et al., 2017, p. 1). This scheme summarizes the many necessary conditions (and ongoing challenges) for early grade reading in developing countries. The adapted 5 T's are Teaching, Texts, Tests, Training, and Tongue (language) (Figure 1). All of these factors are influenced by the context within which the school operates, particularly the cultural orientations and attitudes towards reading and education, as well as whether the minimum conditions for learning have been met (basic nutrition, non-extreme class sizes, essential learning materials, and so on).

Before entering a discussion of these 5 T's, it is worth emphasizing the primacy of the 'minimum conditions for learning' with a short sketch of a typical teacher's situation. Illustrating the context within which many teachers must work helps to anchor expectations of what is possible given classroom realities in some countries. A 2014 nationally representative survey of 10 Francophone African countries, namely, Benin, Burkina Faso, Burundi, Cameroon, Congo, Côte d'Ivoire, Niger, Senegal, Chad, and Togo, found that 22% of primary school pupils were in schools that had no toilet facilities whatsoever (CONFEMEN, 2015, p. 104). In Togo, Chad, and Côte d'Ivoire, the figure is 40%. In Niger, the average Grade 2 class had 48 pupils in it, with much higher class sizes in Senegal (52 pupils per class), Benin (57 pupils per class), and a bewildering 80 Grade 2 pupils per class in Burkina Faso (CONFEMEN, 2015, p. 99). When the average Grade 2 Burkinabe teacher has 80 seven-year-olds in a single class, teaching more than a small minority of them to read is simply not possible. Assuming these elementary conditions are met, what are the factors that contribute to early literacy in developing countries?

The first T in Figure 1 is Teaching, and its quality is determined to a large extent by the second T, Training. There is now a large body of consistent research revealing

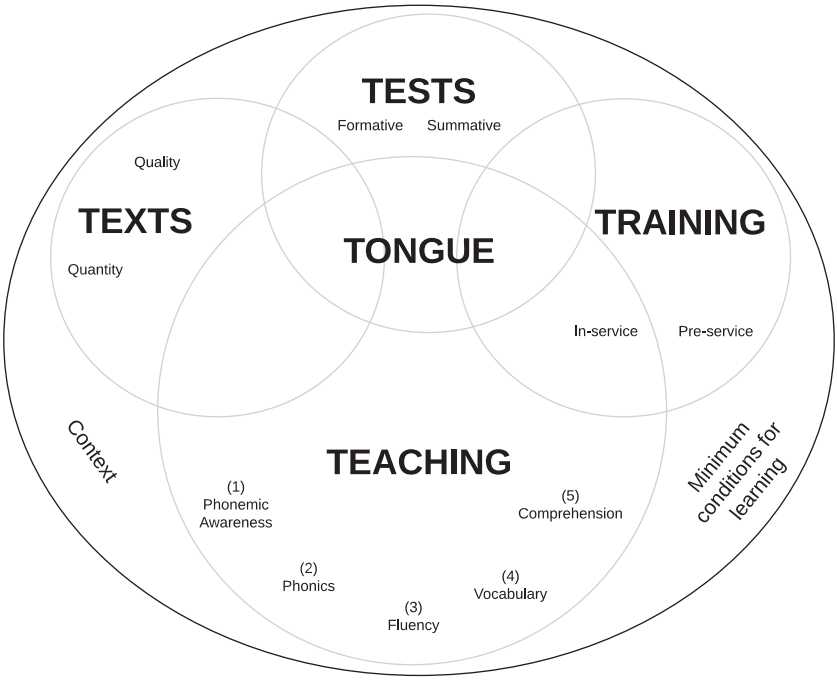

Figure 1. The 5 T's of early grade reading (adapted from Bulat et al., 2017)

the essential components of teaching reading (Castles et al., 2018), supported by the latest findings in neuroscience (Dehaene, 2009; Seidenberg, 2017). These all foreground another 'Big Five' aspects of reading: (1) Phonemic Awareness, the ability to manipulate the smallest units of sounds (phonemes) in words; (2) Phonics, the systematic relationship between letters and sounds; (3) Fluency, the ability to read quickly and accurately; (4) Vocabulary, one's breadth and depth of word knowledge; and (5) Comprehension, the ability to understand what is being read (Bulat et al., 2017; National Reading Panel, 2000).

Unfortunately, these 'scientific' understandings of reading are rarely included in teacher training programs for either in-service or pre-service teachers. Both the length and the quality of initial teacher training will determine to a large extent whether teachers are equipped to teach reading. Turning again to the Francophone African context, two thirds of early primary teachers in Francophone Africa (64%), have received only one year, if that, of teacher training, with 22% having received no professional training whatsoever (CONFEMEN, 2015, p. 121).

What further complicates this issue is that the vast majority of reading research has been conducted on English, which is by no means a typical language. This brings us to the third T, Tongue. As a field of researchers, we would do well to heed Pretorius' admonition in the current volume, repeated in full below:

> First, we need to be mindful of the sources of our knowledge about reading. From which languages do research findings derive? Second, given the complexity of reading, we need to be reasonably sure that there is converging evidence for the claims that are made about reading. Third, we need to be mindful of how we apply what we know and understand about reading in contexts that are different from the original contexts. Will the implied predictions or outcomes still hold true in a different context? Much of what we know and understand about reading comes from a large body of research based on reading in English and other European languages, among them, in particular, Dutch, Spanish, Italian, French, German, Greek, and Swedish. These are languages that belong to the Germanic or Romance language families. They are classified typologically on a continuum, according to whether they have greater or fewer analytic or inflectional morphosyntactic features (that is, whether they convey meaning primarily through syntax, especially word order, or by adding prefixes and suffixes to words). Increasingly, research into reading in languages that are typologically different, such as Turkish, Finnish, and Basque, is entering academic reading journals. These languages differ from European languages in that they are agglutinating languages. In these languages, words consist of sequences of morphemes attached to a stem, each of which represent a different grammatical category, as in the [isiXhosa] word *abayifundi 'they aren't reading it',* which consists of five morphemes *a+ba+yi+fund(stem)+i* … Is reading in an agglutinating language the same as, or different from, reading in analytic or inflectional languages? (Pretorius, current volume)

While Pretorius speaks from the South African context with African languages in mind, Sinha (current volume) shares similar but different concerns in relation to reading in Hindi (India):

> This vast body of research, as well as the building of theory, took place outside India in developed countries whose languages have alphabetic scripts. But Indian script, such as that of Hindi, is alphasyllabic. This raises questions. How can theories developed with a different type of script apply to Indian languages? (Padakannaya and Mohanty, 2004). (Sinha, current volume)

In a similar vein, Menon and her co-authors (current volume) document in some detail the practical difficulties of teaching reading using Indian scripts, and specifically the question of how to sequence the acquisition of *aksharas* (letters of the Indian script) when teaching children to read. This issue speaks to the Text component of the 5 T's – which texts, and what types of texts, should be used when teaching children to read? What their research shows is that the easiest words to write in Kannada (one of the Indian languages) are also words that are unfamiliar to children, while everyday words are often more difficult to write, since they include modifications to the *aksharas* in the form of *maatras* (secondary vowel diacritics). Thus, there is a trade-off between postponing word formation until children know

how to use *aksharas* and *maatras* to form words they know orally, or quickly starting the forming of words whose meaning they do not know. Menon and her co-authors' discussion is especially revealing:

> In contemporary Indian curricula, the emphasis is on forming meaningful words from the beginning. Hence, the order of introducing the base *aksharas* has been reorganized to permit the formation of words. However, curriculum designers hesitate to introduce symbols for *maatras* or conjunct consonant sounds too early – perhaps acknowledging the difficulties that young learners may have in simultaneously mastering so many different symbols of the script. Therefore, in order to make meaningful words, they need to find words that use only the inherent vocalic sounds in the base *aksharas*. Such words can, indeed, be made – but they tend to be words that are not commonly used by young children in their oral language, and are often words derived from the classical Sanskrit language – one of the languages of erudition and scholarship in earlier times. Therefore, the first words learned by a child in school tend to be those that are not in the spoken oral vocabulary of young children, and that represent objects and emotions that the child may have no organic relationship with. For example, the word '*salaga'* (Sanskrit word meaning 'tusker') is easier to form from the *aksharas* introduced, than the word '*aane'* (Kannada word meaning 'elephant' – which has a *maatra*). Likewise, the word '*dhana'* (Sanskrit word for 'wealth') is easier to form than the word '*rokka'* (dialectic word for 'money' in certain parts of Karnataka – which has a conjunct consonant symbol and a *maatra* in it). In our work, we observed a large number of specialized words being introduced to young children engaged in the task of *akshara*-mastery in their classrooms … While the surface features of the curricula have shifted – ostensibly towards meaning-making … the deep structures of teaching and learning literacy remain largely divorced from meaning-making. Thus, children aspiring to be first-generation literates in their families spend the better part of two years seeing pictures and copying down words representing tuskers and kings, chainsaws and inlaid necklaces – which have little or nothing to do with what they might actually want to learn or talk about. We asked a first grader why the words he used at home for different objects were different from the words he learned at school. He looked incredulously at us and responded: 'At home, we speak in Kannada. At school, I am learning English!' This first grader had not realized that the language he was learning at school was not, in fact, English, but school-based Kannada. (Menon et al., current volume)

Issues raised by these and other authors in the current volume point to fundamental questions about the way literacy is conceptualised and taught in developing countries. Furthermore, these examples point only to the technical elements children battle as they try to become code-breakers, not to mention the challenges they face when becoming meaning-makers or text-critics (Luke and Freebody, 1999). Again, Menon and her co-authors show how cultural understandings of literacy can be especially

difficult to overcome. They show that in India, where texts are used in religious contexts for ritual purposes, meaning is 'assumed to reside in the text and not in the minds of the readers. Individual meaning-making and interpretation were not significant to the functions or practices of this form of literacy.' As a result, teachers tend to 'favour shared interpretations of text over individual interpretations'. As the authors conclude, 'When we speak of designing powerful reforms to literacy instruction, we're seeking to accomplish nothing short of cultural change.' It is these types of insights – and there are many in the current volume – that make clear the need for more research on early reading and writing in the languages children speak and the contexts within which they live in developing countries. Throughout the volume, the reader will see that authors engage with different components of the 5 T's model. In the first chapter, McLachlan provides a helpful overview of the dominant ideas in early reading and concludes that "any literacy policy needs to be based on two things: on relevant language and literacy practices in African countries and on the evidence generated by research regarding the knowledge and skills that children need for literacy acquisition". Chapters 2 and 3 deal with Tests and measurement from both a theoretical perspective (Afflerbach) and an applied perspective focussing on Burkina Faso and Senegal (Spaull and Lilenstein). Savage and Côté (in Chapter 5) look at Tongue and ask if there are relevant lessons to be learnt from the Canadian model of language immersion. The authors in Chapters 6, 7, 8, 9, and 10 discuss in some depth the Training element of early literacy, reflecting on experiences in India, Zambia, Chile and Argentina. The pioneering work of Pretorius and of Menon and her colleagues extend our understanding of how Tongue and Teaching work together to help or hinder early literacy. Finally, the authors of chapters 12 through 16 reflect on a multiyear intervention in Burkina Faso, Niger, and Senegal, foregrounding the importance of alignment across the 5 T's. Given how little scholarly attention has been paid to this area of the world, these five chapters offer valuable insights into the practical challenges and opportunities of educational reform in developing countries.

AN OVERVIEW OF EARLY GRADE READING OUTCOMES IN DEVELOPING COUNTRIES

Any discussion of early literacy in developing countries would be incomplete without a short overview of the nationally representative learning outcomes in these countries. Over the last 20 years, there has been a proliferation of cross-national assessments of reading outcomes (Gustafsson, 2018), allowing for international and inter-temporal comparisons of achievement.

Figure 2 below shows the percentage of Grade 2 students who could not read a single word from a short text in the language in which they were being taught. In this selection of countries from Africa, Asia, and the Middle East, it is clear that at least a third of children, and in some countries (Malawi, India, and Ghana) as many as 80% of children are completely reading illiterate after two years of formal full-time schooling.

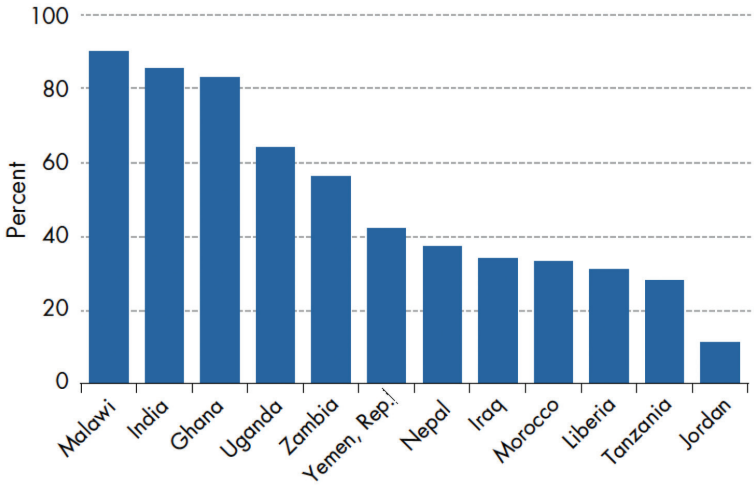

Figure 2. Percentage of Grade 2 students who could not read a single word of a short text (Source: World Bank, 2018, p. 5, which uses nationally representative 2012–2017 data from the UWEZO and ASER tests and the Early Grade Reading Barometer, 2017).

Given this book's special emphasis on Burkina Faso, Niger, and Senegal, it is worth further exploring the most recent cross-national assessment of reading in this region specifically. Periodically the Conference of Ministers of Education of French-Speaking Countries (CONFEMEN) conducts the PASEC[3] assessment in a nationally representative sample of primary schools in Benin, Burkina Faso, Burundi, Cameroon, Congo, Côte d'Ivoire, Niger, Senegal, Chad, and Togo.[4] The most recent assessment was in 2014. This study revealed that at the end of Grade 2, half (52%) of all the children assessed could not read 10 letters of the alphabet correctly in one minute. Only 25% could read more than 20 letters correctly in one minute (CONFEMEN, 2015, p. 38). In Benin, Chad, and Niger, more than two thirds of Grade 2 pupils do not know all of the letters of the alphabet (Figure 3).

Looking again to the chapters in the current volume, Spaull and Lilenstein use household survey data together with results from literacy assessments to analyse a nationally representative cohort of Burkinabe and Senegalese children aged 11 to 15 years old. They find that only 23–34% of each cohort had both completed Grade 2 and acquired basic literacy (23% in Burkina Faso, and 34% in Senegal). For the poorest 40% of children the rates are 11–21%. Many of these results may be difficult to interpret for those in the West unfamiliar with the types of tests conducted in developing countries in Africa and Asia (such as the EGRA, ASER or UWEZO tests). In the few instances when developing countries do participate in the same international assessments with wealthier countries, the magnitude of the differences becomes truly apparent. In the 2016 round of the Progress in International Reading and Literacy Study (PIRLS), 78% of Grade 4 pupils in South Africa could not read

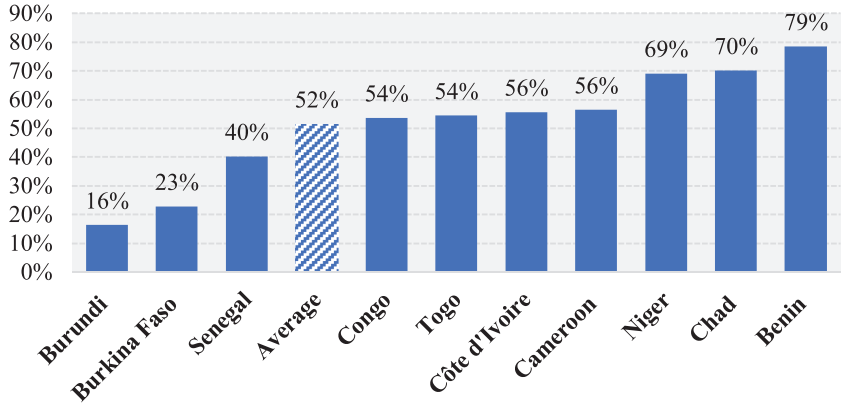

Figure 3. Percentage of Grade 2 students who do not know all of the letters of the alphabet (i.e., could not read at least 10 letters correctly in one minute) (PASEC, 2014). (Source: CONFEMEN, 2015, p. 38)

for meaning in any language (the PIRLS Low International Benchmark), compared to 69% in Egypt and 64% in Morocco (Mullis et al., 2017, p. 55). The international median across all 50 participating countries was 4%, with figures of 5% in Germany, 4% in the United States, and 3% in England. Given the hierarchical nature of reading and the fact that reading for meaning is a prerequisite for further engagement with the curriculum, it is to be expected that these stark differences at the Grade 4 level are even larger in higher grades. In 2015, a selection of developing countries participated in the well-known Program for International Student Assessment (PISA), which assesses 15-year-olds who are still enrolled in school. Fewer than 10% of 15-year-olds in school in Cambodia, Senegal, or Zambia were functionally literate (PISA Level 2), compared to the OECD average of 80% in 50 wealthy countries (OECD, 2018, p. 7). This is all the more concerning when one considers that in 2015 only a third of Cambodian, Senegalese, and Zambian 15-year-olds were actually still in school (OECD, 2018, p. 7).

CONCLUSION: CHARTING THE PATH AHEAD

The education challenge facing the global community is immense. In addition to addressing the unfinished business of the Millennium Development Goals (equitable access and universal primary school completion), there are now the extra challenges of ensuring all children acquire 'effective and relevant learning outcomes', interpreted here as reading and writing for meaning and pleasure. The research findings documented in this volume help move the early literacy discussion forward in important ways by suggesting a number of new avenues for linguistic and pedagogical research. This includes the call for linguistically informed approaches to early literacy instruction; the alignment of training, materials, and assessment; and

the need for the development of lexicons and grammars for under-studied languages. While this volume has contributed to our understanding of early literacy in these developing countries, it has also left us with more questions than answers. The only way to meet the education challenge posed by Sustainable Development Goal 4 will be to facilitate a shift in research priorities and funding towards developing countries: their languages, their contexts, and their policy challenges. There is good reason to do so. Ensuring that all children can read and write for meaning and pleasure will bear countless dividends for humanity as a whole. The benefits to education in general, and literacy specifically, are manifold and include lower fertility (Basu, 2002), improved child health (Currie, 2009), reduced societal violence and improved human rights (Salmi, 2000), increased economic growth (Hanushek and Woessman, 2008), promotion of a national – as opposed to a regional or ethnic – identity (Glewwe, 2002), and increased social cohesion (Heyneman, 2003). Over and above these singular benefits, learning to read for meaning and pleasure is arguably the best way to expand children's capabilities and freedoms, enabling them to pursue the sorts of lives they have reason to value (Sen, 1999).

NOTES

[1] These were the *Journal of Research in Reading*, *Scientific Studies of Reading*, and *Reading Research Quarterly*. To identify these three journals, we use the SCImago Journal Rank Indicator, which calculates the average number of weighted citations received over the selected period. We limited the journals to those focusing specifically on reading and those that had an international focus. Note that these figures do not change substantially when one considers other leading reading journals and are only included here as illustrative of the broader challenge in international reading research. Across the three journals, the number of articles published on each language are as follows: English (730), French (240), Spanish (130), Portuguese (23), Chinese (210), Arabic (60), Hindi (9), Bengali (9), and Swahili (4).

[2] The original '5 T's' proposed by RTI were Teach, Text, Time, Test, and Tongue (Bulat et al., 2017, p. 1). In this model, 'time' is replaced with 'training', given how central teacher training is in almost all the recommendations of the authors in this collected volume, and Tongue is placed as an over-arching connector across texts, tests, training, and teaching.

[3] CONFEMEN Programme for the Analysis of Education Systems.

[4] In the CONFEMEN-PASEC studies, tests are administered in the official language of instruction, which is French in all countries except in Anglophone Cameroon, where tests are administered in English, and in Burundi, where tests are administered in Kirundi (CONFEMEN, 2015, p. 20).

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