EARLY GRADE READING IN SOUTH AFRICA

READING

EDITED BY

Nic Spaull Elizabeth Pretorius

OXFORD

EARLY GRADE READING IN SOUTH AFRICA

READING

EDITED BY

Nic Spaull Elizabeth Pretorius

OXFORD
UNIVERSITY PRESS

OXFORD
UNIVERSITY PRESS

Oxford University Press is a department of the University of Oxford.
It furthers the University's objective of excellence in research, scholarship,
and education by publishing worldwide. Oxford is a registered trade mark of
Oxford University Press in the UK and in certain other countries.

Published in South Africa by
Oxford University Press Southern Africa (Pty) Limited

Vasco Boulevard, Goodwood, N1 City, Cape Town, South Africa, 7460
P O Box 12119, N1 City, Cape Town, South Africa, 7463

First published 2022

Early Grade Reading in South Africa

Print ISBN 978 0 19 075171 5
ePDF ISBN 978 0 19 074138 9

First impression 2022

Typeset in Tisa Pro 10pt on 12pt

Acknowledgements
Publisher: Megan Hall
Managing Editor: Ashly Fraser
Editor: Megan Hall
Proofreader: Alida Terblanche
Indexer: Rita Sephton
Designer: Judith Cross-McCulloch
Typesetter: Firelight Studio

The authors and publisher gratefully acknowledge permission to reproduce copyright material in this book.
Every effort has been made to trace copyright holders, but if any copyright infringements have been made,
the publisher would be grateful for information that would enable any omissions or errors to be corrected in
subsequent impressions.

table of contents

editors

Nic Spaull is an associate professor in the Economics Department at Stellenbosch University, and a research fellow in ReSEP, the Research on Socioeconomic Policy group. He has published extensively on the inequality of educational opportunity in South Africa, focusing on assessment, education policy, and early grade reading and mathematics. He is a P-rated NRF researcher and has held visiting fellowships at Stanford University in the United States and at the Organisation for Economic Cooperation and Development in Paris. Prof. Spaull has been involved in a number of research projects for local and international organisations, including the South African Presidency, the Department of Basic Education, UNICEF, the European Union, UNESCO, ESRC and SACMEQ. He is Special Advisor to the Allan & Gill Gray Philanthropies and also advises numerous NGOs, policy-makers, and grant-making bodies.

Elizabeth (Lilli) Pretorius is Professor Emerita and Research Fellow in the Department of Linguistics and Modern Languages at the University of South Africa. Her main area of research in the past 20 years has been reading literacy, especially in high-poverty contexts. She served on the PIRLS Steering Committee in South Africa for several years and is also a member of the South African Human Rights Commission's Committee on the Right to Read and Write.

contributors

Cally Ardington is a professor in the Southern Africa Labour and Development Research Unit in the School of Economics at the University of Cape Town.

Cameron McConnachie is the regional director of the Makhanda office of the Legal Resources Centre.

Colleen Boyd is a master's student at the School of Education, University of Cape Town.

Elizabeth (Lilli) Pretorius is an emerita professor and research fellow in the Department of Linguistics and Modern Languages at the University of South Africa.

Gabrielle Wills is a senior researcher with Research on Socioeconomic Policy (ReSEP) in the Department of Economics at Stellenbosch University.

Heleen Hofmeyr is a postdoctoral fellow in the Department of Economics at Stellenbosch University.

Jacqui Dornbrack is the literacy director at Room to Read.

Kathleen Rastle is Professor of Cognitive Psychology at Royal Holloway, University of London.

Martin Gustafsson is an education economist at the Department of Basic Education and an associate professor at Stellenbosch University.

Mbali Lesang Sebaeng is an assistant director in the Research Coordination, Monitoring and Evaluation directorate at the Department of Basic Education.

Monica Mawoyo is a research associate in the Department of Childhood Education at the University of Johannesburg.

Nangamso Mtsatse is the CEO of Funda Wande and a research associate at Research on Socioeconomic Policy (ReSEP) in the Department of Economics, Stellenbosch University.

Nic Spaull is an associate professor in the Research on Socioeconomic Policy (ReSEP) group within the Department of Economics at Stellenbosch University.

Nick Taylor is Senior Research Fellow at JET Education Services.

Nompumelelo Mohohlwane is a deputy director for Research Coordination, Monitoring and Evaluation in the Department of Basic Education, a research associate at Stellenbosch University and a non-resident fellow at the Centre for Global Development.

Sarah Murray works jointly for Funda Wande and Rhodes University where she is a senior lecturer in the Centre for Social Development.

Sibhekinkosi Anna Nkomo is a lecturer in the Foundation Phase division at the School of Education, University of the Witwatersrand.

Sipumelele Lucwaba is the head of Strategy, Grant Making and Communications at Funda Wande.

Surette van Staden is an associate professor in the Department of Science, Maths and Technology Education at the University of Pretoria.

Titus Kazungu is Associate Director of the Literacy Program Africa at Room to Read.

Ursula Hoadley is a professor in the School of Education at the University of Cape Town.

foreword

Seventy per cent of children in low- and middle-income countries in 2022 reached the age of ten without being able to read and understand simple text (World Bank, UNESCO, UNICEF, FCDO, USAID, Bill & Melinda Gates Foundation, 2022). Given the importance of being able to read to advance to higher skills, these stark figures illustrate that countries like South Africa must make reading the 'apex priority', and education stakeholders at all levels must urgently act.

In South Africa, where 78% of children are not learning to read for meaning by Grade 4, the challenge is substantial. As several chapters in this volume point out, the challenge is not about lacking an evidence base on how to achieve better reading outcomes, but on the political economy issues that frustrate provincial and national level outcomes. I read the chapters looking for insights on how to help provincial- and national-level policy-makers make the decisions needed to dramatically improve reading outcomes in South Africa.

The depth and breadth of the research covered in this volume is remarkable and highlights the quality of scholarship on early grade reading in South Africa, the envy of so much of the rest of the world, including richer countries. South African reading research is trailblazing in many areas, including the development of agreed-upon benchmarks for oral reading fluency in several African languages (Mohohlwane et al.), and the growing evidence base on the science of reading in African languages, demonstrating the longitudinal connection between decoding, fluency and comprehension (Wills et al.). The evidence on shifting teaching practices is also promising, including more emphasis on phonics and comprehension, more consistent instruction, and the expanding availability of appropriate texts in African languages (Hoadley & Boyd). Outcomes must dramatically improve in Grade 1 – to do so, adhering to the science of reading is essential, namely better (and more) phonics instruction alongside an immediate shift away from approaches that prioritise whole language (Pretorius et al.).

When considering the support that teachers need to achieve better instruction, the book lays out suggestions for both pre-service and in-service. Taylor and Mawoyo's pre-service chapter shows wide variability in what is on offer across teacher education curricula, although the more recent changes to a standards approach are promising. Even more exciting is the Rhodes University course designed to provide high-quality, in-service literacy certification to existing South African educators, so as to rapidly remodel the skills of the experts in the system (Murray et al.). The wave of retirements of Foundation Phase teachers is both a crisis alert and an opportunity, but Spaull and Pretorius suggest concerns that the opening may be difficult to take without substantial investment and policy shifts.

The overarching message of this volume is the importance of using evidence on the science of teaching literacy to improve learning outcomes. This includes providing significantly better learning materials for daily use, high-quality skills-based training, and support to teachers delivering evidence-informed instruction; ensuring that enough time is spent in early primary on mastering phonics so learners can advance to fluency and comprehension, and measuring learning outcomes to track progress and target support, thereby activating accountability in the system. As Spaull and Pretorius highlight in the final chapter, early grade reading has been recently communicated as a national priority in South Africa, but to see results improve this must translate to implementation throughout the education system, and be accompanied by adequate resources, potentially including legal expectations for reading outcomes (McConnachie & Lucwaba).

This volume is evidence of the mature reading research environment in South Africa, but it is also a cry for help to the policy-makers who decide whether reading is really a priority, and to the system of supports around the typical teacher supporting children in rural South Africa. The research community has made it clear what we need to do – our task is to implement it effectively in each individual classroom, every single day.

Dr Benjamin Piper

Director, Global Education
Bill & Melinda Gates Foundation

preface

This edited volume is one of three books in a series focusing on developments in early grade reading and mathematics in South Africa between 2010 and 2022. The first volume is *Early Grade Reading in South Africa*, edited by Nic Spaull and Elizabeth Pretorius, the second volume is *Early Grade Mathematics in South Africa*, edited by Hamsa Venkat and Nicky Roberts, and the third is *Early Grade Reading and Mathematics Interventions in South Africa*, edited by Nic Spaull and Stephen Taylor. Collectively the three books bring together 77 authors from disciplines including economics, linguistics, literacy studies, mathematics education, teacher education, and policy studies. Although their domains and methods of analysis may differ, all authors grappled with the same underlying question: why is it that so few young children in South Africa acquire the building blocks of reading and mathematics in the first years of school? While international large-scale assessments have drawn increasing attention to learning outcomes at the primary school level, there is now a broad-based consensus that the roots of the problem lie even earlier than upper primary school. International assessments like PIRLS and TIMSS show that 60–80% of Grade 4 and 5 learners cannot read for meaning or calculate using the four operations, but emerging research documented in these volumes highlights that more than 50% of learners at the end of Grade 1 do not know all the letters of the alphabet, and cannot add and subtract single-digit numbers.

It is this challenge that animates the research across these three volumes, with an analytic focus on lessons learnt in the last decade (2010–2022). While learning outcomes in South Africa before the Covid-19 pandemic were improving quickly by international standards, the chapters included here present evidence for both optimism and alarm. Optimism because system-wide improvements do not happen accidentally or in a vacuum. Alarm because in 2022 it is still the case that the dignity and life-chances of millions of children in South Africa are foreclosed because they do not learn to read for meaning, or do mathematics with understanding in the first three years of school.

As a group of scholars committed to understanding and documenting the roots of both blockages and breakthroughs in reading and mathematics, it is our hope that you, the reader, find this new research interesting, helpful, generative, and challenging.

acknowledgements

The editors thank the Allan & Gill Gray Philanthropies for their financial support of two in-person authors' workshops, and for funding the excellent editorial assistant, Jess Qvist. We also thank Oxford University Press Southern Africa, who kindly agreed to bear the editorial costs of publishing these three books in an Open Access format, making them available to a wider audience than would otherwise be the case.

statement of peer review

All chapters in this book have been peer-reviewed, with the overall process managed by Oxford University Press SA. In a double-blind process, the reviews were anonymous and neither authors nor reviewers knew the identity of the reviewers or authors. The entire book's manuscript was also peer-reviewed by an international expert in the field.

abbreviations and key terms

ANAs Annual National Assessments
CAPS Curriculum and Assessment Policy Statement
DBE Department of Basic Education (after 2009)
DHET Department of Higher Education and Training (after 2009)
DOE Department of Education (before 2009)
DPME Department of Planning, Monitoring and Evaluation
EC Eastern Cape (province of South Africa)
EFAL English as a First Additional Language, according to the South African curriculum
EGRS Early Grade Reading Study
ELOM Early Learning Outcomes Measure
FFL Foundations for Learning
FP Foundation Phase (Grades 1 to 3)
FS Free State (province of South Africa)
IIAL Incremental Introduction of African Languages
IP Intermediate Phase (Grades 4 to 6)
GP Gauteng (province of South Africa)
GPLMS Gauteng Primary Language and Mathematics Strategy
KPS Knowledge and Practice Standards
KZN KwaZulu-Natal (province of South Africa)
lcpm letters correct per minute
learner a child enrolled at school, or someone learning a language (whether a child or an adult)
LIEP Language in Education Policy
LOLT language of learning and teaching
LP Limpopo (province of South Africa)
lscpm letter-sounds correct per minute
LTSM learning and teaching support material
MP Mpumalanga (province of South Africa)
National Framework for Reading in African Languages National Framework for the Teaching of Reading in African Languages in the Foundation Phase; *also* National Framework
NC Northern Cape (province of South Africa)
NEEDU National Education Evaluation and Development Unit
NGO non-governmental organisation
Nguni a language group including isiNdebele, isiXhosa, isiZulu, and Siswati; *see* Sesotho-Setswana
NPO non-profit organisation
NW North West (province of South Africa)
PIRLS Progress in International Reading Literacy Study
quintile in effect, a poverty ranking of schools in South Africa
SACMEQ Southern Africa Consortium for Monitoring Educational Quality, *or* the Southern and Eastern Africa Consortium for Monitoring Educational Quality
SAHRC South African Human Rights Commission
Sesotho-Setswana a language group including Sepedi, Sesotho, and Setswana; sometimes called Sotho or Sotho-Tswana; *see* Nguni
SGB school governing body
SIRP Sesotho and isiZulu Reading Project
TIMSS Trends in Mathematics and Science Study
translanguaging the practice of using, or encouraging the use of, all the languages or language forms that a person has available
wcpm words correct per minute
WC Western Cape (province of South Africa)

01

Reading research in South Africa (2010–2022): Coming of age and accounting for empirical regularities

ELIZABETH PRETORIUS & NIC SPAULL

Abstract

In this chapter, we show how research related to early reading in South Africa has mushroomed in the second decade of this century, resulting in large longitudinal datasets across different languages. In the second half of the chapter, we argue that these datasets reveal empirical regularities that can and should guide our thinking on early grade reading in South Africa, and should help clarify the content of good reading instruction. The psycholinguistic skills that go into early reading are now well-documented internationally, showing a hierarchy of skills that builds from oral proficiency to auditory discrimination (phonemic awareness) and letter-sound recognition. Once learners can segment individual letter-sounds in words and blend letters to form words, increasing accuracy and fluency then aid comprehension. New analyses of these datasets presented in the current volume support this view, clearly showing that decoding failures in Grade 1 predict later comprehension failures all the way to Grade 7. When less than 50% of South African learners in no-fee schools know all the letters of the alphabet by the end of Grade 1 and less than 50% can reach a minimal fluency threshold in Grade 2, it is clear that policy attention must shift to what is happening in Grade 1 and 2 classrooms that prevents this knowledge from being acquired. Finally, we identify terminological slippages in our shared discourse that obfuscate the issues in reading conversations and offer suggestions for how they might be avoided.

KEYWORDS
early grade reading, EGRA, phonics, fluency, comprehension

1 Introduction

South Africa today is in the fortunate position of having a large and reliable empirical research base on reading outcomes that did not exist 12 years ago. In this chapter, we briefly review research on reading in South Africa from the turn of this century to the present day, showing growth in both scale and scope, and discuss the ways in which the chapters in this volume are positioned in relation to this mushrooming empirical base, and have contributed to it. In the second half of the chapter, we argue that this large database reveals empirical regularities that should guide our thinking on early grade reading in South Africa, and should resolve some of the persistent controversies around what counts as good reading instruction and how best to change teacher practices accordingly.

While the chapters in this volume do not address the Covid-19 pandemic directly, they do illustrate what is currently known about early grade reading in South Africa, and how best to improve it (see also Spaull & Taylor 2022). That knowledge is critical when addressing the large and enduring learning losses arising from the pandemic. Both Van der Berg et al. (2022) and Kotzé et al. (2022) estimate that learning losses at the level of primary school amount to at least one full year of learning, suggesting that ten-year-olds in 2022 now know less than nine-year-olds pre-pandemic. This is a catastrophic setback that will take many years to overcome. Given the emerging evidence on learning losses in 2020 and 2021, the Progress in International Reading Literacy Study (PIRLS) 2021 results are likely to reveal an overall decline in reading outcomes, but the extent of that decline is not yet known. Using PIRLS 2006, 2011 and 2016, Van Staden and Gustafsson in the current volume show that reading outcomes in South Africa were improving before the pandemic, a trajectory to which we can now only hope to return. Given that reading is a foundational skill needed for all other text-based learning, any long-term recovery strategy will need to be mindful of both what is known about reading (this volume) and what is known about interventions to improve reading outcomes (Spaull & Taylor 2022).

1.1 Reading research in South Africa before and after 2010

At the turn of this century, Pretorius (2002) surveyed reading research in South African journals from 1990–2000 and concluded that there was a "deafening silence" on local reading research. Only 1% of articles reviewed dealt with reading issues in English, and there was no published research on reading in African languages. To review progress since then, in 2017 the Primary Teacher Education project commissioned an annotated review of research specifically into reading in African languages (Pretorius 2018). Studies were perused from 2004–2017 since no research on this topic was found for the first three years of the decade. The review shows that there were only a few articles on reading in African languages between 2004–2009 (two to three per year), which were sporadic, small-scale and cross-sectional, conducted by individual researchers using unstandardised assessment instruments. Where generalisations to

the broader population of schools were made, these were either speculative, tentative or problematic. Although South Africa's participation in large-scale, standardised reading assessments such as PIRLS[1] and the Southern and Eastern Africa Consortium for Monitoring Education Quality (SACMEQ)[2] produced a steady spate of publications on reading between 2006–2017, they focused on reading comprehension in the Intermediate Phase (Grades 4 and 6) and direct empirical links to reading in Grades 1 to 3 could not be made. Individual studies slowly increased from 2010 onwards, and the establishment of two new academic journals in South Africa – *Reading and Writing* and the *South African Journal of Childhood Education* – provided local, accredited forums for examining issues around early reading, especially in African languages. From 2014 onwards, studies began to collect more and different types of data (primarily Early Grade Reading Assessment (EGRA) data). Crucially, these were at earlier grades (Grades R, 1, 2 and 3).

However, it is only in the last seven years that a new generation of research projects has emerged that are team-based, longitudinal and large-scale, testing representative samples of learners using standardised instruments and reporting results in comparable formats. Most of this research is based on medium-scale interventions (50+ schools) in different provinces and the data emerging from their evaluations. The largest studies were the Early Grade Reading Studies in the North West (EGRS I) and in Mpumalanga (EGRS II), the Funda Wande interventions in the Eastern Cape and Limpopo, and the Story Powered Schools (SPS) intervention in KwaZulu-Natal and Eastern Cape (see Wills et al., this volume). Some local research has also investigated language and literacy development in the preschool years across the different languages to examine the effects on reading outcomes in formal schooling (e.g. Biersteker & Dawes 2019; Hofmeyr, this volume).

This more recent body of team-based reading research has collectively enabled the establishment of large datasets for different language groups of approximately 12,000 learners across three Nguni languages, 14,000 learners in the Sesotho-Setswana language group, and 20,000 learners of English as a First Additional Language. Ongoing research is collecting similar data on other South African languages (Afrikaans, Tshivenda, and Xitsonga). Over and above the size of the datasets, many of these are also longitudinal in nature, following the same learners over time, making it possible to build up more valid and reliable profiles of reading development across grades. From these data, empirical regularities have emerged, leading to the development of language-sensitive, early grade reading benchmarks (Mohohlwane et al., this volume).

Various chapters in this volume add to this growing body of reading research. For example, Wills et al. and Mohohlwane et al. present detailed accounts of reading trajectories and reading benchmarks across languages and studies. Their seminal work has already begun to influence national policy on reading. The Department of Basic Education adopted their recommendations in 2020 and is using these findings

1. To date, South Africa has participated in four cycles of PIRLS (2006, 2011, 2016 and 2021) where Grade 4 learners have been tested, with tests available in all 11 official languages (Afrikaans, English, isiNdebele, isiXhosa, isiZulu, Sepedi, Sesotho, Setswana, Siswati, Tshivenda, and Xitsonga).
2. To date, South Africa has participated in four cycles of SACMEQ (2000, 2007, 2013, 2021) where Grade 6 learners from 14 African countries are assessed in reading comprehension and mathematics. In South Africa, these assessments are in the language of learning and teaching at the Grade 6 level (usually English or Afrikaans).

to update relevant policies and assessment frameworks. The large and growing body of EGRA data is beginning to complement the well-established PIRLS research programme at later grades (Van Staden & Gustafsson, this volume), as well as new research on preschool and Grade R (Hofmeyr, this volume).

In order to situate these research developments over the last 10 years, we present a short overview of the changing zeitgeist in education before and after 2010.

1.2 The education zeitgeist in South Africa before and after 2010

Along with a new democracy in 1994 and hopes for a more equal society, a new outcomes-based curriculum was introduced in South Africa in 1997. It was based on a learner-centred, constructivist pedagogy[3] that embraced a Whole Language approach to reading that privileged meaning and peripheralised the value of decoding skills. Despite a few tweaks to the curriculum in subsequent years, this constructivist curriculum largely held sway for the next decade, while pressure built up from various stakeholders pointing to its inadequacies. These criticisms gained momentum as more data emerged on exceedingly weak learner outcomes that were not improving over time, evidenced by data from SACMEQ 2000, the 2001 Systemic Evaluations, and TIMSS 2003. Finally, by the end of 2011, a new curriculum, the Curriculum and Assessment Policy Statement (CAPS) was introduced, which specified content far more explicitly and supported a move away from constructivism to more direct and explicit styles of pedagogy and the delineation of knowledge.

This education shift heralded a new era of education-based research in the remainder of the decade, with strong links to early reading research, especially relating to teaching practices, teacher training and texts. For example, findings from the 2012 report by the National Education Evaluation and Development Unit highlighted weaknesses in teachers' content as well as pedagogic and curriculum knowledge of early grade reading (2013). Related to that, commissioned research (Deacon 2016) showed that little attention was given to reading in pre-service, teacher-education programmes at higher education institutions. Qualitative research on classroom observations shed light on the undifferentiated, communalising teaching practices in no-fee schools and showed how poorly trained teachers adopt superficial features of a curriculum without fundamental changes to their classroom practices (Hoadley 2012; De Clercq & Shalem 2014; Muller & Hoadley 2019). Concomitantly, NGOs involved in supporting Foundation Phase teachers have been instrumental in developing early reading resources in African languages, especially graded storybooks and decodable texts, language-sensitive alphabet friezes, posters and flash cards. The Molteno Institute's graded reading series Vula Bula, for example, was first developed for the Gauteng Primary Language and Mathematics Strategy (GPLMS) and has subsequently

3. A constructivist pedagogy is a broad construct that sees knowledge as constructed and existing in the mind, rather than matching an external reality. Children construct knowledge through their own experience; individual experiences make learning unique to each child.

been used in numerous, large-scale interventions (Katz & Rees 2022), briefly being adopted province-wide in the Eastern Cape to some success (Ardington & Spaull 2022).

Using randomised control trials to test versions of the 'triple cocktail' approach first used in the GPLMS, the research directorate of the Department of Basic Education also implemented medium-scale, early reading interventions in an African language at Home Language level (in the North West) and English at First Additional Language level (in Mpumalanga). This intervention includes a structured learning programme, teacher-coaches and print-based resources (see Fleisch & Alsofrom 2022). Various NGOs have subsequently refined these teacher guides and structured lesson plans as well as developing a new generation of language-sensitive, learner workbooks. In the current volume, Dornbrack and Kazungu, and Mtsatse document the process of creating instructional texts for the Room to Read and Funda Wande interventions respectively. Here we see how new data on the components of reading and the strong relationship between decoding and comprehension have led both organisations, cognizant of the science of reading, to develop language-sensitive workbooks. These lesson plans, teacher guides, readers, and workbooks for learners all aim to broaden and strengthen the teaching repertoires and routines of Foundation Phase teachers as well as increase pacing and curriculum coverage. Prior to 2010, the funding of interventions (usually small and ad hoc) entailed few, if any, monitoring and evaluation obligations. In the last decade, however, a tradition of more stringent, external monitoring and evaluation of the processes and outcomes of reading interventions has emerged, resulting in budgets for monitoring and evaluation forming part of intervention programmes. This, in turn, has provided us with more reliable information on what works or does not work in specific schooling contexts.

Several chapters in this volume reflect shifts in education research and its relation to reading in the past decade. For example, McConnachie and Lucwaba's chapter helps locate the reading discourse within a larger legal context showing how reading is, and might be, seen by the judiciary. Pretorius et al. provide a critique of the current Foundation Phase curriculum in light of findings from the science of reading. Reviewing the pedagogical regularities in reading instruction across South African classrooms over the last decade (2010–2020), Hoadley and Boyd suggest that the new curriculum and the roll-out of the DBE Workbooks, from 2011 onwards, have arguably led to at least some change in classroom practices. However, they also highlight that weak teacher content knowledge is still endemic and communalised pedagogy still prevalent, despite these reforms. Two chapters address issues related to teacher knowledge in relation to pre-service and in-service teacher training: Taylor and Mawoyo highlight the difficulties in shifting how faculties of education train and certify teachers, while Murray et al. focus on the Advanced Certificate in Foundation Phase Literacy Teaching at Rhodes, providing one example of a new and promising approach to in-service teacher training.

In sum, this brief review of reading and education research shows that, from a deafening silence in 2000, there is now a large, systematic and reliable empirical evidence-base on early grade reading in South Africa. We believe that this new weight of evidence has reached a level of maturity and stability where empirical regularities are confirmed across multiple studies, representing a wide range of no-fee schools in South Africa (urban, rural, large and small schools, different languages of instruction etc.). Collectively, these studies shed light on different teaching styles, classroom

practices and text-based resources, and show which interventions 'work' or 'fail to work' in developing reading proficiency in the early grades. Collectively, these studies show that only interventions that (i) are sufficiently intensive, (ii) focus on establishing foundational reading skills, (iii) include both additional Learner and Teacher Support Materials, and (iv) include in-classroom coaching or in-classroom teacher assistants lead to improvements in reading outcomes (see Cilliers et al. 2020; Ardington & Meiring 2020; Ardington & Henry 2021). Intervention arms that focused on improving literacy practices in the home (EGRS I) or reading for enjoyment (SPS) did not lead to any improvement in reading outcomes (Ardington et al. 2019). For a full discussion on intervention types and the findings emerging from them, see Spaull and Taylor (2022).

Finally, it is important to note that, apart from shedding light on which reading interventions 'work' or not, the data emerging from these evaluations have also played a decisive role in the development of reading theory and research in South Africa, a point we turn to in the next section.

2 Reading research and empirical obligation

International reading research over the past sixty years shows definitive research emerging from different perspectives, using a range of research methods. Whereas previously most of our information on reading in South Africa was derived from research emanating from the Global North and applied or misapplied to our context, we now have far more local information and data on reading in an African context. This greater research maturity enables us to reflect on, engage with and position ourselves more reliably in the broader global reading landscape both empirically and theoretically.

2.1 Reading theories and the obligation to explain empirical regularities

The South African literature on early grade reading puts forward numerous competing and complementary hypotheses for the low reading outcomes seen in the country. External factors that negatively impact learning and literacy development – such as poverty, schools, resources, and teaching – have been identified. For example, large-scale quantitative surveys point to a lack of sufficient or appropriate texts in African languages, especially information texts (Katz & Rees 2022), ineffective school governance (Wills 2019), wasted teaching time (Carnoy et al. 2015), inadequate teacher training, and inadequate application of the curriculum in the classroom (Taylor 2019; Shalem 2017) to name a few. Classroom-based qualitative studies highlight the persistently communalised nature of South African pedagogy (Hoadley 2018), low levels of teacher content knowledge (Taylor & Taylor 2013; Ramadiro & Porteus 2017; Venkat & Spaull 2015), and the predominance of oral discourse, low cognitive demand, slow pacing and a general lack of coherence (Hoadley & Boyd, this volume). Furthermore, sociocultural research points to the deprioritisation of African

languages (Guzula 2019), the dissimilarities between the content of many texts and learners' own cultural backgrounds (Janks 2011; Prinsloo & Krause 2018), and a lack of indigenous practices in the curriculum, such as oral storytelling (Makaluza 2018).

All these research findings play an important role in explaining the low and unequal outcomes seen in South Africa. Some of these studies report facts (average class size, the presence or absence of texts), or descriptive features of classrooms (pedagogy, pacing, pupil engagement). Still others put forward views to explain why weak outcomes persist over time. Some argue that South African teachers have not been given "meaningful learning opportunities" themselves (Shalem 2017), and others that literacy is primarily a social practice, meaning that outcomes will remain unchanged until policy attention shifts to the multilingual nature of learning (McKinney 2017).

Although theorising about the external factors (e.g. poverty, schools, resources, social practice) that contribute to reading failure is a critical element of research in South Africa, such theorising must remain accountable to the empirical regularities evident in large-scale data on reading outcomes. These theories should also be able to provide a plausible account for the reading trajectories of individual learners over time. While some theories might provide the same generic explanation for reading outcomes that do not meet grade expectations, others are 'phase-specific'. That is to say, some theories provide different explanations for underperformance at different points of the reading journey. As will become evident below, 'phase-specific' hierarchical theories are better able to explain the data that are now emerging compared to more generic and holistic theories of reading acquisition. From a research perspective, one of the critical issues of reading failure that needs to be clarified is that of decoding and its relationship to reading comprehension, as this has important pedagogic implications.

2.2 Empirical regularities in South Africa and internationally

Alphabetic writing systems represent spoken language at the phonemic level, i.e. letters represent distinct sounds in a language. Decoding relies on phonemic awareness, letter-sound knowledge, and the ability to blend letter-sounds to read words. Reading theory and its application to pedagogy on this issue is directly related to the weight of empirical evidence and the direction in which empirical regularities point.

In the past, South African researchers relied on evidence from elsewhere to bolster arguments that decoding was important for early reading success since our own evidence base was still small and ungeneralisable. The international evidence was and is strong,[4] not only for English (Adams 1990; Fuchs et al. 2012; García & Cain 2014; Kilpatrick 2015; Seidenberg 2017; Lonigan et al. 2018; Kim 2020) but across a range of languages and orthographies such as Italian, Greek, Slovenian, Dutch, French, Spanish (Tilstra et al. 2009; Florit & Cain 2011; Caravolas et al. 2013; Kendeou et al. 2013; Sparks & Patton 2016; Erbeli et al. 2017; Van den Bosch et al. 2019; Massonnié et

4. Given the large body of research literature available on this, only a few references are cited as examples.

al. 2019; Florit et al. 2020; Angelelli et al. 2021; Silva-Maceda & Camarillo-Salazar 2021; Wauters et al. 2021), as well as in agglutinating languages such as Turkish and Finnish (Babayağit & Stainthorp 2007; Leppänen et al. 2008; Torppa et al. 2016; Aro 2017), Malay (Lee & Wheldall 2009) and Indonesian (Stern et al. 2018). Although the research base on African languages is still nascent on the African continent, it has been growing rapidly, for example there are now several studies on the importance of decoding skills and reading comprehension in Kenya for East African languages (Kim & Piper 2019; Wawire et al. 2021).

Despite this large cross-linguistic research base, the contextual and linguistic differences between schools in most parts of South Africa and these other regions of the world are non-trivial. While theoretical explanations and data from other contexts remain useful, the ideal is still local evidence on local languages from local contexts. Thankfully, the last decade has seen the emergence of just such evidence, much of which is reflected in the current volume. The benefit of this new data is the ability to link decoding and comprehension outcomes for the same learners over time. Wills et al. (this volume) show that more than half of Grade 1 learners (50%-60%) cannot adequately sound out letters of the alphabet by the end of Grade 1 (Wills et al., this volume: Figures 5 & 6). They also show that the link between being alphabetically adrift and then becoming a struggling reader is both systematic and predictable. Theorising that is disconnected from these empirical realities and that cannot provide plausible explanations for them is of limited value.

2.3 Reading trajectories and the compounding effects of decoding failures

Reading theories that eschew phases in reading acquisition on the grounds that reading is holistic and that all children are unique and develop at their own pace need to engage with longitudinal data that reflect reading profiles of the same learners. Similarly, claims of a weak relationship between decoding and comprehension can be tested empirically with longitudinal data. If a weak relationship were the case, the evidence would show weak associations between decoding and reading comprehension. The evidence would also show strong decoders who are weak comprehenders and/or strong comprehenders who are weak decoders.

In contrast, the hierarchical psycholinguistic theories of reading acquisition in both transparent and opaque orthographies (Adams 1990; Hoover & Gough 1990; Seidenberg 2017; Aro 2017; Hjetland et al. 2019; Kim 2017; Kim 2020) posit that once children can match speech sounds and printed symbols accurately, they are launched on fairly predictable reading trajectories that lead to comprehension. This has given rise to stages of reading or reading trajectories whereby later performance can be predicted from earlier achievement of specific sub-skills (e.g. Chall et al. 1990; Juel & Minden-Cupp 2000; Aro 2017; Stern et al. 2018; Kim 2020), for example accuracy preceding fluency. Such predictions are readily testable from longitudinal reading data. The strong association between decoding and comprehension means that strong decoders are far more likely to understand a text when reading on their own than weak decoders. It has long been emphasised that decoding is a necessary but not

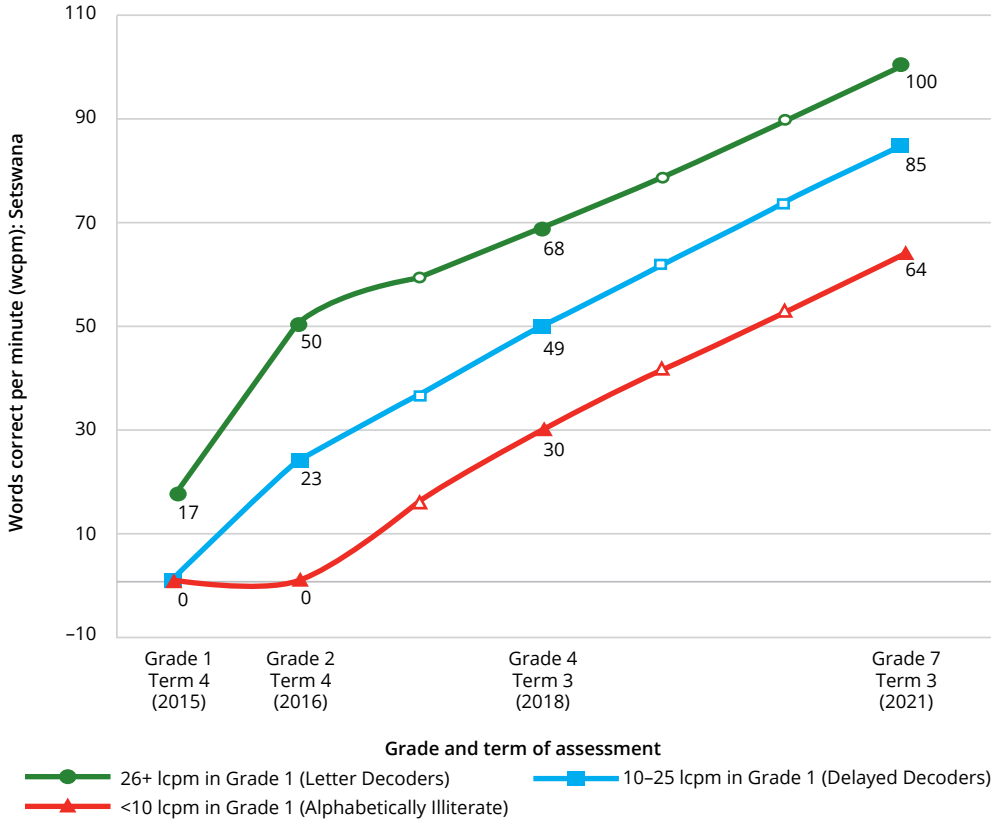
sufficient condition for comprehension (e.g. Hoover & Gough 1990). Fluency frees up working memory and attention for comprehension, meaning learners can read more strategically (Rahimi & Babaei 2021). Once fluency is established, then other factors become drivers of reading comprehension such as differences in vocabulary, background knowledge, familiarity with text structure and genres, and other cognitive factors (e.g. working memory, inferencing). Motivation and enthusiasm for reading can improve reading comprehension in children who can decode (Guthrie et al. 2007), but struggling decoders seldom enjoy reading (Van Bergen et al. 2021). Differences between children in these other factors will account for variations in reading comprehension, but only once the code is mastered – prior to which lack of alphabetic mastery explains the outcome.

As a result of reliably replicated findings across contexts and languages, reading trajectories are now no longer theoretical conjecture but an empirical regularity. The large-scale South African datasets now available for the Nguni (Ardington et al. 2020) and Sesotho-Setswana language groups (Wills et al. 2022a), as well as English as a First Additional Language (Wills et al. 2022b), make it possible to analyse such trajectories in the local South African context, from more than 1,000 schools, across six provinces, with 95% of learners in typical no-fee schools. The findings from longitudinal reading outcomes of the same learners assessed over time show stable trends in groups based on earlier achievement. The notion of a reading trajectory that begins with letter-sound knowledge in Grade 1, leading to increasing fluency in word reading and finally reading comprehension, is a key argument we highlight in this chapter. These large datasets also enable researchers to identify thresholds in early reading, across the different languages, below which learners flounder. Mohohlwane et al. (this volume) set out the full explanation for grade-specific minimum benchmarks for both Nguni and Sesotho-Setswana languages.

It is instructive to review the regularities emerging from these studies and reflect on what they mean for reading theories in South Africa. For example, Wills et al. (this volume) document the longest running of these large-scale studies (EGRS I), which tested Grade 1 Setswana learners in 2015, testing the same learners again in Grade 2 (2016), Grade 4 (2018), and Grade 7 (2021). They present the reading trajectories of four groups of learners, based on their baseline letter-decoding scores (letters correct per minute, lcpm) in Grade 1, following and assessing these same groups over the seven-year period. In Figure 1, we use the same underlying data but adapt the categories slightly for ease of interpretation (combining the top two categories [26–40 and 40+ lcpm] into one category of 26+ lcpm, yielding three rather than four groups). Our three cohorts are therefore Grade 1s who can accurately sound out 26+ letters in one minute, those with emerging alphabetic knowledge (between 10–25 lcpm), and those who know fewer than 10 letters of the alphabet (<10 lcpm). We term these three groups Letter Decoders, Delayed Decoders, and Alphabetically Illiterate respectively. Their word reading abilities are reported in Figure 1.

The empirical salience of these Grade 1 letter-sound groupings becomes strikingly evident when seen longitudinally. Children's alphabetic knowledge is strongly associated with their ability to read words, within and across grades. The Letter Decoders (26+ lcpm) could consistently read more words across the grades and were on track with their grade benchmarks. By contrast, the Delayed Decoders in Grade 1 did not have sufficient alphabetic mastery and could therefore not yet read

Figure 1 Reading trajectories for three groups of learners based on Grade 1 letter-sound knowledge (Early Grade Reading Study I)



Notes *Wills et al. (this volume), Figure 9 (solid markers are assessment dates, hollow markers are interpolations).*

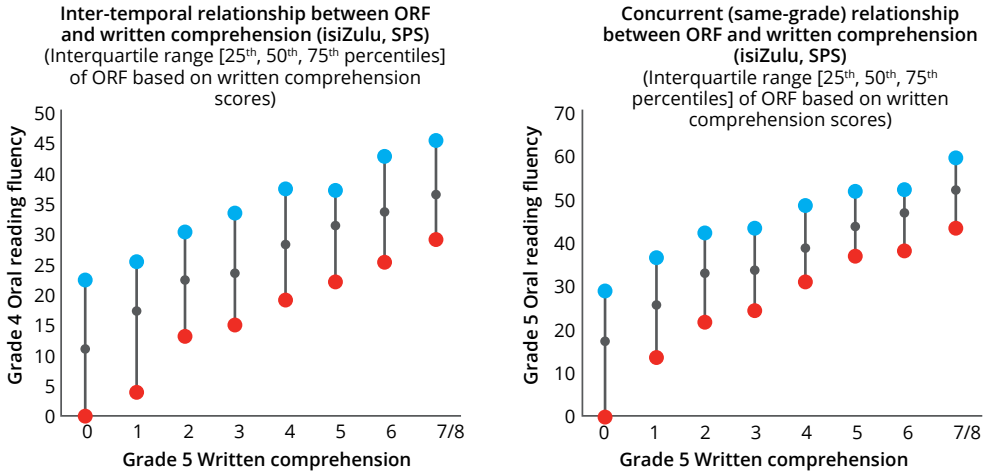
connected text in Grade 1 (0 words correct per minute, wcpm). Together with the Alphabetically Illiterate, they started their second year of schooling with the distinct disadvantage of being unable to read words. Only by the end of Grade 2 did these Delayed Decoders master enough letters and some level of fluency to read 23 wcpm on average. In fact, these Delayed Decoders only reach the Grade 2 fluency benchmark in Grade 4 (49 wcpm). The Alphabetically Illiterate could not sound out even 10 letters by the end of Grade 1 (i.e. <10 lcpm) nor could they read a single word. It is sobering to see that these learners still could not read any words by the end of Grade 2. The compounding effects of their inability to decode are most evident longitudinally where they are reading at only 64 wcpm in Grade 7. Being alphabetically illiterate in Grade 1 sets learners back by at least four years, reaching a Grade 3 benchmark (60 wcpm) only in Grade 7.

The evidence presented here, as well as similar reading trajectories found for isiXhosa, isiZulu, Sepedi and Siswati (Wills et al., this volume), provide strong evidence that later fluency failures are driven by early decoding failures. Still, a key

piece of the puzzle is determining if there is a causal relationship between fluency and comprehension. To use the words of Gersten and Chard (1999, 2), do "plodding decoders become poor comprehenders"? Again, the analysis of Wills et al. shows quite clearly that oral reading fluency (ORF) at Grade 4 predicts reading comprehension[5] at Grade 7 for the same learners (predictive validity), and that Grade 7 ORF strongly predicts Grade 7 reading comprehension (concurrent validity) (see their Figure 11 and 12). There is a strong theoretical foundation behind this finding, predicting that higher fluency leads to better comprehension (Fuchs et al. 2012), at least up to high levels,[6] beyond which vocabulary knowledge and reasoning skills become determinants of higher reading comprehension scores.

These new findings by Wills et al. (this volume) using Setswana data from the North West confirm earlier work by Ardington et al. (2020) on isiZulu in KwaZulu-Natal. Using the latter data, we construct Figure 2, which reflects the relationship between fluency and comprehension in isiZulu, the largest home language in South Africa, showing the longitudinal relationship between Grade 4 ORF and Grade 5 written comprehension scores (*left panel*), and the concurrent relationship between Grade 5 ORF and Grade 5 written reading comprehension scores (*right panel*). Both figures report the interquartile range.

Figure 2 Longitudinal relationship between Grade 4 oral reading fluency and Grade 5 written comprehension (*left*), and concurrent (same-grade) relationship between Grade 5 oral reading fluency and Grade 5 written comprehension (*right*). Interquartile ranges (at the 25th, 50th, and 75th percentiles) reported for each written comprehension category



Note *From Ardington et al. (2020) 43*

5. The Grade 7 written comprehension assessment was a PIRLS Grade 4 released passage ("The Pearl") in the same language as the ORF assessment. The Grade 7 written assessment (EGRS) used the first ten questions. The Grade 5 written assessment in Figure 2 uses the same passage but only the first seven questions.
6. There is a fluency level beyond which additional speed no longer confers an advantage but rather a disadvantage: reading beyond normative speeds results in loss of attention to text detail.

While Figure 1 illustrates the predictive salience of Grade 1 alphabetic knowledge on word-reading outcomes in later grades, Figure 2 documents the relationships between fluency and written comprehension at the higher grades. The interquartile range of oral reading fluency (i.e. the middle 50% of the achievement distribution) is strongly related to written comprehension score, both within the same grade (concurrent validity) and in subsequent grades (longitudinal validity). These strong positive associations illustrate the importance of oral reading fluency for written comprehension. Reverse causality here (Grade 5 written comprehension causing Grade 4 oral reading fluency) is implausible.

These South African results confirm those of other international scholars linking decoding skills to reading comprehension in higher grades. For example, using national longitudinal data from England, McGrane et al. (2017, 64) find that the Grade 1 "Phonics Check Score" was a statistically significant predictor of learners' later performance in PIRLS 2016 in Grade 4. This relationship holds and remains significant after controlling for gender, socio-economic status, age, ethnicity etc.

These empirical regularities, formerly reflected in international research but now also confirmed in African and South African reading research, need to be accounted for in 21st century theorising. Some scholars in South Africa seem to be unaware of these empirical regularities, suggesting that a focus on decoding skills is "reductionist" (Ellis & Bloch 2021). Without counter evidence showing an opposite trend, or without counter explanations about why such a strong relationship exists between early decoding and later comprehension, these objections are based on rhetoric and conjecture rather than countervailing evidence. Theorists can and should propose alternative explanations for the data that we see here, yet to date we find no credible alternatives to the hierarchical psycholinguistic theory explaining reading success and reading failure. Children who do not master the code in Grade 1 lag behind their peers for the remainder of their primary schooling careers, with letter-sound knowledge predicting oral reading fluency and oral reading fluency predicting written comprehension.

This result is not surprising. That explicit, systematic instruction in phonics leads to better reading results has been one of the most consistent findings across 60 years of international reading research (Chall 1967; Chall et al. 1990; Slavin et al. 2009; Snow et al. 1998; Adams 1990; National Reading Panel 2000; Stanovich 2000; Kilpatrick 2015; Seidenberg 2017; Treiman 2018; Castles et al. 2018; Solity 2020). Some researchers might argue that the primary reason for higher initial letter-sound knowledge and subsequent fluency is home background not school reading instruction. While home background undoubtedly plays an important role in all domains, research across developing countries also finds that both letter-sound knowledge and oral reading fluency are amenable to school-based interventions that support teachers and lead to changes in how (and how much) children are taught to decode (Sampa et al. 2018; Kim et al. 2016). This is also true in South Africa where Ardington and Meiring (2020, 7) report changes after only one year of a teacher-coaching intervention, yielding an improvement in letter-sound knowledge of an extra six letter-sounds per minute after one year of intervention in the 30 intervention schools. Mtsatse (this volume) provides more information on this intervention. Similar gains in letter-sound knowledge and fluency are also reported in other coaching interventions such as EGRS I (Fleisch & Alsofrom 2022). Furthermore, significant gains in letter-sound knowledge, syllable

reading, word reading, and reading comprehension have also been found after only one year of a teacher-assistant intervention in Limpopo (Ardington & Henry 2021; Makaluza & Mpeta 2022). Clearly, it is possible to shift both decoding outcomes and reading comprehension through school-based instructional support that builds strong foundational reading skills.

Whatever factors are hypothesised to impact reading performance within and across alphabetic orthographies, there are strong empirical regularities causally linking decoding to later reading comprehension. For reading theories to pass muster, such regularities must be accounted for. Sociocultural studies cast a fascinating light on the ways in which differences in social practice and context provide a normative lens for making sense of the world and of written texts. Yet the social is not oppositional to the psycholinguistic dimensions of reading. Reading is both a social practice and an individual accomplishment. This means that even though learners construct meanings in ways unique to their cultures and experiences, if — for whatever reasons — they are alphabetically adrift in the foundational years, they will not be able to read words to adequately make meaning. Similarly, each unique child, irrespective of his or her unique pace, will develop decoding accuracy before fluency, and fluency before reading comprehension. Suggestions that there is an 'African' way to teach reading in African languages reveal a lack of awareness of just how similar reading in transparent orthographies across agglutinating languages is. This assertion does not take away from other legitimate arguments that reading instruction should be decolonised. We understand these claims to refer rather to texts that are available to African learners, and whether they reflect their lives and cultures, as well as finding innovative ways to incorporate local practices (like oral storytelling) into relevant parts of the curriculum (listening and speaking). Texts and topics may differ between cultures, but the cognitive processes that help learners link speech sounds to text symbols (decoding) are universal for all alphabetic languages. Similarly, pedagogic strategies for teaching phonemic awareness, letter-sound recognition, and blending and segmenting, for example, are now well-documented.

To summarise, we agree with the conclusion of Rose (2006, 4):

> *It is widely agreed that reading involves far more than decoding words on the page. Nevertheless, words must be decoded if readers are to make sense of the text. Phonic work is therefore a necessary but not sufficient part of the wider knowledge, skill and understanding which children need to become skilled readers and writers.*

3 The need for a shared understanding of terminology: What is and isn't phonics?

Reviewing the South African literature and professional discourse on reading acquisition, it is clear that there are different interpretations of what 'phonics' means. Table 1 reflects two typical arguments in relation to phonics.

In this situation it is highly relevant to ask whether what is needed is more, less, or better phonics. Part of the explanation here is about nomenclature and a lack of a shared understanding of what is meant by the word 'phonics'. Ironically, if researchers

from both views in Table 1 observed a teacher asking learners to mindlessly recite letters of the alphabet, chant syllables in a set sequence (*ba-be-bi-bo-bu*; *sa-se-si-so-su*), or chorus words or sentences written on the board, they would agree that this was bad practice. Such teaching is generally condemned. But these same researchers would use a different discourse to describe what they were seeing. Some would see it as 'an overemphasis on phonics', 'only teaching phonics' or 'teaching phonics for hours'. Yet this is not phonics instruction and describing it as such is incorrect or disingenuous. It would better be described as 'barking at letters' or 'chanting at syllables'. It reflects a false and superficial mimicry of aspects of phonics. In contrast, a good phonics lesson involves various activities, explicitly explains letter-sound relationships, involves learners in recognising sounds in known words, and shows how to blend letter-sounds to form syllables or words, and how to write letters. The whole-class phonics part of a lesson should not take longer than 15 minutes. Consolidating code activities later would happen in differentiated pedagogy, by getting learners in groups, pairs or individually, to practise reading (and writing) the letter-sounds in words and short extended texts. Throughout, the activities would move from the known to the unknown, include whole-class and differentiated teaching and learning, and finally show a gradual release from teacher- to learner-centred engagements. Most importantly, the purpose of a phonics lesson in the first two terms of Grade 1 is almost exclusively to introduce learners to letter-sounds and to teach them to match these letter-sounds with their corresponding print symbols. That more than 50% of Grade 1s at the end of that grade still cannot do this for all the letters of the alphabet suggests that what is being taught in Grade 1 is something *other* than how speech sounds map onto print, i.e. something other than phonics.

Table 1 Arguments for and against phonics

For phonics	Against phonics
"When children don't know the letters of the alphabet after a year of full-time schooling and can't decode simple words, then it's clear they were not taught phonics. Children need better phonics instruction. Focusing only on meaning when they don't know the code is senseless."	"The problem is that South African teachers only teach phonics and don't focus on meaning. They spend an hour on phonics with bored and disengaged learners. Teachers should spend less time on phonics and more time on meaningful engagement with enjoyable stories."

Researchers should heed conceptual distinctions and abide by correct nomenclature: the mindless and superficial mimicry of code elements observed in some classrooms is not phonics. One might refer to a distinction between 'barking at syllables' (universally condemned) and 'efficient phonics', which is what we describe above.

3.1 Differentiating between content, skills and problematic pedagogy

Slippage in terminology is also confounded with teaching practices that are frequently used in South African classrooms, for example, when a curriculum topic (phonics) is

conceptually mistaken for a type of pedagogy (communalised learner performance). It is well-documented in South Africa that most teachers in no-fee schools resort to a communalising pedagogy with a teacher-dominated discourse (Hoadley & Boyd, this volume). Learning is perceived as an oral performance, reflected in ritualised repetition of whole-class chorusing of words, or in teachers asking questions "requiring set answers rather than reasoned thinking" and seldom checking understanding (Graham 2010, 312; see also Muller & Hoadley 2019, 123). Yet this is true of most teachers and most subjects. It also happens across phases in primary and secondary schools, and across lessons delivered in indigenous languages or a colonial language (Williams 2006; Abd-Kadir & Hardman 2007; Bertram 2009; Nchindila 2012; Pretorius 2015). It also seems to happen irrespective of the demands of the curriculum. For example, it happened when Outcomes Based Education (predicated on constructivist principles of pedagogy) dominated the schooling scene in South Africa and phonics was officially not part of the curriculum. It is still happening, even though the national curriculum is now more explicit, specifying content in far greater detail (Hoadley 2018). The rote and procedural approach to teaching occurs across the spectrum, not only in 'mindless' phonics instruction.

Identifying 'phonics' as the problem misdiagnoses the problem; in reality it is a style of pedagogy reflecting a lack of individualised instruction, low cognitive demand and slow pacing. When more than half of South African learners do not know the letters of the alphabet by the end of Grade 1, we argue that it is clear they are not receiving efficient phonics instruction, and furthermore that this is the one thing that they need to first access the code and then read with fluency in order to go on and read for meaning.

4. Conclusion

The psycholinguistic skills that go into early reading are well-documented and well-understood internationally. There is a clear hierarchy of skills that builds from oral proficiency to auditory discrimination (phonemic awareness) and letter-sound recognition. Once learners can segment individual letter-sounds in words and blend letters together to form words, they are well on their way to decoding written language. Increasing accuracy leads to increasing fluency, which subsequently frees up working memory and aids comprehension. At higher levels of complexity, decoding is no longer the primary determinant of comprehension, and developing higher order comprehension, an understanding of genre conventions, and the ability to evaluate and critique texts from differing lenses become the pedagogic focus. Given our current realities, that would be a nice problem to have.

Analyses from large and longitudinal South African datasets clearly and consistently link Grade 1 letter-sound knowledge to Grade 2 and 3 oral reading fluency, and finally to written comprehension in higher grades. The emergence of new datasets of foundational reading skills shows unequivocally that early decoding failures predict later comprehension failures, and that alphabetic mastery predicts later fluency and comprehension. Given this, it seems only logical that interventions aimed at

addressing comprehension start by ensuring all children master the letter-sound correspondences (the decoding) needed to understand what is being read.

In this chapter, we have argued that these empirical regularities should form the fulcrum in reading and education theorising and in debates about how to shift teacher practices in our current schooling context. The empirical regularities highlighted in this chapter show that comprehension in the Intermediate Phase is predicted by fluency in the Foundation Phase, which itself is predicted by letter-sound mastery in Grade 1. The same children that failed the PIRLS assessment in Grade 4 failed basic fluency assessments in Grade 2 and did not know all of the letters of the alphabet by the end of Grade 1. The smoking gun at the crime scene of South Africa's literacy crisis is the fact that our learners do not acquire the most elementary building blocks of the literate world when they need to: in Grades 1 and 2. Policy attention must turn to what is happening in Grade 1 and 2 classrooms that prevents this most basic knowledge from being acquired.

References

Abd-Kadir, J. & Hardman, F. (2007). The discourse of whole-class teaching: A comparative study of Kenyan and Nigerian primary English lessons. *Language and Education* 21(1), 1–15.

Adams, M. (1990). *Beginning to Read: Thinking and Learning about Print*. Cambridge, MA: MIT Press.

Angelelli, P., Romano, D.L., Marinelli, C. V., Macchitella, L. & Zoccolotti, P. (2021). The simple view of reading in children acquiring a regular orthography (Italian): A network analysis approach. *Frontiers in Psychology* 12, 1–11.

Aro, M. (2017). Learning to read Finnish. In Verhoeven, L. & Perfetti, C. (Eds), *Learning to Read across Languages and Writing Systems*. 416–435. Cambridge: Cambridge University Press.

Ardington, C. & Henry, J. (2021). Funda Wande Limpopo evaluation: Midline report. Cape Town: SALDRU, University of Cape Town.

Ardington, C. & Meiring, T. (2020). Impact Evaluation of Funda Wande Coaching Intervention Midline Findings. Cape Town: SALDRU, University of Cape Town.

Ardington, C. & Spaull, N. (2022). Sequenced for success: Evaluating the impact of openly licensed Vula Bula anthologies of graded readers on early grade reading outcomes in South Africa. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Ardington, C., Hoadley, U. & Menendez, A. (2019). Impact Evaluation of USAID/South Africa Story Powered School Program Endline Report. Washington, DC: USAID Reading and Access Activity.

Ardington, C., Wills, G., Pretorius, E., Deghaye, N., Mohohlwane, N., Menendez, A., Mtsatse, N. & Van der Berg, S. (2020). Technical Report: Benchmarking Early Grade Reading Skills in Nguni Languages. Stellenbosch: ReSEP, Stellenbosch University. Cape Town: SALDRU, University of Cape Town. Chicago, ILL: NORC at the University of Chicago. Pretoria: DBE.

Babayağit, S. & Stainthorp, R. (2007). Preliterate phonological awareness and early literacy skills in Turkish. *Journal of Research in Reading* 30, 394–413.

Bertram, C. (2009). Learning and teaching in Grade 10 history classrooms at a time of curriculum reform. *Journal of Educational Studies* 8(3), 111–134.

Biersteker, L. & Dawes, A. (2019). South Africa: Measuring up – The Sobambisana evaluation. In Kjørholt, A. T. & Penn H. (Eds), *Early Childhood and Development Work*. 91–112. London: Palgrave Macmillan.

Caravolas, M., Lervåg, A., Defior, S., Seidlova-Makora, G. & Hulme, C. (2013). Different patterns, but equivalent predictors, of growth in reading in consistent and inconsistent orthographies. *Psychological Science* 24(8), 1398–1407.

Carnoy, M., Ngware, M. & Oketch, M. (2015). The role of classroom resources and national educational context in student learning gains: Comparing Botswana, Kenya, and South Africa. *Comparative Education Review* 59(2), 199–233.

Castles, A., Rastle, K. & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest* 19(1), 5–51.

Chall, J. S. (1967). *Learning to Read: The Great Debate.* New York, NY: McGraw-Hill.

Chall, J. S., Jacobs, V. A. & Baldwin, L. E. (1990). *The Reading Crisis: Why Poor Children Fall Behind.* Cambridge, MA: Harvard University Press.

Cilliers, J., Fleisch, B., Kotze, J., Mohohlwane, N., Taylor, S. & Thulare, T. (2020). Can virtual replace in-person coaching? Experimental evidence on teacher professional development and student learning. *Journal of Development Economics* 155, 28(5), 1–15.

De Clercq, F. & Shalem, Y. (2014). Teacher knowledge and employer-driven professional development: A critical analysis of the Gauteng Department of Education programmes. *Southern African Review of Education with Production* 20(1), 129–147.

Deacon, R. (2016). *The Initial Teacher Education Research Project: Final Report*. Johannesburg: JET Education Services.

Ellis, G. & Bloch, C. (2021) Neuroscience and literacy: An integrative view. *Transactions of the Royal Society of South Africa* 76(2), 157–188.

Erbeli, F., Hart S. A. & Taylor, J. (2017). Longitudinal associations among reading-related skills in early elementary school and reading comprehension: A twin study. *Child Development* 89(6), e480–e493.

Fleisch, B. & Alsofrom, K. (2022). Coaching research in the Early Grade Reading Studies in South Africa. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Florit, E. & Cain, K. (2011). The simple view of reading: Is it valid for different types of alphabetic orthographies? *Educational Psychology Review* 23, 553–576.

Florit, E., Cain, K. & Mason, L. (2020) Going beyond children's single-text comprehension: The role of fundamental and higher-level skills in 4th Graders' multiple-document comprehension. *British Journal of Educational Psychology* 90(2).

Fuchs, D., Compton, D. L., Fuchs, L. S., Bryant, J., Hamlett, C. & Lambert, W. (2012). First-grade cognitive abilities as long-term predictors of reading comprehension and disability status. *Journal of Learning Disabilities* 45(3), 217–231.

García, J. R. & Cain, K. (2014). Decoding and reading comprehension: A meta-analysis to identify which reader and assessment characteristics influence the strength of the relationship in English. *Review of Educational Research* (84)1, 74–111.

Gersten, R. & Chard, D. (1999). Number sense: Rethinking arithmetic instruction for students with mathematical disabilities. *The Journal of Special Education* 33(1), 18–28.

Graham, B. E. (2010). Mother tongue education: Necessary? Possible? Sustainable? *Language and Education* 24(4), 309–321.

Guthrie, J. T., Laurel, A., Hoa, W., Wigfield, A., Tonks, S. M., Humenick, N. M. & Littles, E. (2007). Reading motivation and reading comprehension growth in the later elementary years. *Contemporary Educational Psychology* 32, 282–313.

Guzula, X. (2019). Moving beyond artificial linguistic binaries in the education of African Language speaking children: A case for simultaneous biliteracy development. *Perspectives in Education* 36(2), 1–14.

Hjetland, H. N., Lervåg, A., Lyster, S. A. H., Hagtvet, B. E., Hulme, C. & Melby-Lervåg, M. (2019). Pathways to reading comprehension: A longitudinal study from 4 to 9 years of age. *Journal of Educational Psychology* 111(5), 751–763.

Hoadley, U. (2012). What do we know about teaching and learning in South African primary schools? *Education as Change* 16(2), 187–202.

Hoadley, U. (2018). *Pedagogy in Poverty: Lessons from Twenty Years of Curriculum Reform in South Africa*. London: Routledge.

Hoover, W. A. & Gough, P. B. (1990). The simple view of reading. *Reading and Writing: An Interdisciplinary Journal* 2, 127–160.

Janks, H. (2011). Making sense of the PIRLS 2006 results for South Africa. *Reading and Writing* 2(1), 27–39.

Juel, C. & Minden-Cupp, B. (2000). Learning to read words: Linguistic units and instructional strategies. *Reading Research Quarterly* 35, 458–492.

Katz, J. & Rees, S. (2022). Molteno's Vula Bula: Conceptualisation, development, and implementation. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Kendeou, P., Papadopoulos, T. C. & Kotzapoulou, M. (2013). Evidence for the early emergence of the simple view of reading in a transparent orthography. *Reading and Writing: An Interdisciplinary Journal* 26, 189–204.

Kilpatrick, D. A. (2015). *Essentials of Assessing, Preventing and Overcoming Reading Difficulties*. Hoboken, NJ: Wiley.

Kim, Y.-S. G. (2017). Why the simple view of reading is not simplistic: Unpacking the simple view of reading using a direct and indirect effect model of reading (DIER). *Scientific Studies of Reading* 21, 310–333.

Kim, Y.-S. G. (2020). Toward integrative reading science: The direct and indirect effects model of reading. *Journal of Learning Disabilities* 53(6), 469–491.

Kim, Y.-S. G. & Piper, B. (2019). Component skills of reading and their structural relations: Evidence from three sub-Saharan African languages with transparent orthographies. *Journal of Research in Reading* (42)2, 326–348.

Kim, Y.-S. G., Boyle, H. N., Zuilkowski, S. S. & Nakamura, P. (2016). *Landscape Report on Early Grade Literacy*. Washington, DC: USAID.

Kotzé, J., Wills, G., Ardington, C., Taylor, S., Mohohlwane, N. & Nuga Deliwe, C. (2022) Learning Losses Due to the COVID-pandemic. Advisory Note: 2030 Reading Panel 2022. From: www.readingpanel.co.za/resources Accessed 2022-10-13.

Lee, L. W. & Wheldall, K. (2009). An examination of the simple view of reading among beginning readers in Malay. *Reading Psychology* 30, 250–264.

Leppänen, I., Aunola, K., Niemi, P. & Nurmi, J. E. (2008). Letter knowledge predicts Grade 4 reading fluency and reading comprehension. *Learning and Instruction* 18, 548–564.

Lonigan, C. J., Burgess, S. R. & Schatschneider, C. (2018). Examining the simple view of reading with elementary school children: Still simple after all these years. *Remedial and Special Education* 39(5), 260–273

Makaluza, N. (2018). Storytelling for early literacy development in isiXhosa: A case study of a Grade 1 class in Western Cape. (Unpublished master's thesis). University of the Western Cape, Cape Town.

Makaluza, N. & Mpeta, N. (2022). Two birds with one stone: Improving Grade 1 learning outcomes using Funda Wande teaching assistants in Limpopo 2021–2022. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Massonnié, J., Biancoa, M., Lima, L. & Bressoux, P. (2019) Longitudinal predictors of reading comprehension in French at first grade: Unpacking the oral comprehension component of the simple view. *Learning and Instruction* (60) 166–179

McGrane, J., Stiff, J., Baird, J. A., Lenkeit, J. & Hopfenbeck, T. (2017). Progress in International Reading Literacy Study (PIRLS): National Report for England. Oxford: Oxford University Centre for Educational Assessment.

McKinney, C. (2017). *Language and Power in Post-colonial Schooling: Ideologies in Practice*. New York, NY: Routledge.

Muller, J. & Hoadley, U. (2019). Curriculum reform and learner performance: An obstinate paradox in the quest for equality. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 109–125. Cham: Springer.

National Education Evaluation and Development Unit. (2013). NEEDU national report 2012: The State of Literacy Teaching and Learning in the Foundation Phase. Pretoria: DBE.

National Reading Panel. (2000). Teaching Children to Read: An Evidence-based Assessment of the Scientific Research Literature on Reading and its Implications for Reading Instruction. Rockville, MD: NICHD.

Nchindila, B. M. (2012). A study of reading and academic achievement in English in Zambian schools. (Unpublished doctoral thesis). University of South Africa, Pretoria.

Pretorius, E. J. (2002). Reading and applied linguistics: A deafening silence. *Southern African Linguistics and Language Studies* 20, 91–103.

Pretorius, E. J. (2015). Failure to launch: Matching language policy with literacy accomplishment in South African schools. *International Journal of the Sociology of Language* 234, 47–76.

Pretorius, E. J. (2018). Reading in the African Languages: An Annotated Bibliography 2004–2017. Compiled for the PrimTEd project. Johannesburg: JET Education.

Prinsloo, M. & Krause, L. (2018). Testing practice in theory and in a southern school. In Bloome, D., Rowsell, J., Leung, C. and Castanheira, M. L. (Eds), *Re-Theorizing Literacy Practices*. New York, NY: Routledge.

Rahimi, M. & Babaei, S. A. (2021). The relationship between reading strategy use and reading comprehension as mediated by reading rate: The case of eye movement training by rapid serial visual presentation (RSVP). *Teaching. English. Technology* 21, 94–111.

Ramadiro, B. & Porteus, K. (2017). *Foundation Phase Matters: Language and Learning in South African Rural Classrooms*. East London: Magic Classroom Collective Press.

Rose, J. (2006). Independent Review of the Teaching of Early Reading: Final Report. London: Department for Education and Skills.

Sampa, F. K., Ojanen, E., Westerholm, J., Ketonen, R. & Lyytinen, H. (2018). Literacy programs efficacy for developing children's early reading skills in familiar language in Zambia. *Journal of Psychology in Africa* 28(2), 128–135.

Shalem, Y. (2017). Scripted lesson plans: What is visible and invisible in visible pedagogy? In Barrett, B., Hoadley, U. & Morgan, J. (Eds). *Knowledge, Curriculum and Equity*. 183–199. London: Routledge.

Seidenberg, M. (2017). *Language at the Speed of Sight*. New York, NY: Basic Books.

Silva-Maceda, B. & Camarillo-Salazar, C. F. (2021). Reading comprehension gains in a differentiated reading intervention in Spanish based on the simple view. *Child Language Teaching and Therapy* 37(1), 19–4.

Slavin, R. E., Lake, C., Chambers, B., Cheung, A. & Davis, S. (2009). Effective beginning reading programs: A best-evidence synthesis. *Best Evidence Encyclopedia*. Baltimore, MD: Johns Hopkins School of Education, Centre for Data-Driven School Reform.

Snow, C. E., Burns, M. S. & Griffin, P. (1998). *Preventing Reading Difficulties in Young Children*. Washington, DC: National Academy Press.

Solity, J. E. (2020). Instructional psychology and teaching reading: Ending the reading wars. *The Educational and Developmental Psychologist* 37, 123–132.

Sparks, R. & Patton, J. (2016). Examining the simple view of reading model for United States high school Spanish students. *Hispania* 99(1), 17–33.

Spaull, N. & Taylor, S. (2022). Impact or scale? The trade-offs of early grade reading and mathematics interventions in South Africa. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Stanovich, K. E. (2000). *Progress in Understanding Reading: Scientific Foundations and New Frontiers*. New York, NY: Guildford Press.

Stern, J. M. B., Dubeck, M. & Dick, A. (2018). Using early grade reading assessment (EGRA) data for targeted instructional support: Learning profiles and instructional needs in Indonesia. *International Journal of Educational Development* 61C, 64–71.

Taylor, N. (2019). Inequalities in teacher knowledge in South Africa. In Spaull, N. & Jansen, J. (Eds), *South African Schooling: The Enigma of Inequality*. 263–282. Cham: Springer.

Taylor, N. & Taylor, S. (2013). Teacher knowledge and professional habitus. In Taylor, N., Van der Berg, S. & Mabogoane, T. (Eds). *Creating Effective Schools: Report of South Africa's National School Effectiveness Study*. 204–233. Cape Town: Pearson.

Tilstra, J., McMaster, K., Van den Broek, P., Kendeou, P. & Rapp, D. (2009). Simple but complex: Components of the simple view of reading across grade levels. *Journal of Research in Reading* 32(4), 383–401.

Torppa, M., Georgiou, G. K., Lerkkanen, M. K., Niemi, P., Poikkeus, A.M. & Nurmi, J. E. (2016). Examining the simple view of reading in a transparent orthography: A longitudinal study from kindergarten to grade 3. *Merrill Palmer Quarterly* 62, 179–206.

Treiman, R. (2018). What research tells us about reading instruction. *Psychological Science in the Public Interest* 19(1), 1–4.

Van Bergen, E., Hart, S., Latvala, A., Vuoksimaa, E., Tolvanen, A. & Torppa, M. (2021). Literacy skills seem to fuel literacy enjoyment, rather than vice versa. *PsyArXiv*. Preprint.

Van den Bosch L. J., Segers, E. & Verhoeven, L. (2019). The role of linguistic diversity in the prediction of early reading comprehension: A quantile regression approach. *Scientific Studies of Reading* 23(3), 203–219.

Van der Berg, S., Hoadley, U., Galant, J., Van Wyk, C. & Böhmer, B. (2022). Learning Losses from COVID-19 in the Western Cape: Evidence from Systematic Tests. Stellenbosch: Research on Socioeconomic Policy (ReSEP).

Venkat, H. & Spaull, N. (2015). What do we know about primary teachers' mathematical content knowledge in South Africa? An analysis of SACMEQ 2007. *International Journal of Educational Development* 41, 121–130.

Wauters, L., Van Gelder, H. & Tijsseling, C. (2021). Simple view of reading in deaf and hard-of-hearing adults. *Journal of Deaf Studies and Deaf Education* 26(4), 535–545.

Wawire, B. A., Piper, B. & Liang, X. (2021). Examining the simple view of reading in Kiswahili: Longitudinal evidence from Kenya. *Learning and Individual Differences* 90, 102044.

Williams, E. (2006). *Bridges and Barriers: Language in African Education and Development*. Manchester: St. Jerome Publishers.

Wills, G. (2019). School leadership and management: Identifying linkages with learning and structural inequalities. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 301–320. Cham: Springer.

Wills, G., Ardington, C., Pretorius, E. J., Pooe, E. & Ramagoshi, R. (2022a). Benchmarking Early grade Reading skills: Setswana and English First Additional Language. Technical report. Khulisa Management Services. Pretoria: DBE.

Wills, G., Ardington, C., Pretorius, E. J. & Sebaeng, L. (2022b) Benchmarking Early Grade Reading Skills: English First Additional Language. Summary Report. Khulisa Management Services. Pretoria: DBE.

02

What a decade of PIRLS results reveals about early grade reading in South Africa: 2006, 2011, 2016

SURETTE VAN STADEN & MARTIN GUSTAFSSON

Abstract

This chapter aims to illustrate how the Progress in International Reading Literacy Study (PIRLS) is used as an evidence base of systemic health, as well as detailing national priorities for improved performance indicators and the evolution of PIRLS over a decade of South African participation. The evolution of PIRLS 2006 into prePIRLS 2011 and, subsequently, the PIRLS Literacy 2016 study are described, as well as decisions about grades and languages of testing and the stratification of a nationally representative sample by province. These details illustrate not only where we have come from since the inception of PIRLS in 2006, but also what we have learnt up to the latest PIRLS administration cycle in 2021. Many stakeholders primarily expect studies like PIRLS to provide an education system with clear-cut evidence of changes over time (improvement, stagnation or decline). This approach is often evident after the release of overall results, where news media and education commentators interpret findings in terms of whether a statistically significant improvement or deterioration has taken place. In South Africa, role-players like the media have little interest in the nuances of trends over time resulting in reports that mainly focus on league table positions, where South African learners' poor performance makes for sensational news.

KEYWORDS
PIRLS, international large-scale assessments, indicators

For this reason, this chapter highlights the importance of secondary analysis and the analysis of microdata to provide meaning to overall results and findings. An over-reliance on league-table standings or dichotomising results as 'good' or 'bad' limits opportunities to present evidence from international large-scale assessments within a context, and, more importantly for meaningfully informing education debate, re-prioritising areas of importance or even recalculated indicators of success and quality.

1 Introduction

South African participation in international large-scale assessments (ILSAs) goes as far back as its participation in the Trends in Mathematics and Science Study (TIMSS) in 1995 and 1999, and the Southern and Eastern Africa Consortium for Monitoring Education Quality (SACMEQ) study in 2000. In 2006, PIRLS was added to the country's repertoire of international assessment involvement.

ILSAs generate data that can be used to make "generalised descriptions" (Strietholt & Scherer 2018, 368) of education outcomes for participating countries. In this regard, Gustafsson and Blömeke (2018) point out that questions about how educational achievement differs across countries at one point in time are important, but studies on within-country change over time may provide insights into the mechanisms that bring about change or development.

In reflecting specifically on what a decade of PIRLS data (2006, 2011 and 2016) show about early reading in South Africa, this chapter foregrounds certain design decisions that accompanied each cycle. While much more could be added in terms of adaptations to data-collection instruments and translation procedures (see Mtsatse & Van Staden 2021; Roux 2021), this chapter specifically details the grades, language of testing, sampling decisions, and achievement booklet design across three cycles of administration. PIRLS has played an important role in the South African education discourse and in prioritising reading over time, for example, in the Department of Basic Education's Action Plan, the South African Human Rights Commission's Right to Read and Write campaign (endorsed by the Minister of Basic Education), and the 2030 Reading Panel.

The idea of 'progress' in the PIRLS acronym concludes the chapter with a look to the future. A decade of PIRLS data illustrates that growth is important, even if it is at a slow pace. Furthermore, more learners are at least attempting the PIRLS items and more learners from low socio-economic backgrounds are achieving better learning outcomes across the South African education system. Reflections on a decade of PIRLS culminate in introductory remarks about the PIRLS 2021 cycle of administration and its importance in a further evolution of the study in light of challenges relating to the Covid-19 pandemic. At the time of publishing this chapter, the PIRLS 2021 results had not yet been released.

2 Benefits and criticism of international large-scale assessments in developing contexts

For developing countries like South Africa, large-scale assessments should provide opportunities to analyse the microdata to give meaning to results beyond league tables and newspaper headlines. While overall scores are often driven by aptitude, learner motivation and socio-economic status, 'progress', as in the PIRLS acronym, has the potential to provide another reflection on the nature of performance and the nature of trend change in an unequal sector.

Despite the benefits of ILSAs (Hastedt & Rocher 2020), academic criticism of these studies focuses on four points of concern, as listed by Hernandez-Torrano and Courtney (2021), namely:

1. the possibility of ILSAs to encourage regional and global isomorphism, i.e. similarities in educational structures, policies, pedagogies, and curricular content across jurisdictions and cultures;
2. the likelihood of results being reported in an uncritical way;
3. the misuse of causal language when reporting results;
4. the possibility of ILSAs being exclusionary because of the expertise needed to use and interpret measurement devices, establishing consequential and other forms of validity.

South Africa has participated in ILSAs since its first participation in TIMSS in 1995 (Reddy 2006). TIMSS was also conducted in 1999, 2003, 2011, 2015 and 2019. Since the first TIMSS study, other international studies include SACMEQ in 2000, 2007 and 2013, and PIRLS in 2006, 2011, 2016 and 2021 (forthcoming).

South Africa's participation in three cycles of PIRLS since 2006 has pointed to disappointingly low reading-comprehension performance (see Howie et al. 2009; Howie et al. 2012; Howie et al. 2017). At a high level, the PIRLS 2016 results showed that only one in five Grade 4 learners (22%) could reach the Low International Benchmark (Howie et al. 2017).

3 PIRLS administration and design in South Africa

As an international comparative study in reading literacy, PIRLS is administered in five-year cycles and requires the assessment of learners who have had four years of schooling (Mullis et al. 2007). For most countries, this requirement translates to Grade 4 learners. PIRLS is overseen by the International Association for the Evaluation of Educational Achievement (IEA). As an organisation, the IEA undertakes international studies that benchmark the performance of school-going children in mathematics, science, civic education, information, communication, technology, and reading (Mullis et al. 2007). PIRLS aims to describe trends and international comparisons in the reading achievement of Grade 4 learners. It also focuses on learners' competencies in relation to goals and standards for reading education, the impact of the home environment

and how parents foster reading literacy, the organisation, time and reading materials for learning to read in schools, and curriculum and classroom approaches to reading instruction (Mullis et al. 2004).

Table 1 provides a summary of PIRLS grade and language design decisions for South Africa across cycles.

Table 1 PIRLS grade and language of testing decisions across cycles

Cycle of administration	Population tested	Languages tested	Number of sampled schools	Number of learners	Mean score (Standard Error)
PIRLS 2006	Grade 4[1]	All 11 official languages	429	16,073	253 (4.6)
PIRLS 2006	Grade 5	All 11 official languages	397	14,657	302 (5.6)
PIRLS 2011	Grade 4 (prePIRLS)	All 11 official languages	341	15,744	461 (3.7)[2]
PIRLS 2011	Grade 5	Afrikaans and English	92	3,515	421 (7.3)
PIRLS 2016	Grade 4 (PIRLS Literacy, previously called prePIRLS)	All 11 official languages	293	12,810	320 (4.4)
PIRLS 2016	Grade 5	Afrikaans, English and isiZulu	125	5,282	406 (6.0)

Participating countries in PIRLS do not mechanically copy or repeat the study and all its elements from one cycle of assessment to the next. Instead, each new cycle of assessment is administered with country-level adjustments in terms of design and sampling used within PIRLS as a large-scale cross-sectional survey design. This ensures that overall results provide achievement estimates that are as accurate as possible, and a picture of the contextual landscape that resembles as near as possible the national, school, classroom and home background of participating learners and countries, for a particular cycle of participation. Additionally, the IEA closely monitors each cycle's adaptations with a view to comparability over time. Of great importance in each cycle of decision-making is the balance between design improvements and not compromising comparability within and between countries from one cycle to the next.

PIRLS 2006 resulted in findings that a nationally representative sample of learners at Grades 4 and 5 were struggling to develop reading literacy competencies associated with reading comprehension (Howie et al. 2009). With an average age of 11.9 years, the South African Grade 4 learner population was the oldest across all 40 participating countries. In 2006, Grade 4 learners achieved on average 253 points (SE=4.6), while

1. All Grade 4 learners in ordinary schools.
2. Section 4 of this chapter provides details for adjusted trend score estimates between prePIRLS 2011 and PIRLS Literacy 2016.

Grade 5 learners achieved on average 302 (SE=5.6). Average achievement for both these grades is substantially below the fixed international reference average of 500 points. Closest to South Africa in reading achievement was Morocco, the only other African country that participated in PIRLS 2006, with a Grade 4 average of 323 points (SE=5.9) (Mullis et al. 2007).

Of some importance to note is the PIRLS 2006 decision that two grades would be tested in South Africa (Grade 5 as well as Grade 4) and the criterion used to determine the language of testing: the language of testing was required to be the school's Foundation Phase language of learning and teaching (LOLT). The assumption behind the latter was that the LOLT would provide the most accurate indication of reading competence at Grade 4 as the learner would have been exposed to it during the Foundation Phase where learners are taught to read. The decision to include a nationally representative Grade 5 sample was justified by the evidence it might provide of reading progress in the Intermediate Phase once learners made the transition from Grade 4 to Grade 5. The expectation was that Grade 4 results would be poor, and that the inclusion of a Grade 5 sample may show signs of growth. This expectation was indeed fulfilled (see Howie et al. 2009). The languages that performed best in Grade 5 in PIRLS 2006 were included in subsequent cycles as benchmark participants (i.e. not a nationally representative sample) to monitor the trend before the introduction of prePIRLS in 2011. Grade 5 benchmark participation continued for PIRLS 2011 and PIRLS 2016, with isiZulu included in 2016 to investigate evidence of growth for one of the larger African languages.

The country again participated in PIRLS 2011, this time with the majority of the sampled Grade 4 South African learners completing a new assessment known as prePIRLS 2011. PrePIRLS is a shorter, easier test with a lower cognitive demand. Where the PIRLS texts are typically 800 words per text, the prePIRLS texts are typically 400 words. At this time, a new scale was developed for prePIRLS (i.e. the prePIRLS and PIRLS metrics were at this time not directly comparable – they would be re-calibrated later, as discussed in Section 4). South African Grade 4 learners still achieved the lowest overall (461, SE=3.7) in comparison with Botswana and Colombia, the other countries participating in prePIRLS 2011 (Howie et al. 2012). For the sake of retaining some trend data in the better-performing languages of testing, Grade 5 learners were also tested (in Afrikaans and English) with an average achievement of 421 (SE=7.3).

South African learners yet again achieved the lowest overall scores in PIRLS Literacy (previously called prePIRLS) in the 2016 cycle, which was administered to a representative sample of Grade 4 learners across all 11 official languages. The IEA took the approach of calibrating the PIRLS Literacy scores to be comparable to the PIRLS scale scores from 2016 onwards (Martin & Mullis 2012). With an overall Grade 4 score of 320 (SE=4.4) in 2016, PIRLS Literacy results for South Africa proved to be the lowest among all PIRLS Literacy 2016 participating countries – these included Egypt, Morocco, Kuwait, Iran and Denmark (Howie et al. 2017). For the purposes of benchmark participation, Grade 5 learners were again tested in Afrikaans and English, with the addition of isiZulu. Overall achievement yielded 406 points (SE=6.0) for these three language groups, a substantially lower achievement score than the 500 centre point and this for learners who were on average the oldest to participate internationally (Howie et al. 2017).

3.1 PIRLS sampling strategies across cycles

PIRLS 2006 takes the form of a cross-sectional survey with the aim of investigating reading literacy at a point in time, within a single learner population for each of the participating countries. The following section details the PIRLS sampling design across cycles as confirmation that stringent sampling criteria are in place for each cycle of PIRLS through random selection proportional to school size (Hernandez-Torrano & Courtney 2021). For example, attempts to show higher levels of achievement through preferential selection or exclusion of schools, or sample manipulation, are not possible. For the PIRLS 2011 and 2016 cycles, a two-stage, stratified cluster sample was used (schools as the first stage and classes within schools as the second stage (Joncas & Foy 2011; LaRoche et al. 2016). This was different to the sample design proposed for PIRLS 2006 which was a three-stage, stratified cluster sample, the third stage being the learners within classes (Foy & Joncas 2003; Howie et al. 2009).

As discussed by Van Staden (2010) in reference to the PIRLS sampling procedures, the first stage of sampling consisted of individual schools that were selected with probabilities proportional to their size. In this case, school size was measured by the estimated number of learners enrolled in the target grade. In South Africa, the 11 possible LOLTs in a school's Foundation Phase were used as the explicit stratification variable (e.g. the language Sepedi), with province as an implicit stratification, e.g. each province where Sepedi is used as a LOLT in the Foundation Phase). In this way, evidence regarding language competence across the country can be identified, followed by competence in these languages for each province.

Sampled schools that did not participate were schools that are not functional, e.g. due to fire or floods, or schools that no longer exist, e.g. where a merger between two schools had taken place but the national list of schools had not yet been updated.

This second stage of sampling refers to classes within sampled schools. Within each sampled school, a list of eligible classes for the target grade was prepared. From this list, a single eligible class was randomly selected. In this regard, Foy and Joncas (2003) encouraged each participating country to sample two classrooms per school if possible and the budget allowed.

With PIRLS 2006, explicit mention of a third-stage sampling unit was made, which refers to learners within sampled classrooms. Beyond the 2006 cycle, this specific stage was removed, since internationally all learners in intact, sampled classes were already selected for the PIRLS assessment in 2006, with the exception of learners with functional disabilities, intellectual disabilities and non-native language speakers (LaRoche et al. 2016). The average number of Grade 4 learners assessed per class in South Africa was 42 in 2006 (Howie et al. 2009), 40 in 2011 (Howie et al. 2012) and 45 in 2016 (Howie et al. 2017).

The requirements of the PIRLS 2006 sample size demand the participation of a minimum of 150 schools and 4,000 tested learners per country. Table 2 provides information on the numbers of learners and the realised school samples for each of the PIRLS cycles in South Africa.

Two important sampling aspects need further elaboration: firstly, the sampling of South African schools across PIRLS cycles was set up to maximise the benefit of the selected schools at different grades of testing. Therefore, while sampling was done

from a sample frame for Grade 4 schools, the same schools were used to administer PIRLS at Grade 5 level too. A separate Grade 5 sample was not drawn in any of the cycles. Secondly, learners were tested in the LOLT they used in the Foundation Phase (Grades 1 to 3). This information means that learners were tested in PIRLS in the language to which they had been exposed during the Foundation Phase, which was not necessarily their home language. That being said, Spaull and Pretorius (2019) have reported that in more than 70% of schools, at least 75% of Foundation Phase learners speak the LOLT as their home language (Spaull & Pretorius 2019, 150) even in high-poverty contexts. However, they also note that in Gauteng this percentage is much lower (around 30%) than other provinces. While the decision to test in the LOLT seems logical enough, the practicality of this arrangement was problematic across cycles in a number of schools. For some schools, more than one LOLT exists in the Foundation Phase. During test administration, these anomalies had to be accommodated, for example, where there were two classes, one with isiZulu and the other with Sepedi as LOLT, testing had to take place in both languages.

According to LaRoche et al. (2016), learners within a sampled class are randomly assigned a PIRLS (or PIRLS Literacy, depending on which study the country was participating in) achievement booklet through a booklet rotation system. This system is briefly explained in the next section.

3.2 PIRLS achievement booklet design

In the PIRLS reading assessment, the two purposes of reading (for literary experience, and to acquire and use information) are represented by a number of reading passages, with accompanying questions learners are required to answer.

The PIRLS 2006 and 2011 achievement booklet structure made use of a matrix design technique, in which the passages and accompanying questions are divided into groups or blocks (or reading passages) with overlapping sections (Mullis et al. 2004).

Each assessment booklet is made up of two of these ten blocks according to a specific plan, with testing time split between two 40-minute passages and questions. Learners therefore spend 40 minutes answering questions on the first passage in their test booklet, followed by a break, and then another 40 minutes on the second passage. Learners are not allowed to return to the first passage once the time allocated to the second passage commences. This rule ensures that, even if learners are unable to complete the first passage during the first forty minutes of the test, they still attempt responses to both passages and do not become fixated on completing the first passage. The variation in combinations ensures that learners randomly receive any of the two PIRLS passages to which to respond.

Against this background of technical, design and methodological issues, the ultimate goal of an assessment like PIRLS is in providing accurate and reliable systemic information on issues of curricular intent, implementation, and attainment. Differences between these dimensions within a system leave much for ministries of education, policy-makers, and researchers to grapple with. In developing contexts, evidence of growth is of particular interest and importance, therefore the next section

deals with the lessons learnt from using trend data and the interpretation of score adjustments from PIRLS 2011 to PIRLS 2016 for South Africa.

4 The difficulty of establishing reliable PIRLS trends in South Africa

South Africa's experience in PIRLS was unusual in that it was the only country to participate in prePIRLS in the 2011 cycle *and* in PIRLS Literacy in 2016. Colombia and Botswana participated in prePIRLS in 2011, but did not participate in any PIRLS testing in 2016. Because prePIRLS scores were on a metric used just for prePIRLS, and because there was an interest in gauging progress between 2011 and 2016 in South Africa, the 2011 prePIRLS score had to be recalibrated to the general PIRLS metric in preparation for the 2016 international PIRLS report. All scores in 2016, whether from PIRLS Literacy or 'regular' PIRLS, used the same metric.

When PIRLS 2016 results were made public in December 2017, the finding for South Africa was that there had been no statistically significant change between PIRLS 2011 and 2016, the scores for Grade 4 reading being 323 and 320 respectively. This was the first time that a PIRLS trend had entered the policy discourse in the country. The reasons for the earlier 2006 to 2011 trend being largely ignored are explained below. The source for the 2011 and 2016 national scores is the PIRLS 2016 international report (Mullis et al. 2017), which had the score values for both years in the initial online version released in 2017, though this version was replaced by a new one in 2020, where references to the 2011 score had been removed. The reasons for this are explained below.

A typical media headline following the 2017 release was the following, in *City Press* (Fengu 2017): "Grade 4s can't read: Researchers 'underestimated how deep SA's crisis was' ". The emphasis is telling, and indicative of problems in communicating ILSA results well. The emphasis tends to be on international comparisons at a point in time, or a league table approach, and not on whether improvement has occurred. Arguably, what should have been even more lamentable than that South Africa achieved the worst results of all PIRLS 2016 countries was the apparent lack of any progress between 2011 and 2016 – although the 2011 results showed such low levels of achievement, and despite many interventions to improve learning and teaching, such as better access to books for learners and clearer curriculum guidelines for teachers (Gustafsson 2019b). Moreover, this headline reflects the difficulty of retaining facts from the past in the public consciousness. The earlier 2006 PIRLS results, using the general PIRLS metric, pointed to reading outcomes that were even worse than those of 2016. Evidence of very weak reading skills was nothing new in South Africa.

Several education experts with whom the authors interacted at the time expressed scepticism about the reported lack of change between 2011 and 2016. This absence of progress contrasted with an earlier improvement in the Grade 4 PIRLS results between 2006 and 2011 that exceeded what one might expect, given the historical trends of ILSA-participating countries. It also contrasted with 2007 to 2013 improvements seen in the Grade 6 results of SACMEQ. These inconsistencies led the

Department of Basic Education (DBE), South Africa's national authority for schools, to examine whether the 2011 score was in fact correct. If it were incorrectly inflated, this would explain the steeper-than-expected improvement before 2011 and the lack of any improvement after 2011. The methods and findings of this re-examination are set out in Gustafsson (2020).

The methods were relatively straightforward. Across four passages, 65 items were common across prePIRLS 2011 and PIRLS Literacy 2016. Responses to these items in the publicly available data did indeed reflect large improvements between 2011 and 2016, equal to around 0.05 of a South African standard deviation per year, a steep improvement by ILSA standards. Analysis by UNESCO Institute for Statistics (2019) points to the strongest improvers amongst developing countries achieving gains of between 0.05 and 0.09 of a national standard deviation per year. Within this range, improvements appear to be the largest among countries with an exceptionally low point of departure, such as South Africa.

A rudimentary application of the item response theory ('irt') command in Stata 16, using the publicly available PIRLS microdata, pointed to South Africa's 2011 national score being around 295, not the abovementioned 320. It was concluded that the 2011 score published in 2017 was indeed higher than it should be, and that rather than seeing no improvement between 2011 and 2016, South Africa experienced among the steepest improvements of all countries in PIRLS during this period.

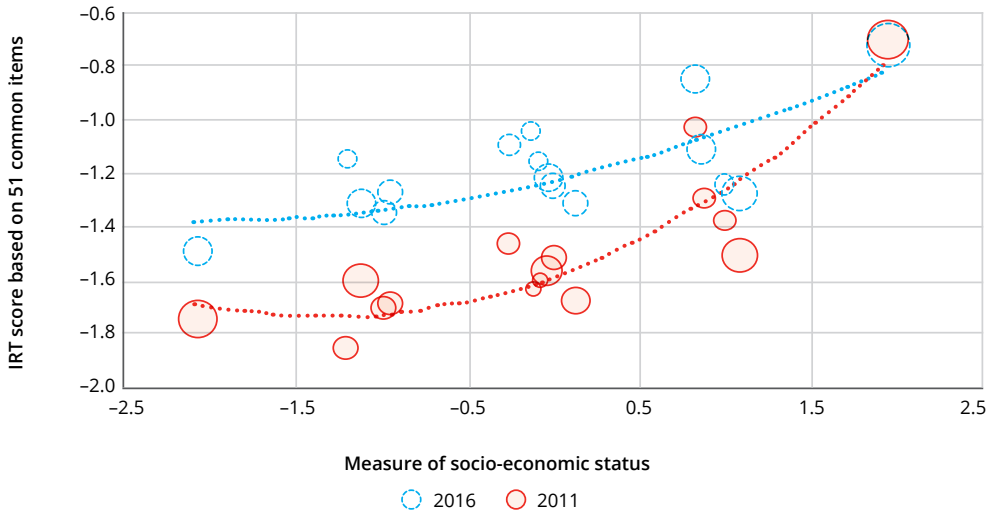
The analysis moreover probed whether sampling irregularities may explain South Africa's improvement. Did the 2016 sample over-represent middle-class schools, for instance, relative to the 2011 sample, despite rigorous procedures relating to the national representativity of samples? On the basis of the analysis of Figure 1, it was concluded that changes in the mean score between 2011 and 2016 were driven by improvements at most points in the socio-economic spectrum. It was only among children at the highest socio-economic level that no improvement was evident. This finding implies a reduction in educational inequality.

The DBE's findings were brought to the attention of the IEA in late 2019, who conceded that they had made an error in the recalibration of the 2011 results. The IEA's original recalibration had made use not of the four common passages, but of the fact that in 2011 Colombia's learners had been randomly assigned within each school to prePIRLS and regular PIRLS. It is likely that this approach would not have accurately recalibrated the South African 2011 scores because Colombia's learners have historically performed better than South Africa's learners: in 2011, Colombia's Grade 4 learners scored 448 on the general PIRLS scale, against South Africa's 320 five years later. There would not have been enough low-performing learners in Colombia to produce a recalibration algorithm that would work effectively with the South African data. Why the IEA did not simply use items common to both prePIRLS 2011 and PIRLS Literacy in 2016 is not clear.

As already mentioned, in early 2020, the IEA removed South Africa's incorrect 2011 score from the 2016 international report, and any reference to a 2011 to 2016 trend.

The Department of Basic Education (2020) published its re-analysis of the PIRLS trend in its five-year sector plan. The media response to this was also telling.

Figure 1 PIRLS 2011 to 2016 improvements by socio-economic status



Note *From Gustafsson (2020), Figure 12. Bubbles represent 16 comparable socio-economic categories in each year, with the area of each bubble reflecting the number of weighted learners. Curves are quadratic trendlines.*

The *Sunday Times* (Govender 2020) released an article with the following heading: "Professor proves South African kids know their stuff". The finding that *progress* had been satisfactory was confused with *levels* of reading being satisfactory. This type of confusion seems to rest on the common assumption that rapid improvements in learning outcomes, much steeper than those seen by the best improvers in ILSAs in recent decades, are somehow possible. This assumption appears to underpin unattainable targets for standardised test scores set by many education authorities (UNESCO Institute for Statistics 2019). With such an assumption, it is understandable that news about an exceptionally steep improvement might lead to the conclusion that learning outcomes have now reached a satisfactory level.

In late 2021, the IEA (2021) shared its own re-analysis of the 2011 to 2016 PIRLS trend for South Africa. While this e-report has been shared among key stakeholders in the country, it was by May 2022 not publicly available online. The IEA's new recalibration of South Africa's 2011 score drew not just from South Africa's raw test data, but also from the data of six other countries participating in either prePIRLS 2011 or PIRLS Literacy 2016. Several checks were run to ensure that South Africa's recalibrated 2011 results, and their underlying item parameters, were consistent with the overall scaling of the 2016 PIRLS results. The new analysis agreed broadly with the DBE's analysis, and concluded that the 2011 score on the general PIRLS scale was 278 – 42 points below the 2016 score of 320. This 42-point gain would be the second-steepest gain among the 43 countries with results for 2011 and 2016, after Morocco's gain of 48 points. Moreover, this 42-point gain translates into an annual gain of 0.08 South African standard deviations. Table 2 below reproduces the table with the key findings of the IEA's (2021) report.

Table 2 South Africa prePIRLS 2011 achievement results on the PIRLS scale

Scale	prePIRLS 2011 average scale score	PIRLS Literacy 2016 average scale score	Difference
Overall PIRLS reading	278 (5.1)	320 (4.4)	+42 (7.0)
Reading purposes			
Literary	280 (5.2)	323 (4.7)	+43 (7.2)
Informational	273 (5.0)	314 (4.5)	+41 (7.0)
Comprehension processes			
Retrieving and straightforward inferencing	277 (5.0)	321 (4.5)	+44 (6.8)
Interpreting, integrating, and evaluating	273 (5.2)	308 (5.3)	+35 (7.6)

Note *From IEA (2021), 7 (Exhibit 4). All differences in the final column represent statistically significant improvements.*

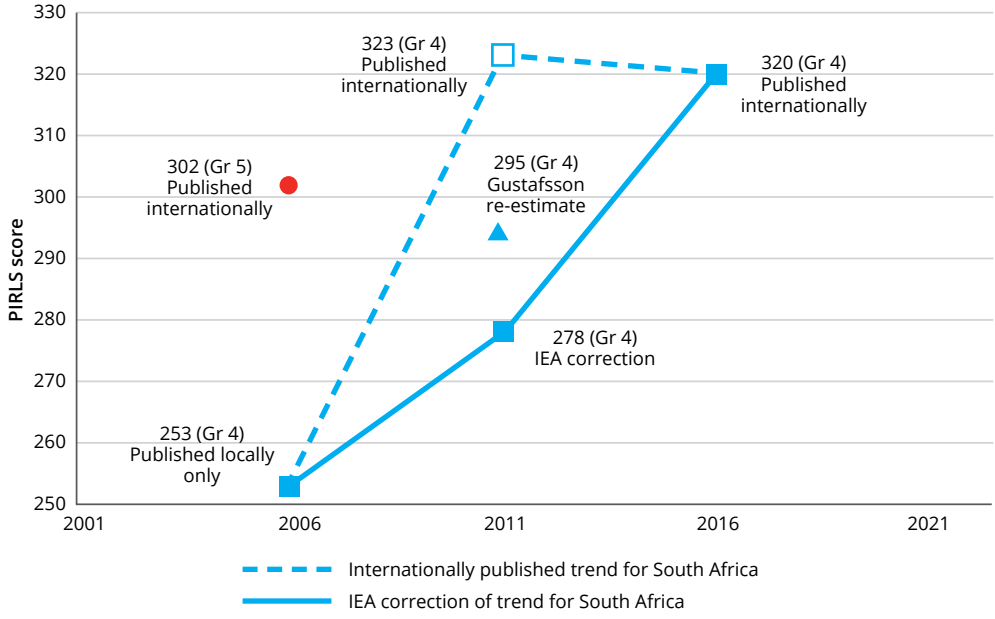
The graph in Figure 2 summarises the evolving information on what the true reading trend was in South Africa. Up to the release of the PIRLS 2016 report in 2017, there was no known PIRLS trend. This report revealed not just a 2016 score of 320, but a recalibrated and thus comparable 2011 score of 323. This produced an exceptionally steep improvement in the earlier 2006 to 2011 period, and no improvement between 2011 and 2016. The steep 2006 to 2011 trend received little attention as the 2006 Grade 4 results, though published, were not widely known. It was the Grade 5 results, released in the international reports of the time, which had enjoyed by far most attention. What attracted nearly all the attention was the no-change 2011 to 2016 trend. The initial re-estimation by the DBE produced a 2011 score of 295, after which the IEA, using a far more rigorous approach, arrived at a figure of 278. The resultant picture, and there appears to be no reason to doubt its accuracy, is of a relatively steady and rapid improvement during the decade of 2006 to 2016.

From South Africa's experiences with the 2011 recalibration, certain lessons can be drawn that are relevant beyond South Africa.

The microdata and technical documentation of the ILSAs should be easily available and more extensively used by a wider range of analysts, not just to extract further knowledge, but even to check the reliability of the data and statistics. The PIRLS and TIMSS data and metadata are easily downloadable and are of a high standard. Other ILSAs, such as SACMEQ, should strive towards a similar level of rigour. Yet even the IEA's statistics should be checked, in particular by analysts based in countries described by these statistics. Replicating published statistics is an excellent means of understanding the data, and conducting training for analysts.

More training is needed in countries such as South Africa, where capacity to analyse data in general is scarce, and capacity to employ psychometric methods, in particular those informed by item response theory (IRT), is extremely scarce. To illustrate, there are probably no more than three or four South Africans who get close

Figure 2 PIRLS trends 2006 to 2016



to having the skills required to understand and replicate the entire PIRLS assessment process, from raw response data to the various PIRLS statistics that are published.

More psychometric skills are needed in order to facilitate the communication of relevant assessment concepts to less technical audiences. Programmes such as PIRLS become less of a 'black box'. South Africa, like many other countries, struggles to grapple with questions of educational improvement, and the different degrees of comparability, over space and time, found in various assessment types. While assessments such as PIRLS are important in that they provide what is arguably the maximum possible degree of comparability, other assessments not designed to produce strictly comparable results have nonetheless been used as if they are designed for this – see Nuga Deliwe and Van der Berg (2022) for a discussion of Annual National Assessments in South Africa. In the case of South Africa, the Grade 12 examinations are often used as a gauge of progress. In many respects this is incorrect, though with a sufficient awareness of the limitations of the data, roughly reliable trends can be established (Gustafsson 2019a). If assessment experts can confirm the degree of non-comparability of certain assessment datasets, this is arguably preferable to dismissing these datasets as completely unusable for comparison purposes. This is especially so in a context where popular perceptions and traditions around long-standing assessment systems are not easily changed.

In short, apart from providing vital and reliable information on educational improvement, programmes such as PIRLS provide an excellent point of departure for training new assessment experts.

5 Conclusion

In this chapter, PIRLS was discussed in terms of its evolution over a decade of participation in three cycles of administration (2006, 2011 and 2016). In this reflection on a decade of administration, the chapter provided the reader with insight into the design and sampling decisions that are made from one cycle to the next, keeping in mind the balance between allowable design decisions that would not compromise the accuracy of national performance indicators within countries nor reasonable comparability between countries.

In reflecting on a decade of PIRLS administration in South Africa, the chapter highlighted the importance of secondary analysis and the analysis of microdata to provide meaning to overall results and findings, even when trend score adjustments are made upon closer inspection of initially released trend results. A point originally made by Gustafsson and Blömeke (2018) and noted earlier in the chapter deserves emphasis: assessing the development and growth of educational achievement across countries at one point in time is important, but studies on within-country change over time may provide insights into the mechanisms that bring about change or development.

At the time of this chapter's publication, we eagerly await the PIRLS 2021 results, since they may prove to be of great importance in the further evolution of the study in light of challenges arising from the Covid-19 pandemic (Ardington et al. 2021). For the purposes of PIRLS 2021, nationally representative samples of Grade 4 learners were tested across 11 languages, while a nationally representative sample of Grade 6 learners were tested in Afrikaans and English in all the sampled PIRLS schools. Results from Grade 4 learners will provide continued evidence of the PIRLS trend across 11 languages from PIRLS 2016, but Grade 6 learner results will aim to provide insight into achievement at the end of the Intermediate Phase. Of added importance to the PIRLS 2021 results is national evidence of the possible effects of Covid-19 and learning losses as a result of disruption not only to a national education system, but to education systems globally.

References

Ardington, C., Wills, G. & Kotze, J. (2021). COVID-19 learning losses: Early grade reading in South Africa. *International Journal of Educational Development 86*, 102480.

Department of Basic Education (DBE). (2020). Action Plan to 2024: Towards the Realisation of Schooling 2030. Pretoria: DBE.

Fengu, M. (2017). Grade 4s can't read: Researchers "underestimated how deep SA's crisis was". *City Press*. 5 December 2017.

Foy, P. and Joncas, M. (2003). *Progress in International Reading Literacy Study 2006: School Sampling Manual*. IEA: Statistics Canada.

Govender, P. (2020). Professor proves South African kids know their stuff. *Sunday Times*. 25 October 2020.

Gustafsson, M. (2019a). The Case for Statecraft in Education: The NDP, a Recent Book on Governance, and the New Public Management Inheritance. Stellenbosch Economic Working Paper Series, WP16/2019. Stellenbosch: ReSEP, Stellenbosch University.

Gustafsson, M. (2019b). Pursuing equity through policy in the schooling sector 2007–2017. In Spaull, N. & Jansen, J. (Eds). *South African Schooling: The Enigma of Inequality*. 47–66. Cham: Springer.

Gustafsson, M. (2020). A Revised PIRLS 2011 to 2016 Trend for South Africa and the Importance of Analysing the Underlying Microdata. Stellenbosch Economic Working Paper Series, WP02/2020. Stellenbosch: ReSEP, Stellenbosch University.

Gustafsson, J. E. & Blömeke, S. (2018). Development of school achievement in the Nordic countries during half a century. *Scandinavian Journal of Educational Research*, *62*(3), 386–406.

Hastedt, D. & Rocher, T. (2020). International large-scale assessments in education: A brief guide. IEA Compass: Briefs in Education. Number 10. *International Association for the Evaluation of Educational Achievement*.

Hernández-Torrano, D. & Courtney, M. G. (2021). Modern international large-scale assessment in education: an integrative review and mapping of the literature. *Large-scale Assessments in Education*, *9*(1), 1–33.

Howie, S. J., Venter, E., Van Staden, S., Zimmerman, L., Long, C., Scherman, V. & Archer, E. (2009). PIRLS 2006 Summary Report: South African Children's Reading Literacy Achievement. Pretoria: Centre for Evaluation and Assessment.

Howie, S. J., Van Staden, S, Tshele, M, Dowse, C. & Zimmerman, L. (2012). South African Children's Reading Literacy Achievement Summary Report. Pretoria: Centre for Evaluation and Assessment.

Howie, S. J., Combrinck, C., Roux, K., Tshele, M., Mokoena, G.M. & McLeod Palane, N. (2017). Progress in International Reading Literacy Study 2016: South African Children's Reading Literacy Achievement. Pretoria: Centre for Evaluation and Assessment.

IEA (2021). Scaling the PrePIRLS 2011 South Africa Data. Chestnut Hill: Boston College. [Unpublished, but available from the authors on request]

Joncas, M. & Foy, P. (2011). Sample design in TIMSS and PIRLS. *Methods and Procedures in TIMSS and PIRLS* 1–21.

LaRoche, S., Joncas, M. & Foy, P. (2016). Sample design in PIRLS 2016. *Methods and Procedures in PIRLS* 3–1.

Martin, M. O. & Mullis, I. V. S. (2012). *Methods and Procedures in TIMSS and PIRLS 2011*. Chestnut Hill, MA: TIMSS and PIRLS International Study Center, Boston College.

Mtsatse, N. & Van Staden, S. (2021). Exploring differential item functioning on reading achievement: A case for isiXhosa. *South African Journal of African Languages 41*(1), 1–11.

Mullis, I. V. S., Kennedy, A. M., Martin, M. O. & Sainsbury, M. (2004). *PIRLS 2006 Assessment Framework and Specifications*. Chestnut Hill, MA: TIMSS and PIRLS International Study Center, Boston College.

Mullis, I. V. S., Martin, M. O., Kennedy, A. M. & Foy, P. (2007). *PIRLS 2006 International Report: IEA's Study of Reading Literacy Achievement in Primary Schools*. Chestnut Hill, MA: TIMSS and PIRLS International Study Center, Boston College.

Mullis, I. V. S, Martin, M. O, Foy, P. & Hooper, M. (2017). *PIRLS 2016 International Results in Reading*. Chestnut Hill, MA: TIMSS and PIRLS International Study Center: Boston College.

Nuga Deliwe, C. & Van der Berg, S. (2022). The role of assessment in Foundation Phase improvement: The Annual National Assessments and beyond. In Venkat, H. & Roberts, N. (Eds), *Early Grade Mathematics in South Africa*. Cape Town: Oxford University Press.

Reddy, V. (2006). *Mathematics and Science Achievement at South African Schools in TIMSS 2003*. Cape Town: HSRC Press.

Roux, K. (2021). Examining the equivalence of the PIRLS 2016 released texts in South Africa across three languages. (Unpublished doctoral thesis). University of Pretoria, Pretoria.

Spaull, N. & Pretorius, E. (2019). Still falling at the first hurdle: Examining early grade reading in South Africa. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 147–168. Cham: Springer.

Strietholt, R. & Scherer, R. (2018). The contribution of international large-scale assessments to educational research: Combining individual and institutional data sources. *Scandinavian Journal of Educational Research*, *62*(3), 368–385.

UNESCO Institute for Statistics (2019). *How Fast Can Levels of Proficiency Improve? Examining Historical Trends to Inform SDG 4.1.1 scenarios*. Montreal.

Van Staden, S. (2010). Reading between the lines: Contributing factors that affect Grade 5 learning reading performances. (Unpublished doctoral thesis). University of Pretoria, Pretoria.

03

Foundational skills in home language reading in South Africa: Empirical evidence from 2015–2021

GABRIELLE WILLS, CALLY ARDINGTON & MBALI LESANG SEBAENG

Abstract

Using a large corpus of early grade reading data for more than 40,000 South African learners, mostly from no-fee schools, this chapter provides the most authoritative evidence to date of what we know about foundational language and decoding skills in Nguni and Sesotho-Setswana home languages. We document levels of decoding skills among Foundation Phase learners (Grades 1 to 3), identify the oral language skills with which learners start Grade 1, and consider how oral reading fluency develops to the end of primary school. We find that far too many children in under-resourced schools enter school with under-developed oral language skills in their home language. Furthermore, the development of decoding skills remains slow, with most learners entering school with virtually no knowledge of the code of their home language, despite spending a year in Grade R. Slow and low mastery of letter-sounds and complex consonant sequences, as well as slow fluency development in the Foundation Phase, is evidence that most children in no-fee schools are neither receiving effective, systematic phonics instruction, nor being given opportunities to read extended texts. This has significant implications for fluency development in later years.

KEYWORDS
early grade reading, African languages, reading trajectories, decoding, oral reading fluency, text comprehension, South Africa

Across different samples, large proportions of Grade 6 learners (35–46%) do not reach fluency benchmarks for African languages set for the Grade 3 level. Of particular concern is weak reading development among boys. We also show empirically that reading trajectories by the end of primary school are shaped by what happens in the first two years of school, particularly the extent to which decoding skills are acquired by the end of Grade 2.

1 Introduction

Reading is the foundation for all academic learning. Achievement in this foundational skill is not only a predictor of high school achievement, but of meaningful civic and economic engagement as well as self-expression after schooling (SAHRC 2021). It is disconcerting, therefore, that close to 80% of South African children are unable to read for meaning in their home language by the time they are well into their fourth year of school as reflected in the 2016 Progress in International Reading Literacy Study (PIRLS) (Howie et al. 2017). Success in learning to read is dependent on how well children are taught and the extent to which they are offered opportunities to read. While children can achieve oral language through a process of natural acquisition, they will only learn to read if they are intentionally and systematically taught (Seidenberg 2017). It is therefore imperative for children to learn to read for meaning in the early grades – specifically in the first three years of school – to ensure that they have an established foundation for when the transition to 'reading in order to learn' happens in Grade 4 (Howie et al. 2017).

Although rich, nationally representative data of learners' reading comprehension skills in their home languages are available through South Africa's participation in international and regional studies such as PIRLS or the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ),[1] the results from these studies are only useful in identifying levels of reading comprehension. Likened to the 'tip of the iceberg', reading comprehension reflects the culmination of the development of numerous skills, providing little insight into the root causes of underperformance, i.e. the sub-components required to read for meaning (Spaull et al. 2020).

Numerous factors, knowledge bases, skills and processes that underpin reading comprehension need to coordinate and develop for learners to successfully understand a reading text. Various reading skills, including knowledge of the code of a language, become integrated through a developmental sequence (Chall 1983) and it is only gradually that learners come to fully comprehend what they are reading (Castles et al. 2018). The development of automaticity in decoding can support comprehension, as cognitive resources are freed up to be used for meaning-making. But oral language also supports reading comprehension. The product of decoding and language skills results in reading comprehension, with impairments in each compromising the ability to understand a reading text (Gough & Tunmer 1986; Hoover & Gough 1990). For that reason, both of these foundational skills need to be mastered when learning to read in

1. Representative reading comprehension data are also available for eight out of nine South African provinces from the National School Effectiveness Study (2007 to 2009).

any language and should be assessed alongside comprehension (Department of Basic Education 2020). For optimal success, literacy should also develop in the language with which learners are most familiar – their home language. In South Africa, more than 70% of learners in the Foundation Phase of public schooling are in schools where most children (75%+) speak the language of learning and teaching (LOLT) as their home language (Spaull & Pretorius 2019, 5).

In this chapter, we document what we know about oral language and decoding skills in two main home-language groups – Nguni languages (including isiXhosa, isiZulu and Siswati) and Sesotho-Setswana languages (including Sepedi – also called Northern Sotho – and Setswana). By collating reading data from assessments inspired by Early Grade Reading Assessments (EGRA) (Dubeck & Gove 2015), collected across six studies in six provinces between 2015 and 2021, we have constructed the largest existing corpus of data on early grade reading skills in these languages. Accordingly, this chapter provides the most authoritative evidence to date of what we know about foundational language and decoding skills in these South African home languages. Updating existing reviews (Spaull & Pretorius 2019) using much larger learner and school samples, and drawing on improved instruments to measure early grade reading skills in African languages, we document oral language skills (e.g. phonemic awareness, listening comprehension), and decoding skills (e.g. alphabetic knowledge, oral reading fluency). We provide evidence of the oral language skills with which learners enter school and consider how decoding skills progress over the primary school grades. We also consider how decoding and fluency support comprehension. Tracking the development of reading sub-skills addresses a significant gap in our knowledge of what early reading trajectories look like in African languages.

2 Background

As Spaull and Pretorius reflect (2019, 157), much of the South African discourse on reading has focused on the end point of the learning-to-read journey, using assessments of written reading comprehension. These written assessments provide important information to monitor national literacy levels, but they do not reveal *why* children cannot read, and do not identify at what *stage* in the sequence of reading development bottlenecks are experienced (Zuilkowski et al. 2019, 596). In this chapter, we aim to use a large corpus of reading data to shed light on which of the building blocks of reading children are stumbling on and when they are doing so.

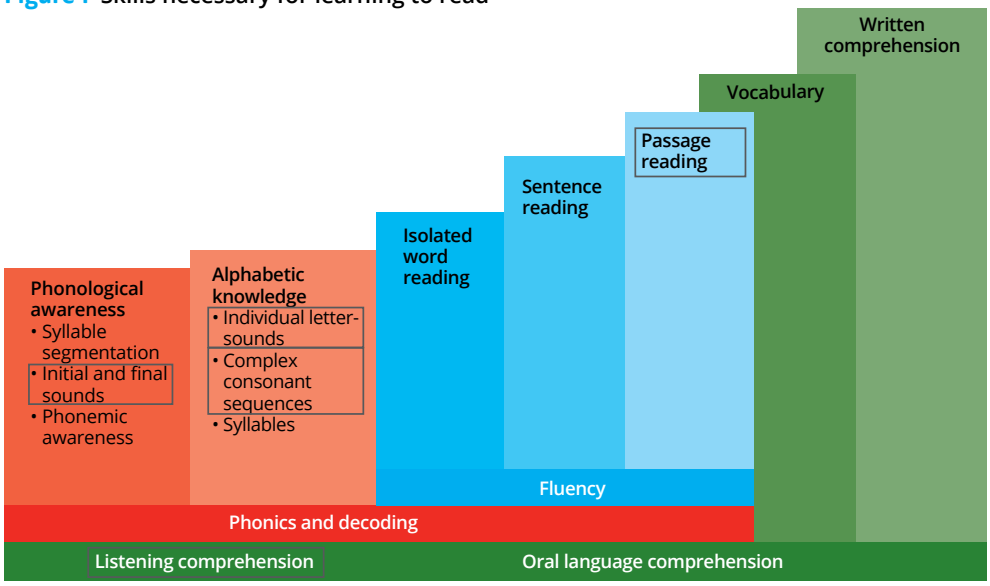
In alphabetic languages, letter graphemes are a code representing sounds that correspond with spoken language. These sound-representing letters are then blended to form words. A beginner reader spends time deciphering this code, i.e. decoding (Spaull & Pretorius 2019). For this to successfully happen, interconnected reading skills that build on one another need to be intentionally and skilfully taught, paying attention to the linguistic characteristics of the language. Figure 1 summarises how these and other reading skill components build on one another and together work towards reaching the goal of reading comprehension (Time4Learning 2022; Reading Rockets 2022; RTI International 2016, 19). The acquisition of foundational reading skills predicts later success in reading (Wilsenach 2019, 2) so that data on these skills

are important in understanding early grade reading trajectories. In this chapter, we document from available data what we know about the acquisition of five skills (framed in Figure 1) that are taught and acquired at different points of the literacy journey.

Phonological awareness skills should develop faster in learners who speak languages with simple syllable structures (like African languages) compared with languages with more complex syllable structures. Furthermore, learning to read in any alphabetic orthography, including agglutinating[2] African languages, requires a solid understanding of letter-sound relationships (Pretorius 2018, 74). In addition to this, complex consonant sequences (for example *ntsw* in *intswahla*) are prevalent in African languages, despite their highly syllabic and simple consonant–vowel (CV) structure. These consonant sequences can be more complex to process *phonologically* or *visually* than single letter graphemes[3] (De Vos et al. 2014, 3). Once learners can decode words, they need to master fluency. Fluency refers to being able to read words with automaticity – "quickly, accurately and with proper expression" (RTI International 2016, 25).

Nationally representative assessment data that measures South African learners' foundational decoding skills are currently not available. Yet significant efforts have been made to collect non-representative data. Multiple studies and interventions in South Africa have assessed reading skills for impact studies, monitoring and evaluation, or other purposes. These data have also increasingly served beyond their primary purposes to explore reading outcomes in the early years. For example, they have been used in the establishment of early grade reading benchmarks in Nguni languages (Ardington et al. 2020; Ardington et al. 2021b) and Sesotho-Setswana languages (Mohohlwane et al., this volume; Wills et al. 2022).

Figure 1 **Skills necessary for learning to read**



2. In agglutinating languages, affixes and word stems are 'glued' together to form new meanings.
3. The term *grapheme* is given to the letter or combination of letters that represents a phoneme. For example, the word *ghost* contains five letters and four graphemes (*gh*, *o*, *s* and *t*), representing four phonemes.

Collating evidence from EGRA studies collected up to 2017, Spaull and Pretorius (2019) provided an earlier summary of what we know about the sub-components of reading that contribute to very poor reading comprehension outcomes. Despite the centrality of oral language when learning to read, they bemoan the paucity of empirical research on oral language among African language learners. By contrast, more is known about decoding skills in the early grades. Drawing on EGRA data from about 3,000 to 4,000 learners in mostly no-fee[4] schools (typically attended by poorer children than those attending fee-paying schools), Spaull and Pretorius (2019, 161) identify that the letter-sound knowledge and oral reading fluency of Grade 1 to 3 learners is "low and slow". They also identify "severe problems" with oral reading fluency (ORF) (2019, 159) when comparing ORF levels against tentative[5] fluency benchmarks they suggest for the end of Grade 2 or start of Grade 3 in disjunctive and conjunctive[6] languages (Spaull et al. 2020). They conclude that reading is far too slow among Foundation Phase learners, making comprehension virtually impossible.

In this chapter, the broad conclusions of Spaull and Pretorius (2019) are empirically supported using a much larger set of data and a more diverse set of assessments. Building on their work, we not only document various decoding skills among Foundation Phase learners (Grades 1 to 3) but identify oral language skills at the start of Grade 1, and consider how decoding skills, particularly oral reading fluency, develop to the end of primary school.

3 Data and method

For this chapter, we compile data on reading in Nguni and Sesotho-Setswana languages for 40,000 unique learners located in about 1,000 schools across six South African provinces. Data are collated from the Story Powered Schools (SPS) project in KwaZulu-Natal and the Eastern Cape, the first and second Early Grade Reading Studies (EGRS I and II) in the North West and Mpumalanga, the Reading Support Project (RSP) in a sub-sample of EGRS I schools, the Funda Wande (FW) interventions in the Eastern Cape and Limpopo, and the Leadership for Literacy (LFL) study in KwaZulu-Natal, Gauteng and Limpopo (Ardington et al. 2019; Ardington & Meiring 2020; Ardington & Henry 2022; DBE & Wits 2020; Research on Socio-Economic Policy 2017; Stern et al. 2022). In all six studies, one-on-one assessments (one fieldworker to one child) were administered. From Grade 3 onwards, learners were also given a written assessment.

Learner and school sample sizes by study and language are reflected in Table 1. Assessments of reading skills are available in three Nguni languages (isiXhosa, isiZulu and Siswati) and two Sesotho-Setswana languages (Sepedi and Setswana). The learner assessment samples are almost all from no-fee schools and are sufficiently

4. In South Africa, there are two main categories of public schools: no-fee and fee-paying. More than 70% of South African learners are in no-fee schools (these are synonymous with Quintiles 1 –3 in the Department of Basic Education classification system).
5. Since their study, larger initiatives have been conducted to establish Nguni and Sesotho-Setswana language benchmarks.
6. In conjunctive languages, morphemes (the smallest meaningful unit of language) are merged into single written words (e.g. isiXhosa) while in disjunctive languages, morphemes mostly appear as single words (e.g. Sepedi).

large to provide evidence of reading performance in these less resourced school settings. It must be emphasised that these samples are neither representative at a national or provincial level nor of a language group. Across samples, there is variation in the rural/urban status of schools and the socio-economic status of learners. For this reason, we are careful throughout the analysis to report results separately by study and language.

Notwithstanding these limitations, a cross-sectional view of these data allows us to identify decoding levels for learners from the start of Grade 1 to the end of primary school (Grade 7). We are careful to distinguish between Nguni and Sesotho-Setswana language samples, particularly when reporting on oral reading fluency, due to varied orthographies. Both language groups are agglutinating, but Nguni languages have a conjunctive orthography, resulting in fewer, yet much longer, words in sentences while Sesotho-Setswana languages are disjunctive, with shorter average word length. (For example, the disjunctively written three-word phrase *Ke a taboga* (I am running) in Setswana would be written conjunctively in isiXhosa as one word: *ndiyabaleka*.) We do not distinguish across control or intervention samples, where reading datasets derive from programme evaluations, given how small impact sizes typically are across studies when considered, for example, in terms of gains in the number of letters or words read correctly.[7]

Learners are tracked over time in almost all these studies, with between two and five assessment points available for the same learners over time (see second half of Table 1). Using the longitudinal aspect of the data, we move beyond a static snapshot of levels, considering progress in reading across primary school grades. We also identify how the development of decoding skills in early grades predicts the development of higher order reading skills, such as written comprehension skills in later grades. We then identify what reading trajectories look like across learners with different starting skills and between boys and girls.

As an advantage over existing reviews that have relied on estimates taken directly from reports or papers to identify decoding skills, a 'primary' analysis of assessment data supports better comparison of reading skills across different studies. Direct comparison of estimates across different study reports can be difficult where analysts use different approaches in how they treat zero or missing values, in how they derive timed values such as letter-sounds (or words) read correctly per minute, or in whether repeating learners are included or excluded from samples. All of these affect the averages obtained (Crawfurd 2021). By deriving decoding measures from item-level assessment-task data across studies in a similar manner, we circumvent some of these comparability issues. However, variation across assessment tasks or the varied difficulty of oral reading fluency passages across grades and studies still presents a limitation for an exact cross-study or cross-grade comparison of reading skills. Despite these shortcomings, sufficient overlap in passages and tasks assessed across and within studies (Ardington et al. 2020) remains supportive of the analyses presented.

7. Given the low base from which reading skills are tracked, improvements cited are often less substantive than what is implied by standard deviation gains and less consequential in biasing an analysis of reading levels, when reflecting on programme impacts in terms of additional words or letters read.

Table 1 Compiled Nguni and Sesotho-Setswana reading data from different EGRA-type studies in South Africa, 2015–2021

Study	Language	No. of schools	No. of learners	Grades				
				Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
SPS	isiZulu	188	5,371	2, 3 & 4	3, 4 & 5			
	isiXhosa	170	5,002					
EGRS II	isiZulu	49	969	1	1	2	3	4
	Siswati	131	2,358					
FW EC I	isiXhosa	59	1,187	1 & 2	1 & 2	3 & 4	3 & 4	
FW EC II	isiXhosa	57	968	1	1			
LFL	isiZulu	42	510	3 & 6	3 & 6			
	Sepedi	9	135					
FW LP	Sepedi	120	7,064	1, 3 & 6				
EGRS I	Setswana	230	4,558	1	1	2	4	7
EGRS I sustainability	Setswana	212	2,133	3				
EGRS I benchmarking	Setswana	209	5,547	3, 4 & 7				
RSP	Setswana	212	4,201	1	4			
Unique learners			40,991					
Unique schools		1,020						

Notes *SPS = Story Powered Schools, EGRS II = second Early Grade Reading Study, FW EC = Funda Wande (Eastern Cape), LFL = Leadership for Literacy, FW LP = Funda Wande (Limpopo), EGRS I = first Early Grade Reading Study; RSP = Reading Support Programme. Shaded cells reflect that learner samples are drawn from the same schools.*

4 Oral language skills at the start of school

The bidirectionality of oral language and literacy is a guiding principle that underpins reading development (Vihman 1996). In other words, the language skills with which learners enter school aid their literacy development and vice versa – the more their literacy skills develop, the more their language skills improve. Unfortunately, high proportions of children, particularly in poorer South African contexts, are entering school with poor language skills. In a recent study, almost half of children aged four to five in South African early learning programmes were identified as not being developmentally on track in terms of their emergent literacy and language skills (Giese et al. 2022).

Not surprisingly, we find that far too many learners enter Grade 1 with poorly developed oral language abilities that fall well short of the home-language skills specified in the Grade R home-language curriculum. We illustrate this with pre-pandemic data collected in the Eastern Cape and Mpumalanga in the first term of Grade 1 (Table 2). According to the Curriculum and Assessment Policy Statement (CAPS), a Grade R learner "understands that words consist of more than one sound" and "distinguishes aurally between different sounds especially at the beginning

of words" (DBE 2011, 40). However, at the beginning of Grade 1, half of learners in an Eastern Cape sample (49%) and two-thirds of learners in a Mpumalanga sample (68%) were unable to provide the initial sound of any of three simple words read aloud by the assessor in a Nguni language (*kodwa*, *misa*, and *vuka* in the Eastern Cape; *busa*, *gogo*, and *wena* in Mpumalanga). Only 23% and 7% of learners in the Eastern Cape and Mpumalanga samples respectively were able to correctly identify the initial sound of all three words.

Table 2 **Oral language skills at the beginning of Grade 1**

	Eastern Cape	Mpumalanga
Ability to identify initial sounds^ of words (phonemic awareness)		
... % of learners scoring zero (i.e. 0 of 3 items correct)	49%	68%
... Average percentage score (out of 3 items)	37%	18%
... % of learners answering all 3 oral items correctly	23%	7%
Listening comprehension*		
... % of learners scoring zero	12%	9%
... Average percentage score**	53%	55%
Observations (Grade 1 learners, Term 1)	590	3,327

Notes *From Funda Wande (Eastern Cape) and EGRS II (Mpumalanga). Assessments conducted in Grade 1 Term 1 in 2019 and 2017 respectively. ^The fieldworker says a word (e.g.* vuka*) and asks the child to repeat the word. Once the child has repeated the word, the fieldworker asks the child what sound the word begins with. *Length of isiXhosa listening comprehension story for Eastern Cape learners: 72 words. Length of isiZulu and Siswati stories for Mpumalanga: 30 words each. **No. of listening comprehension questions asked: five in both the Eastern Cape and Mpumalanga.*

Learners starting Grade 1 also perform poorly on listening comprehension, a measure that is predictive of reading acquisition. In Nguni languages, of the almost 4,000 Grade 1 learners assessed across two provinces, around one in ten was unable to correctly answer any questions verbally about a short story read to them by the assessor (see Table 2). The Grade R curriculum expectation is that learners should be able to recall details and state main ideas from stories read by the teacher, demonstrating "understanding by answering questions related to the story" (DBE 2011, 43). On average, learners could only verbally answer about half (53–55%) of the questions correctly. In the Eastern Cape sample, learners found the only straightforward inferential question particularly challenging, with just one in three (30%) providing a correct answer. All questions provided for the Mpumalanga sample were literal, but learners performed very poorly (27% correct) on a question that related to an incidental detail. This is consistent with research suggesting that it is harder to recall events not in the causal chain of a narrative (Trabasso & Van den Broek 1985). This suggests that even with a very short aural story, most learners do not retain more than the story's most salient details.

While listening comprehension and initial word-sounds do not provide a comprehensive picture of oral language skills, the poor performance in both samples is indicative of most children not meeting Grade R curriculum expectations by the time they begin Grade 1. This is a concern since both initial sound and listening comprehension skills are found to be significant predictors of later oral reading fluency. For example, learners in the Eastern Cape sample who can identify all three initial sounds at the beginning of Grade 1 have an oral reading fluency score[8] at the end of Grade 3 that is 15 words higher than those who were unable to identify any of the initial sounds.

5 Alphabetic knowledge

Complementing the analysis on listening comprehension and phonemic awareness, we now document learners' knowledge of their home language 'code' through assessments of single and more complex letter-sounds.

5.1 Letter-sound knowledge

Letter-sound knowledge is typically measured by the number of letters (both single vowels and single consonants) sounded correctly in a minute. Using this metric, Figures 2 and 3 categorise learner samples from an isiXhosa sample from the Eastern Cape and then a Setswana sample from the North West into five groups:

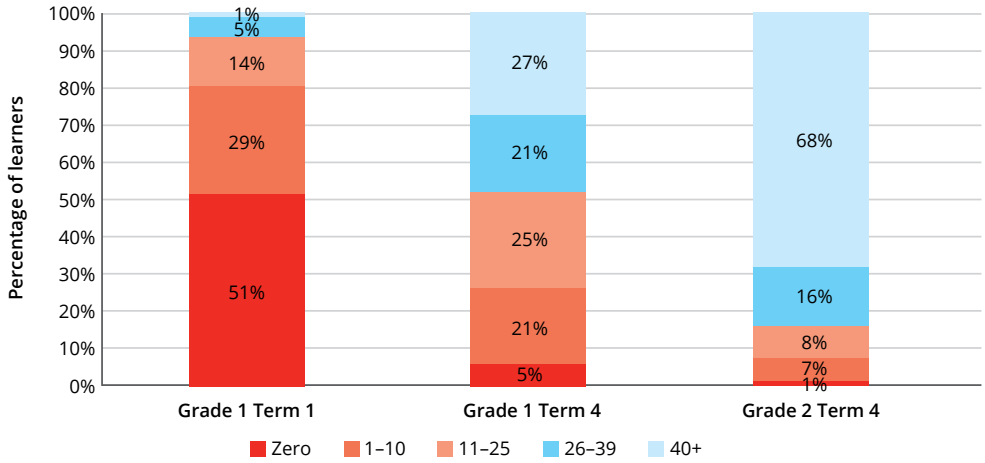
1. No alphabetic knowledge. Learners do not sound any letter correctly in a minute.
2. Very limited alphabetic knowledge. Learners correctly sound 1–10 letters in a minute.
3. Limited alphabetic knowledge. Learners correctly sound 11–25 letters in a minute.
4. Emergent alphabetic knowledge. Learners correctly sound 26–39 letters in a minute (i.e. they are able to sound at least as many letters in the alphabet).
5. Basic alphabetic knowledge. Learners correctly sound at least 40 letters in a minute. This corresponds to an end of Grade 1 letter-sound benchmark in both Nguni and Sesotho-Setswana languages. There are diminishing improvements in letter-sound reading beyond sounding 40 letters in a minute, as Ardington et al. note (2020).

The figures demonstrate how these letter-sound knowledge profiles develop in the first two years of school. At the start of Grade 1, 51% and 42% of the Eastern Cape and North West learner samples respectively have no alphabetic knowledge, despite most of these learners having attended Grade R. This finding reiterates earlier work showing that far too many learners are entering Grade 1 with virtually no letter-sound knowledge (Ardington et al. 2020). Despite significant improvement in this constrained skill by the end of Grade 2, with 68% and 53% of these samples meeting the letter-sound

8. Average oral reading fluency at the end of Grade 3 is around 20 words per minute.

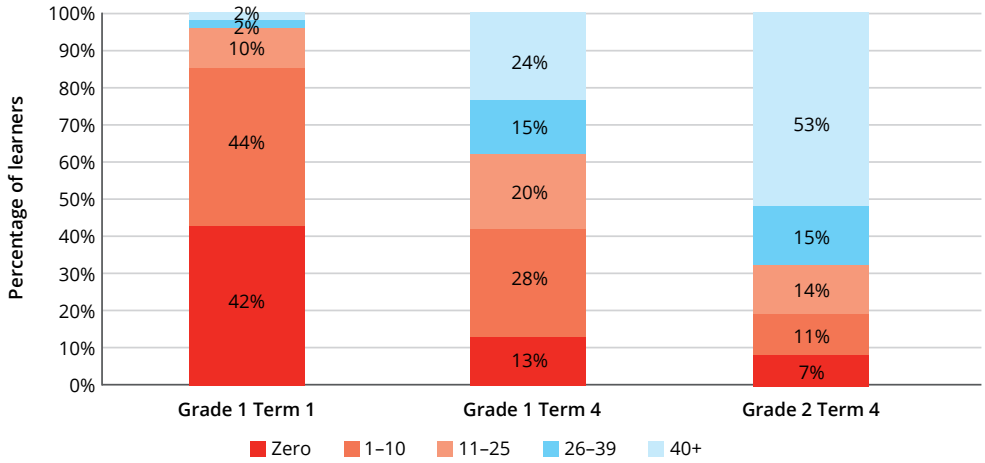
benchmark of 40 letter-sounds correct per minute (lscpm) respectively, mastery of this very basic skill eludes significant proportions of children even after two years of school. Across the two samples, 16% and 32% sound fewer than 26 letters per minute by the end of Grade 2. Not shown in Figure 2, we also find that far too many learners are not mastering this basic decoding skill by the end of the Foundation Phase, with around one in five learners at the end of Grade 3, across the pooled data, unable to correctly sound 26 letters correct per minute.

Figure 2 **Letter-sound knowledge in Grades 1 and 2, Eastern Cape sample (isiXhosa, a Nguni language)**



Notes *From Funda Wande Eastern Cape (waves 1–2) 2019, own calculations. The Grade 1 sample is longitudinal but the Grade 2 data are from a different cohort in the same schools. N = 590 for Grade 1 Term 1; 550 for Grade 1 Term 4; and 559 for Grade 2 Term 4.*

Figure 3 **Letter-sound knowledge in Grades 1 and 2, North West sample (Setswana, a Sesotho-Setswana language)**



Notes *From EGRS I (waves 1–3), own calculations. Unbalanced panel including repeaters. N = 4,452 for Grade 1 Term 1; 4,138 for Grade 1 Term 4; and 3,712 for Grade 2 Term 4.*

5.2 Knowledge of complex consonants

In Nguni and Sesotho-Setswana languages, the vowel system is relatively small and straightforward (with just five vowels in isiZulu and seven in Setswana) compared to the more complex system of about 20 different vowel phonemes in English. Yet overall, Nguni and Sesotho-Setswana languages have a larger consonant code set than English, comprising many simple and more complex consonants, as reflected in digraphs, trigraphs (or even more complex consonant sequences), and blends (Katz 2020). Complex consonant sequences feature regularly in Nguni and Sesotho-Setswana languages, making knowledge of them necessary to read most Grade 1-level texts. Examples in Nguni languages include digraphs such as *dl, hl, kh,* trigraphs such as *tsh*, and blends such as *gcw, ndl, ntsw.* In Setswana, examples include digraphs *ng, ts,* trigraphs such as *tsh,* and blends such as *ngw, tshw.*

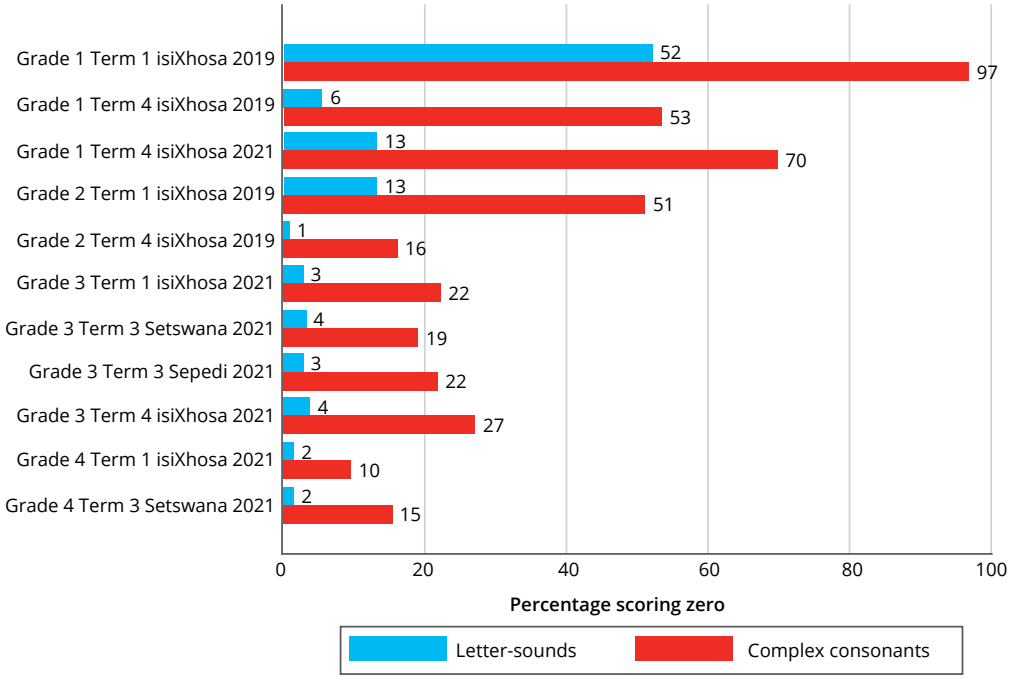
Weak knowledge of complex consonants presents a problem for reading development in African languages. There are almost no early grade reading texts with sentences in these languages that do not have a consonant sequence. Figure 4 contrasts the percentage of learners unable to sound any letter correctly in a minute against the percentage of learners in the same samples unable to sound any consonant sequence correctly in a minute. Three clear patterns emerge:

- Knowledge of complex consonants (and single letters) is acquired far too slowly in Grade 1. About 53–70% of Eastern Cape isiXhosa learners cannot sound one complex consonant correctly by the end of Grade 1.
- Despite weak, overall letter-sound knowledge, learners across all grades find reading single letter-sounds much easier than complex consonants. By illustration, of a sample of Grade 2 Eastern Cape isiXhosa learners assessed pre-pandemic (2019), just 1% are unable to sound any letter correctly but 16% are unable to correctly sound any complex consonant sequence.
- By the end of the Foundation Phase and even into Grade 4, learners still experience considerable difficulty in recognising complex consonants. At the end of Grade 3, about 19–27% of Nguni and Sesotho-Setswana language samples cannot sound one complex consonant correctly. These figures are 10–15% a year later at the end of Grade 4.

Mastery in letter naming, and knowledge of letter-sounds and consonant sequences is necessary to read in Nguni and Sesotho-Setswana languages. Although most learners do not master these skills in the Foundation Phase, these skills are unlikely to be taught beyond Grade 3. How will these skills then be acquired? Even where letter-sound knowledge is mastered, the lack of familiarity with complex consonant sequences is a major inhibitor to reading.

In the next section, which summarises what we know about oral reading fluency levels among learners in no-fee schools, most of the African language passages considered in the analysis contain 6–11 complex consonant sequences before reaching the 11th word of the passage (see Ardington et al. 2020, 19). Quite simply, it is not possible to even begin reading a passage in an African language text without knowledge of, and automaticity in, sounding complex consonants.

Figure 4 Percentage of learners unable to sound one letter or one complex consonant correctly: Nguni and Sesotho-Setswana languages



Notes *Data from Funda Wande (LP and EC) and EGRS I, own calculations.*

6 Oral reading fluency

Oral reading fluency (ORF or fluency for short) is a measure of overall reading competence "reflecting a complex orchestration" of the numerous skills required to read (Fuchs et al. 2001, 240). Rather than merely being another decoding skill along with letter-knowledge, isolated word reading or non-word reading, oral or text reading is also viewed as related to but separable from decoding and language comprehension (Kim & Wagner 2015). Some liken fluency to a 'bridge' between decoding and comprehension skills (Adams 1990; Pikulski & Chard 2005). As accuracy in decoding words increases in tandem with processing speed, this leads to automaticity in decoding words from a text. This frees up cognitive resources (working memory and attention) to be used for constructing meaning from a text. Fluency is thus a necessary skill to develop in the process of being able to read for meaning.

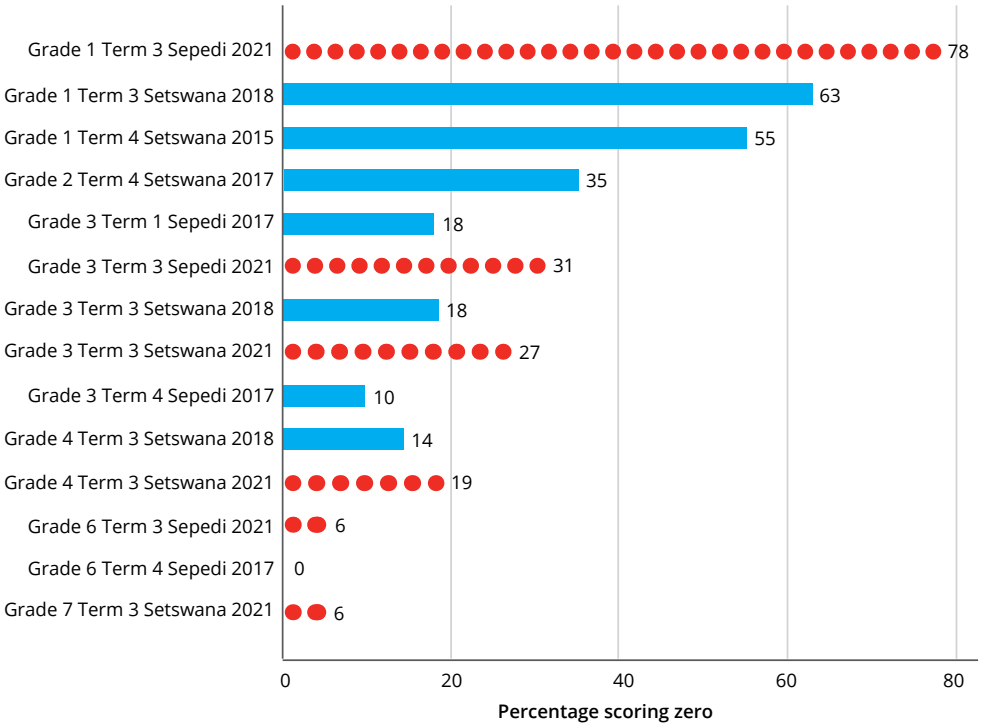
In this section, we document fluency levels by grade, term and language group. Fluency is measured here by the number of words read correctly per minute (wcpm). We first document what we know about fluency levels and how this compares to established minimum fluency benchmarks in African languages (Ardington et al. 2021b; Wills et al. 2022). Then we examine fluency trajectories across the primary

school grades using a longitudinal example from the North West. Cross-study, cross-grade fluency comparisons in home language are supported using similar narrative stories across studies and grades to assess fluency (Ardington et al. 2020).

6.1 Oral reading fluency levels

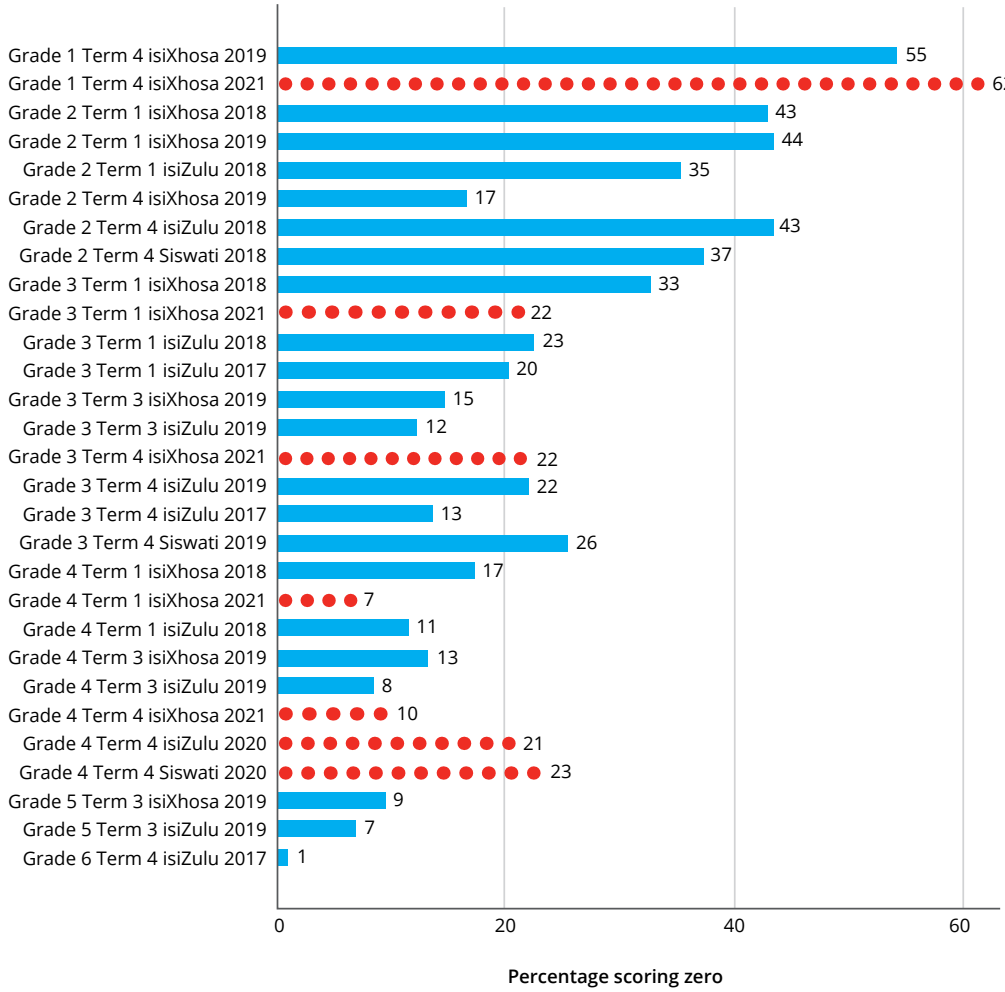
During the first year of schooling, most Grade 1s should be able to read a series of short sentences or a little text on their own, albeit haltingly. Some Grade 1s will start doing this by the second term. However, across this large dataset, the development of fluency by the end of Grade 1 remains unrealised among most African-language learners in our samples. Figures 5 and 6 summarise the percentage of learners by grade, language and study that cannot read one word correctly from a passage. More than 55% of Nguni and Sesotho-Setswana language learner samples assessed pre-pandemic cannot read a single word correctly from a grade-level text by the end of Grade 1. Particularly poor outcomes are identified among isiXhosa and Sepedi Grade 1 learner samples assessed in term 3 or 4, two years into the pandemic in 2021 (62–78% cannot read one word from a passage).

Figure 5 **Percentage of learners unable to read one word correctly from a passage in a minute: Sesotho-Setswana languages**



Notes *Data from Funda Wande LP and EGRS I, own calculations. Dotted bars highlight pandemic-affected years.*

Figure 6 Percentage of learners unable to read one word correctly from a passage in a minute: Nguni languages



Notes *Data from Funda Wande EC, EGRS II, and SPS, own calculations. Dotted bars highlight pandemic-affected years.*

The skill of reading connected text in a passage only emerges, albeit too slowly, at the end of Grade 2 or the start of Grade 3. This is seen in Figures 7 and 8, which plot fluency levels at the 25th, 50th (median), and 75th percentile for Nguni and then Sesotho-Setswana language samples. As a minimum fluency benchmark in Sesotho-Setswana languages, by the end of Grade 2 *all* learners should be reading at least 40 wcpm. Just 36–56% of language learner samples for Sesotho-Setswana at the end of Grade 2 (or start of Grade 3) meet this benchmark (Mohohlwane et al., this volume), with median fluency at 23–41 wcpm and 25th percentile fluency levels ranging from just 0–11 wcpm (Figure 8). Even weaker reading is evident among the Nguni-language samples. A minimum fluency benchmark of 20 wcpm in Nguni languages is suggested for the end of Grade 2.

Yet among Nguni-language learner samples assessed at the end of Grade 2 (or start of Grade 3), this benchmark is met by just 29–54% (Mohohlwane et al., this volume), with median fluency at 9–20 wcpm and 25th percentile fluency levels at just 0–7 wcpm (Figure 7). Furthermore, despite two years of formal schooling, large percentages of learners cannot read one word correctly from a passage: 17–43% of Nguni-language samples and 18–35% of language samples for Sesotho-Setswana assessed at the end of Grade 2 or start of Grade 3 before the pandemic (see Figures 5 and 6).

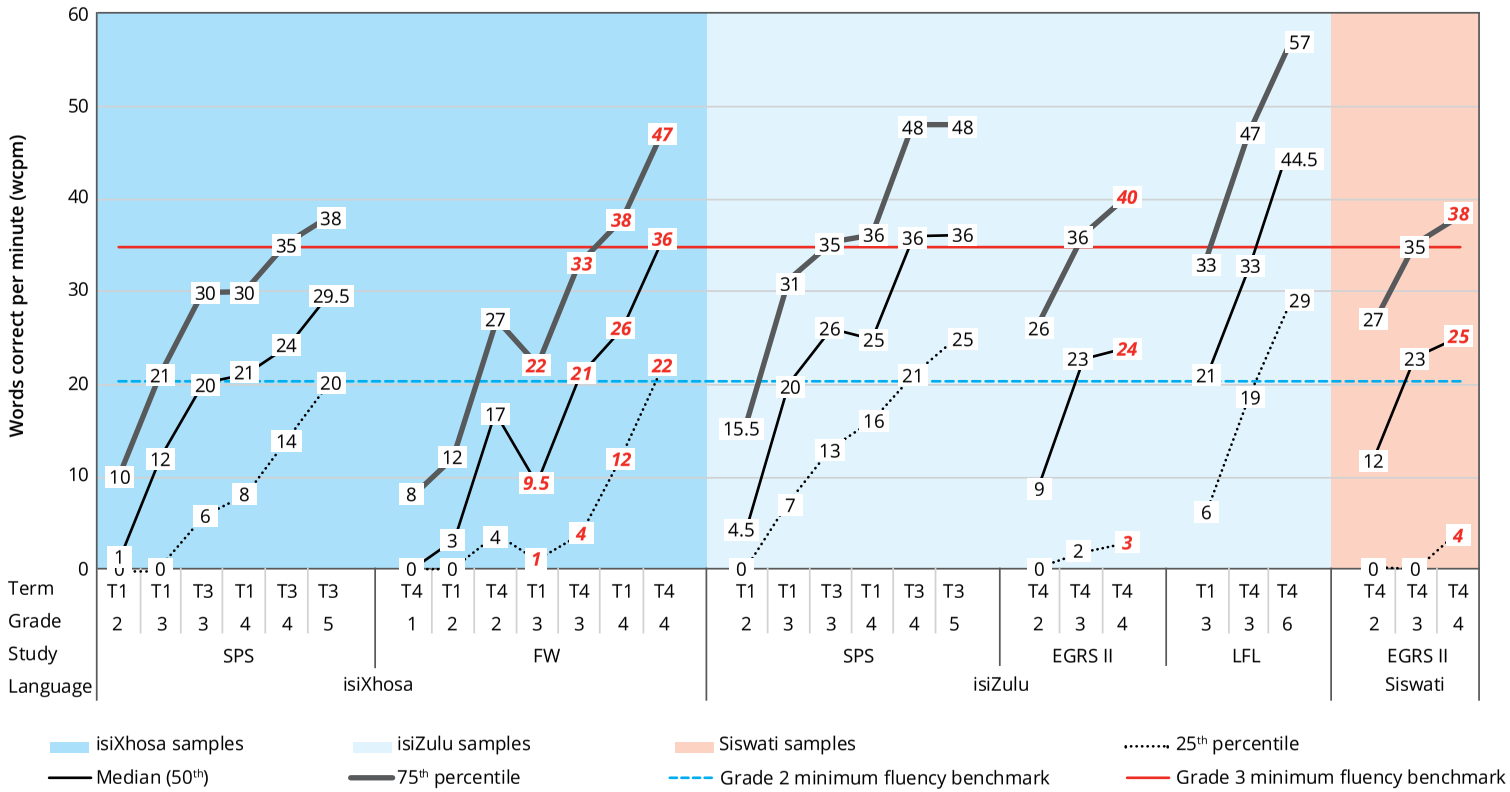
By the end of the Foundation Phase, overall home-language fluency has developed far too slowly, especially where the curriculum requires that learners can read for meaning by the end of Grade 3, not only in their home language but in English. Pre-pandemic, 10–18% of language samples for Sesotho-Setswana and 12–26% of Nguni-language samples assessed at the end of Grade 3 could not read one word correctly from a text. In Sesotho-Setswana languages, learners should be reading at least 60 wcpm by the end of Grade 3. Among end of Grade 3 (or start of Grade 4) Sesotho-Setswana language learners assessed pre-pandemic, just 24–48% meet this benchmark (Mohohlwane et al., this volume) with median fluency at 40–59 wcpm. In Nguni languages, only at the 75th percentile is a minimum Grade 3 fluency benchmark of 35 wcpm being reached in Grade 3 (or start of Grade 4) learner samples, with median fluency at 20–33 wcpm and 11–47% meeting the benchmark.

With each successive grade, the percentage of non-readers generally declines, and fluency continues to develop into the Intermediate and Senior Phases. For example, at the end of Grade 6 or 7, for Sesotho-Setswana language learner samples, non-reader percentages decline to around 0–6% and median fluency has increased to 65–86 wcpm. At the end of Grade 6, a learner in a Nguni-language sample is typically reading 45 wcpm. However, not all learners by the end of Grade 6 are meeting minimum fluency benchmarks. It is very sobering that, of the Grade 6 samples, 35–46% do not meet Grade 3 fluency benchmarks and 7–27% fail to meet Grade 2 fluency benchmarks (Mohohlwane et al., this volume), especially where the fluency levels reported reflect an upper estimate of proficiency. At higher grades, for both Nguni and Sesotho-Setswana languages, the oral reading fluency texts used (results reported in Figures 7 and 8) are set below grade level, and only relate to narrative texts.[9] These fluency assessments do not capture the reading of academic or scientific language, or the knowledge required to support meaning-making when accessing school subject-specific textbooks in the Intermediate and Senior Phases. Fluency in reading subject-specific texts is likely to be much lower than what is reflected here, especially where knowledge of subject-specific vocabulary or low frequency words have not developed (Snow 2017, 10).

The results in Figures 5 to 8 are suggestive of Covid-19 disruptions to reading development. Generally, the percentage of non-readers in pandemic years are higher than in pre-pandemic years (before 2020).[10] In Figure 8, Grade 3 fluency outcomes in Setswana are lower across the distribution in samples from the Reading Support Project in 2021 compared to 2018, despite Grade 3 cohorts being drawn from the same schools. Furthermore, Grade 4 fluency averages in these schools in 2021 are slightly lower than *Grade* 3 fluency averages in 2018, despite administering virtually the same passage. The

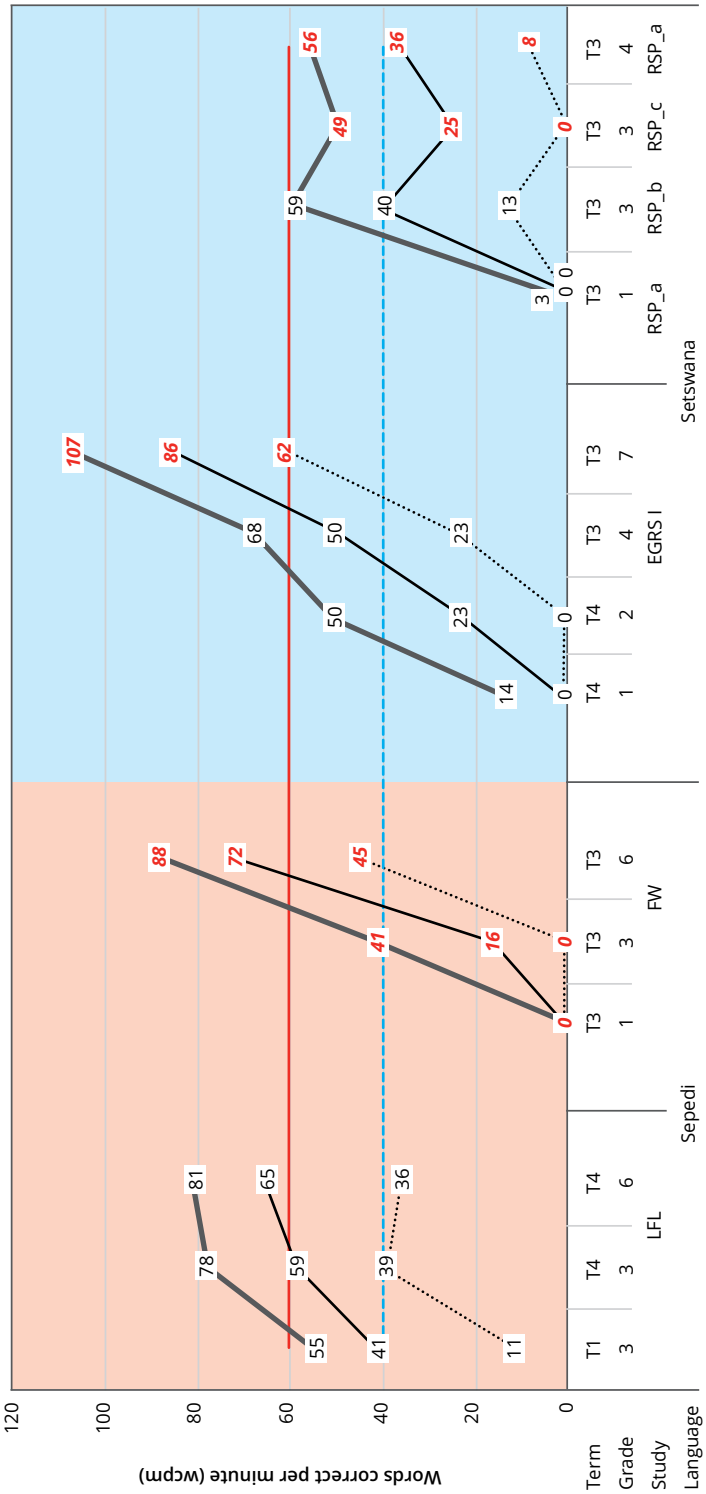
9. Readability tests for African languages are not readily available, but assessments of many of these passages suggest they are set well below the learners' grade level.
10. Some exceptions occur where much easier passages were administered.

Figure 7 Oral reading fluency at the 25th, 50th (median), and 75th percentile, Nguni-language samples (years affected by Covid-19 in bold italic)



Notes *Own calculations from raw data. SPS = Story Powered Schools (KwaZulu–Natal, Eastern Cape), FW = Funda Wande (Eastern Cape), EGRS II = second Early Grade Reading Study (Mpumalanga), LFL = Leadership for Literacy (KwaZulu–Natal, Gauteng). Data labels in red (bold italic) reflect assessments during the pandemic (2020 or 2021). The data are treated here as cross-sections but are longitudinal in the sense of tracking performance across grades in the same schools within a study. Statistics include non-readers (i.e. ORF = 0). T = term.*

Figure 8 Oral reading fluency at the 25th, 50th (median), and 75th percentile, Sesotho-Setswana language samples (years affected by Covid-19 in bold italic)



Notes *Own calculations from raw data. FW LP = Funda Wande (Limpopo), EGRS I = first Early Grade Reading Study (North West), LFL = Leadership for Literacy (Limpopo), RSP = Reading Support Project (North West) in a subset of EGRS I schools. Data labels in red (bold italic) reflect assessments during the pandemic (2020 or 2021). The data are treated as cross-sections but are longitudinal in the sense of tracking performance across grades in the same schools within a study. Statistics include non-readers (i.e. ORF = 0). T = term.*

impacts of Covid-19 disruptions to reading development are explored more fully in Ardington et al. (2021a). With respect to the development of decoding skills (as measured by letter-sound knowledge and word reading), they estimate that in 2020 Grade 2 learners lost between 57% and 70% of a normal year of development relative to their pre-pandemic peers. Among a Grade 4 sample, losses in the development of these skills are estimated at between 62% and 81% of a normal year of learning.

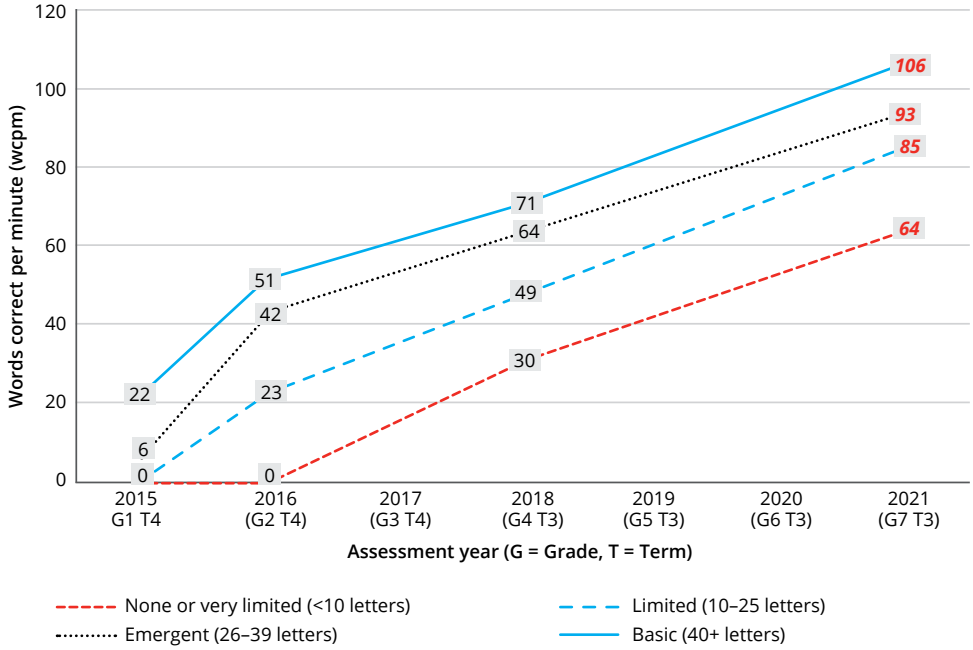
6.2 Fluency trajectories: a longitudinal perspective

Although reading development is slow, the preceding analysis is indicative of fluency developing beyond the Foundation Phase into the Intermediate and Senior Phases. This aligns with international findings that fluency in alphabetic orthographies continues to improve into higher primary grades, albeit at declining rates from about Grade 4 or 5 (Arnesen et al. 2017; Hasbrouck & Tindal 2006). But what do reading development trajectories look like depending on learners' acquisition of decoding skills in the first year of school? Existing theory and empirical evidence imply that there are decoding thresholds below which reading stagnates (Good & Jeffersson 1998; Wang et al. 2019), and conversely reading improvements are likely to be steeper if basic decoding skills are mastered early on. We examine how reading develops over time, and whether gaps widen depending on early acquisition of skills. For this analysis, we draw on four waves of EGRS I data that allow us to report on trajectories in Setswana fluency for a Grade 1 cohort (2015) tracked up to six years later to the end of primary school (Grade 7, 2021).

In Figure 9, fluency trajectories for this longitudinal sample are distinguished for four categories of learners classified by their alphabetic knowledge at the end of Grade 1. Alphabetic knowledge categories include: none or very limited (less than ten correct letter-sounds per minute [lscpm]), limited (10–25 lscpm), emergent (26–39 lscpm), and basic (at least 40 lscpm). The basic level of at least 40 lscpm corresponds to a recommended minimum letter-sound knowledge benchmark at the end of Grade 1. Sample sizes in each category are large, ranging between 282 to 582 and include repeaters (i.e. the original Grade 1 learner cohort is assessed regardless of whether learners are held back) so that reading gains are not overly inflated through the exclusion of repeaters (Crawfurd 2021).

The extent to which basic letter-sound knowledge is acquired by the end of Grade 1 is strongly associated with how fluency progresses into Grade 2. After two years of schooling, fluency scores have improved much more for learners who, by the end of Grade 1, had developed emergent or basic alphabetic knowledge compared to learners with no or very limited, or limited alphabetic knowledge. Learners with no or very limited alphabetic knowledge at the end of Grade 1 cannot read one word a year later. They are not meeting a Grade 2 minimum fluency benchmark for Sesotho-Setswana languages of 40 wcpm by the end of Grade 4, and are at least three years behind their peers who were reading at or above 26 lscpm (emergent level) by the end of Grade 1. However, after two years of school, we do not find evidence of diverging fluency gaps across groups distinguished by their 'baseline' Grade 1 alphabetic knowledge. Linear growth in fluency is implied from Grade 2 onwards. We point out though that the 2021 (Grade 7) assessment point is collected after two years of the pandemic so that reading development profiles from Grades 4 to 7 are likely to be flatter for all groups compared with a pre-pandemic scenario.

Figure 9 Oral reading fluency trajectories in Setswana across primary school grades for four categories of learners distinguished by their end of Grade 1 alphabetic knowledge (average ORF shown)



Notes *Data from EGRS I (waves 2–5), own calculations. No data were collected in Grade 3 Term 4, Grade 5 Term 3 or Grade 6 Term 3. A linear trajectory from Grade 4 Term 3 to Grade 7 Term 3 is assumed but likely flattened due to Covid-19 learning losses (pandemic-affected estimates in bold red). Learner samples in each category are large (282 to 582) and include repeaters. The highest grade in which a learner could be, never having repeated since Grade 1, is in brackets.*

6.3 Gender differences in fluency trajectories

We further examine whether fluency trajectories widen across boys and girls, given the large existing body of literature that points to a significant learning advantage for girls in South Africa, particularly in terms of reading comprehension (Hofmeyr 2020; Spaull & Makaluza 2019). At the median, a widening pro-girl fluency gap is evident into the second year of school, but then gaps in favour of girls remain relatively constant until the end of primary school (Figure 10.1). At the tails of the distribution, however, a divergence occurs. At the 25th percentile, the fluency gap in favour of girls widens across all primary school grades, and the strongest girl readers (75th percentile) get increasingly better at reading than their male counterparts (Figure 10.2).

Reading gaps across boys and girls reflect broader developmental gaps that emerge before school starts in domains such as emergent literacy and language, executive functioning, and fine motor or visual skills (Giese et al. 2022, 21–23). However, evidence in this chapter together with a wider body of research suggests these gender gaps are exacerbated as children progress through school.

Figure 10.1 Setswana fluency trajectories: gender comparisons at the 50th percentile (median)

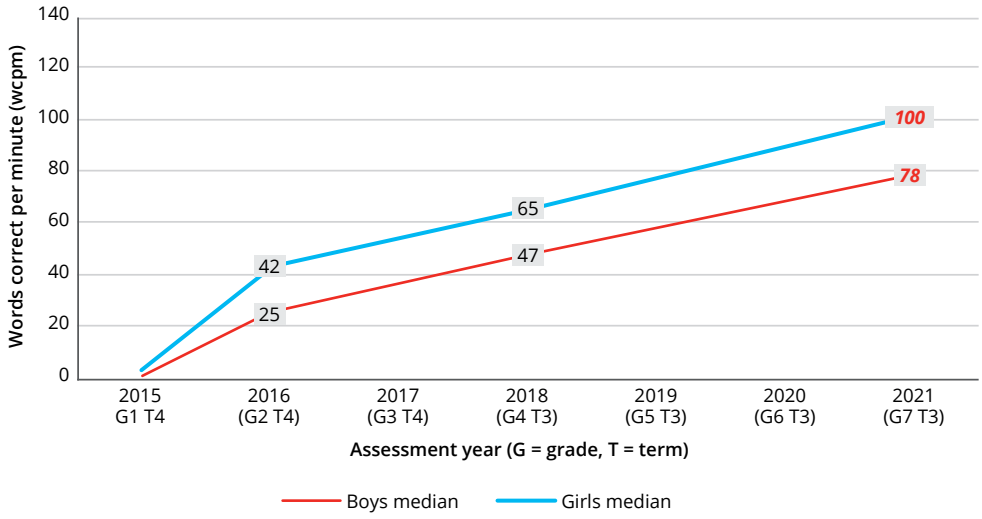
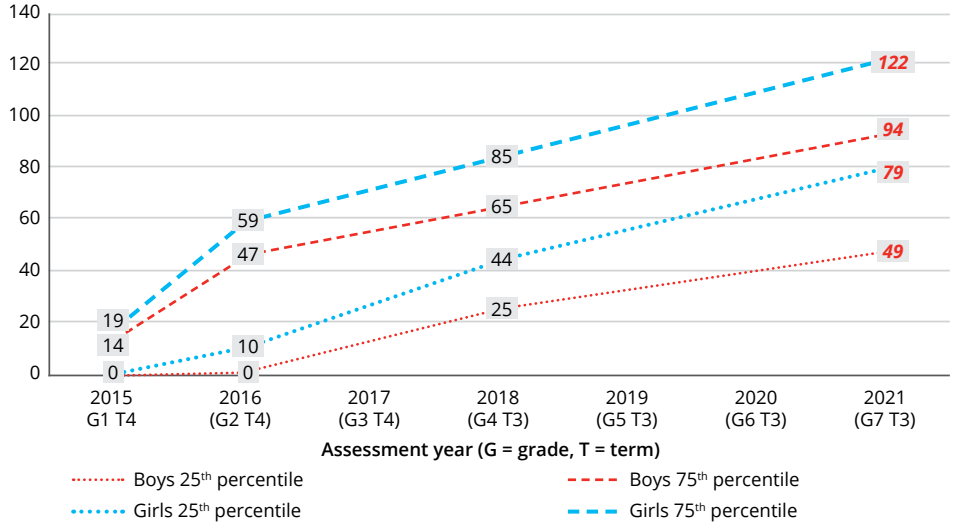


Figure 10.2 Setswana fluency trajectories: gender comparisons at the 25th and 75th percentiles



Notes *Data from EGRS I (waves 2–5), own calculations. All passages are narrative texts. No data were collected in Grade 3 Term 4, Grade 5 Term 3 or Grade 6 Term 3. A linear trajectory from Grade 4 Term 3 to Grade 7 Term 3 is assumed but likely flattened due to Covid-19 learning losses (pandemic-affected estimates in bold red). N=670 boys and 628 girls. The highest grade in which a learner could be, never having repeated since Grade 1, is shown in brackets.*

6.4 Oral reading fluency and its links to comprehension

Despite our focus in this chapter on foundational decoding skills and fluency, these skills are a means, not an end, and they thus need to be viewed in relation to reading comprehension. As Snow (2017, 8) reflects, giving early grade learners the opportunity to learn about print and how it relates to the phonological structure of words, and giving them enough practice to develop fluency, are necessary but not sufficient for the development of literacy and academic proficiency. An overt prioritisation of code-focused skills in low literacy environments, at the expense of activities that support meaning-making, would be detrimental to learning. Learners must understand the meaning of words in a text, and have the requisite background knowledge to engage with the text's subject so they can "fit new knowledge into a larger conceptual structure" (Snow 2017, 8).

Even so, we find that early success in decoding and fluency is, up to a point, very strongly positively associated with not only current levels of comprehension but future comprehension skills. This is evidenced in Figures 11 and 12 showing oral reading fluency score distributions from the 25th percentile to the 75th percentile (with the median reflected by the middle line) associated with raw scores obtained on a written comprehension task. The left figure in each graph shows the predictive association between ORF and written comprehension in a later grade. The right figure shows the concurrent association between ORF and written comprehension in the same grade.

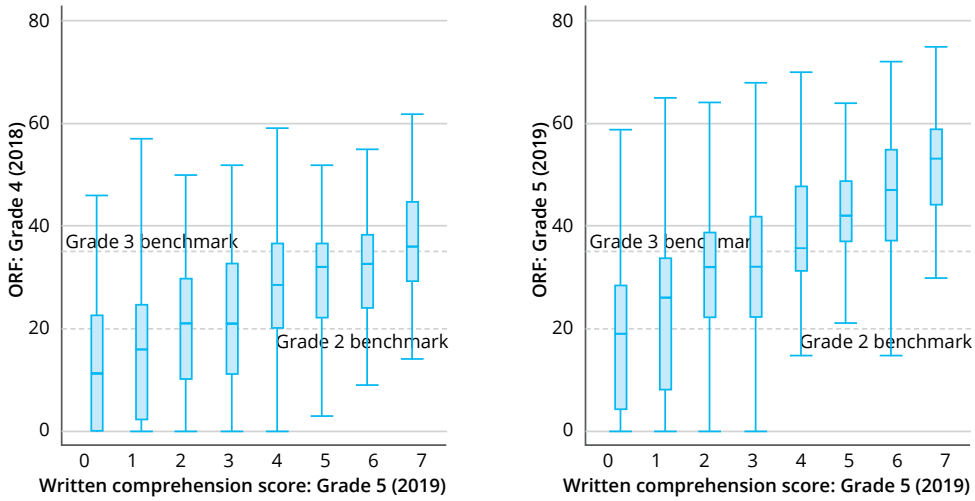
Learners with more advanced fluency in earlier grades are far better positioned to make meaning from what they read in later primary grades, reflected in their written responses to reading comprehension questions. In a Grade 5 Nguni-language sample, each successive level of comprehension achievement is associated with higher ORF distributions a year earlier in Grade 4 (see Figure 11, left). For a Setswana sample in Grade 4, better ORF distributions are associated with higher written comprehension performance three years later, at the end of primary school (Grade 7) (see Figure 12, left). A strong concurrent positive association between ORF and written comprehension is then seen in the right panel of each figure. Grade 5 Nguni-language ORF scores are positively associated with current written comprehension performance (Figure 11, right) while a strong positive concurrent association is also shown for a Grade 7 Setswana-language sample (Figure 12, right).

Meeting early grade minimum fluency benchmarks in Nguni or Sesotho-Setswana languages is also very predictive of the development of higher order comprehension skills. Those learners who were reading at least at the Grade 3 language benchmark for Sesotho-Setswana of 60 wcpm by the end of Grade 4 are almost all successfully tackling a written comprehension task at the end of Grade 7. These learners are prepared for the transition into secondary school. By contrast, learners not meeting a Grade 2 Sesotho-Setswana minimum fluency benchmark by the end of Grade 4 are unable to comprehend what they are reading by the end of primary school, typically scoring less than 40% in written comprehension.

In contextualising these strong predictive patterns, lending credence to the notion that fluency is a 'bridge' to comprehension (Pikulski & Chard 2005), we also find evidence of diminishing returns to comprehension when fluency develops beyond benchmark levels (Ardington et al. 2021b). Figure 12, for example, shows the diminishing improvements in comprehension at successively higher ORF

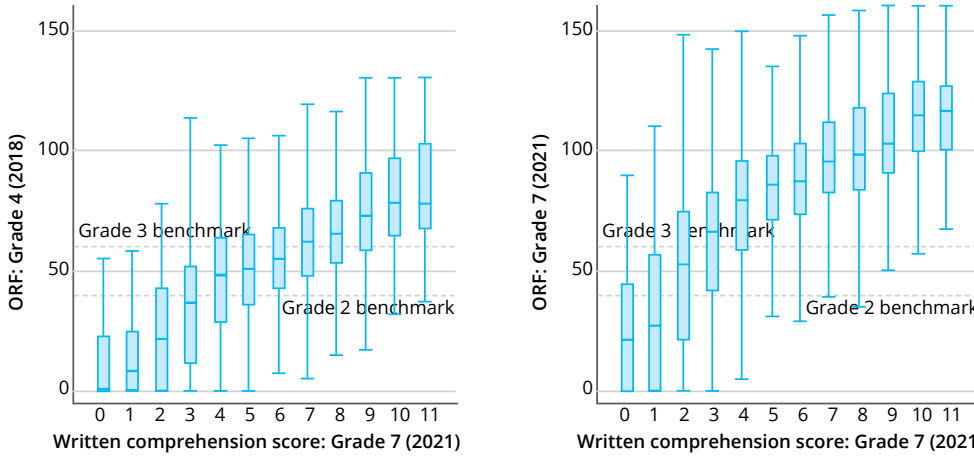
distributions – a point reiterated in Mohohlwane et al. (this volume). This foregrounds the importance of providing scaffolding for meaning-making through incorporating the teaching of comprehension skills in early grade reading instruction and all primary school subjects.

Figure 11 **Concurrent and predictive validity of oral reading fluency for comprehension: isiZulu samples (*left*: predictive association; *right*: concurrent association)**



Notes *Data from SPS (waves 1 and 2), own calculations. IsiZulu sample. Box plots show the interquartile range where the top and bottom line of each box reflects the 75th and 25th percentiles of ORF respectively. The middle line of each box is the median. N = 740 (left) and 741 (right).*

Figure 12 **Concurrent and predictive validity of oral reading fluency for comprehension: Setswana samples (*left*: predictive association; *right*: concurrent association)**



Notes *Data from EGRS I (waves 4 and 5), own calculations. Box plots show the interquartile range where the top and bottom line of each box reflects the 75th and 25th percentiles of ORF respectively. The middle line of each box is the median. N = 1971 (left) and 2856 (right).*

7 Conclusion

Using non-representative but large, longitudinal assessments of reading in Nguni and Sesotho-Setswana languages from about 40,000 South African learners, we have documented proficiency levels in the acquisition of foundational decoding skills. We also identified oral language skills with which children start school. It is impossible to avoid a focus on oral language development in thinking about promoting literacy, given the centrality of oral language to achieving the ultimate goals of literacy development, namely comprehension and written communication (McBride et al. 2017, 376).

We found that far too many children in under-resourced schools are entering school with under-developed oral language skills in their home language. Furthermore, the development of decoding skills remains too slow, with most learners entering school with virtually no knowledge of the code of their home language, despite spending a year in Grade R. Stunting in the acquisition of both oral language and decoding skill sets will impair the development of reading comprehension (Hoover & Gough 1990). Serious consideration therefore needs to be given to the quality of Grade R instruction received in no-fee schools, which has been found wanting (Van der Berg et al. 2013), as well as instruction in Grades 1 and 2. Furthermore, wider societal attention needs to be given to reducing significant developmental gaps in children's first 4–5 years of life before they start school (Giese et al. 2022).

Notwithstanding the low levels of oral language skills with which children start school, African home-language decoding skills should be acquired faster. With one-to-one mapping in the grapheme–phoneme relationship in transparent African languages, accuracy in decoding should occur earlier and more easily in these languages compared to more opaque languages such as English (Caravolas et al. 2013; Katz & Frost 1992; Seymour et al. 2003). Rather, we find evidence of slow and low mastery of letter-sounds and, in particular, complex consonant knowledge in the first two years of school, and slow fluency development in the Foundation Phase. This is evidence that the effective execution of a systematic phonics approach to teaching reading (Castles et al. 2018) evades most of the no-fee schools in this study. Children need to be given opportunities to master decoding skills to access reading in their home languages. We provide strong evidence that mastery of decoding skills in the Foundation Phase supports improved fluency and comprehension at the end of primary school. If learners lack the most basic decoding skills, then any individual, text-based, meaning-focused activities that they engage in will, by definition, be meaningless.

However, the findings are also instructive in showing how *both* code-focused and meaning-focused literacy instruction are necessary in the early grades in low literacy contexts. At higher levels of fluency, comprehension improvements tend to diminish implying that while fluency is necessary for comprehension, it is not a sufficient condition to support meaning-making. In addition, in early childhood and primary school settings, children must be given opportunities to learn vocabulary, develop oral language skills and acquire knowledge. These components of reading are of equal importance as the development of foundational skills, such as learning letters, sounds, complex consonant sequences, word reading, and fluency (McBride et al. 2017).

We focused mostly on reading in this chapter, but acknowledge the importance of writing, and the bidirectionality that exists in the relationship between the development of reading and writing skills (Martins & Silva 2006). Although we provide evidence of a strong positive association between fluency and written reading comprehension (measured both concurrently and in terms of predictive relationships), much more research is needed on the relationship between reading and writing development (McBride et al. 2017, 374; Aram & Levin 2002).

As an extension of the review by Spaull and Pretorius (2019), one of the most important contributions of this chapter is new evidence of how fluency develops beyond the Foundation Phase into the Intermediate and Senior Phases. It is sobering that large proportions of Grade 6 learners (35–46%) are not yet reading at Grade 3 minimum fluency benchmarks. Importantly though, trajectories of reading development look very different depending on whether learners have or have not grasped basic decoding skills, particularly alphabetic knowledge, by the end of Grade 2. This is another stark reminder that much more needs to be done to address decoding gaps in the first two years of school. Of particular concern are underdeveloped reading skills among boys, with significant gender gaps in favour of girls at the start of school persisting into higher grades. Relative to fluency gaps in Grade 1, there is some evidence of further widening in fluency gaps across boys and girls at the 25th and 75th percentile after six further years of schooling.

In sum, although reading is about much more than decoding, fluency and accuracy, we have shown quite clearly that in the absence of mastering these necessary conditions, it is simply not possible to read for meaning.

Acknowledgements

We acknowledge funding for this chapter from the Economic and Social Research Council (grant ES/T007583/1) and Allan and Gill Gray South Africa Philanthropy.

References

Adams, M. J. (1990). *Beginning to Read: Thinking and Learning about Print*. Cambridge, MA: MIT Press.

Aram, D. & Levin, I. (2002). Mother-child joint writing and storybook reading: Relations with literacy among low SES kindergartens. *Merrill-Palmer Quarterly* 48(2), 202–224.

Ardington, C. & Henry, J. (2022). Funda Wande Eastern Cape Evaluation. Baseline Report. Cape Town: SALDRU, University of Cape Town

Ardington, C. & Meiring, T. (2020). Impact Evaluation of Funda Wande Coaching Intervention Midline Findings. Cape Town: SALDRU, University of Cape Town.

Ardington, C., Hoadley, U. & Menendez, A. (2019). Impact Evaluation of USAID/South Africa Story Powered School Program Endline Report. Chicago, ILL: NORC at the University of Chicago, USAID.

Ardington, C., Wills, G., Pretorius, E., Deghaye, N., Mohohlwane, N., Menendez, A., Mtsatse, N. & Van der Berg, S. (2020). Technical Report: Benchmarking Early Grade Reading Skills in Nguni

Languages. Stellenbosch: ReSEP, Stellenbosch University. Cape Town: SALDRU, University of Cape Town. Chicago, ILL: NORC at the University of Chicago. Pretoria: DBE.

Ardington, C., Wills, G. & Kotze, J. (2021a). COVID-19 learning losses: Early grade reading in South Africa. *International Journal of Educational Development* 86 (October 2021), 102480.

Ardington, C., Wills, G., Pretorius, E., Mohohlwane, N. & Menendez, A. (2021b). Benchmarking oral reading fluency in the early grades in Nguni languages. *International Journal of Educational Development 84*, 102433. From: https://doi.org/10.1016/j.ijedudev.2021.102433 Accessed 2022-10-26.

Arnesen, A., Braeken, J., Baker, S., Meek-Hansen, W., Ogden, T. & Melby-Lervåg, M. (2017). Growth in oral reading fluency in a semitransparent orthography: Concurrent and predictive relations with reading proficiency in Norwegian, Grades 2–5. *Reading Research Quarterly 52*(2), 177–201.

Caravolas, M., Lervåg, A., Defior, S., Seidlová Málková, G. & Hulme, C. (2013). Different patterns, but equivalent predictors, of growth in reading in consistent and inconsistent orthographies. *Psychological Science 24*(8), 1398–1407.

Castles, A., Rastle, K. & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest 19*(1), 5–51.

Chall, J. S. (1983). *Stages of Reading Development*. New York, NY: McGraw Hill.

Crawfurd, L. (2021). Accounting for repetition and dropout in contemporaneous cross-section learning profiles: Evidence from Rwanda. *International Journal of Educational Development 85*, 102443.

De Vos, M., Van der Merwe, K. & Van der Mescht, C. (2014). A linguistic research programme for reading in African languages to underpin CAPS. *Journal for Language Teaching 48*(2), 149–177.

Department of Basic Education (DBE). (2011). Curriculum Assessment and Policy Statement. Grades R–3. English Home Language. Pretoria: DBE.

Department of Basic Education (DBE). (2020). National Framework for the Teaching of Reading in African Languages in the Foundation Phase. Pretoria: DBE.

Department of Basic Education & University of the Witwatersrand (DBE and Wits). (2020). Early Grade Reading Study 2017–2019, Waves 1–4 Merged [dataset]. Version 1. Pretoria: DBE and the University of the Witwatersrand [producers], 2020. Cape Town: DataFirst [distributor], 2020.

Dubeck, M. M. & Gove, A. (2015). The early grade reading assessment (EGRA): Its theoretical foundation, purpose, and limitations. *International Journal of Educational Development 40*, 315–322.

Fuchs, L. S., Fuchs, D., Hosp, M. K. & Jenkins, J. R. (2001). Oral reading fluency as an indicator of reading competence: A theoretical, empirical, and historical analysis. *Scientific Studies of Reading 5*(3), 239–256.

Giese, S., Dawes, A., Tredoux, C., Mattes, F., Bridgman, G., Van der Berg, S., Schenk, J. & Kotzé, J. (2022). The Thrive by Five Index Report Revised August 2022. Cape Town: Innovation Edge.

Good, R. H. & Jeffersson, G. (1998). Contemporary perspectives on curriculum-based measurement. In Shinn, M. R. (Ed), *Advanced Applications of Curriculum-based Measurement*, 61–88. New York, NY: Guildford.

Gough, P. B. & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education 7*(1), 6–10.

Hasbrouck, J. & Tindal, G. A. (2006). Oral reading fluency norms: A valuable assessment tool for reading teachers. *The Reading Teacher* 59(7), 636–644.

Hofmeyr, H. (2020). South Africa's Pro-Girl Gap in PIRLS and TIMSS: How Much Can Be Explained? Stellenbosch Economics Working Papers Series, WP17/2020. Stellenbosch.

Hoover, W. A. & Gough, P. B. (1990). The simple view of reading. *Reading and Writing 2*(2), 127–160.

Howie, S. J., Combrinck, C., Roux, K., Tshele, M., Mokoena, G.M. & McLeod Palane, N. (2017). Progress in International Reading Literacy Study 2016: South African Children's Reading Literacy Achievement. Pretoria: Centre for Evaluation and Assessment.

Katz, J. (2020). Back to Basics: Comparing the Orthographic, Phonic and Grammatical Features of English and African Languages to Improve Literacy Teaching. Presentation at PrimTEd Literacy Working Group Seminar.

Katz, L. & Frost, R. (1992). The reading process is different for different orthographies: The orthographic depth hypothesis. In Frost, R. & Katz, L. (Eds), *Orthography, Phonology, Morphology, and Meaning*. 67–84. Amsterdam: Elsevier Science Publishers.

Kim, Y.-S. G. & Wagner, R. K. (2015). Text (oral) reading fluency as a construct in reading development: An investigation of its mediating role for children from Grades 1 to 4. *Scientific Studies of Reading 19*(3), 224–242.

Martins, M. & Silva, C. (2006). The impact of invented spelling on phonemic awareness. *Learning and Instruction 16*, 41–56.

McBride, C., Snow, C. E., Kucirkova, N. & Gover, V. (2017). Old and new: Reflecting on the enduring key issues in early literacy. In Kucirkova, N., Snow, C. E., Grover, V. & McBride, C. (Eds), *The Routledge International Handbook of Early Literacy Education*. 373–382. New York, NY: Routledge.

Pikulski, J. J. & Chard, D. J. (2005). Fluency: Bridge between decoding and reading comprehension. *The Reading Teacher* 58(6), 510-519.

Pretorius, E. J. (2018). Getting it right from the start: Some cautionary notes for early reading instruction in African languages. In N. Spaull & J. P. Comings (Eds), *Improving Early Literacy Outcomes: Curriculum, Teaching and Assessment*. 63–88. Leiden: IBE/BRIL.

Reading Rockets (2022). Phonological and Phonemic Awareness. From: www.readingrockets.org/teaching/reading-basics/phonemic Accessed 2022-09-12.

Research on Socio-Economic Policy, Stellenbosch University. Leadership for Literacy 2017 [dataset]. Version 1. Stellenbosch: ReSEP [producer], 2019. Cape Town: DataFirst [distributor], 2019.

RTI International. (2016). *Early Grade Reading Assessment Toolkit (2nd edition)*. Research Triangle Park, NC: RTI International.

Seidenberg, M. (2017). *Language at the Speed of Sight: How We Read, Why So Many Can't, and What Can Be Done About It*. New York, NY: Basic Books.

Seymour, P. H. K., Aro, M. & Erskine, J. M. (2003). Foundation literacy acquisition in European orthographies. *British Journal of Psychology 94*(2), 143–174.

Snow, C. (2017). Early literacy development and instruction: An overview. In Kucirkova, N., Snow, C. E., Grover, V. & McBride, C. (Eds), *The Routledge International Handbook of Early Literacy Education*. 5–13. New York, NY: Routledge.

South African Human Rights Commission (SAHRC). (2021). The Right to Read and Write. Cape Town: SAHRC.

Spaull, N. & Makaluza, N. (2019). Girls do better: The pro-female gender gap in learning outcomes in South Africa 1995–2018. *Agenda* 33(4), 11–28.

Spaull, N. & Pretorius, E. (2019). Still falling at the first hurdle: Examining early grade reading in South Africa. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 147–168. Cham: Springer.

Spaull, N., Pretorius, E. & Mohohlwane, N. (2020). Investigating the comprehension iceberg: Developing empirical benchmarks for early-grade reading in agglutinating African languages. *South African Journal of Childhood Education* 10(1), a773.

Stern, J., Jukes, M., Roper, M., Taimo, L. & Bisgard, J. (2022). The First Early Grade Reading Study. Year 7 Report. Sustainability Impact Evaluation of the Early Grade Reading Study (EGRS I) in South Africa. Johannesburg: Khulisa Management Services. Pretoria: DBE.

Time4Learning (2022). Reading Skills Pyramid. From: www.time4learning.com/homeschool-curriculum/reading-pyramid.html Accessed 2022-10-31.

Trabasso, T. & Van den Broek, P. (1985). Causal thinking and the representation of narrative events. *Journal of Memory and Language* 24(5), 612–630.

Van der Berg, S., Girdwood, E., Shepherd, D., Van Wyk, C., Kruger, J., Viljoen, J., et al. (2013). The Impact of the Introduction of Grade R on Learning Outcomes. Stellenbosch: ReSEP, Stellenbosch University.

Vihman, M. M. (1996). *Phonological Development: The Origins of Language in the Child*. New Jersey: Blackwell.

Wang, Z., Sabatini, J., O'Reilly, T. & Weeks, J. (2019). Decoding and reading comprehension: A test of the decoding threshold hypothesis. *Journal of Educational Psychology 111*(3), 387–401.

Wills, G., Ardington, C., Pretorius, E., Pooe, E. & Ramagoshi, R. (2022). Benchmarking Early Grade Reading Skills: Setswana and English First Additional Language. Technical Report. Johannesburg: Khulisa Management Services.

Wilsenach, C. (2019). Phonological awareness and reading in Northern Sotho: Understanding the contribution of phonemes and syllables in Grade 3 reading attainment. *South African Journal of Childhood Education* 9(1), a647.

Zuilkowski, S. S., Piper, B., Kwayumba, D. & Dubeck, M. (2019) Examining options for reading comprehension assessment in international contexts. *Journal of Research in Reading* 42 (3–4), 583–599.

04

ELOM in the Western Cape: Investigating the early roots of reading failure

HELEEN HOFMEYR

Abstract

This chapter presents the results from a study that examines the performance of children as they enter school (Term 1 of Grade R) in a sample of 75 primary schools in the Western Cape. Fifty of the schools have Afrikaans as LOLT while 25 have isiXhosa as LOLT. The early learning skills of Grade R learners were assessed using the ELOM 4&5, locally developed and validated instruments that assess children in five key developmental domains. While the results point to clear socio-economic status differences in early learning scores, there is also much variation in scores within socio-economic groups. Making use of a unique opportunity to compare Grade R results with cross-sectional data of learner performance in Grades 1, 4 and 7 in the same schools, we show that while overall correlations between achievement scores across grades are relatively low, Grade R achievement explains a significant proportion of achievement in later grades (around 40%). This result suggests that school quality and the home environment (before starting school and during the early years of school) jointly determine learning outcomes in later grades.

KEYWORDS
early childhood,
school readiness,
socio-economic status,
ELOM,
Grade R,
pre-literacy

1 Introduction

The current volume clearly shows that South African learners do not acquire foundational literacy by the end of Grade 3. While we know that poor-quality schooling certainly contributes to these poor schooling outcomes, evidence from a wide range of disciplines has shown that there is a strong link between the skills with which children enter school and their later outcomes (Hackman & Farah 2009; Heckman 2011; Sánchez 2017). Despite this, we still know very little about the skill formation of learners growing up in the Global South, where low quality schooling often dominates explanations for learners' poor educational outcomes, crowding out other potential explanations such as low levels of school readiness among children when they enter school, or the interplay between a lack of school readiness and low school quality.

The purpose of this chapter is to investigate the extent to which South African learners' poor reading outcomes can be linked to skills backlogs that are already present at the very start of formal schooling. This is done by presenting evidence of the early learning skills of a sample of Grade R learners (aged 5–6 years) in one province (the Western Cape). Learners were assessed in five developmental domains as part of a larger research study, namely 'Roots & Shoots', which aims to follow the same learners across three years (2022–2025) in an attempt to investigate how children's skills as they first enter school are related to their learning outcomes throughout the Foundation Phase (Grades R to 3). Using the Early Learning Outcomes Measure (ELOM[1]) (Dawes et al. 2016), 587 learners in 75 schools were assessed when they first entered primary school – that is, during the first term of Grade R. Of the 75 schools, 50 were Afrikaans language of learning and teaching (LOLT) and 25 were isiXhosa LOLT. These same learners will be assessed in Grade 1, 2, and 3, enabling a longitudinal database of learning outcomes to be created, as part of the Roots & Shoots study.

The evidence presented in this chapter clearly shows that many children start school without the skills necessary to learn effectively, and without the skills that the curriculum expects of them, such as oral language skills. Socio-economic status (SES) clearly plays a role in determining learners' readiness to start formal schooling, with children from wealthier backgrounds being much more likely to start school developmentally on track. On the other hand, the results in this chapter point to great variability in children's early learning skills within SES groups, and even within the same classrooms. This suggests that SES is not perfectly correlated with early learning skills – that is, that while poorer children perform worse in early learning skills on average, there are many children from poorer backgrounds who start school developmentally on track. What happens to learners who enter the same schools, but with differing levels of foundational skills, is an important question for future research that aims to understand the roots of reading failure in South Africa.

1. Early Learning Outcomes Measure

2 Literature review

2.1 Early skills and literacy achievement

Reading achievement is a cumulative process involving both mastering new skills and improving existing skills (Duncan et al. 2007). Evidence from high-income countries shows that specific academic skills, but also more general cognitive skills acquired before school, are important determinants of later mastery of more complex reading tasks. These skills can be grouped according to four of the five developmental domains assessed in the ELOM assessment, namely gross motor development, fine motor coordination and visual motor integration, cognition and executive function, and emergent literacy and language. Gross motor development – a child's ability to control the large muscles of the body – is associated with later literacy outcomes because the same regions of the brain that are involved in motor activity are involved in general cognition – itself strongly linked to literacy achievement (Battaglia et al. 2019). Fine motor coordination and visual motor integration are important for the development of the ability to recognise letters and replicate them as children learn to write (Carlson et al. 2013). Executive function, a higher-order cognitive process consisting of three lower-order cognitive processes (i.e. working memory, inhibitory control, and cognitive flexibility or attention shifting), has also been linked to later literacy achievement (Schmitt et al. 2017). Likewise, attention-related skills such as task persistence and self-regulation are strongly linked to literacy achievement since they increase the time children engage in academic behaviours (Skibbe et al. 2019). Lastly, emergent literacy and language concerns a child's ability to communicate effectively, primarily through oral language (listening and speaking), and constitutes one of the most important foundations of literacy acquisition (Kuhl 2011).

2.2 Evidence of early skills from South Africa

There is a dearth of local evidence on the links between the skills with which children enter school and later reading achievement. There are, however, a handful of studies that have assessed the early skills of children and that provide some indication that South Africa's poor literacy outcomes may find their roots in the early years. The most notable in this regard is the Thrive by Five Index Report (Giese et al. 2022), which, using the ELOM, assessed the early learning skills of a nationally representative sample of five-year-olds enrolled in early childhood development (ECD) centres in 2021. The study found that 65% of children attending an ECD centre in South Africa are falling behind developmentally, in terms of cognitive and/or physical development (Giese et al. 2022, 4). In early learning specifically, 55% of children were falling behind – that is, more than half of South African five-year-olds enrolled in ECD centres were not able to do the learning tasks expected of children their age, and would thus start school on the back foot.

The Thrive by Five report also found evidence of a strong SES gradient to performance in the ELOM, with children from low-SES households performing

significantly worse than their high-SES peers. In their study, SES was measured as the official Department of Basic Education (DBE) quintile ranking of the school nearest to the ECD centre. The authors conclude that "[b]efore they even enter their first school classroom, most poor children in South Africa face significant barriers to success" (Giese et al. 2022, 5). Considered together with evidence from the international literature that skills gaps in childhood widen over time (Van Poortvliet 2021), the fact that more than half of South African five-year-olds are falling behind developmentally, and that there are large SES differences in early learning, is strongly suggestive that the foundations for the country's poor literacy outcomes are at least partially laid long before the start of formal schooling.

This chapter aims to add to this evidence by presenting recent (2022) data on early learning outcomes for a sample of Grade R learners in the Western Cape. The evidence presented in this chapter, although not nationally or provincially representative, builds on the evidence of the early roots of reading failure presented in the Thrive by Five Report. The present study does so by investigating the nature of variation in early learning scores within and across schools, and comparing school-level learning outcomes in Grade R to outcomes in Grades 1, 4 and 7 in the same schools in the same year (2022). While these data are not yet longitudinal – i.e. they do not follow the same learners over time – the evidence presented in this chapter constitutes the first attempt at linking school-level achievement in Grade R with achievement in later grades in the same schools. As such, this chapter is the first attempt to link early learning outcomes with South Africa's poor literacy outcomes in later grades. The intention of this ongoing study is to follow the Grade R learners into and through Grades 1, 2 and 3, building a longitudinal database of learning outcomes.

3 Study design and methods

3.1 Sampling

3.1.1 The Afrikaans sample

The initial round of the Roots & Shoots study took advantage of an existing research study that collected achievement data on children in Grades 1, 4, and 7 in 100 primary schools in the Western Cape with Afrikaans as their LOLT. The aim of that study was to measure the impact of an intervention jointly implemented by a non-governmental organisation (Funda Wande) and the Western Cape Education Department (WCED) that targeted foundational literacy and numeracy in 50 treatment schools. The outcomes of these schools were compared with 50 comparison schools. Within each educational district, statistical techniques were used to select the comparison schools such that they matched the treatment schools as closely as possible on performance on the Grade 3 systemic assessments[2] from 2017 to 2019. Roots & Shoots assessed the early learning skills of Grade R children as they entered formal schooling (i.e. in Term

2. These are standardised assessments conducted province-wide on an annual basis by the WCED.

1) in 50 schools that were part of the evaluation study (i.e. half of the schools in the Funda Wande evaluation study). The schools are located in the educational districts of the Metro (four districts) and Cape Winelands (one district), therefore including five of the eight districts in the province. We aimed to assess eight randomly selected Grade R children in each school, that is, 400 children with Afrikaans as LOLT. All 24 assessments conducted with children who were older than the cut-off point of 69 months were excluded in the final sample. Assessments conducted with children who were older than the cut-off point of 69 months, as well as those who had missing scores on one or more of the ELOM domains, were dropped from the final sample.

A major advantage of the Roots & Shoots data is that Grades 1, 4, and 7 learners in the same schools were assessed as part of the Funda Wande intervention evaluation. As a result, it is possible to compare the achievement of Grade R learners in the 50 Afrikaans schools with the achievement of learners in these higher grades in the same schools. With two of the schools only offering classes up to the end of the Foundation Phase, the final sample consists of 980 Grade 1 learners, 483 Grade 4 learners, and 488 Grade 7 learners.

3.1.2 The isiXhosa sample

In addition to the 50 Afrikaans schools, Roots & Shoots assessed Grade R children in 25 isiXhosa LOLT schools in the Western Cape. Only schools in the Cape Town Metro districts were considered since most isiXhosa LOLT schools in the Western Cape are located in Cape Town. The sample frame was further restricted to schools with at least 30 learners in both Grade R and Grade 1 and excluded schools that had participated in the Funda Wande pilot in 2021. Schools were stratified in quintiles of their average Grade 3 systemic performance between 2017 and 2019. Five schools were then randomly selected within each stratum. The final sample consisted of 199 isiXhosa LOLT children in Grade R.

3.2 Measures

3.2.1 The ELOM instrument

There are currently two ELOM assessments, one for children aged 4–5 years (ELOM 4&5), and one for children aged 6–7 years (ELOM 6&7). The early learning skills of Grade R children were assessed using ELOM 4&5, while those of Grade 1 learners were assessed using ELOM 6&7. ELOM 4&5 is aligned with the South African Early Learning Curriculum Framework and was developed and standardised for use with children in two age groups: 50–59 months and 60–69 months. This is the same assessment that was used by the Thrive by Five study. The difference between the Thrive by Five sample and the Roots & Shoots sample is that the majority of children in the former were aged 50–59 months, while the majority of children in the Roots & Shoots sample were aged 60–69 months. The ELOM 4&5 has different cut-off points for assessing children's development, depending on which of these two age bands they fall into (see

Dawes et al. 2016). When comparing findings across the two studies, it is therefore important to keep in mind that two different age groups are being compared.

The ELOM 4&5 has 23 items clustered in five domains:

- gross motor development,
- fine motor coordination and visual motor integration,
- emergent numeracy and mathematics,
- cognition and executive functioning, and
- emergent literacy and language.

A child's performance in each of the five ELOM 4&5 domains is awarded a raw score, which is then transformed into a scaled score. In each domain, item scaled scores are summed to provide a domain total score out of 20. The five domain scores are then summed to derive the ELOM 4&5 total score out of 100. The ELOM technical manual specifies the cut-off points on each domain, as well as on the overall ELOM assessment, that are associated with being 'on track', 'falling behind', and 'at risk' for each age group. Adopting the terminology used by the Thrive by Five study (Giese et al. 2022), we call these categories 'on track', 'falling behind', and 'falling far behind', respectively.

3.3 Fieldwork

Data for the study were collected in March and April 2022. Assessments took place at the schools, in a quiet space away from other children. Each assessment took approximately 45 minutes, and all children were assessed in their home language. Ethical clearance for the study was obtained from the University of Cape Town's Commerce Faculty, and permission to conduct research in schools was granted by the WCED's Directorate of Research.

3.4 The final sample

The initial dataset consisted of 615 child assessments from 75 primary schools. Of these, 28 assessments were flagged as invalid. All 25 assessments conducted with children who were older than the cut-off point of 69 months were excluded from the final sample. The remaining three invalid assessments were deemed to be so due to the child missing a score on one or more of the ELOM domains, and were also excluded. This resulted in a final sample of 587 children from 75 schools. Details about the final sample are presented in Table 1.

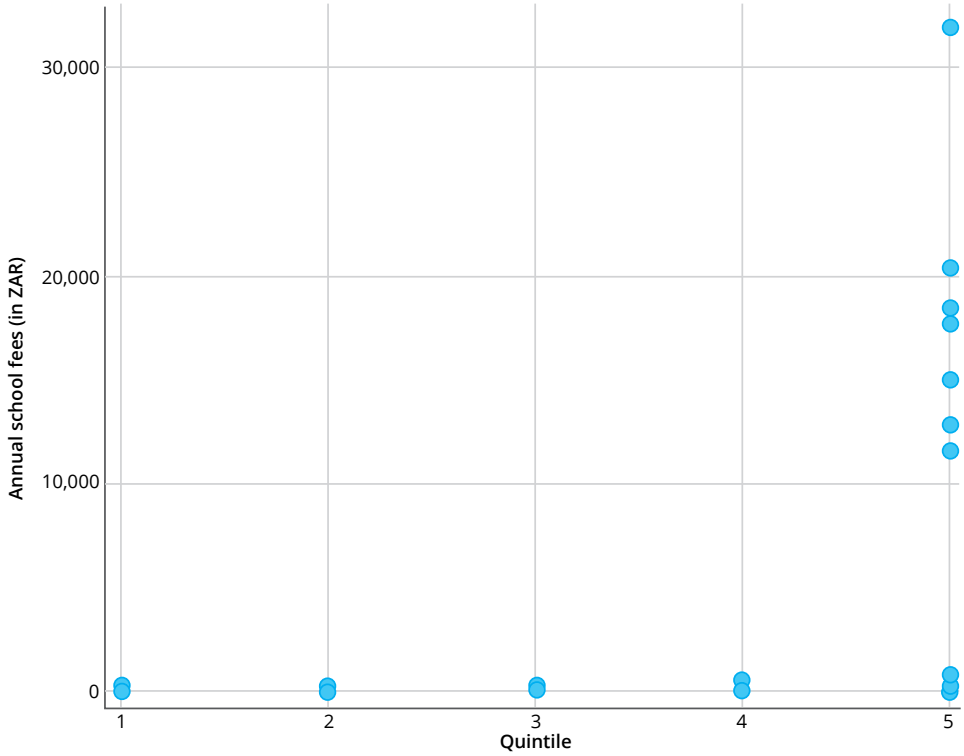
Table 1 Characteristics of final Roots & Shoots sample

	Learners		Schools		Afrikaans		IsiXhosa	
	N	Proportion	N	Proportion	N	Proportion	N	Proportion
Cape Winelands	117	19.9%	16	21.3%	16	100.0%	0	0.0%
Metro Central	56	9.5%	7	9.3%	5	71.4%	2	28.6%
Metro East	216	36.8%	27	36.0%	16	59.3%	11	40.7%
Metro North	127	21.6%	16	21.3%	12	75.0%	4	25.0%
Metro South	71	12.1%	9	12.0%	2	22.2%	7	77.8%

3.5 School quintiles

While the Funda Wande intervention aimed to focus on Quintile 1–3 schools, the list of schools provided by the WCED included Quintile 4 and 5 schools, which usually charge fees. This selection of schools across all quintiles was advantageous for Roots & Shoots as it allows for meaningful comparison across quintiles to inform our understanding of

Figure 1 Annual school fees by school quintile



the links between school readiness and SES. Table 1 shows that nearly half (46.8%) of the sample consists of Quintile 4 and 5 schools, and that only a very small proportion (8%) consists of Quintile 1 schools. (Note that the entire province of the Western Cape does not have a large proportion of Quintile 1 schools.) Upon further investigation, however, it is clear that the official DBE quintile rankings of schools are not a true reflection of the fee status of schools in the sample. This confirms previously presented evidence that the official DBE quintile rankings of schools are not true approximations of the wealth of learners attending those schools. This is due to the method used by provincial education departments to assign a quintile rank to a school, i.e. using data on the relative poverty levels within 3 km of a public school. However, as Zoch (2017) shows, using 2011 Census data, the official quintile rankings are out of date – that is, the relative community poverty levels initially used to assign school quintiles are no longer an accurate reflection of the true poverty levels of those communities. This can be seen in Figure 1, which shows the annual school fees by quintile of each school in the sample. It is clear from the figure that while there are some Quintile 5 schools charging in excess of R3,000 in school fees per year, there are many Quintile 4 and 5 schools that charge very low fees, or do not charge fees at all.

Given the fee structures of schools in the different DBE quintiles, the analysis of early learning outcomes that follows is not presented by quintile, as is done for example in the Thrive by Five Index report (Giese et al. 2022). Instead, we present results according to the fee structures of schools. To do so, we construct three bands of school fees: no-fee schools; low-fee schools (schools with fees lower than or equal to R3,000 per year); and mid-fee schools (schools with fees higher than R3,000 per year). The distribution of learners in the sample according to these categories, and by school LOLT, is shown in Table 2. The table shows that almost three-quarters (73.4%) of the total sample of learners are in no-fee schools, 17.4% are in low-fee schools, and the remaining 9.2% of learners are in mid-fee schools. It is important to note the very small number of learners in mid-fee schools – only 54 learners in Afrikaans LOLT schools (13.9% of the Afrikaans sample) and no learners for isiXhosa LOLT.

Table 2 Distribution of learners across school fee groups, by LOLT

	Afrikaans		isiXhosa		Total	
	N (learners)	% of Afrikaans sample	N (learners)	% of isiXhosa sample	N (learners)	% of total sample
No-fee	248	63.9%	183	92.0%	431	73.4%
Up to R3,000 per annum	86	22.2%	16	8.0%	102	17.4%
More than R3,000 per annum	54	13.9%	0	0.0%	54	9.2%

Further support for presenting results according to these three categories of schools is provided in Table 3, which shows the average Grade 3 systemic assessment results across three years (2017–2019) for each category of schools. The table shows that there

are clear differences in the systemic results of these three groups. The biggest difference in systemic results is observed between low-fee and mid-fee schools, with mid-fee far outperforming low-fee schools in the Grade 3 systemic tests.

Table 3 Average Grade 3 systemic scores 2017–2019 by school fee categories

	Average systemic score (standard deviations)
No-fee	–0.72
Low-fee	–1.2
Mid-fee	3.47

4 Results

4.1 What proportion of the sample is developmentally on track?

Figure 2 shows the total early learning scores of the Roots and Shoots sample, compared with the results of the national Thrive by Five study, as well as the provincial Thrive by Five results for the Western Cape. The figure shows that the Roots & Shoots sample performed very similarly to the Thrive by Five Western Cape sample, with 62% of children being developmentally on track, 22% falling behind, and 17% falling far behind. The Roots & Shoots results also echo those of Thrive by Five in that the sample significantly outperformed the Western Cape Thrive by Five sample of children enrolled in ECD centres.

Figure 2 Total learning scores: Percentage falling far behind, falling behind, and on track: Thrive by Five vs Roots & Shoots

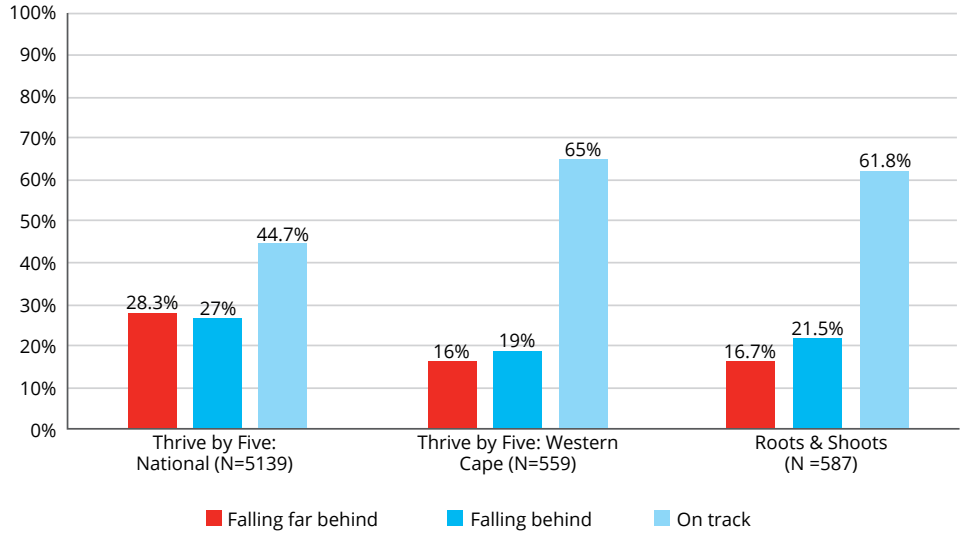
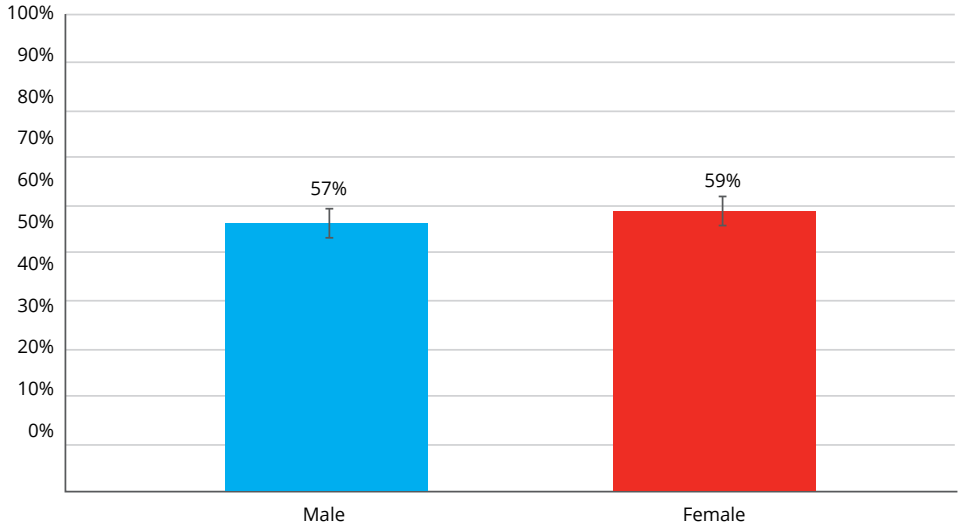


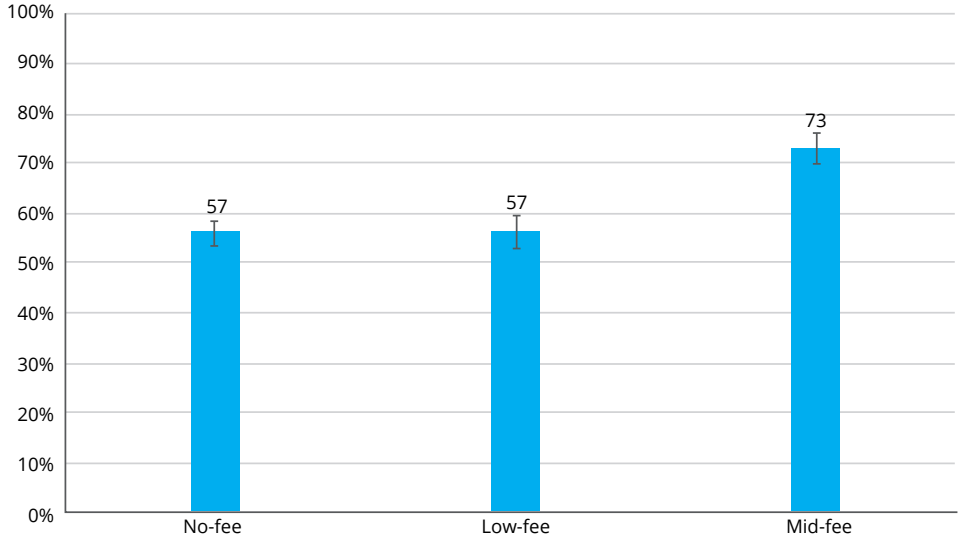
Figure 3 shows the total learning scores by sex (out of 100), and indicates that although girls slightly outperformed boys on the overall early learning measure, this difference was not statistically significant. Girls and boys therefore did not have significantly different overall learning scores.

Figure 3 Total learning scores (means), by sex



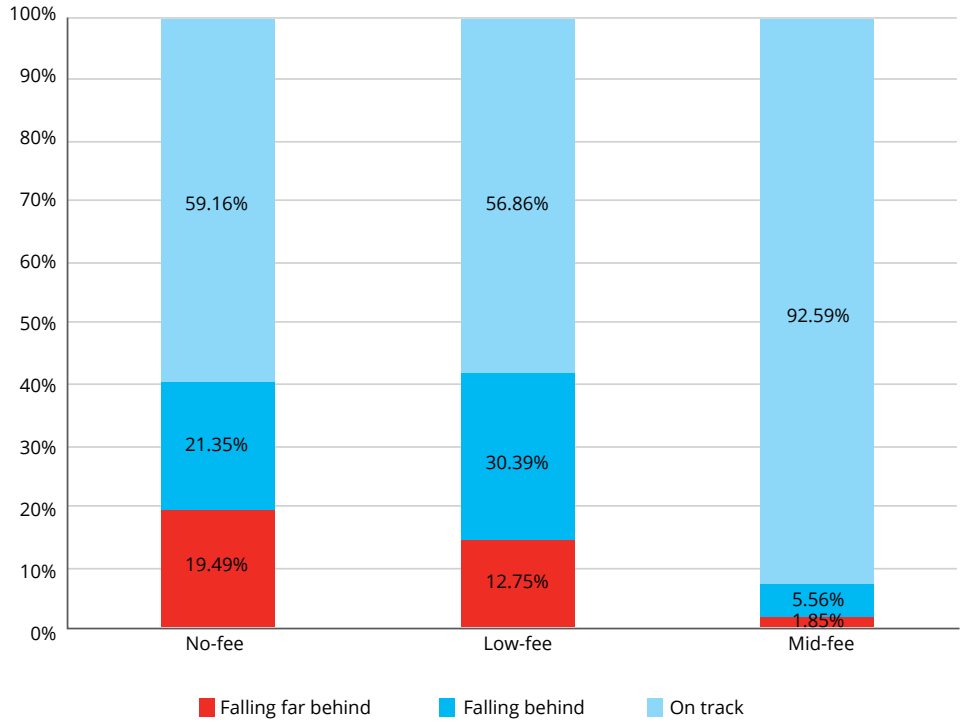
Total learning scores by school fee group are plotted in Figure 4. The figure presents clear evidence of an SES gradient to total learning scores, with learners in mid-fee

Figure 4 Learning totals (means), by school fee group



schools achieving significantly higher overall scores than learners in no-fee and low-fee schools. It is important to note, however, that there was no difference in the overall ELOM scores of learners in no-fee versus low-fee schools: learners in both types of schools achieved an average of 57 ELOM points (out of 100).

Figure 5 **Total learning scores: Percentage falling far behind, falling behind, and on track, by school fee group**



Notes *N (No-fee) = 431 learners; N (Low-fee) = 102 learners; N (Mid-fee) = 54 learners.*

SES differences in ELOM scores are especially clear in Figure 5, which shows the proportions of learners on track, falling behind, and falling far behind by school fee grouping. While just over half of learners in no-fee and low-fee schools were on track in terms of overall learning scores, this proportion was 93% for learners in mid-fee schools. That is, almost all learners who were falling behind or falling far behind developmentally (220 out of 224 learners) were attending no-fee or low-fee schools. This constitutes strong evidence of an SES gradient to performance in the ELOM assessment. At the same time, it is important to note the lack of significant differences in the ELOM scores of learners in no-fee versus low-fee schools: while a slightly higher proportion of learners in no-fee schools than low-fee schools were on track developmentally (59.2% versus 56.9%), this difference was not statistically significant. This suggests that while school readiness clearly differs by school SES, this difference

only emerges between learners in no-fee and low-fee schools, on the one hand, and learners in mid-fee schools, on the other.

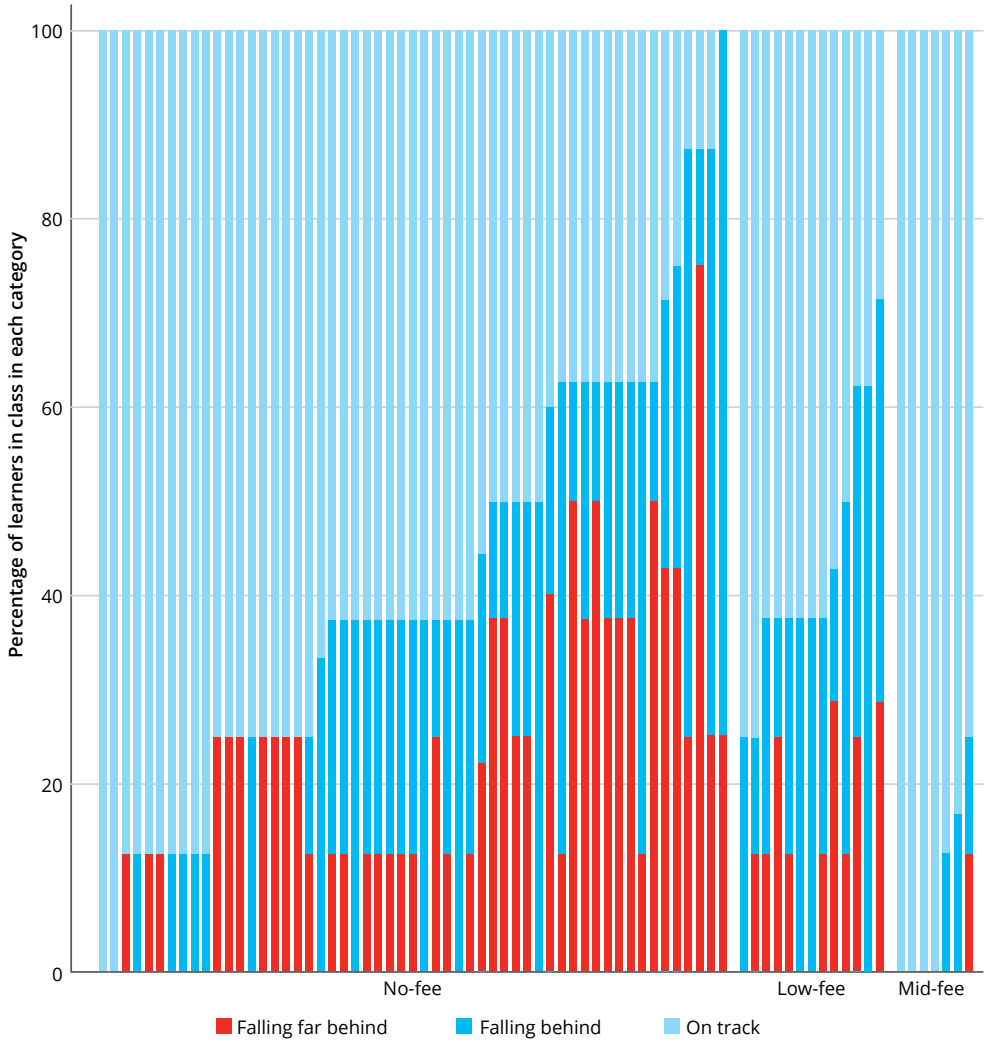
Despite this clear SES gradient to performance in the ELOM, Figure 5 also shows that SES is not deterministically associated with early learning skills. That is, it is not the case, for example, that all learners attending no-fee and low-fee schools performed poorly in the ELOM. In fact, there are arguably large proportions of learners in these schools who are developmentally on track. While the ELOM is not a perfect measure of learners' readiness to learn, this evidence nonetheless suggests that much of learners' failure to acquire reading skills is due to an interaction between low quality schooling and home environments that do not adequately support development during the early school years. That a large proportion of children in the Roots & Shoots sample attending no-fee and low-fee schools are developmentally on track is a finding that raises important questions about the trajectories of these learners. It will be interesting to see what happens to those learners in no-fee and low-fee schools who started school on track as they progress through the Foundation Phase. Do the learning outcomes of these learners converge to a low average along with those of their classmates who were developmentally behind when they started school? Or do these students remain on a higher learning trajectory, given their advantage in early learning skills when they started school? It will only be possible to answer such questions once the Roots & Shoots longitudinal data become available in 2023–2025.

4.2 Investigating variability in ELOM scores within schools

Figure 6 shows the proportion of learners within each surveyed class that was on track, falling behind, and falling far behind. Each bar represents a Grade R class. The school fees of schools are indicated on the x-axis, with all no-fee schools plotted on the left side of the first 'gap' in the bar graph. The bars are ordered according to the proportion of learners on track in each class, from the largest proportion of on track learners to the smallest, within each school fee category. The figure presents evidence of much variability in the proportion of learners on track, falling behind, and falling far behind within individual classrooms, across school fee groups. It is clear, however, that mid-fee schools have the least variability in ELOM scores, with the vast majority of Grade R learners in these seven schools being developmentally on track. By contrast, no-fee and low-fee schools have much more variability in ELOM scores within the same classrooms. One such class, for example, consists of a quarter of surveyed learners who are falling far behind, another quarter who are falling behind, and half who are developmentally on track. The challenges for Grade R teachers facing classes with such varying levels of skills upon school entry are immense, and deserves more research and policy attention.

The information presented in Figure 6 further points to much variation in the skills children enter school with, across schools charging different fees, and even within the same classes. That is, while SES clearly matters in terms of determining early learning skills, there is much variation within SES groupings with regard to the skills with which children enter school.

Figure 6 Percentage falling far behind, falling behind, and on track, by school



4.3 Comparing early learning scores with later school outcomes

The analysis presented thus far provides an indication of how Grade R learners in the Roots & Shoots sample performed on the ELOM assessment, with particular emphasis on gaps in early learning scores across schools with different fee statuses. A major advantage of the Roots & Shoots sample of schools is that the Afrikaans schools in the sample are part of the Funda Wande early grade literacy and numeracy evaluation – as such, in 2022 in the same school, Grade 1 learners were assessed in early literacy and mathematics at the same time as Grades 4 and 7 learners were assessed in literacy (i.e.

these are not the same learners over time). As a result, it is possible to compare learning outcomes in Grade R with learning outcomes in Grades 1, 4, and 7 in the same schools at the same point in time. It is important to note that the comparison of learning scores in the analysis that follows is not based on the same learners – the available data are cross-sectional, meaning they provide a snapshot of learner performance at one point in time, in four grades in the same schools. It is also important to note that this school-level analysis of learning outcomes was only possible for the Afrikaans schools in the Roots & Shoots sample – i.e. there are no isiXhosa schools in the analysis that follows.

4.3.1 Comparison of school-level means across grades

Table 4 presents results regarding the magnitudes of the associations between the 50 Afrikaans schools' mean Grade R ELOM 4&5 scores and the total learning scores in later grades. Coefficients are presented in standard deviations. That is, a one-standard-deviation increase in Grade R ELOM 4&5 scores is associated with a 16.1% standard deviation increase in Grade 1 learning scores. The table also shows the percentage of variation in Grade 1, 4, and 7 total learning scores that is explained by schools' mean ELOM 4&5 scores. The results in the table point to a relatively weak association between mean school-level ELOM 4&5 scores and total learning scores in the later grades. Similarly, while the proportion of variation in learning scores in later grades explained by variation in Grade R scores may seem large, the magnitudes of these proportions mean that more than half of the variation in later learning scores are not explained by variation in scores at school entry (i.e. ELOM 4&5 scores in Term 1 of Grade R). This is suggestive that the skills that children enter school with are not associated with later performance in a deterministic way, that is, that school quality does make a difference in determining literacy outcomes in the primary school grades. An alternative explanation is that the ELOM 4&5 assessment is not measuring pre-literacy skills well. This is less likely to be the case since the assessment was developed in alignment with the Grade R curriculum, and has been validated as a measure of school readiness in the South African context (Snelling et al. 2019).

Table 4 **Associations between school-level mean total learning scores in Grade R and scores in later grades**

	Correlation (Standard deviations)	% of variation explained
Grade R & Grade 1 total learning scores	0.161	44.70%
Grade R & Grade 4 total learning scores	0.145	43.50%
Grade R & Grade 7 total learning scores	0.131	39.90%

Comparing schools' position in a tercile ranking of performance across grades provides information about the association between the relative position of schools across grades. To do so, I construct terciles[3] of performance at the school level in Grades R,

3. Terciles are constructed by ranking schools from lowest to highest performance and splitting the sample of schools into three groups. Each tercile thus contains 33% of the schools in the sample.

1, 4 and 7, and compare schools' tercile ranking across grades. Table 5 shows how schools transitioned between different performance terciles in Grade R versus Grade 1. Following the diagonal of the table shows that 44% of schools (22 schools) that were in the lowest performance tercile in Grade R were also in the lowest performance tercile in terms of Grade 1 performance, while 42% of schools that were in the second performance quintile in Grade R were also in the second performance tercile in Grade 1, and half of the schools that were in the highest performance tercile in Grade R were also in the highest performance tercile in Grade 1. Table 6 shows the same information, this time comparing the performance terciles of schools in Grade 4 with their performance tercile in Grade R. The results in Table 6 are very similar to those reported in Table 5, indicating that there is consistency in how schools' tercile rank performance changed between Grade R and Grade 1 versus Grade R and Grade 4. Table 7 compares schools' tercile rank performance in Grade R with that in Grade 7, and points to similar patterns.

Table 5 Transition matrix of terciles of performance in Grade 1 vs Grade R

		Terciles of Grade R performance		
Terciles of Grade 1 performance		1	2	3
	1	44%	26%	30%
	2	38%	42%	20%
	3	18%	32%	50%
	Total	100%	100%	100%

Table 6 Transition matrix of terciles of performance in Grade 4 vs Grade R

		Terciles of Grade R performance		
Terciles of Grade 4 performance		1	2	3
	1	44%	38%	20%
	2	24%	42%	30%
	3	32%	20%	50%
	Total	100%	100%	100%

Table 7 Transition matrix of terciles of performance in Grade 7 vs Grade R

		Terciles of Grade R performance		
Terciles of Grade 7 performance		1	2	3
	1	44%	38%	20%
	2	36%	32%	30%
	3	20%	30%	50%
	Total	100%	100%	100%

It is also instructive to consider how tercile performance in later grades compares across different grades. Table 8 compares schools' performance terciles for the Grade 1 assessment with their terciles for the Grade 4 assessment. Interestingly, there seems

to be a slightly stronger association between Grade 1 and Grade 4 performance at the school level, with 62% of schools that were in the lowest performance tercile in Grade 1 also being in the lowest tercile in Grade 4. Similarly, 62% of schools that were in the highest performance tercile in Grade 1 were also in the highest tercile in Grade 4. Table 9 compares Grade 1 tercile performance with Grade 7 tercile performance, and points to associations between Grade 1 and Grade 7 performance that are very similar in magnitude to the associations observed between Grade 1 and Grade 4 performance. Lastly, Table 10 compares schools' tercile performance in Grade 4 with that in Grade 7. It is interesting to note that the magnitudes of the associations between Grade 4 and Grade 7 school-level performance are slightly smaller than those of the associations reported in Tables 8 and 9, with 56% of schools who are in the lowest performance tercile in Grade 4 being in the same tercile in Grade 7, and half of schools in the top performance tercile in Grade 4 also being in the top tercile in Grade 7.

Table 8 Transition matrix of terciles of performance in Grade 4 vs Grade 1

		Terciles of Grade 1 performance		
Terciles of Grade 4 performance		1	2	3
	1	62%	38%	0%
	2	26%	36%	38%
	3	12%	26%	62%
	Total	100%	100%	100%

Table 9 Transition matrix of terciles of performance in Grade 7 vs Grade 1

		Terciles of Grade 1 performance		
Terciles of Grade 7 performance		1	2	3
	1	64%	26%	12%
	2	18%	58%	24%
	3	18%	16%	64%
	Total	100%	100%	100%

Table 10 Transition matrix of terciles of performance in Grade 7 vs Grade 4

		Terciles of Grade 4 performance		
Terciles of Grade 7 performance		1	2	3
	1	56%	32%	12%
	2	32%	32%	38%
	3	12%	36%	50%
	Total	100%	100%	100%

Overall, the comparisons of school-level learning scores across grades suggest that schools play a large role in determining children's literacy achievement – schools do not simply reproduce the patterns of performance that are observed when children first enter school. That is, the results suggest that there is both a school component and a school readiness component to children's reading failure in later grades. This evidence is merely suggestive, however, since the literacy scores compared above are not of the same children. Only once longitudinal data on the same children are available – as the Roots & Shoots project plans to collect – will it be possible to ascertain with more certainty to what extent patterns of performance observed at the start of formal schooling are maintained as children progress through the primary school grades.

5 Discussion

The results presented in this chapter point to four main conclusions. Firstly, it is clear that many children in the Roots & Shoots sample start formal schooling with a backlog in early skills, with 38% of sampled Grade R learners not meeting the standard for being developmentally on track. This evidence echoes the findings of the Thrive by Five Report, namely that many children start school without the skills needed to learn effectively.

Secondly, the analysis presented here points to clear SES differences in ELOM scores. Specifically, the results show that learners attending mid-fee schools outperformed learners in no-fee and low-fee schools in the ELOM assessment: Virtually all learners who were falling behind or falling far behind on the ELOM assessment were in no-fee or low-fee schools. This strongly suggests that the large achievement gap between poor and less poor children in South Africa can partly be explained by the fact that poorer children, on average, start school less prepared for the formal schooling environment than do their wealthier counterparts.

The third main result is that there is much variability in the skills with which children start school, even within the same classrooms. This poses immense challenges for teachers, since it is uncertain at what level they should pitch their lessons. In addition, this result raises important questions about the trajectories of learners in the same school who start school with varying levels of skills. Only once the Roots & Shoots longitudinal data are available will it be possible to determine the learning trajectories of learners in the same schools who start school developmentally on track, falling behind, or falling far behind.

Lastly, the comparison of school-level learning scores across grades suggests that there is a relatively weak association between the skills with which children enter school and their later learning outcomes in the same schools. Considered with the evidence of SES differences in early learning scores, this result suggests that both school quality and the skills with which children enter school are important in determining reading outcomes. That is, the results point to an interplay between home environments (both before children start school and during schooling) and school quality in determining learning outcomes. This result is based on performance data of different learners, however, and so remains merely suggestive. Once again, it will be

possible to determine with more certainty to what extent school quality determines learning outcomes in the later grades once the longitudinal Roots & Shoots data become available in 2023–2025.

6 Conclusion

The results in this chapter add new evidence to our understanding of the relationship between the skills with which children start school and their later learning outcomes. The results from the ELOM assessment in the Western Cape show that, indeed, many learners start school without the skills that are required for them to learn effectively. There are, however, also many learners in no-fee and low-fee schools who do start school on track developmentally. Investigating what happens to the learning outcomes of these learners as they progress through school is crucial for our understanding of how the skills with which children enter school are translated into later learning outcomes.

References

Battaglia, G., Alesi, M., Tabacchi, G., Palma, A. & Bellafiore, M. (2019). The development of motor and pre-literacy skills by a physical education program in preschool children: A non-randomized pilot trial. *Frontiers in Psychology* 9(Jan), 1–10.

Carlson, A. G., Rowe, E. & Curby, T. W. (2013). Disentangling fine motor skills relations to academic achievement: The relative contributions of visual-spatial integration and visual-motor coordination. *Journal of Genetic Psychology* 174(5), 514–533.

Dawes, A., Biersteker, L., Girdwood, E., Snelling M. & Tredoux, C. (2016). *Early Learning Outcomes Measure (ELOM) Technical Manual*. Cape Town: Innovation Edge.

Duncan, G. J. et al. (2007). School readiness and later achievement. *Developmental Psychology* 43(6), 1428–1446.

Giese, S., Dawes, A., Tredoux, C., Mattes, F., Bridgman, G., Van der Berg, S., Schenk, J. & Kotzé, J. (2022). Thrive by Five Index Report Revised August 2022. Cape Town: Innovation Edge.

Hackman, D. A. & Farah, M. J. (2009). Socioeconomic status and the developing brain. *Trends in Cognitive Sciences* 13(2), 65–73.

Heckman, J. J. (2011). The economics of inequality: The value of early childhood education. *American Educator* 2011(Spring), 31–36.

Kuhl, P. K. (2011). Early language learning and literacy: Neuroscience implications for education. *Mind, Brain, and Education* 5(3), 128–142.

Sánchez, A. (2017). The structural relationship between early nutrition, cognitive skills and non-cognitive skills in four developing countries. *Economics and Human Biology* 27(April), 33–54.

Schmitt, S., Geldhof, G. J., Purpura, D. J., Duncan, R. & McLelland, M. M. (2017). Examining the relations between executive function, math, and literacy during the transition to kindergarten: A multi-analytic approach. *Journal of Educational Psychology* 109(8), 1120–1140.

Skibbe, L. E., Montroy, J. J., Bowles, R. P. & Morrison, F. J. (2019). Self-regulation and the development of literacy and language achievement from preschool through second grade. *Early Childhood*

Research Quarterly 46, 240–251.

Snelling, M., Dawes, A., Biersteker, L., Girdwood, E. & Tredoux, C. (2019). The development of a South African early learning outcomes measure: A South African instrument for measuring early learning program outcomes. *Child: Care, Health and Development* 45(2), 257–270.

Van Poortvliet, M. (2021). Inequality in skills for learning: Do gaps in children's socio-emotional development widen over time according to family background? *Oxford Review of Education* 47(4), 455–474.

Zoch, A. (2017). The effect of neighbourhoods and school quality on education and labour market outcomes in South Africa. Stellenbosch Economic Working Paper Series, WP08/2017, 1–43.

05

A review of recent efforts to benchmark early reading skills in South African languages

NOMPUMELELO MOHOHLWANE, GABRIELLE WILLS & CALLY ARDINGTON

Abstract

In this chapter, we provide a review of recent efforts to benchmark early grade reading skills in African languages in South Africa. We start by arguing for different benchmarks for the various languages. We then trace events that have led to the prioritisation and acceleration of the benchmarking efforts. Specifically, we outline prominent efforts to set grade-specific, minimum reading benchmarks in Nguni and Sesotho-Setswana languages. In the process of establishing these benchmarks, we outline key methodological lessons learnt, and how these lessons can give impetus to benchmarking early grade reading skills in all official South African languages. The close partnerships between government, donors and academics in encouraging successful benchmarking efforts to date provide a case study for other developing countries aiming to improve their understanding of early grade reading, prioritise indigenous languages, and track children's reading trajectories. Chief amongst the benefits of this is the adoption of a single set of benchmarks per language group, rather than competing benchmarks produced by different donors or education organisations. The benchmarks established include a minimum Grade 1 letter-sound benchmark of 40 letter-sounds

KEYWORDS
reading benchmarks, foundational skills, African languages, reading thresholds, reading trajectories

correct per minute for both Nguni and Sesotho-Setswana languages. For oral reading fluency in Nguni languages, a Grade 2 minimum benchmark of 20 words correct per minute (wcpm) and a Grade 3 minimum benchmark of 35 wcpm has been proposed. In Sesotho-Setswana languages, these Grade 2 and 3 minimum benchmarks are set at 40 wcpm and 60 wcpm respectively. Among the best Grade 2 learner samples from no-fee schools, just 54 to 56% meet the Nguni or Sesotho-Setswana benchmarks respectively at the end of Grade 2 or start of Grade 3. However, while there is much excitement about collaborations to benchmark African languages, the true value of these efforts will only be established once early grade reading benchmarks are incorporated into the curriculum, and used nationally to track children's reading trajectories.

1 Introduction

In early 2019, South African president Cyril Ramaphosa articulated a clear expectation for basic education: every child should be able to read for meaning by age ten (Ramaphosa 2019). Aligning with this goal, and the higher prioritisation of reading in the national education agenda, including the education sector plan (DBE 2020b), there has been a new impetus to develop reading benchmarks in all official South African languages.

Although curriculum documents state that by a certain grade or age a child should be able to 'read fluently and with understanding', in the initial stages of reading this generic goal provides little specificity as to whether a child is on a developmental trajectory to be able to read with meaning. To monitor whether children are on track to meet such goals, numerical measures of proficiency in specific reading skills – namely reading benchmarks – are necessary. Reading benchmarks inform a shared vision of what successful reading looks like at the end of each grade, i.e. Grades 1, 2 and 3, by articulating a standard against which teachers can track the development of learners' reading sub-skills. Reading benchmarks also support the *early* identification of learners who are at risk of not learning to read for meaning by age ten. This, in turn, supports remediation at an earlier age. Reading benchmarks are also increasingly viewed as useful tools in highlighting the need for increased investment in education and more importantly education system reform (DBE 2020a).

While reading norms exist in English (Hasbrouck & Tindal 2006), until recently there has been scant research guiding the development of African language reading benchmarks. What has been clear is that one cannot transfer reading benchmarks from English to the Nguni or Sesotho-Setswana languages due to differences in the phonological, morphological, and orthographical features of African languages. At the most basic level, simple comparisons of fluency across languages are not possible due to vastly different word lengths. Therefore, benchmarking processes need to take account of the linguistic features of the language for which the benchmarks are being developed (Maake 1993; Louwrens & Poulos 2006). Beyond that, one needs to allow for language-specific accuracy–speed and fluency–comprehension relationships that reflect reading development (Miller et al. 2014; Spaull et al. 2020).

In this chapter, we trace events that have led to the prioritisation and acceleration of benchmarking efforts in South Africa. The first part of the chapter elaborates on why benchmarks are important, why they should be incorporated into policy and teaching,

and the rationale for setting language-specific benchmarks. Second, we turn to the policy landscape, examining to what extent early grade reading benchmarks have been part of the existing curriculum policy over the past 10 years. We then consider the influence of international movements to assess early grade reading and how that has influenced benchmarking in South Africa. This leads to an account of local efforts to apply new methodological innovations to reading data to support local benchmarking initiatives, with new methods resulting in the establishment of Nguni and Sesotho-Setswana language benchmarks for the Foundation Phase. Finally, the chapter summarises the main lessons learnt from recent African language benchmarking exercises, while mapping out proposed areas of work going forward.

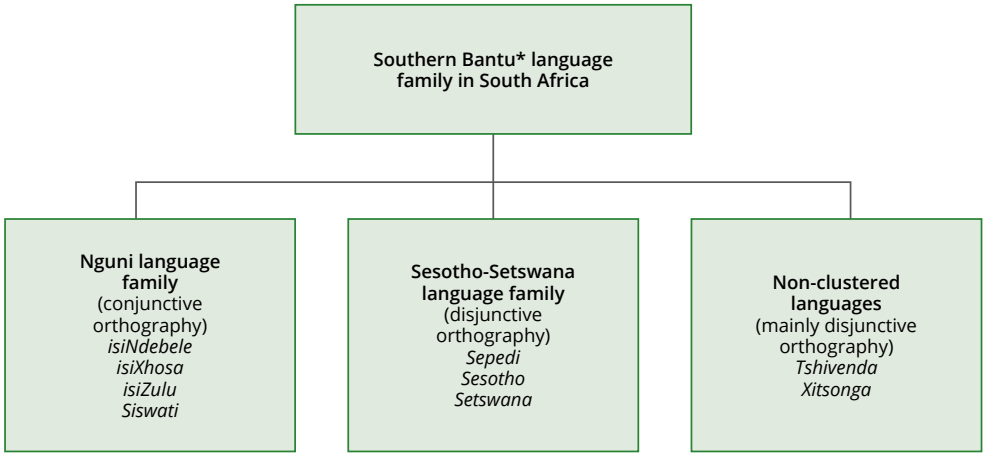
2 The purpose of establishing early grade reading benchmarks and the language differences in South Africa

Broadly, reading benchmarks express what reading success looks like. How benchmarks are used varies at different levels of the education system. At the highest level, the process of setting benchmarks allows education systems to articulate their definition of reading proficiency. Among teachers and students, benchmarks provide development targets to aim for. At the school level, they can be used to identify how many children are on track to read with meaning, while identifying how many children need additional support. This in turn informs the required resourcing for remedial programmes. The establishment of benchmarks in reading can also have positive spillover effects on other subjects and grades. If the benchmarks are used to drive instructional improvement, this can provide a tangible illustration of how to set standards that could be applied in another subject, such as numeracy. A reading benchmarking process can provide systemic lessons on establishing clear expectations for learning in other subjects and grades (World Bank 2019; Khulisa Management Services 2020; DBE & World Bank 2021). There are of course certain subjects and grades where benchmarking does not apply, such as secondary school history or literature, where the skills or content taught are unconstrained.

While the purpose of benchmarks is clear, developing them is complex, requiring consensus on what skills and methods to use (Thomas & Peng 2004; RTI 2017b). One particularly challenging aspect to consider is that differences in language typology necessitate distinct language-specific benchmarks. While alphabetical languages share common features, orthographic and morphological differences across languages result in differences in the relationship between language components, linguistic strategies employed for reading, and appropriate pacing when reading (Katz & Frost 1992; Probert & De Vos 2016; Makalela & Fakude 2014). Figure 1 classifies nine official African languages in South Africa into four groups: Nguni languages, which have a conjunctive orthography; Sesotho-Setswana languages, which have a disjunctive orthography; and two individual languages – Tshivenda and Xitsonga, which do not fall into either the Nguni or Sesotho-Setswana language groups. Afrikaans and English

are the two remaining official languages of South Africa; they are excluded from the figure as they have different roots.[1]

Figure 1 South African language families



Notes *Adapted from Spaull et al. (2020). * The word Bantu is "a frequently occurring plural form of the word meaning person" (Mohohlwane 2020). It is not only linguistic; it was objectified almost immediately and used for ethnographic purposes. The term remains controversial due to its politicised nature, especially in South Africa. However, the linguistic label remains official.*

The language classifications are based on orthography – the relationship between how languages are written and read. In transparent orthographies, there is a one-to-one mapping in the grapheme–phoneme relationship. In opaque orthographies, such as English, this mapping is more complex. African languages in South Africa are all transparent and agglutinating, however, they differ in morphology. Nguni languages are conjunctive, i.e. one word may represent a whole sentence (Khumalo 1987; Nkomo & Wababa 2013) while Sesotho-Setswana languages are written disjunctively and have short word segments with prefixes and infixes written separately (Machobane & Mokitimi 1998; Machobane et al. 2003). Tshivenda and Xitsonga have mostly disjunctive features; however, they also include some compounding features (Nengovhela 2005) making them "bridging languages" in terms of classification (Mathivha 1973, 1). Table 1 illustrates these differences.

As Table 1 shows, there is clearly a need for language-specific reading benchmarks. But to what extent have benchmarks – and, more importantly, language-specific benchmarks – been acknowledged and reflected in existing policy? This is the question we turn to next.

1. English and Afrikaans are Indo-European languages, and therefore unrelated to the African languages that are the focus of this chapter.

Table 1 Words per sentence in conjunctive vs disjunctive orthographies: An example

Language	Text (sentences 1 to 3)
English	There was a stranger who was very hungry. He came to a village and asked for food. Nobody had any food.
isiZulu	Kunesihambi esasilambile kakhulu. Safika emizini omunye sacela ukudla. Abantu babengenakho ukudla.
Sepedi	Go be go na le mosepedi yo a bego a na le tlala. O fihlile motseng wo mongwe a kgopela dijo. Go be go se na yo a bego a na le dijo.
Xitsonga	A ku ri ni mufambi loyi a ri na ndlala. U fikile emugangeni a kombela swakudya. A ku nga ri na loyi a ri na swakudya.

	Words in sentence 1	Words in sentence 2	Words in sentence 3	Total no. of words	Words per sentence (average)	Letters per word	Total single syllable words: V or CV
isiZulu	3	5	3	11	3.7	7.7	0
Sepedi	13	8	12	33	11	2.8	23
Xitsonga	10	6	10	26	8.7	3.4	17

Notes *Spaull et al. (2020) based on the 'Stone Soup' story in the Vula Bula series (Katz & Lawrence 2012).*

3 Local and international curriculum and assessment developments influencing benchmark development

The Foundation Phase Home Language curriculum[2] in South Africa identifies five essential components in the teaching of reading; these are phonemic awareness, word recognition, comprehension, vocabulary, and fluency (DBE 2011, 14). For the purposes of this chapter, we focus on fluency. Fluency is identified as the development of mastery in decoding, word recognition and passage reading (DBE 2011, 14, 18, 28), reflecting a combination of accuracy, speed, and prosody. Adapting the work of Betts (1946) on accuracy levels, the Department of Basic Education (DBE) defines the acceptable standard of fluency as reading with 95% accuracy at the independent reading level, or with 90% accuracy at the instructional reading level (DBE 2011, 64). Learners are classified as reading at the independent, instructional or frustration[3] level based on a combination of their word-reading accuracy and comprehension. In this study, however, we only consider speed and accuracy in measuring fluency, given the difficulty of measuring prosody in large field studies.

It is clear that the curriculum explicitly mentions fluency in the *teaching* of reading. However, the extent to which the curriculum requires the assessment of fluency is less clear. While the initial version of the curriculum required teachers to formally assess learners between seven to nine times per year on a range of skills including fluency (DBE 2010, 55–129), an amendment reduced formal assessments to one per term, without explicitly stating which skills to assess (DBE 2019a). We expect that this reduction has negatively impacted the assessment of fluency in the classroom. We also note that benchmarks are not mentioned in the curriculum, although more recent policy documents, such as the National Framework for the Teaching of Reading in African Languages in the Foundation Phase (DBE 2020a), highlight that benchmarks could add increased specificity to the teaching and assessment of African languages. Informal assessments are mentioned in the curriculum and there may be other assessment guides and plans at the provincial, district or school level. It is our view that these lack the official accountability embedded in the curriculum through formal assessments, as only formal assessments are used for learner promotion, teacher monitoring, and national accountability.

In summary, while the curriculum acknowledges the importance of fluency and acceptable standards for this, a lack of emphasis on the assessment of fluency may have perpetuated a lack of awareness of low and slow reading among individual learners, with limited action to remediate gaps, as a result.

2. The National Curriculum Statements Grades R–12 (NCS), commonly referred to as the CAPS curriculum, was rolled out in the Foundation Phase and Grade 10 in 2012, with the remaining grades following over three years.
3. Readers at the frustration level are reading with less than 90% accuracy and less than 50% comprehension.

3.1 EGRAs and international efforts to address 'learning poverty' establish a foundation for international benchmarking efforts

Governments, large international organisations and academics have been ringing alarm bells on 'learning poverty' in developing nations, particularly the large gaps between low basic literacy and numeracy levels and the desired 'learning quality' related to Sustainable Development Goals (UNESCO 2016; Bulat et al. 2017). Internationally, a lack of measurement of foundational reading skills has contributed to the problem of 'learning poverty' in developing countries (Azevedo 2020), where the failure to use assessment to identify weak learning outcomes has been twofold.

Firstly, far too few developing countries participate in international assessments of early learning skills despite their introduction three decades ago with significant uptake in the Global North. For example, South Africa has been one of only three African countries participating in the Progress in International Reading Literacy Study (PIRLS) and one of fewer than ten developing countries participating overall. A second issue is that these assessments are subject to floor effects in low literacy or numeracy contexts, i.e. being unable to capture the point at which learning fails to materialise. As discussed elsewhere (cf. Wills et al., this volume), PIRLS – a written comprehension assessment used in more than 50 countries – measures the 'comprehension iceberg' and does not give us insight into earlier reading skills or the building blocks that must develop before children can understand what they read (Spaull et al. 2020). In South Africa, there is currently no nationally representative survey that measures underlying, early grade reading skills, such as decoding or fluency, that could explain poor comprehension performance. As a result, there are no nationally representative datasets that can support empirically driven benchmarking processes.

Following broad consultation, a global decision was taken as early as 2006 to address global assessment gaps in reading through the development of Early Grade Reading Assessments (EGRAs).[4] EGRAs assess the alphabetic principle, phonemic awareness, word recognition, comprehension, vocabulary, fluency, and writing. They were intended to be low-cost, early grade assessments that could be applied in a wide range of countries and adapted to the features of different languages. They are designed to be administered by teachers or fieldworkers without specialist knowledge in a relatively short time – approximately 15 minutes – per learner (Gove & Wetterberg 2011).[5] [6] By 2016, EGRAs were used in more than 70 countries in more than 120 languages (RTI International 2016). At least 23 of these countries are in Africa; the group includes South Africa.

4. EGRAs were developed by the Research Triangle Institute, trading as RTI International, and funded by the United States Agency for International Development (USAID) in 2006.
5. While other early grade reading tools were available, these were accessed at a high cost and often required specialists to administer them (Gove & Wetterberg 2011).
6. These were deliberate design decisions intended to enable uptake in resource-constrained contexts including large class sizes. A comprehensive package including EGRAs, training manuals, and training videos was developed and distributed.

The proliferation of data produced globally through using EGRAs has been a catalyst for the development of early grade reading benchmarks. Four key factors contribute to this, namely, the consistency in the skills assessed; the alignment of these skills to early grade curriculum expectations; transparent assessment protocols; and developments in technology supporting the accuracy, consistency and efficiency of large-scale individual learner assessments.

Several countries, including Ethiopia, Ghana, Kenya, Liberia, Malawi, Rwanda, Tanzania, and Zambia, have leveraged their EGRA data to create early grade reading benchmarks (RTI International 2017a; Stern & Piper 2019). However, across African countries, only around 5% of learners were reaching these benchmarks (RTI International 2017b), seriously limiting their usefulness in tracking incremental improvements or guiding remediation or instruction.

Despite the introduction of EGRAs in South Africa, they have not been systematically used for benchmarking efforts. South Africa has had five phases of EGRAs, starting as early as 2007. They have provided a tool that could assess reading in Foundation Phase classrooms, and they lent themselves easily to adaptation across all 11 official languages. The first phase involved versioning EGRAs into all 11 official languages, through subject advisors[7] (DBE 2010). Subsequent phases have rolled out EGRAs to schools with training led by subject advisors (DBE 2019b; Govender & Hugo 2020). While a large number of schools have been reached with EGRAs to date, the assessments have not been rolled out to all primary schools across the country. Rather, EGRAs have continued to be used as a classroom resource for teachers, with some data collation and comparison within provinces.

As a means of supporting benchmarking efforts, however, EGRAs are not without their limitations and critiques. Issues relate to the inappropriateness of English as the reference language; the inappropriateness of direct translations of the assessments across languages (Graham & Van Ginkel 2014); the absence of measurement of language-specific skills, such as knowledge of complex consonant sequences that is important for reading in some languages (Wilsenach 2019); and the lack of language-specific interpretation of reading scores once translations into other languages are done (Miller et al. 2014; Spaull et al. 2020).

4 Compilation of existing reading data and development of new methods establishes the foundations for language benchmarking in South Africa

Since 2015, data collection projects, unrelated to wider implementation of national EGRAs, have adapted EGRAs to address some of these limitations. Using these

7. These are district-based educators required to be subject and/or phase specialists in their field, demonstrating both depth of content knowledge as well as its pedagogy (DBE 2013).

non-representative sample-based surveys, collaborative research and funder activities have accelerated the establishment of empirical benchmarks for foundational reading skills in African languages in South Africa.

A 2019 design process was a significant catalyst for accelerating the establishment of benchmarks. This process saw the DBE convene workshops with multiple stakeholders, including RTI International specialists who have led similar processes in other developing countries. The design process culminated in the report *Setting Reading Benchmarks in South Africa* (Khulisa Management Services 2020), which documented data approaches and empirical methodologies to support benchmarking. The design phase informed decisions on which grades and languages to benchmark, e.g. Home Languages at Grades 1, 2 and 3. A further decision was taken to benchmark each language separately and then compare these benchmarks within each family of African languages. If consistent patterns emerged, then a language family benchmark could be adopted.

The choice of which language to benchmark first was informed by the availability of existing reading data. Concurrent with the *Setting Reading Benchmarks* report process, multi-stakeholder collaboration was under way to establish Nguni-language benchmarks (Ardington et al. 2020). The collaboration involved multiple institutions, organisations and skills. In collaboration, and with coordination support from the DBE, the Nguni-language benchmark team were able to bring together a collection of rich data on early grade reading in Nguni languages. Learner assessment data from five[8] different studies resulted in the largest compilation of EGRA data in three Nguni languages: isiXhosa, isiZulu, and Siswati (no large-scale data were available for isiNdebele, also a Nguni language). When combined, these data contain multiple assessment points, which can be compared over time for nearly 16,400 unique learners across 660 schools, typically no-fee.

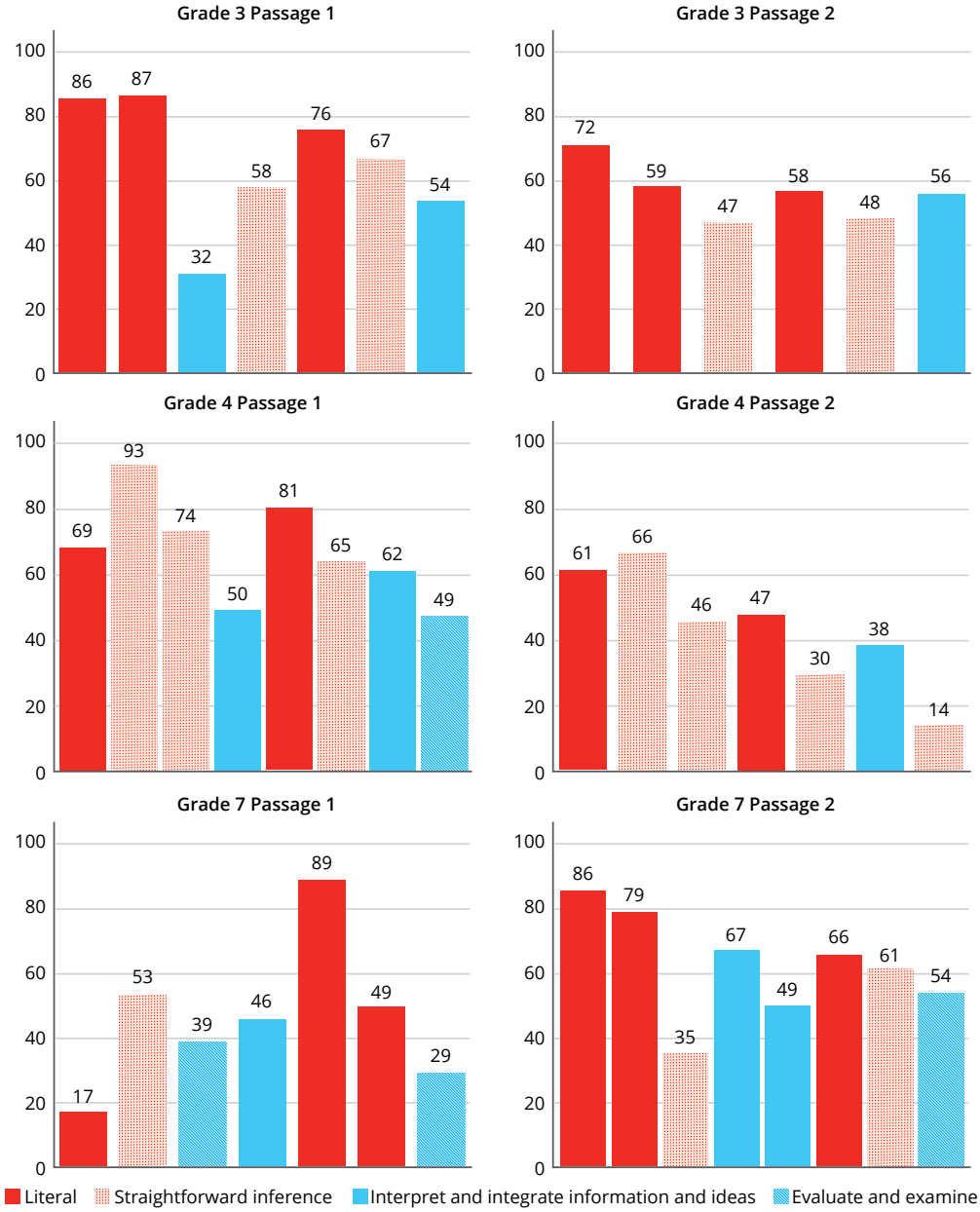
Despite the availability of rich data, it became apparent that existing methodological approaches to establish empirically driven benchmarks (Jukes et al. 2018a, Jukes et al. 2018b) suffered from technical limitations and were not suited to low literacy contexts. Firstly, most of the existing benchmarks were based on EGRAs with a typical reading time limit of one minute, with learners only attempting the comprehension questions related to the parts of the passage that they were able to read in one minute. In many contexts, this results in benchmarks being set beyond the reach of the vast majority of learners, limiting the usefulness of the benchmarks for tracking improvements. In addition, the one-minute time limit artificially inflates the relationship between fluency and comprehension through the number of questions attempted. More recently, EGRAs have been adapted to allow learners an additional two minutes to read the passage so that they may attempt additional comprehension questions – a more suitable approach for establishing benchmarks.

Secondly, 'traditional' approaches to setting fluency benchmarks identify fluency levels that support a fixed level of comprehension, e.g. reading at 80% comprehension.

8. 1 Early Grade Reading Study II in Mpumalanga, led by the DBE and funded by USAID; 2 Zenex Foundation Literacy Project, funded by the Zenex Foundation; 3 Story Powered Schools, led by NORC at the University of Chicago and funded by USAID; 4 Funda Wande, led by SALDRU and funded by the Allan Gray Orbis Foundation Endowment; 5 Leadership for Literacy, led by ReSEP and DBE, and funded by the Economic and Social Research Council (grant ES/N01023X/1).

This method, however, was found to be unsuitable as it assumes that comprehension is a defined construct with equivalent meaning across reading passages. In reality, linking a statistical process to a fixed comprehension process is too sensitive to the cross-text comparability of comprehension questions. While comprehension processes are hierarchical, question difficulty ranges within a single type of comprehension

Figure 2 Percentage of learners answering each comprehension question correctly (EGRS I Setswana data)



Note *Adapted from Wills et al. (2022).*

question (e.g. literal comprehension questions). This is illustrated in Figure 2, which summarises how learners perform on individual comprehension questions classified by the PIRLS underlying comprehension process they aim to assess. The bar colours indicate the types of comprehension processes engaged in the questions: literal, straightforward inference, interpret and integrate ideas and information, and examine or evaluate. Figure 2 illustrates that there is no clear relationship between the hierarchy of the comprehension process and the difficulty of questions. Instead, there is clear evidence of variation in difficulty (as shown by differences in average scores) within literal comprehension questions, within straightforward inference questions, and within the more challenging comprehension questions requiring learners to interpret, integrate or evaluate information. Even where different passages assign an equal mix of comprehension question types, question difficulty ranges even within a single comprehension typology. Anchoring comprehension questions to a required level is a challenging process, presenting significant limits to creating comparable reading comprehension assessments. This implies that choosing a cut-off point for the desired comprehension level (e.g. 80% of questions correct) is somewhat arbitrary. Benchmarks established using a fixed comprehension-level approach would be biased by the varying difficulty of the comprehension questions.

Given the problems with the traditional approach, it was necessary to take a new approach that would be less sensitive to the difficulty levels of comprehension tasks. A method was also needed that allows existing adapted EGRA data to be used, has less restrictive data requirements, and reduces the need for expensive new data collection in resource-constrained environments. Through rigorous engagement between linguists, language experts and data analysts, a new empirical approach grounded in a theory of reading in African languages was established.

Traditional approaches to benchmarking reading sub-skills often focus on identifying a single point or benchmark where decoding skills are sufficiently established to support comprehension (Abadzi 2012). However, reaching fluency levels that support reading with understanding as defined by a benchmark may only be attainable once a minimum 'threshold' of fluency has developed (Paris & Hamilton 2011; Wang et al. 2019). In other words, children need to develop skills or knowledge (e.g. fluency) to a threshold level to proceed further in their reading development. Achieving a threshold does not guarantee further development but not achieving a threshold will certainly inhibit it. It is also possible that there is an upper threshold where there are no further comprehension gains to increasing fluency (Wang et al. 2019). Beyond this fluency point, limited comprehension skills become the binding constraint, and instructional focus should shift from improving fluency to developing comprehension skills. This upper threshold may be an appropriate fluency benchmark.[9] In a two-stage process of establishing minimum grade-specific fluency benchmarks, we first use empirical methods and multiple grades of reading data to identify a 'lower threshold' and an 'upper threshold' in a reading skill that is non-grade specific (stage one). The second stage involves aligning the overall 'lower threshold' and 'upper threshold' to grade levels by examining how attainable they

9. Alternatively, if there are continued improvements in comprehension with increasing fluency, the upper threshold becomes the fluency point above which a reasonable level of comprehension is supported.

are and how they align with curriculum requirements. This two-stage process was followed for each language. Once it was clear that the estimates across languages within a language family were within a narrow margin, the findings were then consolidated across languages within a language family to establish one set of grade-specific minimum benchmarks for the language family.

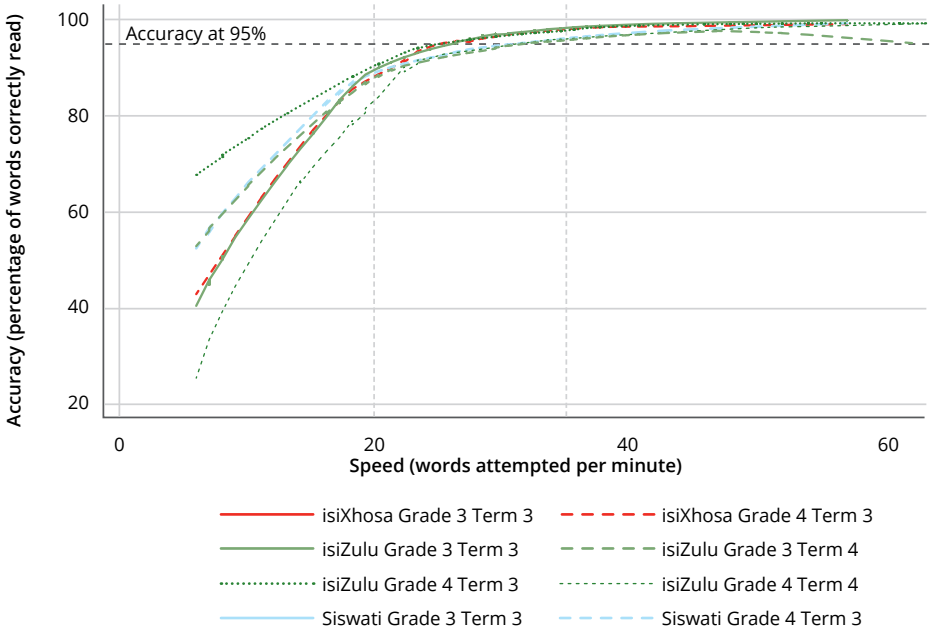
A starting point for the empirical analysis was a consideration of the relationship between accuracy and speed in reading and then how they relate to comprehension, when combined in a fluency measure. In English, accuracy in recognising letters, syllables and words has been shown to develop first; once accuracy is established, reading rates increase as decoding becomes more automatic, rapid, and effortless (Fuchs et al. 2001; Spear-Swerling 2006). This in turn frees up working memory and attention for meaning construction. Accuracy specifically moderates the relationship between speed and comprehension. If errors are made when reading, this reduces reading speed and clutters working memory, diverting attention from meaning-making. The development of these processes depends crucially on language typology. Accuracy tends to develop more rapidly in languages with a transparent orthography (e.g. Nguni and Sesotho-Setswana languages) than in those with an opaque orthography like English. Automaticity (i.e. processing without effort or conscious attention) will develop more slowly, or may only develop at a sub-lexical level, in Nguni languages because their agglutination and conjunctive orthography produce long words with a high degree of visual similarity (Land 2016).

Accuracy–speed and fluency–comprehension relationships have been insufficiently studied in African languages. To avoid imposing a priori assumptions about these relationships, the studies adopted non-parametric techniques. The identification of empirical regularities in accuracy–fluency and fluency–comprehension relationships was the basis for the identification of a non-grade specific 'lower threshold' and 'upper threshold' for both oral reading fluency (number of words correct per minute of connected text) and the foundational skill of letter-sound knowledge. Threshold and benchmark values were then subjected to tests of validity to determine how they predict future reading success, by exploiting the longitudinal nature of these data.

As we show in the next section, this empirical approach proved to be applicable not only to Nguni-language data, but to subsequent studies to benchmark reading skills in Sesotho-Setswana languages (see Wills et al. 2022; Ardington et al. 2022). The second set of benchmarks focuses on the Sesotho-Setswana languages, namely, Sepedi, Sesotho, and Setswana. Similar to the Nguni languages, these benchmarks are based on early grade reading studies[10] with more than 19,000 unique Grades 1 to 7 learners across 359 no-fee schools.

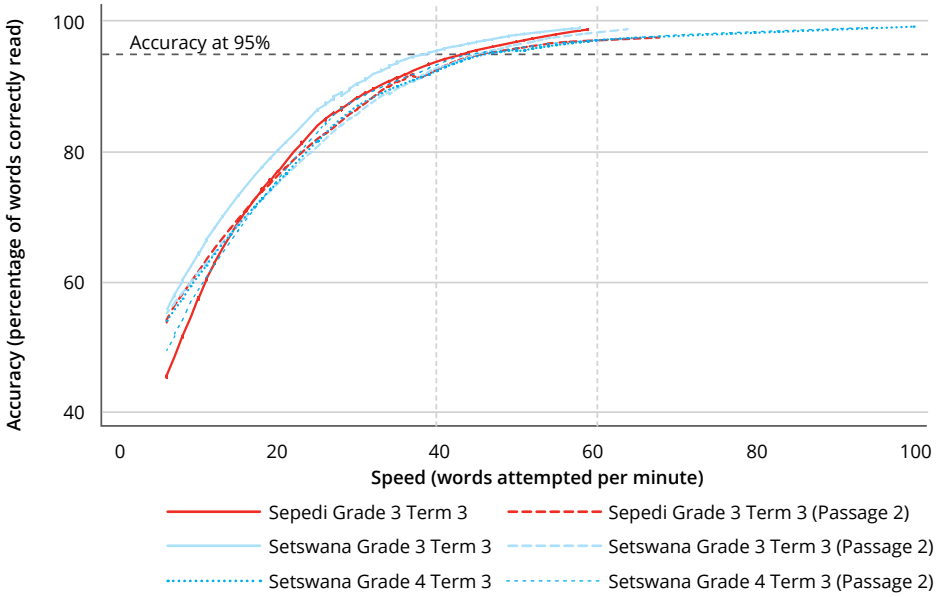
10. 1 Early Grade Reading Study I in North West, led by the DBE and funded by the Department of Planning, Monitoring and Evaluation, the North West Department of Education, the International Initiative for Impact Evaluation, Zenex Foundation, UNICEF, USAID, and the Chairman's Fund of Anglo American; 2 Room to Read interventions in Limpopo; 3 Funda Wande, led by SALDRU and funded by the Allan Gray Orbis Foundation Endowment, with additional data-collection funded by Zenex Foundation; 4 Literacy Boost in the Free State led by Save the Children; 5 Leadership for Literacy led by ReSEP and DBE, and funded by the Economic and Social Research Council (grant ES/N01023X/1).

Figure 3 Accuracy and speed in reading connected text: Nguni languages



Note *Number of words attempted trimmed to the range 6–100.*

Figure 4 Accuracy and speed in reading connected text: Sesotho-Setswana languages



Note *Number of words attempted trimmed to the range 6–100.*

4.1 Stage one: Establishing minimum fluency benchmarks

For both Nguni and Sesotho-Setswana languages, a consistent pattern was observed in the data where accuracy and speed initially increase quite steeply and together, after which the relationship flattens off. This is shown using Grades 3 and 4 reading data for Nguni languages in Figure 3 and for Sesotho-Setswana languages in Figure 4. Typically, this flattening occurs at accuracy levels around 95%, after which further development is only in speed. However, given differences across conjunctive and disjunctive languages, the speed associated with an average accuracy of 95% differs significantly across languages. In Nguni languages, this speed is above 20 words correct per minute (wcpm) across the various samples, while in Sesotho-Setswana languages it is roughly 40 wcpm.

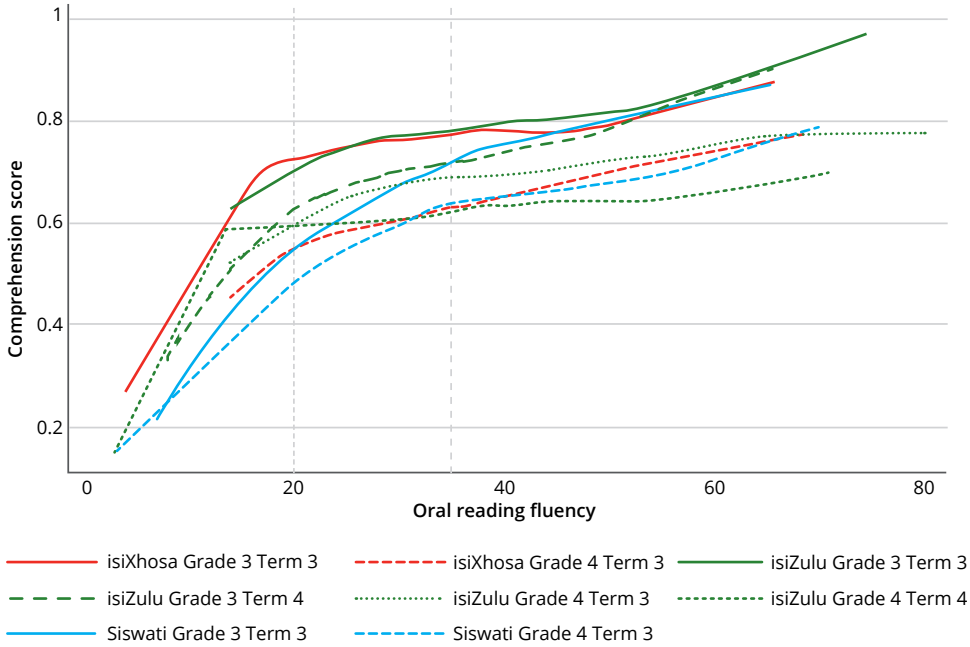
This non-linear relationship between fluency and accuracy provided the first piece of evidence in support of a lower threshold of 20 wcpm for Nguni language fluency, and a lower threshold of 40 wcpm for Sesotho-Setswana fluency (Ardington et al. 2020; Wills et al. 2022; Ardington et al. 2022). If learners are reading slower than these fluency thresholds, they have not yet reached accuracy levels to support the development of comprehension.

The next step was to look for evidence of an upper threshold and then to examine whether the lower and upper thresholds are logical points with regard to the goal of reading: to read with comprehension. Average comprehension scores were examined separately for grades, languages and across different passages, at each level of fluency. We provide examples of this relationship in this chapter focusing specifically on Grade 3 and 4 in Figure 5 and Figure 6.

Although there are differences in the average comprehension levels between samples, the fluency–comprehension gradient is non-linear in most cases. In Nguni languages, fluency below 20 wcpm appears to be a threshold below which comprehension skills are inadequately developed, while in Sesotho-Setswana languages, comprehension is unlikely to develop below 40 wcpm. In Nguni languages, learners reading between 20 and 35 wcpm appear to have reached an accuracy threshold, while in Sesotho-Setswana languages, this accuracy threshold is reached between 40 and 60 wcpm. In this zone, increasing speed and automaticity is associated with improvements in comprehension. The comprehension–fluency gradient then tends to flatten out at around 35 wcpm in Nguni languages, and 60 wcpm in Sesotho-Setswana languages, with diminishing returns to fluency. These points appear to be upper thresholds. Note that this flattening occurs at fairly low comprehension levels (e.g. between 50% and 75% of comprehension questions correct in the Grades 3 and 4 Sesotho-Setswana samples) suggesting that under-developed comprehension skills become the key hurdle for learners at these fluency levels.

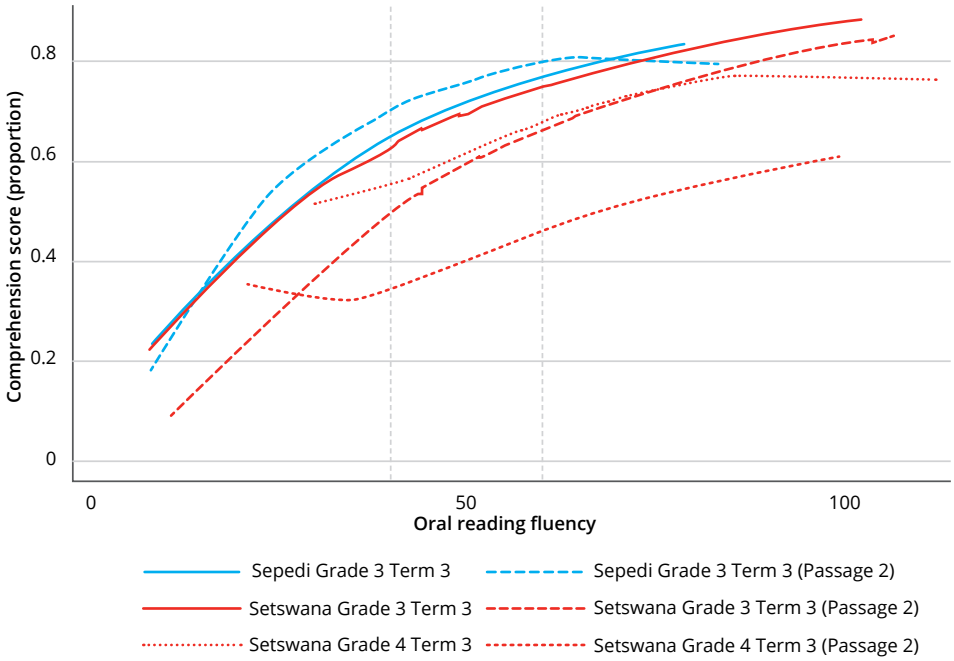
A common criticism of fluency benchmarks is that, by encouraging speed, they ignore the possibility that there are students that read slowly but with accuracy (Dowd & Bartlett 2019). In Nguni languages, from the end of Grade 2 into the Intermediate Phase, we find few accurate readers who are reading less than 20 wcpm (Ardington et al. 2021). In Sesotho-Setswana language data, there are very few readers who read fewer than 40 wcpm while reaching accuracy levels of at least 95%.

Figure 5 The relationship between fluency and comprehension: Nguni languages



Note *Grade 3 and 4 samples: restricted to learners attempting all questions.*

Figure 6 The relationship between fluency and comprehension: Sesotho-Setswana languages



Note *Grade 3 and 4 samples: learners attempting all questions.*

By the end of primary schooling, conversely, there are very few *inaccurate* readers reading more than 60 wcpm.

This non-parametric analysis[11] of data regularities and critical thresholds in reading skills, further supported with tests of predictive validity (as discussed in Ardington et al. 2020, and Wills et al. 2022), helped to establish non-grade specific lower and upper thresholds in reading fluency. As discussed in the chapter by Wills et al. (this volume), the Grade 2 fluency benchmark is highly predictive of whether children are able to meet the Grade 3 fluency benchmark. Furthermore, meeting these grade-specific minimum benchmarks is in turn highly predictive of the development of higher-order comprehension skills in the Intermediate and Senior Phases.

4.2 Stage two: Aligning the overall lower and upper thresholds to a grade by examining their attainability

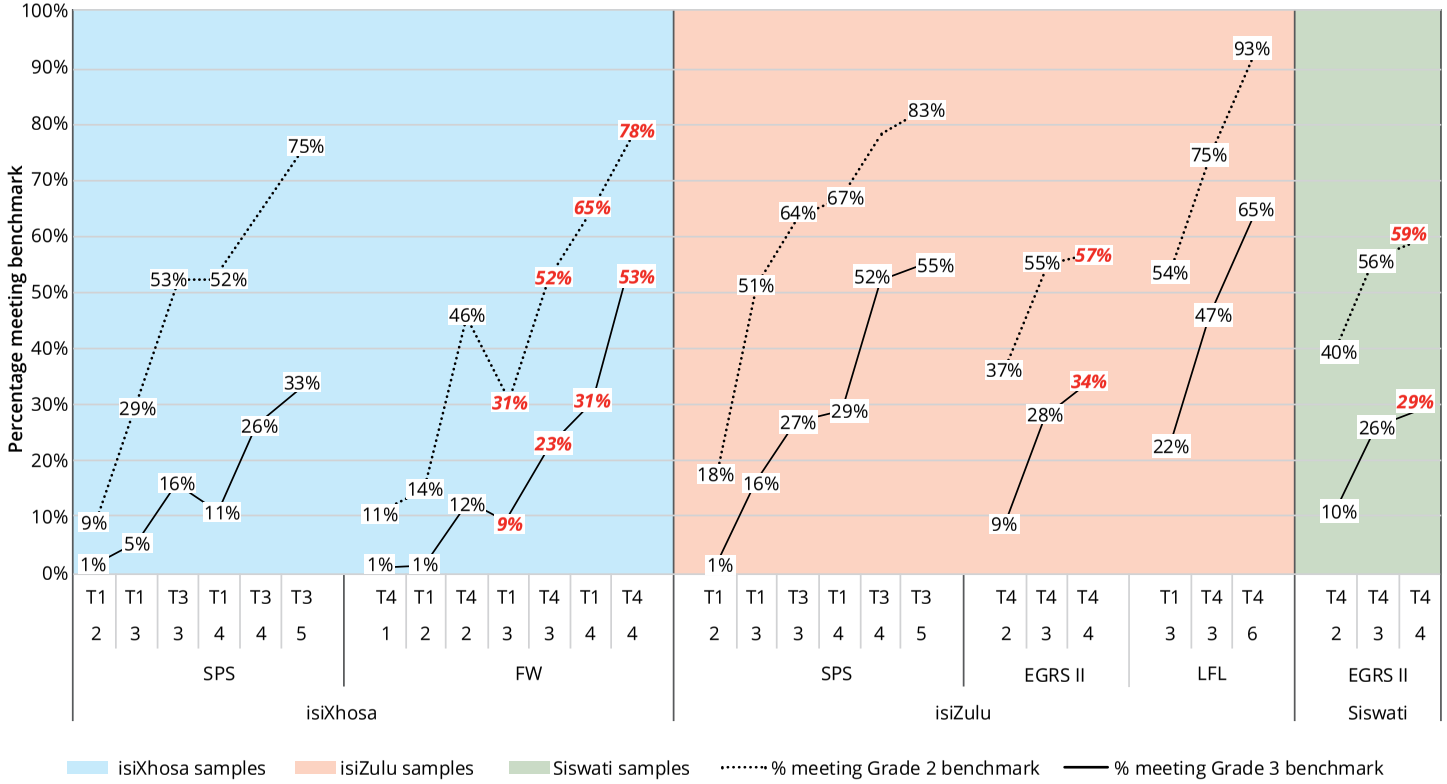
The second stage in the benchmark process was to align the overall 'lower' and 'upper' fluency thresholds, identified from a range of grade data, to a specific grade, by examining whether they are attainable by learners. Figure 7 and Figure 8 summarise by study, grade, and term, the percentage of learners meeting the fluency lower threshold and upper threshold, in Nguni and Sesotho-Setswana languages respectively.

In Nguni languages, across pre-pandemic samples assessed at the end of Grade 3 or the start of Grade 4, 11–47% were reading at least 35 wcpm. Of Sesotho-Setswana language learners assessed at the end of Grade 3 or the start of Grade 4 pre-pandemic, 24–48% were reading at least 60 wcpm. After two years of the pandemic, however, just 5–14% of Grade 3 (term 3) samples reach the Sesotho-Setswana upper threshold of 60 wcpm. Despite this setback, the curriculum requires that children can read with meaning by the end of the Foundation Phase. For this reason, the overall upper threshold for early grade reading fluency, i.e. necessary but not sufficient to support meaning-making, is appropriate as an end of Grade 3 benchmark.

On the road to reaching this Grade 3 benchmark, there are large enough samples reaching the 'lower threshold' by the end of Grade 2 to suggest it is attainable at Grade 2. Depending on the samples considered, 29–54% of Nguni-language samples assessed at the end of Grade 2 or the start of Grade 3, pre-pandemic, were meeting the fluency lower threshold of 20 wcpm. For Sesotho-Setswana language samples, the comparative estimates are 36–56% reaching a fluency lower threshold of 40 wcpm at the end of Grade 2 or the start of Grade 3. For this reason, the 'lower threshold' is finally termed a Grade 2 minimum-fluency benchmark.

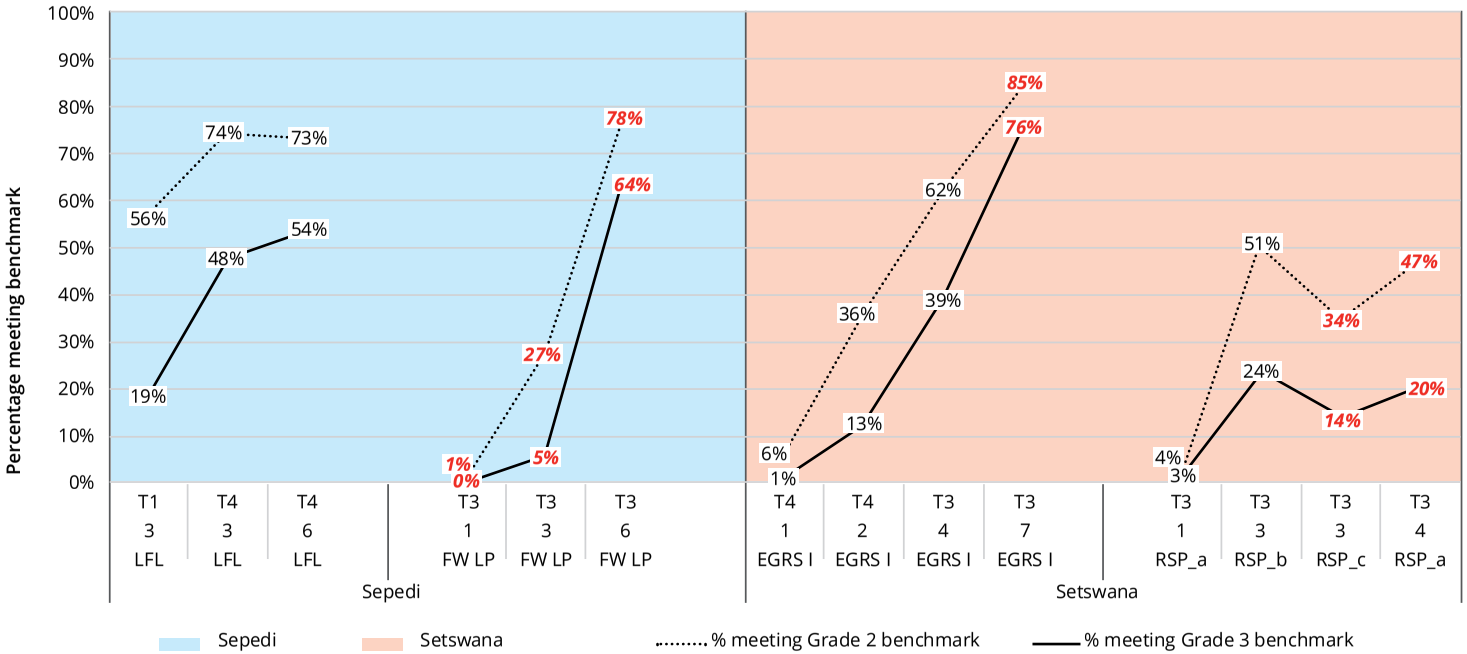
11. We use locally weighted polynomial regressions to avoid imposing any parameters on the relationship between the two variables.

Figure 7 Percentages of learner samples meeting the Grade 2 and Grade 3 fluency benchmarks: Nguni language samples



Notes *Own calculations from raw data. SPS = Story Powered Schools (KwaZulu-Natal and Eastern Cape), FW = Funda Wande (Eastern Cape), EGRS II = second Early Grade Reading Study (Mpumalanga), LFL = Leadership for Literacy (KwaZulu-Natal and Gauteng). Data labels in bold italic red reflect assessments during the pandemic (2020 or 2021). The data are treated here as cross-sections but are longitudinal in the sense of tracking performance across grades in the same schools within a study. Statistics are calculated including non-readers (i.e. ORF = 0).*

Figure 8 Percentages of learner samples meeting the Grade 2 and Grade 3 fluency benchmarks: Sesotho-Setswana language samples



Notes *Own calculations from raw data. FW = Funda Wande (Limpopo), EGRS I = Early Grade Reading Study I (North West), LFL = Leadership for Literacy (Limpopo), RSP = Reading Support Project (North West) in a subset of EGRS I schools. Data labels in bold italic red reflect assessments during the pandemic (2020 or 2021). The data are treated here as cross-sections but are longitudinal in the sense of tracking performance across grades in the same schools within a study. Statistics are calculated including non-readers (i.e. ORF = 0).*

4.3 Establishing a letter-sound benchmark

Having identified minimum grade-specific fluency benchmarks, we worked backwards along the development cline to consider what letter-sound benchmark could support the acquisition of fluency skills (Ardington et al. 2020). In selecting an appropriate letter-sound benchmark, the research team were guided by a combination of insights from the data, expert opinion grounded in the theory of reading, and curriculum requirements. Empirically though, our departure point was an examination of the relationship between accuracy and speed in sounding out letters.

In Nguni languages, the following patterns were observed with respect to reading letter-sounds. First, learners with low accuracy tend to have low speed; then speed improves steadily with accuracy to a point, but beyond this point there are no further improvements in accuracy. Specifically, the letter-sound speed–accuracy gradient tends to flatten around 40 letter-sounds correct per minute (lscpm). We then used longitudinal data to examine whether there are any significant gains in sounding out letters at speeds greater than 40 lscpm. For all samples, we found that improvements in letter-sounds per minute are lower for learners who reached 40 lscpm at the first assessment than for those who, for example, could only correctly sound 20 letters. It is evident that there are diminishing improvements to letter-sound knowledge beyond 40 lscpm, which may reflect that this is simply a constrained skill (i.e. one can only master a finite number of letters in the alphabet). Finally, reaching 40 lscpm was predictive of reaching the oral reading fluency benchmarks in later assessment rounds.

In Sesotho-Setswana languages, we identified very similar patterns, confirming that 40 lscpm is a suitable letter-sound benchmark not only for Nguni languages but also for Sesotho-Setswana languages. Since Nguni and Sesotho-Setswana languages are both alphabetic languages, albeit with variations in the pronunciation of letters and their frequency in these languages, it is logical to adopt the same letter-sound benchmark for the end of Grade 1.

The benchmark of 40 lscpm is not completely out of reach by the end of Grade 1. Of a Setswana sample assessed pre-pandemic in term 4 of Grade 1, about a quarter (24%) were meeting the letter-sound benchmark. However, the majority of Setswana learners are acquiring letter-sound knowledge too slowly, with 13% unable to sound one letter correctly at this stage (Wills et al. 2022). Among Nguni language samples, about 7–32% of learners assessed at the end of Grade 1 or the start of Grade 2 were meeting the benchmark of 40 lscpm.

Table 2 summarises grade-specific minimum benchmarks in African languages that have been established to date for the Foundation Phase grades. The table also summarises the percentage of learners from available samples that meet these benchmarks at the specified grade. Since these grade-specific minimum benchmarks are empirically grounded in contextually relevant data, they are not set so high as to be out of reach for the vast majority of learners (a problem that plagues many benchmarking initiatives in developing countries), yet are aspirational enough to encourage improvement along a developmental pathway.

Table 2 Grade-specific minimum reading benchmarks in Nguni and Sesotho-Setswana languages

	Nguni home language		Sesotho-Setswana home language	
	Benchmark	% of non-representative grade samples meeting benchmark pre-pandemic	Benchmark	% of non-representative grade samples meeting benchmark pre-pandemic
By the end of Grade 1, all learners should be able to sound	40 lscpm	7–32% [a]	40 lscpm	24% [a]
By the end of Grade 2, all learners should be able to read at least	20 wcpm	29–54% [b]	40 wcpm	36–56% [b]
By the end of Grade 3, all learners should be able to read at least	35 wcpm	11–47% [c]	60 wcpm	24–48% [c]

Notes *a = end of Grade 1 or start of Grade 2 samples, b = end of Grade 2 or start of Grade 3 samples, c = end of Grade 3 or start of Grade 4 samples.*

5 Lessons learnt and taking the benchmarking agenda forward

A key lesson in the ongoing journey to develop African language benchmarks has been that strong collaboration between funders, stakeholders, research organisations, and African language specialists is vital to taking the benchmarking agenda forward. Collaboration has supported innovation and excellence in the benchmarking process while promoting capacity-building.

Table 3 provides a summary of the progress towards establishing benchmarks in all 11 official languages, with estimations on when the various benchmark reports and measurements will be available for use in the sector.

We also particularly note the collaborative support of various donors interested in benchmarking, enabling the adoption of a single set of benchmarks per language group rather than competing benchmarks produced by different donors or education organisations. There has been increasing coordination and consolidation of donor funds and efforts in order to ensure maximum returns and efficiencies in funding for reading benchmarks. This process has been led by the DBE and has entailed periodic updates, joint meetings and bilateral meetings, with careful replication of processes and methodologies, and capacity alignment. In the past, this kind of collaboration around benchmarks was absent. For example, in 2015 one donor was collaborating with a section of the DBE; in 2017, this increased to two donors; to date, there have been at least seven funders and partners contributing financial, material, and data resources to the benchmarking agenda.

Table 3 Summary of benchmarking plans and progress

Progress	Public release/ availability
1. Nguni language group report	
Consolidated, adopted by the DBE and released publicly	October 2020
2. English First Additional Language report	
Analysis and reporting in progress	July 2022
3. Sesotho-Setswana language group report	
Consolidation under way	October 2022
4. Afrikaans language report	
Data analysis under way	October 2022
5. Xitsonga language report	
Data collection in October 2022	January 2023
6. English Home Language report	
Fundraising under way	July 2023
7. Tshivenda language report	
Fundraising under way, data-collection planned for August 2023	January 2024

Related to this multi-donor engagement, the investment in early grade reading improvements seen through the implementation and evaluation of early grade reading studies has been commendable in the past decade. The availability of longitudinal data, collected in transparent and replicable ways, has been a significant galvaniser in sustaining interest, building capacity, and providing data for reanalysis. If best practices are followed in the design of instruments to assess reading in African languages, future data-collection efforts could also be optimised for benchmarking.

6 Opportunities and next steps

While there is much excitement about collaborations to benchmark African languages, the true value of these efforts will only be established once early grade reading benchmarks are formally incorporated into the curriculum, used to monitor reading nationally (aligning with broader national efforts to track 'learning poverty'), and used by teachers to track children's reading trajectories.

Specifically, we identify four factors that need to be in place before the efficacy of reading benchmarks in supporting a national reading improvement agenda is realised. Firstly, the remaining plans to establish Foundation Phase and Intermediate Phase reading benchmarks for *all* Home Languages *and* English as a First Additional Language must be completed as planned. In this regard, it will be important to restrict benchmarks to reading sub-skills that have been agreed, as the experiences of other developing countries show that too many benchmarks leads to confusion and cognitive overload (RTI International 2017b).

Secondly, it would be important to create a baseline on how many learners reach these benchmarks for each language, through a nationally representative sample. While much has been written in the basic education sector plan on the importance of reading in the early grades, national measurement of this has not recently taken place. The availability of these early benchmarks, developed through sound methods, enables objective measurement of progress over time, allowing systemic information to guide curriculum strengthening in the Foundation Phase. This would also enable national and provincial accountability and reporting against national sector plan goals, as well as against the president's declaration that every child should read for meaning by age ten. Connecting reading benchmark use to a wider national Systemic Evaluation programme may be the best approach to institutionalise the adoption of benchmarks. The Systemic Evaluations are planned to be nationally representative surveys, assessing literacy (and mathematics) in Grades 3 and 6 in the primary grades[12] (DBE 2020b). The chapter by Nuga Deliwe and Van der Berg (2022) provides a broader discussion on the current status of the Systemic Evaluations. It is worth noting though, that the Systemic Evaluations are intended to be administered through whole-class written assessments. Measuring early grade reading, however, would require one-on-one testing of a sample of learners. While funding and capacity have already been allocated to the Systemic Evaluations, one-on-one testing would have direct additional capacity and cost implications.

Thirdly, the integration of these benchmarks into the curriculum process to enhance teaching and learning will need to be carefully considered. The Foundation Phase curriculum will need to be amended to incorporate the benchmarks for each respective language, focusing on assessment criteria and measures of proficiency. In addition, the curriculum could broadly incorporate grade-specific minimum reading benchmarks together with remediation strategies to address learning gaps for learners not reaching the benchmarks. Incorporating the benchmarks into future frameworks and guidelines on reading, such as the National Framework for the Teaching of Reading in African Languages in the Foundation Phase, published in 2020, would also benefit and contribute to coherence. Concurrently, reading benchmarks, and guidance on how they can be used to track learners' reading development, would need to be absorbed into pre-service teacher education programmes.

Fourthly, a clear communication strategy will also be required to encourage the use of benchmarks, especially since the relationship between research findings and pedagogy is not always direct, while highlighting that speed in decoding should not be emphasised over accuracy or the importance of teaching skills that support meaning-making. For schools and teachers, clear guidance is required on how benchmarks can augment the value of one-on-one reading assessments in the classroom, and how collating formative reading assessments across classrooms can provide school-level visibility of learner progress in reading against established benchmarks. Classroom-level assessments of reading may ultimately require a revision of the EGRAs, how they are used, and innovations that improve their ease of use.

Furthermore, a clear public communication strategy that clarifies grade-related reading expectations through benchmarks may give parents tangible and simple

12. At the secondary school level, Grade 9 will be sampled.

measures against which to gauge their children's reading progress. Lessons from the NGO Pratham (Banerjee et al. 2010; Banerji 2013) have shown how stimulating such efforts can enable community engagement and support local accountability for learning improvements, as well as providing insight into unsuccessful practices that South Africa should avoid.

Acknowledgements

We acknowledge funding for this chapter from the Economic and Social Research Council (grant ES/T007583/1), ReSEP at Stellenbosch University, the Department of Basic Education, Zenex Foundation, and Funda Wande.

References

Abadzi, H. (2012). Developing cross language metrics for reading fluency measurement: Some issues and options. Global Partnership for Education Working Paper Series on Learning No. 6. World Bank.

Ardington, C., Wills, G., Pretorius, E., Deghaye, N., Mohohlwane, N., Menendez, A., Mtsatse, N. & Van der Berg, S. (2020). Technical Report: Benchmarking Early Grade Reading Skills in Nguni Languages. Stellenbosch: ReSEP, Stellenbosch University. Cape Town: SALDRU, University of Cape Town. Chicago, ILL: NORC at the University of Chicago. Pretoria: DBE.

Ardington, C., Wills, G., Pretorius, E., Mohohlwane, N. & Menendez, A. (2021). Benchmarking oral reading fluency in the early grades in Nguni languages. *International Journal of Educational Development* 84, 102433.

Ardington, C., Mohohlwane, N., Sebaeng, L., Jodar, P., Beggs, C., Makgabo, C., Maledu, A. & Zwane, Z. (2022). Sepedi Early Grade Reading Skills Benchmarks. 2022. Technical Report. Pretoria: DBE.

Azevedo, J.P. (2020). Learning Poverty: Measures and Simulations. World Bank Policy Research Working Paper No. 9446. World Bank

Banerjee, A.V., Banerji, R., Duflo, E., Glennerster, R. & Khemani, S., (2010). Pitfalls of participatory programs: Evidence from a randomized evaluation in education in India. *American Economic Journal: Economic Policy* 2(1), 1–30.

Banerji, R. (2013). Learning for all: The challenge of taking everyone along. In Henck, A., Kenny, K., Lei, P., Paxton, W. & Talbot-Zorn, M. (Eds) *The Right to Learn: Community Participation in Improving Learning*. Westport, CT: Save the Children.

Betts, E. A., (1946). *Foundations of Reading Instruction, with Emphasis on Differentiated Guidance*. New York, NY: American Book Company.

Bulat, J., Dubeck, M., Green, P., Hraden, K., Henny, C., Mattos, M., Pflepsen, A., Robledo, A. & Sitabkhan, Y. (2017). What works in Early Grade Literacy Instruction. *RTI Press Publication Occasional Paper No. OP-0039-1702*. Research Triangle Park, NC: RTI Press.

Department of Basic Education (DBE). (2010). Annual Report 2009/2010. Pretoria: DBE

Department of Basic Education (DBE). (2011). National Curriculum Statement (NCS), Curriculum and Assessment Policy Statements (CAPS), Grade R-3, English Home Language. Pretoria: DBE

Department of Basic Education (DBE). (2013). Policy on the organisation, roles and responsibilities of Education Districts. Government Gazette No. 36324. Pretoria: DBE

Department of Basic Education (DBE). (2019a). National Curriculum Statement (NCS), Curriculum and Assessment Policy Statements (CAPS), GET CAPS Amendment. Pretoria: DBE

Department of Basic Education (DBE). (2019b). DBE to implement Early Grade Reading Assessment. From: www.education.gov.za/ArchivedDocuments/ArchivedArticles/EGRA.aspx Accessed 10 February 2022.

Department of Basic Education (DBE). (2020a). National Framework for the Teaching of Reading in African Languages in the Foundation Phase. Pretoria: DBE

Department of Basic Education (DBE). (2020b). Action Plan to 2024: Towards the Realisation of Schooling 2030. Pretoria: DBE

Department of Basic Education (DBE) & World Bank. (2021). African Languages Reading Benchmarks in South Africa. Dialogue Concept Note. Pretoria: DBE.

Dowd, A .J. & Bartlett, L., (2019). The need for speed: Interrogating the dominance of oral reading fluency in international reading efforts. *Comparative Educational Review* 63, 189–212.

Gove, A. K. & Wetterberg, A. (2011). *The Early Grade Reading Assessment: Applications and Interventions to Improve Basic Literacy.* North Carolina: RTI Press.

Govender, R. & Hugo, A. J. (2020). An analysis of the results of literacy assessments conducted in South African primary schools. *South African Journal of Childhood Education* 10(1),1–13.

Graham, B. E. & Van Ginkel, J. A. (2014). Assessing early grade reading: the value and limits of words per minute. *Language, Culture and Curriculum* 27(3), 44–259.

Fuchs, L. S., Fuchs, D., Hosp, M. K. & Jenkins, J. R. (2001). Oral reading fluency as an indicator of reading competence: A theoretical, empirical, and historical analysis. *Scientific Studies of Reading* 5(3), 239–256.

Hasbrouck, J. & Tindal, G.A. (2006). Oral reading fluency norms: A valuable assessment tool for reading teachers. *The Reading Teacher* 59(7),636–644.

Jukes, M., Cummiskey, C. & Gargano, M. (2018a). Guidance Note: Setting Data-Driven Oral Reading Fluency Benchmarks. Research Triangle Park, NC: RTI International.

Jukes, M., Cummiskey, C., Gargano, M. & Dubeck, P. (2018b). Data-Driven Methods for Setting Reading Proficiency Benchmarks. Produced for Room to Read. Research Triangle Park, NC: RTI International.

Katz, L. & Frost, R. (1992). The reading process is different for different orthographies: The orthographic depth hypothesis. In Frost, R. and Katz, L. (Eds), *Orthography, Phonology, Morphology, and Meaning*. 67–84. Amsterdam: Elsevier.

Katz, .J. & Lawrence, M. (2012). Isobho lamatshe (Early Graded Readers), Vula Bula. Johannesburg: Molteno Institute for Language and Literacy.

Khulisa Management Services. (2020). *Setting Reading Benchmarks in South Africa*. USAID Publication. Johannesburg: DBE.

Khumalo, J. S. M. (1987). An autosegmental account of Zulu phonology. (Unpublished doctoral thesis). University of Witwatersrand, Johannesburg.

Land, S. (2016). Automaticity in reading isiZulu. *Reading & Writing: Journal of the Reading Association of South Africa* 7(1), 1–13.

Louwrens, L. J. & Poulos, G. (2006). The status of the word in selected conventional writing systems: The case of disjunctive writing. *Southern African Linguistics and Applied Language Studies* 24(3), 389–401.

Maake, N. P. (1993). C. M. Doke and the development of Bantu literature. *African Studies* 52(2), 77–88.

Machobane, M. & Mokitimi, M. (1998). Problems in the development of Sesotho orthography. In Prah, K. K. (Ed), *Between Distinction and Extinction: The Harmonisation and Standardisation of African Languages*. 203–212. Johannesburg: Witwatersrand University Press.

Machobane, M. E., Matlosa, L. & Mokitimi. M. I. (2003). Harmonisation of orthography in the Sotho Group of languages. In Chebanne, A., Jokweni, M., Mokitimi, M. A. & Ngubane, S. (Eds), *Unifying Southern African Languages: Harmonisation and Standardisation*. 135–142. Cape Town: CASAS.

Makalela, L. & Fakude, P. (2014). Barking at texts in Sepedi oral reading fluency: Implications for edumetric interventions in African languages. *South African Journal of African Languages* 34 (1), 71–78.

Mathivha, M. E. R. (1973). *Venda as a bridging language*. University of the North. Series 26.

Miller, P., Kargin, T. & Guldenoglu, B. (2014). Differences in the reading of shallow and deep orthography: Developmental evidence from Hebrew and Turkish readers. *Journal of Research in Reading* 37(4), 409–432.

Mohohlwane, N. (2020). Mother-tongue instruction or straight-for-English? The primary education policy dilemma. ReSEP Working Paper, April 2020. Stellenbosch University: Department of Economics.

Nengovhela, M. A. (2005). Derivational morphology in Tshivenda: an analysis of word-formation processes. (Unpublished doctoral thesis). University of Limpopo, Polokwane.

Nkomo, D. & Wababa, Z. (2013). IsiXhosa lexicography: Past, present and future. *Lexikos* 23(1), 348–370.

Nuga Deliwe, C. & Van der Berg. (2022). The role of assessment in Foundation Phase improvement: The Annual National Assessments and beyond. In Venkat, H. & Roberts, N. (Eds), *Early Grade Mathematics in South Africa*. Cape Town: Oxford University Press.

Paris, S. C. & Hamilton, E. E. (2011). The development of children's reading comprehension. In Israel, S. E. & Duffy, G. G. (Eds), *Handbook of Research on Reading Comprehension*. 32–53. New York, NY: Routledge.

Probert, T. & De Vos, M. (2016). Word recognition strategies amongst isiXhosa/English bilingual learners: The interaction of orthography and language of learning and teaching. *Reading & Writing: Journal of the Reading Association of South Africa* 7(1), 1–10.

Ramaphosa, C. (2019) President Cyril Ramaphosa: State of the Nation Address 2019. South African Government. 7 February 2019. *www.gov.za/speeches/president-cyril-ramaphosa-2019-state-nation-address-7-feb-2019-0000* Transcript.

RTI International. (2016). *Early Grade Reading Assessment (EGRA) Toolkit (2nd edition)*. Washington, DC: USAID.

RTI International. (2017a). All Children Reading – Asia. EGRA Benchmarks and Standards Research Report. Research Triangle Park, NC: RTI International.

RTI International. (2017b). Setting and Using Benchmarks for Reading Performance. Washington, DC: RTI International.

Spaull, N., Pretorius, E. & Mohohlwane, M. (2020). Investigating the comprehension iceberg: Developing empirical benchmarks for early-grade reading in agglutinating African languages. *South African Journal of Childhood Education* 10(1), 1–14.

Spear-Swerling L. (2006). Children's reading comprehension and oral reading fluency in easy text, Reading and Writing. *An Interdisciplinary Journal* (19), 199–220.

Stern, J. & Piper, B. (2019). Resetting Targets: Examining Large Effect Sizes and Disappointing Benchmark Progress. Occasional Paper. Research Triangle Park, NC: RTI International .

Thomas, S. & Peng, W. J. (2004). The use of educational benchmarks in indicator publications. In Scheens J., & Hendricks, M. (Eds), *Benchmarking the Quality of Education, Faculty of Behavioural Sciences*. University of Twente: Enschede.

UNESCO. (2016). Education for people and planet: Creating sustainable futures for all. Global Education Monitoring Report. Paris: UNESCO.

Wang, Z., Sabatini, J., O'Reilly, T. & Weeks, J. (2019). Decoding and reading comprehension: A test of the decoding threshold hypothesis. *Journal of Educational Psychology* 111(3), 387–401.

Wills, G., Ardington, C., Pretorius, E., Pooe, E., Ramagoshi, R. (2022) Benchmarking Early Grade Reading Skills: Setswana and English First additional Language. Technical Report. Johannesburg: Khulisa Management Services.

Wilsenach, C. (2019). Phonological awareness and reading in Northern Sotho – Understanding the contribution of phonemes and syllables in Grade 3 reading attainment. *South African Journal of Childhood Education* 9(1), 1–10.

World Bank. (2019). *Ending Learning Poverty: What Will It Take?* World Bank, Washington, DC.

06

Early grade reading instruction in South African classrooms: 2010–2020

URSULA HOADLEY & COLLEEN BOYD

Abstract

A review by Hoadley (2012) described the features of South African primary school classrooms and identified classroom factors associated with learning gains in medium- and large-scale studies up until 2010. Since that review, much has happened in the reading instruction space in South Africa. This chapter reviews current research (from 2010 onwards) focused on literacy classrooms, identifying factors associated with improvements in reading outcomes, and describing shifts in reading instructional practices over the last 10 years. The chapter argues that there have been substantial changes in classrooms. Key shifts in instructional practices may be attributable to a raft of early grade reading interventions, and two key policy interventions: the Curriculum and Assessment Policy Statement and the DBE Workbooks. The review further identifies crucial aspects of classroom practice that have not changed: pacing, individualisation, feedback, and teacher knowledge.

KEYWORDS
reading instruction, literacy instruction, classroom observation, South African pedagogy

1 Introduction

An awareness of a 'reading crisis' both globally (World Bank 2019) and locally has corresponded to increased focus on what happens in reading classrooms and recognising reading pedagogies as a fulcrum for improving literacy levels. A review by Hoadley (2012) outlined reading instructional practices in South African primary school classrooms associated with learning gains up until 2010. A summary of the findings from that review is shown in Table 1. The review found severe shortages of texts across classrooms associated with a largely oral pedagogy focused on decoding single letters, words, and sentences. Little evaluation was evident across classrooms, pacing was found to be extremely slow, and teachers' levels of competence in teaching reading was weak.

Table 1 Summary findings from Hoadley (2012)

Teaching	• Students mainly read isolated words rather than extended texts
	• Learners mainly wrote or copied single words and single sentences. There was very little writing of extended text.
	• Focus was on decoding texts rather than comprehension and reading for meaning
	• Very little vocabulary and spelling development
	• Little systematic teaching of phonics and decoding skills
Text	• Students had limited opportunities to handle books and bound material • Oral discourse predominated in classrooms • Severe shortage of sufficient reading material at a range of reading levels, and especially in African languages
Evaluation	• Little or no formative assessment (elaboration on learner responses)
	• Learning was largely communalised with little attention to individual learners' progress
Time	• The pace of instruction was very slow
Teacher knowledge	• Low levels of teacher competence in teaching reading

Since the 2012 review, there has been considerable change in the reading instruction space in South Africa. At the same time, there have been modest improvements (pre-Covid-19) in reading levels (Van der Berg & Gustafsson 2019). Although these improvements were off a low base, and poor reading outcomes in the Foundation Phase remain a great cause for concern, Gustafsson's estimates (2020) suggest the speed of improvements in reading has been impressive compared to what the fastest improving countries in recent history have achieved. This chapter reviews current research from 2010 onwards that is focused on Foundation Phase (Grade R to Grade 3) literacy classrooms. It aims to identify elements of instruction that may have contributed broadly to this improvement. It also considers particular intervention studies that aimed to identify specific factors associated with improvements in reading outcomes. The chapter draws on both published and grey literature to develop a framework for the consideration of reading instruction practices. Key shifts from 2010 to 2020 are identified and discussed in relation to the framework.

1.1 Changes in the South African early grade reading landscape since 2010

A number of key policy and programmatic changes have taken place since 2010. Perhaps the most notable was a reform of the national curriculum, which introduced the Curriculum and Assessment Policy Statement (CAPS) in 2012.[1] This highly specified curriculum delineated the main components for reading instruction: phonics, comprehension, vocabulary, and fluency. It also mandated different forms of reading: Shared, Paired, Group Guided (GGR), and Independent Reading, as well as Read-Alouds and oral language development (listening and speaking). CAPS also specified the required amount of time to be spent on different aspects of reading instruction (as shown in Table 2).

Table 2 Specification of Foundation Phase reading instruction in CAPS (DBE 2011)

Reading activity	Number of days per week	Amount of time per day	Total time per week
Phonics	5	15 mins	75 mins
Shared Reading	3	15 mins	45 mins
Group Guided Reading	5	30 mins	150 mins
Writing	3	15 mins	45 mins

The second significant reform relevant to reading was the introduction of more text into classrooms. The main source was the DBE Workbooks from 2011, providing all Foundation Phase learners with a CAPS-aligned workbook containing fiction and non-fiction text and activities, available in all 11 official languages. A second major source of text was increased development and provision of readers. Notable in this regard was the Vula Bula series, readers that have been appropriately sequenced in terms of the linguistic demands of reading in different African languages (as opposed to being translations from English as occurred in the past) (see Katz & Rees 2022). Vula Bula books have been widely distributed since their development within the context of the Gauteng Primary Literacy and Mathematics Strategy (GPLMS) in 2011, and currently also form part of the learner materials provided in a number of large-scale interventions. In 2019, Vula Bula anthologies (the storybooks collected into grade-level single volumes) were distributed to all learners in the Eastern Cape, with positive reading shifts in reading outcomes reported (see Ardington & Spaull 2022).

The third change was the introduction of the Annual National Assessments (ANAs) from 2011 to 2014. These provided the first major national assessment of reading at primary school. The low scores on the ANAs were results that were much more accessible and direct for teachers than those of PIRLS or SACMEQ. Despite extensive criticism of the tests, they served to alert the system generally to the very low levels of reading across the grades.

1. CAPS built on the Foundations for Learning (FFL) programme (DOE 2008a) and the policy document Teaching Reading in the Early Grades: A Teacher's Handbook (DOE 2008b) that preceded CAPS with a similar focus on types of reading and reading components.

A fourth key shift in the reading landscape was a growth in interventions aimed at early grade reading. Appendix 02 shows a comprehensive timeline of interventions implemented throughout the review period (2006–2022). Large-scale studies, of particular focus here, pursued a 'structured pedagogy' approach, following the success of earlier studies, like Learning for Living (Sailors et al. 2010) and the Systematic Method for Reading Success (Piper 2009) – an approach that has become dominant in interventions across Africa and elsewhere to address the identified 'reading crisis' (Piper & Dubeck 2021).

Structured pedagogy is a broad term referring to a range of interventions that include a combination of learning materials, lesson plans (often scripted) or teacher guides, and training and/or coaching. The aim is to shift instructional practice through rigorously specified and paced programmes that ensure coverage of a range of reading instruction components. South African studies have included the GPLMS, the Reading Catch-Up Programme, the DBE-led Early Grade Reading Studies (EGRS I and EGRS II), the Programme to Improve Learning Outcomes (PILO), Room to Read, the National Education Collaboration Trust (NECT), and Funda Wande. Details of these studies and the wide range of reading interventions in schools in the period of this review are provided in Appendix 01 (see also Meiklejohn et al. 2021).

Studies that were rigorously evaluated (with treatment and control groups; quantitative and qualitative data; and learner performance measured on a range of tests) included the GPLMS, EGRS I, EGRS II, the Funda Wande Coaching Intervention in the Eastern Cape, and the Funda Wande Teacher Assistant and Learner Workbook intervention in Limpopo. All of these programmes showed positive learning gains of 30%–110% of a year of learning after one year of intervention. All of these interventions also included a mix of materials (including lesson plans and graded readers), and teacher support and development (different modes of training, or coaching and teaching assistants). It is possible to conclude from this body of research that, like elsewhere, structured pedagogy interventions have an impact on students' reading outcomes. This chapter considers mechanisms at the level of the classroom associated with the shifts in some of these interventions specifically, as well as shifts in reading pedagogies more broadly. Given the changes in the landscape sketched above, what does research say has changed and what has remained the same in early grade reading classrooms in South Africa?

2 Methodology

This review constitutes an integrative review, a more iterative and flexible form of systematic review. The goal of an integrative review is to summarise the accumulated state of knowledge in a defined field of interest. While aiming, like systematic reviews, to synthesise research findings into a "coherent whole" (Cooper 1982, 291), integrative reviews are defined by the use of varied data sources, comprising both empirical and theoretical literature, and a combination of data from diverse research designs (Jones-Devitt et al. 2017).

The review draws on published and grey material. It includes all classroom-based studies focused on South African early grade classrooms (Grades R to 4) teaching reading in Home Language. This excludes research focused on teaching English

as an additional language but includes studies in multilingual classrooms, where the medium of instruction was English, but the majority of learners were African-language speakers. Recent evaluations of large-scale interventions and some larger-scale descriptive studies provide reliable empirical findings, and a range of small-scale studies offer important theoretical insights and add depth to our understanding.

The issue of measurement of classroom practices has been an ongoing source of debate and development since the 1960s, especially in relation to large-scale research. Often based on self-reporting, teacher accounts of their own practice have proven to be problematic not only because of memory, comprehension, judgement, and social desirability (Douglas 2009); in addition, teachers' reported practice has consistently been found to be different to what they actually do in their classrooms (Argyris and Schön 1974).This is a finding confirmed across a wide range of South African studies (for example, Mudzielwana et al. 2012; Pretorius & Knoetze 2013; Stoffelsma 2019). The review thus only selected studies based on classroom *observations*, with the assumption that this methodology yields more reliable accounts of teacher practices. A number of high-quality, insightful studies that interviewed or surveyed teachers regarding their practices are thus excluded (for example, Botha 2017; Ardington & Meiring 2020; Pretorius & Klapwijk 2016).

Detail on the studies is given in Appendix 01. A number of the studies have methodological limitations such as being limited by small sample sizes, lack of rigour, and a lack of controlled comparisons. Nonetheless, as in the prior review, what is of interest are consistencies across small-scale studies and how these relate to larger-scale ones. Three types of studies were identified, and a discussion follows.

The first set of studies comprises three studies, all of which included interventions, and employed proper impact evaluations with pre- and post-tests of student reading outcomes measured in treatment and control groups. They also had a sizeable sample of classroom observations that attempted to meaningfully relate pedagogy to outcomes. The first study was *EGRS I* (Taylor et al. 2017), a three-year structured pedagogy intervention that included a classroom observation study of 60 schools (Kotzé 2017), as well as case studies of four Grade 2 classrooms (Reeves 2017) and a further set of case studies of seven classrooms (Fleisch & Dixon 2019). *EGRS II* was an intervention to support English as a First Additional Language but included a classroom observation study of 52 Home Language lessons (Thulare 2019). Both EGRS I and II showed positive impacts on reading outcomes. The third study, the Story Powered Schools (*SPS*) Project in KwaZulu-Natal and the Eastern Cape (Ardington et al. 2019), showed no impact of its intervention, which entailed various activities aimed at developing reading for enjoyment (for example, establishing reading clubs). The lack of effect was confirmed at the classroom level through a study of 40 teachers in 20 schools. The SPS classrooms were not implementing the SPS programme, but they were all following either the NECT lesson plans for reading or the PILO daily scripted lesson plans and materials for reading lessons (Hoadley 2019). In this way, they provided useful insights into reading instruction in the context of these large-scale (though not yet evaluated) programmes.

A second set of studies attempted to link instruction to reading outcomes, either in the context of an intervention or teaching-as-usual. The Magic Classroom Collective (*MCC*) in the Eastern Cape was a design-based research and intervention study that included cycles of material design, teacher development and support, and classroom observation and analysis over a five-year period. Learners were tested with systemic

literacy tests at different points in the project, showing significant gains over time. At baseline in 2007, there were no learners scoring above 40% on the test, but by 2015, one third of learners were scoring in this range, with 11% scoring above 60%. While the majority were still not reading independently, there was evidence of the emergence of independent reading (Ramadiro & Porteus 2017). Given the lack of a control group, the MCC was not able to measure how much project learners were performing over and above the general improvement in all schools that occurred between 2007 and 2015. Nonetheless, the study yielded key qualitative insights into reading instruction in rural classroom contexts.

The national Implementation Evaluation of the National Curriculum Statement Grade R to 12 Focusing on the Curriculum and Assessment Policy Statements (*DPME* 2017) and the Schools Performing Above Demographic Expectations (*SPADE*) study in the Western Cape (Hoadley 2017; Hoadley 2018) attempted to show a relationship between pedagogy and performance, in teaching-as-usual classrooms. Both employed a matched-pairs approach but failed to find a relation. One reason for this is that achievement outcomes in the schools under investigation generally fell within a very low achievement range, thus the difference between better and worse outcomes was often marginal. Also, the data were cross-sectional, and thus not able to pick up cumulative pedagogic effects over time. These two studies have been treated as descriptive studies in the review.

A third set of studies described classrooms at large- and at small-scale without reference to reading outcomes or a specific intervention. Two large-scale studies of classrooms emerged from the National Educational Evaluation and Development Unit (NEEDU). *NEEDU 2012* (Taylor 2013) focused on curriculum delivery in the Foundation Phase and observed 215 Grade 2 classrooms, while *NEEDU 2013* observed reading instruction in 112 rural, primary, multigrade classrooms (Taylor 2014). A further seven small- and medium-scale studies likewise offered descriptive findings of reading classrooms.

All studies included in the review are shown in Table 9 in Appendix 01. In the discussion of the findings that follows in Section 4, the larger studies are referred to by their project names (in *italics* above). Smaller studies are referred to by publication citation.

3 Framework for investigating early grade reading instruction

In developing a framework for the organisation of findings in the review, we drew on three main sources. The first was a framework developed by Hoadley (2017), grounded in the work of Bernstein (1990) that attends to the structural features of early grade pedagogy. The second source was the work of Kim et al. (2016), who adapted the useful six Ts of effective reading instruction, a mnemonic derived from Allington (2002). The third was a consideration of an "instructional framework that integrates multiple principles to promote students' successful learning" developed by Stern et al. (2021) specifically in relation to structured pedagogy. Table 3 shows the three frameworks in summary, diagrammatic form.

Table 3 Three frameworks for the consideration of reading instruction

Hoadley (2017)	Kim et al. (2016)	Stern et al. (2021)
Classroom discourse type	Time	Maximising instructional time
Engagement with text	Teaching	Practising systematic and explicit instruction
Evaluation or feedback	Text	Establishing instructional routines
Pacing	Tongue	Providing scaffolding
Lesson coherence	Testing	Making assessment-informed decisions
Cognitive demand	Talk	Fostering social and emotional learning and engagement
Reading practices		
Time on task		
Orderliness or discipline		
Individualisation		

We found substantial overlap across the frameworks and created our own composite framework. In line with the methodology of an integrative review, we worked with the framework iteratively in relation to the studies reviewed, refining and augmenting it where necessary. In line with the function of integrative reviews, we offer in the framework a set of generalisations about substantive issues in the field of reading instruction from studies directly bearing on the dimensions, and consider the research literature as a whole in relation to these dimensions. Important though they are, our framework does not include behavioural, social or emotional dimensions, given that none of the studies reviewed addressed these issues. The framework is shown in summary in Table 4. Each of the ten dimensions is discussed briefly below.

Table 4 Framework for the analysis of reading instruction

Dimension	Definition
1 Reading activity	Content and methods of early grade reading instruction
2 Time on task	Allocation and use of time for reading instruction
3 Pacing	Time allocated in the lesson relative to the difficulty or extent of the content or activities introduced
4 Text availability	Amount of and access to level-appropriate reading text
5 Text use	Systematic use of text, especially text talk
6 Language	Language of reading instruction relative to home language of learner
7 Evaluation or feedback	Transmission of criteria for successful reading
8 Lesson structure or coherence	Linkages between components and instructional routine
9 Individualisation	Recognition of individual performances and differentiated pedagogic strategies
10 Teacher knowledge	Knowledge of the content and skills to teach reading and evaluate learners

Reading activity (1 in Table 4) refers to the 'what' of reading instruction. It includes the foundational components of teaching reading, including the 'five pillars' – phonemic awareness, word recognition (phonics and sight words), fluency, vocabulary, and comprehension (National Reading Panel 2000) – as well the extension of this to oral language development (Snow et al. 2005). It also includes different methods of reading – Shared, Paired, Group Guided, Independent, and Silent Reading, as well as Read-Alouds. It also extends to storytelling. Writing is included in reading as it is understood to constitute a fundamental part of learning to read especially in the early grades. Up until the implementation of CAPS in 2012, the teaching of these specific reading activities was not part of official reading instruction policy. After 2012, most of these activities were specified in the curriculum as requirements in all early grade reading classrooms.

Time concerns two dimensions in the framework. The first is *time on task* (2 in Table 4) and the extent to which time is allocated and used for reading instruction. The second is *pacing* (3), which considers whether time spent in the lesson is appropriate, relative to the difficulty or extent of the content or activities introduced.

Text also comprises two dimensions. The first is *text availability* (4), concerning how much text is available and whether it is accessible to teachers and learners. The other is *text use* (5), relating more directly to the way teachers use text in class, and the amount and quality of their text talk (as opposed to oral teaching that is not grounded in printed language).

Language (6) refers to a key issue in debate and research around teaching reading in learners' home language. While most agree that it is optimal for learners to learn to read in their mother tongue, the practice in many classrooms reflects a very different range of experiences for learners. A 2011 review of all South African schools showed that 72% of learners are in schools where most children (75%+) have the same home language as the one that is used in their school in the Foundation Phase. In Gauteng, 30% of learners learn to read in a language that is not their home language, similar to Mpumalanga (Spaull & Pretorius 2019, 151). The result is that a considerable number of learners are schooled in a language that is different to the one that they speak at home.

Evaluation or feedback (7) refers to the transmission of criteria for successful reading, through instruction and through formative and formal assessment. Broader research shows the need for *explicit* feedback, especially for students who come from less literate or less pedagogically oriented homes (Morais et al. 2004; Reeves 2005; Lubienski 2004). The related notion of direct instruction is common across the literature on structured pedagogy (for example, Kim & Davidson 2019), arguing that, for effective literacy acquisition, children need explicit instruction in discovering the rules of written language.

Lesson structure or coherence (8) concerns the ways in which instructional routines are established in the classroom. Structured pedagogy programmes in particular aim explicitly to improve classroom instructional routines and to provide teachers with new and extended repertoires (Fleisch 2016). Focus is also on the linkages between different parts of lessons and different components of reading instruction (ILA 2019), and the extent to which lessons reflect systematic ordered instruction (Shalem & Slonimsky 2010).

Individualisation (9) is about recognising individual student performances and tailoring assessment, content, pedagogy and classroom structure to smaller groups of children and individuals (Tomlinson 2014; Hoadley 2018). Prior research in the South African context shows the dominance of a 'communalising' pedagogy (Hoadley 2018), where no distinctions or judgements are made of individual learners and their activity. The unit of teaching is the class: the pedagogy is undifferentiated and undifferentiating, with little explicit marking out of individual performances, or differentiated activity that acknowledges that children learn in different ways and at different paces.

Teacher knowledge (10) is the final dimension in the framework. Arguably teacher knowledge is impressionistic and not directly observable in the classroom. However, Snow et al. (2005) and Chall (2000) argue that it is possible to observe the extent of teachers' skills and knowledge to facilitate effective reading instruction, especially in choices, mistakes and omissions. Phelps and Schilling (2004) argue that teachers' knowledge of the rules of reading (subject matter knowledge), of phonology, morphology, and semantics, and of the reading strategies young learners use in decoding and comprehending text (subject matter knowledge for teaching reading) are key to knowing how to respond in situ. The issue of low levels of teacher knowledge is one that has been highlighted in the South African context for some time. Van der Berg et al. (2016) refer to it as a 'binding constraint' on raising literacy levels.

4 Findings

Results from the review of studies are presented below in terms of the framework dimensions.

4.1 Reading activities

Up until the implementation of CAPS in 2012, the teaching of specific, discrete components of reading was not part of official reading instruction policy. After 2012, the teaching of phonics became mandated, as did different kinds of reading activity (including Shared, Paired, GGR, Independent, and Silent Reading). Group Guided Reading as a specific methodology for teaching reading in small, ability-graded groups also became a daily requirement. In addition, a focus on oral language development (in listening and speaking) and on forms of writing were specified.

Those studies looking at shifts in practice found that teachers who had undergone an intervention taught more of the different components of literacy instruction (Fleisch & Dixon 2019; Reeves 2017; Fleisch et al. 2017; Taylor et al. 2017; Thulare 2019). In the research, there are diverse findings in relation to the *dominance* of particular components. On the one hand, a number of studies found that phonics dominates instruction. This was especially the case in earlier studies in the review period. Here, the teaching of phonics was found to be very repetitive, with chorused

repetition of sounds, words and, in some instances, sentences. NEEDU 2012 sums up its findings in relation to phonics teaching: "Teachers seem satisfied to achieve low levels of text decoding, rather than treating decoding skills as the foundation from which to launch the main goal of developing increasingly sophisticated comprehension powers" (Taylor 2013, 75). EGRS I, from later in the review period, also found the teaching of phonics in many instances taking up the whole lesson (rather than a 15 minute slot in the 1.5 hours of language teaching per day). The study also found phonics teaching was isolated from other activities with very little to no evidence of a phonics programme that 'connected' what students learn in phonics and what they read, which is argued to be "essential for building a faster foundation in early reading" (ILA 2019, 5).

The second most common component taught was *Shared Reading*, but the way it was conducted varied across classrooms. EGRS II reported teachers reading aloud from the DBE Workbooks, with learners following in their copies. In other cases, Big Books were used, but in every case, these were reported to be limited in number. Where learners read, reading was primarily constituted as an oral performance of decoding text to speech, with an emphasis on correct pronunciation and understanding the meaning of individual words (Mather & Land 2014, 209). The dominant chorus mode of reading where all children read in a collective chant was dominant across a range of studies.

The MCC introduced a form of Read-Alouds termed 'storybook reading' that aimed to expose children to quality literature and give them "the experience of being consumed by the magic of a book" (Ramadiro & Porteus 2017, 83). It also aimed to develop teachers' enjoyment of reading and establish Read-Alouds as a routine activity. The project reported this storybook reading as something easily adopted by teachers and integrated into daily practice. This kind of practice was noted across other studies where storybook reading was taken up alongside the dominance of phonics and children chanting letter-sounds and syllables in unison (for example, Pretorius & Mokhwesana 2009).

There is a discernible shift in *comprehension* activity across the review period. Earlier studies in the review period reported no activities to support the comprehension of written text, where teachers tended to read texts aloud in class without explaining meaning, or showing learners how to apply strategies before, during or after reading (Mudzielwana et al. 2012). Later studies, like the SPS, found that in the context of the NECT and PILO structured reading programmes being implemented in the classrooms, text was often mediated by teachers to assist in comprehension. The consistency of this talk across classrooms suggested strategies derived from programmes' lesson plans, with formulaic questions, like 'who is the author?' and 'from looking at the cover, what do you think will happen in the story?' asked repeatedly across classrooms (Hoadley 2019).

Across all studies, teachers asked simple, low-level factual recall questions based on texts used. Mostly the answers were communally produced in chorused response. Learners were not seen to initiate discussion or ask questions. There was very little evidence of learners *independently* or *individually* deriving meaning from text.

Oral language development was also found to be restricted by the few opportunities given to learners to talk and ask questions. The MCC reported teachers

finding it difficult to distinguish between the development of spoken language and of literacy, and then to identify and take advantage of interdependencies between the two (Ramadiro & Porteus 2017, 23).

Across studies and across time, there was very little evidence of independent writing. Most writing that occurred entailed copying from the board or completing tasks in workbooks. Extended independent writing is still not a feature of Foundation Phase classrooms. Only EGRS II found more learners in intervention classes completing and creating their own phrases and sentences rather than solely copying.

Finally, there were very mixed reports on Group Guided Reading (GGR) and its prevalence across classrooms. Although not common, it was identified as occurring in a number of classrooms, attempted more often in the context of interventions. A number of consistent problems with the use of the methodology, however, were raised across a range of studies. Teachers lacked an understanding of the purpose of GGR, i.e. supporting children to become independent readers through ability grouping and targeted texts and strategies. Thulare (2019, 19) suggests, however, that teachers' willingness to attempt more difficult strategies like GGR in some classrooms is perhaps indicative of emerging mastery. Other issues with GGR identified were:

- Even within the smaller groupings of GGR, choral reading was common (Mohlanhledi & Rowland 2016; Hoadley 2019; Thulare 2019).
- Teachers had difficulty matching levelled texts to ability "because of a lack of training in using assessment tools" (Mohlanhledi & Rowland 2016, 4; Fleisch & Motilal 2020).
- Time and the lack of sufficient texts was an issue.
- Teachers did not provide different ability groups with different books (Mohlanhledi & Rowland 2016; Kotzé 2017; Reeves 2017).
- No questions, or low levels of questioning, and a teacher focus on punctuation and pronunciation were issues (Mohlanhledi & Rowland 2016; SPADE).

Tables 5 and 6 summarise the discussion regarding reading activity, identifying the activities associated with improved reading outcomes (Table 5) and providing descriptive accounts of reading activities (Table 6). Teaching more varied components of literacy instruction, and more reading and writing of extended text were associated with improvements in reading outcomes. Earlier studies in the review period reported the dominance of phonics in lessons, with more comprehension and Shared Reading activity emerging over time. Comprehension activity is at a very low level and there is limited opportunity for learners for oral language development. Most descriptive studies identified an absence of independent and individual reading and writing.

Table 5 **Reading instruction content associated with improved reading outcomes**

	Selected study examples
Teaching a variety of reading instruction components	EGRS II Steinke & Wildsmith-Cromarty (2019)
Reading connected text	MCC
More independent writing	Reeves (2017)

Table 6 Descriptive accounts of reading instruction content

Finding	Selected study examples
Dominance of phonics	NEEDU 2012 Van der Mescht (2013) Nel et al. (2016) Verbeek (2010) Nkosi (2011) Fleisch & Motilal (2020)
Shared Reading and Read-Alouds common	NEEDU 2012 SPS MCC Mather & Land (2014)
No integration of reading components	NEEDU (2012) MCC
Low-level, factual recall comprehension questions	SPS Steinke & Wildsmith-Cromarty (2019) Nel et al. (2016) Mather & Land (2014)
Evidence of some GGR	NEEDU (2012) SPS
No individual reading	NEEDU (2013) SPS EGRS I Reeves (2017)
No independent writing	NEEDU 2013 MCC
Limited oral language development	SPS MCC

4.2 Time

There were mixed findings across studies regarding the use of instructional time, on the one hand, and pacing of lessons, on the other. While the DPME study reported considerable disruption to the school day and teachers' common absence from class, the SPS and SPADE studies found very little time lost to non-instructional activities. A number of small-scale studies conducted in the context of structured pedagogy interventions show how lesson plans maximise time on task in classrooms, and increase the pace of instruction (Fleisch & Dixon 2019; Reeves 2017). Slow pacing, however, appears to be an enduring feature of classrooms across a number of studies (MCC; SPS; Fleisch & Motilal 2020). In particular, a common practice in classrooms is for teachers to mark all learner tasks in the course of the lesson while learners sit without activity. This appears to be a significant contributor to the slow pacing of lessons (Mohlanhledi & Rowland 2016). In addition, a number of studies find that teachers struggle to manage time in accordance with curriculum stipulations, spending more time on activities than prescribed (especially phonics instruction).

4.3 Text

A marked departure from previous studies into early grade reading classrooms is the availability and use of text for reading, particularly text in African languages at grade level. The DBE Workbooks have been highly significant in this regard. Multiple studies report on their widespread use, often as the dominant text used in classrooms. The MCC study describes this as "startling": "While it is notoriously difficult to find ways to directly impact instructional practice, these materials were relatively quickly embraced by teachers" (Ramadiro & Porteus 2017, 61). They attribute the high levels of usage to these materials being the first widely available set of coherent classroom materials developed in African languages.

The SPS study found that, in 80% of KZN classrooms and 60% of Eastern Cape classrooms in the sample, learners were exposed to extended text via the DBE Workbooks in the course of a lesson (either read by or to them). In the DPME study, DBE Workbooks were the only resource available at all schools in the primary sample, while in 61 primary classes observed they were the most frequently used LTSM. Most of the large-scale intervention lesson plans are aligned to and explicitly link to text in the DBE Workbooks for use in instruction (for example, NECT, PILO, EGRS I and Funda Wande).

Despite these successes, some cautions have been raised with *over-reliance* on the DBE Workbooks in instruction, particularly given some of the workbooks' shortcomings (Hoadley & Galant 2016; Ramadiro & Porteus 2017). In a number of studies, they are used for GGR, Shared Reading and Read-Alouds, supplanting other material even where this is available.

The other text-related shift is in the availability and use of readers in classrooms, most notably the Vula Bula reader anthologies and series of books. A key finding from EGRS I was the increased use of graded readers in treatment classrooms. EGRS II found far more pupils reading graded-readers in their coaching arm, even though teachers in both coaching and training arms received the same number of books. Strikingly, virtually no pupils in the control classrooms read any books, despite the fact that almost every teacher in the control group claimed to have access to readers (Cilliers et al. 2020). This points to the need for support for teachers in the *use* of text. Nassimbeni and Desmond's (2011) study, showing improved availability and use of books in classrooms for both classroom activities and voluntary reading, also demonstrated the need for careful training and benign monitoring to accompany book distribution. MCC also points to teachers needing support in using text systematically.

Although there has been a substantial improvement in the availability of text, many studies (especially earlier ones) indicate the insufficiency of texts (Verbeek 2010; Nkosi 2011). Currently, attention is drawn to a lack of multiple copies of different levelled texts to implement GGR (Phala & Hugo 2022; Mohangi et al. 2016). In addition, although there are more decodable texts (like Vula Bula), there is very little richer children's fiction in classrooms, which would be likely to motivate and interest children and encourage reading for choice (B. Ramadiro, personal communication). Crucially, though, the blackboard was not the dominant textual resource in the majority of classrooms, as had been the case in previous research. This is a significant shift away

from a concept of reading as a public, communal activity where a single text is publicly displayed for chorused reading.

To summarise, there is a lot more text in classrooms but insufficient numbers of readers and too small a *range* of children's fiction and non-fiction books.

4.4 Language

The disconnect between the LOLT and learners' home language is raised in a number of studies. Mohangi et al. (2016) provide a stark example of the effects of this from nine Grade R lessons in an English-LOLT school serving isiZulu, Sepedi, Setswana, and Tshivenda-speaking learners. A commonly observed feature in these classrooms was the learners' rote recitation of traditional English nursery rhymes, with a clear lack of learner understanding . Taylor (2013) found that in a third of NEEDU sample of schools, English LOLT was offered in the Foundation Phase for African-language speakers in at least one class. Parental pressure for instruction in English, coupled with teachers' constrained capacity to teach in English, complicates the issue (Taylor 2013, 34). This disconnect between LOLT and the home language of learners (and teachers) presents particular difficulties for developing phonemic awareness.

Ramadiro and Porteus (2017) argue that there has been exceedingly little investment into the interface of African languages, pedagogy, and literacy. The structural and typological differences between African languages and English are outlined by De Vos et al. (2014, 50), where they argue that very little is known of how orthography interacts with morphology, syntax and lexis in African languages, nor of how these translate into norms and standards that can inform curriculum, and, consequently, pedagogy. Ramadiro and Porteus (2017, 81) identified a lack of available suitable isiXhosa material for two key elements of a balanced reading programme: materials to support phonics development in large classrooms, and levelled reading materials to support fluency development and reading for understanding. They give the example of the DBE Workbooks that deal poorly with isiXhosa phonics, likely a result of them being 'versioned' from English blueprints. Katz and Rees find a similar problem with newly issued DBE readers (2022). Bikitsha and Katz's (2013) analysis of CAPS for isiXhosa Home Language shows that the national curriculum is problematic as a basis for developing materials in this language. They conclude that learners being taught the phonics sequences recommended in CAPS may well struggle to become literate, in spite of their familiarity with the language.

A further issue arising out of several studies is the relationship between teaching Home Language and First Additional Language. The MCC study found that, in their pedagogical strategies, teachers did not distinguish between teaching reading in isiXhosa Home Language and English First Additional Language, being uncertain as to what success looked like for these two subjects in different grades. While most learners transition quite abruptly from their home language (up to Grade 3) to English (Grade 4 onwards), Ramadiro and Porteus (2017) argue for a more gradual transition from home language instruction in the Foundation Phase to English as LOLT in the Intermediate Phase.

The extensive literature around language also raises issues around dialects, and learners who have been socialised into bilingual or multilingual repertoires in the home. No classroom-based studies fit the criteria for inclusion in this review, but this is an active area of current research (bua-lit collective 2018).

4.5 Evaluation or feedback

The research reviewed found a dearth of evaluation in classrooms. One of the key issues is that pedagogy in classrooms remains *communalised*. Teachers work with the whole class as a homogeneous group, with little or no differentiation of tasks and no individual performances. The communal production of text takes place both at the oral and written level. In reading, learners were seldom seen to read individually, although this occurred to some extent in GGR sessions, which are designed specifically to monitor individual progress. In writing, where comprehension questions were to be written down, answers were often first produced communally prior to being copied down by learners in their books. Independent original writing that did not involve copying from the board was rare, as we saw in Section 4.1.

There was also no evidence of summative assessment in classrooms, in the form of oral reading fluency tests, comprehension tests, dictation, or other forms of formalised measurement of learner reading competence (Steinke & Wildsmith-Cromarty 2019).

EGRS II found intervention and control teachers alike rarely explaining to learners what was about to be read or had been read during Shared Reading and GGR activities. Teachers were also rarely seen affirming learner responses during class discussion or correcting learner mistakes (Kotzé 2017, 6). Likewise, DPME (2017) found that teachers asked a lot of questions and spread them around the class, but did not respond to learner misconceptions or errors to build on existing knowledge.

The SPADE project, amongst a sub-sample of 23 'good' teachers in the Western Cape, found that teachers made the requirements for tasks and activities explicit and were to some extent explicit around requirements when monitoring students engaging with the content of the lesson. However, they provided less feedback in response to learners' production. Also, feedback was made in reference to particular pedagogic instances, rather than generalised across time or across instances to draw out general principles.

4.6 Lesson structure or coherence

One of the clearest findings from those studies conducted in the context of interventions was a shift in approaches to literacy teaching that had become institutionalised, normalised, and habituated (Fleisch & Dixon 2019; MCC; EGRS II). Reeves (2017) found that lesson plans established routines that helped teachers to manage and maximise the use of time in class. Further, the provision of reading activities increased the regularity of their instruction. SPS confirmed better pacing and sequencing of lessons and better coverage of different components of literacy instruction through routines derived from

NECT and PILO lesson plans that guided instruction in the 40 classrooms observed. The EGRS II classroom observation study found the ability of intervention teachers to pace and monitor learners through a series of activities was the biggest difference seen in teacher practice.

Most of the studies cited here are nevertheless based on observations of single lessons. MCC observed instruction across time, drawing attention to rituals, rhythms, and organisational systems daily, weekly, and annually. For them, the biggest challenge was not so much any isolated lesson but rather stringing together lessons into meaningful learning days and weeks that held together conceptually across a learning term and year (Ramadiro & Porteus 2017, 70).

4.7 Individualisation

In several studies, teachers attempted GGR that showed some indication of differentiation between learners. However, EGRS I showed that groups were given the same book, with individual feedback not evident. Thus, while differentiation can assist with individualisation, the one does not necessarily entail the other. The main reading activity across classrooms was learners reading aloud together, where the teacher did not engage with learners individually about their reading abilities (Kotzé 2017; Reeves 2017). EGRS II reported that paying individual attention, whether to less or more capable learners, was not found in intervention or control classrooms (Thulare 2019).

NEEDU 2013 found that differentiation was seen in only 11% of the 114 multigrade rural classrooms, a context in which knowledge differentiation for learners at different age and grade levels is crucial (Taylor 2014). Ramadiro and Porteus (2017, 71) offer an important caution. They found that pushing for early differentiated practice amongst teachers struggling to use time systematically, often in large classes, further alienated them. They argue for "building instructional momentum, acknowledging that teachers would teach largely to a whole class". A number of the studies reviewed argue that large class sizes mitigate against differentiating strategies such as GGR, and make it difficult to monitor individual learners' reading trajectories.

We indicated in Section 4.1 how problematic GGR is for teachers, nonetheless individualised instruction is crucial. A communalised orientation to learning to read and write means that there are few expectations that students individually read and understand the text, and that they independently interpret and write it. The prioritisation of socially shared understanding of text mitigates the development of *individual* meaning-making required for progress through the schooling system.

4.8 Teacher knowledge

The issue of teacher knowledge was first raised in the period of this review in classroom-based studies around the GPLMS (De Clercq & Shalem 2014; Shalem 2017). For that programme, it was argued that this kind of highly scripted, content-based intervention was unlikely to work without the development of teachers' own subject and pedagogical knowledge. Shalem (2017) argued that unless the teacher has strong

conceptual knowledge of what she teaches, she will struggle to decide what counts in a lesson, and how to make this explicit to learners.

The issue of teacher knowledge was raised across almost all the studies reviewed, specifically in relation to teaching African languages (Ramadiro & Porteus 2017); addressing reading difficulties (Fleisch & Motilal 2020; Phala & Hugo 2022); phonics teaching in multilingual contexts (Mohangi et al. 2016); and theoretical knowledge to teach comprehension (Mudzielwana et al. 2012).

The lack of reading instructional expertise is related to teachers' own low levels of literacy and reading (Pretorius & Knoetze 2013; Hoadley 2018) and that teachers are "ambivalent, reluctant readers at best, with few self-generative reading traditions in their lives" (Ramadiro & Porteus 2017, 74).

5 Discussion

By looking at classrooms at scale, EGRS I, EGRS II and, to some extent, the MCC were the only large-scale studies that reliably considered what classroom mechanisms may have contributed to better reading outcomes. Across the studies, greater access to, and use of, text was identified as potentially causal, in particular, text in African languages. In addition, more structured and routine reading instruction, and the teaching of a range of reading activities, correlated with improved reading outcomes. These factors are mirrored more broadly by two key policy interventions – CAPS (more structured teaching of a range of reading activities) and the DBE Workbooks (more African language text available and used in classrooms) – that may explain some of the improvements in reading outcomes beyond intervention projects. The key factors are shown in Table 7.

Table 7 Reading instruction factors in large-scale studies associated with improved reading outcomes

Classroom feature	Study
Availability of more reading materials (readers and workbooks)	EGRS I MCC EGRS II
More reading of extended text in target language	EGRS I MCC
Teaching a range of reading instruction components	EGRS II
More structured and routine reading pedagogies	EGRS I MCC EGRS II

In Table 8, a comprehensive description of dominant pedagogic practices in reading classrooms based on the review above is shown, in contrast with the findings of the previous review (Hoadley 2012). Here we see both change and stasis in what is currently happening in early grade reading classrooms in South Africa. Hoadley's earlier (2012) findings are arranged in relation to the framework of the present paper.

Table 8 Shifts in reading instruction practices in classrooms: 2010–2022

Pedagogic dimension	Hoadley (2012) findings	Positive shift ⇑ Negative shift ⇓ No change ⇔	Current review
Reading activity	Learners mainly read isolated words rather than extended texts	⇑	More extended text read in classrooms
	Learners mainly copied single words and single sentences; very little writing of extended text	⇔	Some evidence of more independent extended writing but copying still dominates
	Focus on decoding texts rather than comprehension and reading for meaning	⇑	More teaching of a range of reading instruction components including Shared Reading and comprehension
	Little systematic teaching of phonics and decoding skills	⇑	Systematic teaching of phonics evident across classrooms (but decontextualised)
	Oral discourse predominated in classrooms	⇑	Most reading instruction occurs in relation to text
	Low levels of cognitive demand	⇔	Low-level factual recall questions dominate comprehension activities
Time	Pace of instruction very slow	⇔	Some improvement in time on task in context of interventions but pacing remains very slow
Text	Severe shortage of sufficient reading material at a range of reading levels, especially in African languages	⇑	Far greater availability of text for reading (mainly DBE Workbooks) in African languages
	Students had limited opportunity to handle books and bound material	⇑	Greater use of text in classrooms, especially DBE Workbook and, to a lesser extent, readers
Language	Complex language challenges with many learners learning in an additional language (not their home language)	⇔	Most learners initially learn to read in their home language but resourcing for African language and multilingual teaching remains neglected
Evaluation or feedback	Little or no formative assessment (elaboration on learner responses)	⇔	Feedback and elaboration on learner productions remains limited
Lesson structure or coherence	Lack of coherence in lesson structure	⇑	More structure to lessons especially in context of reading interventions

Pedagogic dimension	Hoadley (2012) findings	Positive shift ⇑ Negative shift ⇓ No change ⇔	Current review
Individualisation	Learning largely communalised with little attention to individual learners' progress	⇔	Some evidence of differentiation (e.g. GGR) but little individualisation of learners in pedagogy
	Lack of opportunity for learners to read on own and ask questions	⇔	Learners very rarely seen to read on their own, to ask questions or to initiate discussion
Teacher knowledge	Low levels of teacher knowledge in teaching reading	⇔	Low levels of teacher knowledge of teaching reading

There have been a number of significant shifts over the past ten years in early grade reading classrooms, meaning lessons in 2022 look very different to those of 2010. The impact of structured pedagogy programmes is evident in gains in reading outcomes but also in key aspects of classroom instruction. The most reliable evidence of shift emerging from the review of classroom observation studies indicates greater availability and use of textual resources in African languages, a wider range of reading activities taught, and more structure and routine in lessons. The review also found that lessons were more coherent, and more focused around text. Although these aspects are seen especially in the context of reading interventions, they are also attributable to national policy interventions, crucially the implementation of CAPS and the DBE Workbooks.

While the review found no negative shifts in practices, certain pedagogical dimensions are in stasis. These include the very slow pace of teaching and the low level of cognitive demand in classrooms, both impacting coverage. On the basis of clear findings, the review suggests that learners continue to be exposed to a low dosage of learning, as they were in the past (Carnoy et al. 2012). Time is still not used sufficiently effectively for learning.

There are three additional and related aspects to reading pedagogy that appear resistant to change: teacher knowledge, individualisation, and feedback. They are tightly linked, in that, in order to provide appropriate *feedback* for improvement, teachers need *knowledge* as well as a sense of *individual* learners' reading ability. The lack of development of teacher's knowledge with respect to reading emerges as an overriding concern across the studies reviewed. There are two key issues related to this. The first is that development work needs to be done in a way that is accountable to the linguistic contexts of children and their teachers, and responsive to the realities of day-to-day instructional practice in difficult classroom contexts, especially large classes (Ramadiro & Porteus 2017). This need perhaps suggests why coaching has shown to be more effective than other types of interventions. The second issue is that we need to understand teachers' own logic for why certain aspects of pedagogy persist, such as slow pacing. A better understanding of the social and instructional norms that persist amongst teachers could provide greater insight into their practices and priorities in the classroom and indicate more appropriate and targeted ways to support them in improving instruction.

Finally, a communalised pedagogy persists in classrooms. Recent research has raised questions around whether we should be aiming for individualised forms of pedagogy in the first place, and whether more local pedagogies can be conceived of that are sensitive to the contextual realities of large classes and the more formalistic teaching that is common (Venkat & Askew 2018; Ramadiro & Porteus 2017; Muller & Hoadley 2019). These are important questions, but in ongoing research, we need to be aware of the ways in which embedded, communalised pedagogies, emphasising socially shared understandings and productions of text, present a fundamental barrier to learners' independent access to the written code of schooling and the possibilities that affords.

References

Allington, R. L. (2002). What I've learned about effective reading instruction from a decade of studying exemplary elementary classroom teachers. *The Phi Delta Kappan* 83(10), 740–747.

Ardington, C. & Meiring, T. (2020). Impact Evaluation of Funda Wande Coaching Intervention Midline Findings. Cape Town: SALDRU, University of Cape Town.

Ardington, C. & Spaull, N. (2022). Sequenced for success: Evaluating the impact of openly licensed Vula Bula anthologies of graded readers on early grade reading outcomes in South Africa. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Ardington, C., Hoadley, U., Menendez, A. (2019). Impact Evaluation of USAID/South Africa Story Powered School Program: Endline Report. Chicago, ILL: NORC at the University of Chicago.

Argyris, C. & Schön, D. A. (1974). *Theory in practice: Increasing professional effectiveness*. San Francisco, CA: Jossey-Bass.

Bernstein, B. (1990). *Class, Codes and Control. (Volume IV: The Structuring of Pedagogic Discourse).* London: Routledge.

Bikitsha, N. & Katz, J. (2013). An analysis of the isiXhosa Home Language CAPS for the Foundation Phase, and the implications thereof for the teaching, learning and assessment of phonics and meaningful reading in isiXhosa. Presentation at the 8th Annual RASA Conference 25–27 October 2013, Johannesburg.

Botha, D. J. (2017). The practices of a group of 'out-standing' early reading teachers working in Johannesburg government schools. (Unpublished doctoral thesis). University of the Witwatersrand, Johannesburg.

bua-lit collective, 2018. How are we failing our children? Reconceptualising language and literacy education. From: www.bua-lit.org.za Accessed 2022-09-12.

Carnoy, M., Chisholm, L. & Chilisa, B. (2012). The Low Achievement Trap: Comparing Schooling in Botswana and South Africa. Pretoria: HSRC Press

Chall, J. S. (2000). *The Academic Achievement Challenge*. New York, NY: Guildford Press.

Cilliers, J., Fleisch, B., Prinsloo, C. & Taylor, S. (2020). How to improve teaching practice? An experimental comparison of centralized training and in-classroom coaching. *Journal of Human Resources* 55(3) 926–962.

Cooper, H. M. (1982). Scientific guidelines for conducting integrative research reviews. *Review of Educational Research* 52(2), 291–302.

De Clercq, F. (2014). Improving teachers' practice in poorly performing primary schools: The trial of the GPLMS intervention in Gauteng. *Education as Change* 18(2), 303–318.

De Clercq, F. & Shalem, Y. (2014). Teacher knowledge and employer-driven professional development: A critical analysis of the Gauteng Department of Education programmes. *Southern African Review of Education with Education with Production* 20(1), 129–147.

Department of Basic Education (DBE). (2011). National Curriculum Statement (NCS) Curriculum and Assessment Policy Statement. English Home Language Foundation Phase Grades R-3. Pretoria: DBE.

Department of Education (DOE). (2008a). Foundations for Learning. Pretoria: DOE.

Department of Education (DOE). (2008b). Teaching Reading in the Early Grades: A Teacher's Handbook. Pretoria: DOE.

Department of Planning, Monitoring and Evaluation (DPME). (2017) Implementation Evaluation of the National Curriculum Statement Grade R to 12 Focusing on the Curriculum and Assessment Policy Statements (CAPS). Pretoria: DPME.

De Vos, M., Van der Merwe, K. & Van der Mescht, C. (2014). A research programme for reading in African languages to underpin CAPS. *Journal for Language Teaching* 48(2), 148–177.

Douglas, K. (2009). Sharpening our focus in measuring classroom instruction. *Educational Researcher* 38(7), 518–521.

Fleisch, B. (2016). System-wide improvement at the instructional core: Changing reading teaching in South Africa. *Journal of Educational Change* 17, 437–451.

Fleisch, B. & Dixon, K. (2019). Identifying mechanisms of change in the Early Grade Reading Study in South Africa. *South African Journal of Education* 39(3), 1–12.

Fleisch, B. & Motilal, G. B. (2020). The triple cocktail programme to improve the teaching of reading: Types of engagement. *South African Journal of Childhood Education* 10(1), 1–13.

Fleisch, B., Taylor, S., Schôer, V. & Mabogoane, T. (2017). Failing to catch up reading in the middle years: The findings of the impact evaluation of the Reading Catch-Up Programme in South Africa. *International Journal of Educational Development* 53, 36–47.

Gustafsson, M. 2020. A revised PIRLS 2011 to 2016 trend for South Africa and the importance of analysing the underlying microdata. Stellenbosch Economic Working Paper Series, WP02/2020. Stellenbosch: ReSEP, University of Stellenbosch.

Hoadley, U. (2012). What do we know about teaching and learning in South African primary schools? *Education as Change* 16(2), 187–202.

Hoadley, U. (2017). Learning to fly: Pedagogy in the Foundation Phase in the context of the CAPS reform. *Journal of Education* 67, 13–38.

Hoadley, U. (2018). *Pedagogy in Poverty. Lessons from Twenty Years of Curriculum Reform in South Africa*. London: Routledge.

Hoadley, U. (2019). *The impact of the SPS programme at the classroom level: Observation of Home Language lessons*. Chicago, ILL: NORC at the University of Chicago.

Hoadley, U. & Galant, J. (2016). An analysis of the Grade 3 Department of Basic Education workbooks as curriculum tools. *South African Journal of Childhood Education* 6(1), 1–12.

International Literacy Association (ILA). (2019). Meeting the challenges of early literacy phonics instruction. Literacy leadership brief. Newark, DE: ILA.

Jones-Devitt, S., Austen, L. & Parkin, H. J. (2017). Integrative reviewing for exploring complex phenomena. *Social Research Update* 66, 1–4.

Katz, J. & Rees, S. (2022). Molteno's Vula Bula: Conceptualisation, development and implementation. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Kim, Y.-S. G. & Davidson, M. (2019). Promoting successful literacy acquisition through structured pedagogy: Global Reading Network Critical Topics Series. Prepared by University Research Co., LLC. (URC) under the Reading within Reach (REACH) initiative for USAID's Building Evidence and Supporting Innovation to Improve Primary Grade Assistance for the Office of Education (E3/ED). From: www.edu-links.org. Accessed 2022-10-26.

Kim, Y.-S. G., Boyle, H. N., Zuilkowski, S. S. & Nakamura, P. (2016). Landscape Report on Early Grade Literacy. Washington, DC: USAID.

Kotzé, J. (2017). Classroom Observation Study: the Early Grade Reading Study (EGRS). Pretoria: DBE, and UNICEF

Kruizinga, A. & Nathanson, R. (2010). An evaluation of guided reading in three primary schools in the Western Cape. *Per Linguam* 26(2), 67–76.

Lubienski, S. T. (2004). Decoding mathematics instruction: A critical examination of an invisible pedagogy. In Muller, J., Davis, B. & Morais, A. (Eds), *Reading Bernstein, Researching Bernstein.* London and New York, NY: Routledge.

Mather, N. & Land, S. (2014). Exploring educators' understanding of developing learner's reading skills and their readiness to implement CAPS. *Journal for Language Teaching* 48(2), 199–215.

Meiklejohn, C., Westaway, L., Westaway, A. F. H. & Long, K. A. (2021). A review of South African primary school literacy interventions from 2005 to 2020. *South African Journal of Childhood Education* 11(1), a919.

Mkhwanazi, H. N. (2013). Teachers' use of formative assessment in the teaching of reading comprehension in Grade 3. (Unpublished doctoral thesis). University of Pretoria, Pretoria.

Mohangi, K., Krog, S., Stephens, O. and Nel, N. (2016). Contextual challenges in early literacy teaching and learning in grade R rural schools in South Africa. *Per Linguam,* 32(1), 71–87.

Mohlanhledi, P. M. & Rowland, C. B. (2016). Improving South African third graders' reading skills: Lessons learnt from the use of Guided Reading approach. *South African Journal of Childhood Education* 6(1), a367

Morais, A., Neves, I. & Pires, D. (2004). The what and the how of teaching and learning: Going deeper into sociological analysis and intervention. In Muller, J., Davis, B. & Morais, A. (Eds), *Reading Bernstein, Researching Bernstein.* London and New York, NY: Routledge.

Mudzielwana, N. P., Joubert, I., Phatudi, N. C. & Hartell, C. G. (2012). Teaching reading comprehension to Grade 3 Tshivenda-speaking learners. *Journal of Educational Studies 11*(1), 67–84.

Muller, J. & Hoadley, U. (2019). Curriculum reform and learner performance: An obstinate paradox in the quest for equality. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality: A Study of Present Situation and Future Possibilities*. Cham: Springer.

Nassimbeni, M. & Desmond, S. (2011). Availability of books as a factor in reading, teaching and learning behaviour in twenty disadvantaged primary schools in South Africa. *South African Journal of Libraries and Information Science* 77(2), 95–103.

National Education Collaboration Trust (NECT). (2016). Annual Report 2016: Education Collaboration Reaches a Third of the National System. From: nect.org.za/publications/annual-reports/ Accessed 2022-11-01.

National Reading Panel. (2000). *Teaching Children to Read: An Evidence-based Assessment of the Scientific Research Literature on Reading and its Implications for Reading Instruction*. Rockville, MD: NICHD.

Nel, N., Mohangi, K., Krog, S. and Stephens, O. (2016). An overview of Grade R literacy teaching and learning in inclusive classrooms in South Africa. *Per Linguam* 32(2), 47–65.

Nkosi, Z.P. (2011). An exploration into the pedagogy of teaching reading in selected Foundation Phase isiZulu Home Language classes in Umlazi schools. (Unpublished doctoral thesis). University of Kwa-Zulu Natal, Durban.

Phala, T. A. and Hugo, A. (2022). Difficulties in teaching Grade 3 learners with reading problems in full-service schools in South Africa. *African Journal of Disability* (Online) 11, 1–9.

Phelps, G. & Schilling, S. (2004). Developing measures of content knowledge for teaching reading. *The Elementary School Journal* 105(1), 31–48.

Piper, B. (2009). Impact study of SMRS using early grade reading assessment in three provinces in South Africa. Washington, DC: USAID.

Piper, B. & Dubeck, M. (2021). Structured Pedagogy Literature Review. Prepared for the Bill & Melinda Gates Foundation for the Science of Teaching grant. Research Triangle Park, NC: RTI International.

Pretorius, E. J. & Klapwijk, N. M. (2016). Reading comprehension in South African schools: Are teachers getting it, and getting it right? *Per Linguam* 32(1), 1–20.

Pretorius, E. J. & Knoetze, J. J. (2013). The teachers' book club: broadening teachers' knowledge and building self-confidence. *Mousaion* 31(1), 27–46.

Pretorius, E. J. & Mokhwesana, M. M. (2009). Putting reading in Northern Sotho on track in the early years: Changing resources, expectations and practices in a high poverty school. *South African Journal of African Languages*, 29(1), 54–73.

Ramadiro, B. (2021). Personal communication.

Ramadiro, B. & Porteus, K. (2017). *Foundation Phase Matters: Language and Learning in South African Rural Classrooms*. East London: Magic Classroom Collective Press.

Reeves, C. A. (2005). The effect of 'opportunity to learn' and classroom pedagogy on mathematics achievement in schools serving low socio-economic status communities in the Cape Peninsula. (Unpublished doctoral thesis). University of Cape Town, Cape Town.

Reeves, C. (2017). The Early Grade Reading Study (EGRS): In-depth Case Studies of Home Language Literacy Practices in Four Grade 2 Classrooms in Treatment 1 and 2 schools (October 2016 to January 2017). Pretoria: DBE.

Sailors, M., Hoffman, J. V., Pearson, P. D., Beretvas, S. N. & Matthee, B. (2010). The effects of first- and second-additional language instruction in rural South African schools. *Bilingual Research Journal* 33(1), 21–41.

Shalem, Y. (2017). Scripted lesson plans: What is visible and invisible in visible pedagogy? In Barrett, B., Hoadley, U. & Morgan, J. (Eds), *Knowledge, Curriculum and Equity*. 183–199. London: Routledge.

Shalem, Y. & Slonimsky, L. (2010). Seeing epistemic order: Construction and transmission of evaluative criteria. *British Journal of Sociology of Education* 31(6), 755–778.

Snow, C., Griffin, P. & Burns, M. (2005). *Knowledge to support the teaching of reading*. San Francisco, CA: Jossey-Bass.

Spaull, N. & Pretorius, E. J. (2019). Still falling at the first hurdle: Examining early grade reading in South Africa. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. Cham: Springer.

Steinke, K. & Wildsmith-Cromarty, R. (2019). Securing the fort: Capturing reading pedagogy in the foundation phase. *Per Linguam* 35(3), 29–58.

Stern, J. Jukes, M., Piper, B., DeStefano, J., Meija, J., Dubeck, P., Carrol, B., Jordan, R., Gatuyu, C., Nduku, T., Punjabi, M., Harris van Keuren, C. & Tufail, F. (2022). Learning at Scale: Interim Report. RTI International.

Stoffelsma, L. (2019). From 'sheep' to 'amphibian': English vocabulary teaching strategies in South African township schools. *South African Journal of Childhood Education* 9(1), a650.

Taylor, N. (2013). NEEDU National report 2012: The state of teaching and learning literacy in the Foundation Phase. Pretoria: DBE.

Taylor, N. (2014). NEEDU National Report 2013: Teaching and Learning in Rural Primary Schools. Pretoria: DBE.

Taylor, S. (2019). How can learning inequalities be reduced? Lessons learnt from experimental research in South Africa. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 321–336. Cham: Springer.

Taylor, S., Cilliers, J., Prinsloo, C., Fleisch, B. & Reddy, V. (2017). The Early Grade Reading Study: Impact Evaluation After Two Years of Interventions. Technical Report.

Thulare, T. (2019). The Second Early Grade Reading Study: Classroom Observation Study Grade 3. Pretoria: DBE.

Tomlinson, C. A. (2014). *The Differentiated Classroom: Responding to the Needs of all Learners (2nd edition)*. Alexandria, VA: ASCD.

Van der Berg, S. & Gustafsson, M. (2019). Educational outcomes in post-apartheid South Africa: Signs of progress despite great inequality. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 25–45. Cham: Springer.

Van der Berg, S., Spaull, N., Wills, G., Gustafsson, M. & Kotzé, J. (2016). Identifying binding constraints in education. From: SSRN 2906945. Accessed 2022-09-09.

Van der Mescht, C. (2013). Positions on the mat: A micro-ethnographic study of teachers' and learners' co-construction of an early literacy practice. (Unpublished doctoral thesis). Rhodes University, Makhanda.

Venkat, H. & Askew, M. (2018). Mediating primary mathematics: Theory, concepts and a framework for studying practice. *Educational Studies in Mathematics* 97(1), 71–92.

Verbeek, D. C. (2010). Teaching reading for meaning? A case study of the initial teaching of reading in a mainstream South African school. (Unpublished doctoral thesis). University of KwaZulu-Natal, Pietermaritzburg.

Western Cape Education Department (WCED). (2015). Western Cape Education Budget Vote 2015/2016. WCED Online, 26 March 2015. [Media release]. From: wcedonline.westerncape.gov.za/comms/press/2015/21_26mar.html Accessed 2022-11-01.

World Bank (2019). Ending learning poverty: what will it take? From: https://openknowledge.worldbank.org/bitstream/handle/10986/32553/142659.pdf?sequence=7 Accessed 2022-09-09.

appendix /01

Table 9 Classroom-based studies included in the review

Project	Intervention	No. of schools / teachers / lesson observations	Level	Language	Province	Brief description	Reference
EGRS I	*Scripted lesson plans, graded readers and other LTSM, plus training for one arm, and training plus on-going coaching for a second arm*	*60 schools* *60 teachers* *60 lessons*	*Grade 2*	*Setswana*	*North West*	*To investigate underlying change mechanisms by observing how the learning environment, teaching practice, and classroom activities changed as a result of the programmes*	*Kotzé (2017)*
EGRS I	*Scripted lesson plans, graded readers and other LTSM, plus training for one arm, and training plus on-going coaching for a second arm*	*12 lessons*	*Grades 1 & 2*	*Setswana*	*North West*	*Case studies investigating teachers' practice in the context of EGRS I, selected on the basis of student reading outcome levels*	*Fleisch & Dixon (2019)*
EGRS I	*Scripted lesson plans, graded readers and other LTSM, plus training for one arm, and training plus on-going coaching for a second arm*	*4 schools* *4 teachers* *4 lessons*	*Grade 2*	*Setswana*	*North West*	*Case studies to gain a better understanding of which elements of the two interventions were successful in changing teacher behaviour, and which were less successful*	*Reeves (2017)*

Project	Intervention	No. of schools / teachers / lesson observations	Level	Language	Province	Brief description	Reference
EGRS II	*Scripted lesson plans, graded readers and other LTSM plus training for one arm, and training plus ongoing coaching for a second arm, for English, but observations of HL included*	*18 schools 52 teachers 52 lessons*	*Grade 3*	*isiZulu Siswati*	*North West*	*Comparison of EFAL and HL classroom practices*	*Thulare (2019)*
Magic Classroom Collective (MCC)	*Design-based research and intervention that included cycles of material design and development, teacher development and support, classroom-based support and observation, and analysis*	*15 schools 72 teachers*	*Foundation Phase*	*isiXhosa*	*Eastern Cape*	*Purpose: to understand: i) instructional practices in rural and poor classrooms; ii) the factors that reproduce them; and iii) design principles that can be foundational in shifting practices*	*Ramadiro & Porteus (2017)*
Story Powered Schools (SPS)	*To shift teachers' practices through a two-day training activity focused on strategies and activities for implementing reading for enjoyment in classrooms (use Nal'ibali supplement) plus mentoring by Story Sparkers*	*20 Schools 40 teachers 40 lessons*	*Grades 1–4 Multigrade*	*isiXhosa isiZulu*	*Eastern Cape, KwaZulu-Natal*	*Classroom observations in 40 deep-rural classrooms to discern whether instruction incorporated reading for enjoyment activities*	*Hoadley (2019)*

Project	Intervention	No. of schools / teachers / lesson observations	Level	Language	Province	Brief description	Reference
NEEDU 2012		*133 schools* *215 teachers* *215 lessons*	*Grade 2*	*Wide range*	*All nine provinces*	*Curriculum delivery in the Foundation Phase with a focus on early grade reading and maths*	*Taylor (2013)*
NEEDU 2013		*112 lessons*	*Early multigrade*	*Wide range*	*All nine provinces*	*Teaching and learning in rural primary schools, especially reading in multigrade classrooms*	*Taylor (2014)*
Biblionef 60 schools project	*Donation of local language, attractive, age-appropriate books*	*20 schools* *20 teachers* *20 lessons*	*Grade 4*	–	*Eastern Cape, Gauteng, KwaZulu-Natal and Limpopo*	*Investigate the effects of providing storybooks and training in their use in twenty disadvantaged primary schools in rural South Africa*	*Nassimbeni & Desmond (2011)*
Literacy Leadership Project	*Eight-month project including professional development workshops and teacher discussion groups around GGR*	*1 school* *4 teachers* *32 lessons*	*Grade 3*	*77% Sepedi, 24% Xitsonga, 9% isiZulu*	–	*Investigate teachers' implementation of GGR in their classrooms*	*Mohlanhledi & Rowland (2016)*
		3 schools *6 teachers*	*Grade 1* *Grade 2*	–	*Western Cape*	*Investigation of implementation of GGR in a set of schools in Western Cape*	*Kruizinga & Nathanson (2010)*
CAPS Implementation study	–	*12 schools* *24 teachers* *24 lessons*	*Grade 2*	*Wide range*	*Eastern Cape, Gauteng, KwaZulu-Natal, Mpumalanga*	*Investigate the challenges experienced in implementing the school curriculum*	*DPME (2017)*

Project	Intervention	No. of schools / teachers / lesson observations	Level	Language	Province	Brief description	Reference
	–	*10 schools*	*Grade R*	*English, isiZulu, Sepedi, Setswana*	*Gauteng, Mpumalanga*	*An overview of early literacy teaching and learning in Grade R classrooms (for later comparison with China)*	*Nel et al. (2016)*
	–	*3 schools* *12 teachers* *12 lessons*	*Grade 3*	*English, isiZulu, Sepedi*	*Gauteng*	*To identify the difficulties faced by a group of Grade 3 teachers in full-service school to support their learners with reading problems*	*Phala & Hugo (2022)*
	–	*3 schools* *9 teachers*	*Grade R*	*English*	*Gauteng*	*Overview of challenges that teachers in selected rural Gauteng Grade R classrooms experience in delivering a literacy curriculum*	*Mohangi et al. (2016)*
	–	*3 schools* *6 teachers* *24 lessons*	*Grade 3*	*Tshivenda*	*Limpopo*	*To explore and understand how teachers teach reading comprehension in order to support their Tshivenda-speaking learners*	*Mudzielwana et al. (2012)*
PhD study	–	*4 schools* *7 teachers* *49 lessons*	*Grade 3*	*Siswati*	*Mpumalanga*	*Investigating teachers' use of formative assessment in teaching comprehension*	*Mkhwanazi (2013)*

Project	Intervention	No. of schools / teachers / lesson observations	Level	Language	Province	Brief description	Reference
PhD study	–	*2 schools* *8 teachers*	*Foundation Phase*	*isiZulu*	*KwaZulu-Natal*	*Investigating the teaching of reading in isiZulu home language classrooms*	*Nkosi (2011)*
Schools Performing Above Demographic Expectations Project (SPADE)	–	*14 schools* *46 teachers* *46 lessons*	*Grade 3*	*Afrikaans, isiXhosa*	*Western Cape*	*Comparing instruction of teachers in schools performing better or less well*	*Hoadley (2017)*
PhD study	*Training in teaching reading*	*34 lessons*	*Grade 2*	*English, isiZulu*	*KwaZulu-Natal*	*Comparing teachers who received training (on a framework designed to measure reading PCK) from READ or Read 2 Learn with non-trained teachers*	*Steinke & Wildsmith-Cromarty (2019)*

appendix /02

Table 10 Timeline of early reading interventions and initiatives: 2006 to 2022

Year	Intervention / initiative	Description of intervention / initiative
2006	*Literacy and Numeracy (LitNum) Strategy (2006–2016)*	*To ensure high levels of literacy across the province, Western Cape Education Department (WCED) implemented a holistic teacher development initiative. Critical impact features included teacher training (by WCED officials or through tertiaries) in literacy and pedagogical techniques, and advocacy for community and parental involvement.*
2008	*Foundations for Learning (FFL) Campaign (2008–2011)*	*The FFL campaign was a curriculum innovation strategy aiming to strengthen the teaching and learning of literacy and numeracy in the Foundation and Intermediate Phases. According to the then Department of Education, the goal of the campaign was to improve learner performance in literacy and numeracy through teacher training and support.*
	National Reading Strategy (2008)	*The then Department of Education placed reading firmly on the school agenda. The strategy built on six key pillars for success with the intended outcome that all learners should be able to read basic texts by the end of Grade 3. The six pillars were: (i) monitoring learner performance; (ii) teaching practice and methodology; (iii) teacher training, development, and support; (iv) resources; (v) research, partnerships, and advocacy; and (vi) management of teaching of reading, (World Bank Group 2021).*
	Teaching Reading in the Early Grades: A Teacher's Handbook (2008)	*Produced by the then Department of Education, the Handbook aimed to help teachers by outlining how children learn to read, as well as explaining core methodologies such as Shared Reading, Guided Reading, Independent Reading, and word- and sentence-level work.*
2009	*Systematic Method for Reading Success (SMRS) (2009–abandoned)*	*Implemented in 30 intervention schools in Gauteng, Limpopo, and the North West, the SMRS provided 45 detailed lesson plans to be implemented, alongside some additional materials in the first half of Grade 1 (six months) (Taylor 2019).*
2010	*Gauteng Primary Language and Mathematics Study (GPLMS) (2010–2013)*	*Followed a structured pedagogic approach to intervention by providing highly detailed teacher guides, coaching, and LTSM. Also intended to provide learner support through parent and community involvement. Coaches visited a total of 990 schools with 750,000 learners and 12,000 teachers (De Clercq 2014).*
	Room to Read Literacy Programme (2010–2020)	*Entailed library resourcing of levelled children's books. Just-in-time training and regular on-site coaching plus provision of learner books and teacher guides to support implementation. Included Sepedi- and Xitsonga-language and literacy programmes.*

Year	Intervention / initiative	Description of intervention / initiative
2011	*DBE Workbooks (2011–ongoing)*	*The DBE provided all learners in Grades 1 to 9 in all 11 official languages with a CAPS-aligned workbook containing activities, and fiction and non-fiction texts to be used in class. These workbooks were also used by departments to monitor curriculum coverage in classrooms.*
	Annual National Assessments (2011–2014)	*The DBE responded to the reading crisis by instituting standardised testing, which was "envisioned as a quality assurance mechanism that provides standardized data to guide future targeted intervention and to enable the sector to utilize the findings and devise ways to further improve the quality of basic education" (De Vos et al. 2014, 150).*
2012	*Magic Classroom Collection (MCC) (2012–2017)*	*In the Eastern Cape across 15 schools (72 teachers and 2,500 learners on average), MCC developed a full curricula toolkit in English FAL, isiXhosa HL, and Mathematics: structured pedagogic programmes that included teaching and learning materials, capacity development through centralised training plus on-site coaching.*
	Vula Bula (2012–ongoing)	*Authentic Foundation Phase graded readers were developed in eight African languages and distributed across 800 schools under the GPLMS project.*
	Reading Catch-Up Programme (2012–2014)	*In the Pinetown district of KwaZulu-Natal, the DBE implemented an intermediate, 11-week, structured pedagogic programme in EFAL as an intervention.*
	Click Foundation's Reading Eggs (2012–ongoing)	*In schools across Eastern Cape, Gauteng, KwaZulu-Natal, Mpumalanga, and the Western Cape, 227 computer labs with web-based, interactive 'reading eggs' that provide an additional 22.4 hours of reading-level-appropriate programmes to Foundation Phase learners were introduced.*
2013	*National Education Collaboration Trust (NECT) (2013–2020)*	*In the years 2013 and 2014, NECT put into place the 'Professionalisation of Teaching' Learning Programmes intervention, which aimed to provide teachers with curriculum support across EFAL, isiZulu, Mathematics, and Science. In 2013–2014, the intervention offered teachers pace-setters and trackers plus lesson plans to support teacher's coverage of the curriculum, as well as training programmes and in-school support (NECT 2014, 8). According to NECT's 2016 annual report, of the 2.6 million items of teaching materials and school management instruments distributed to teachers across South Africa, the largest proportion of these were materials from the NECT toolkits, which had, by 2016, been designed to cover teaching in isiXhosa, Sepedi, Setswana, Tshivenda and Xitsonga alongside English and isiZulu.*
	SiyaJabula SiyaKhula's kaMhinga Literacy Project (2013–2015)	*USAID and the DBE, together with the Elma Foundation, implemented an intervention across 32 schools (16 intervention and 16 control) in Limpopo where reading facilitators were trained to work with groups of learners.*
2014	*Zenex Literacy Project (2014–2019)*	*Structured pedagogic intervention in HL and EFAL, in Eastern Cape, KwaZulu-Natal, and Western Cape, consisting of training sessions for teachers and HODs in 21 schools, with on-site coaching for teachers, and provision of expert reading materials.*

Year	Intervention / initiative	Description of intervention / initiative
2015	*EGRS I (2015–2017)*	*In two districts of the North West, the DBE implemented various intervention arms to improve Setswana HL literacy and reading across 230 primary schools.* *Intervention 1: Structured pedagogic intervention with centralised training across 50 schools* *Intervention 2: Structured pedagogic intervention with on-site coaching across 50 schools.* *Intervention 3: Encouraging parental involvement through recruiting a community reading coach who hosts frequent training sessions for parents in early literacy activities (2015–2016) across 50 schools* *Control group: 80 schools*
	Jika iMfundo: Programme for the Improvement of Learning Outcomes (PILO) (2015–2017)	*Under the Jika iMfundo campaign of the KwaZulu-Natal Department of Education, PILO – a not-for-profit organisation – designed and implemented a structured pedagogic programme as an intervention. It was implemented over three years in two districts of the province. The aim was to improve curriculum coverage. PILO designed a three-armed intervention to ensure increased coverage of the isiZulu Grade 1 HL curriculum, including lesson plans, LTSM (graded readers and posters), curriculum planners, trackers, and assessment resources, and provided just-in-time training for school HODs.*
	Western Cape 'Living Labs' Schools Project (2015–abandoned)	*Implemented across 100 schools in the Western Cape, the Living Labs project aimed to use studies from around the world to improve language and mathematics teaching in the Foundation Phase. Its main recommendations included competence testing and careful selection of HODs, resource development, the development and use of reading norms, and assessing and improving teachers' capacities to teach reading (WCED 2015).*
2016	*Primary School Reading Improvement Programme (2016–ongoing)*	*EFAL teacher development initiative that used lesson plans, trackers and supporting materials to strengthen the teaching of reading. Since 2017, 39,000 subject advisors and teachers have participated nationwide.*
2017	*Shine Literacy's Khanyisa Project (2017–ongoing)*	*Piloted in 24 schools (1,584 learners) across greater Cape Town. Shine Literacy Hours use volunteers who receive training on how to do various daily reading activities with Grade 2 learners. Teachers receive training on how to instil a reading culture in their classrooms. Shine Literacy Centres and Chapters provide a variety of storybooks and 'take-home-books' for learners.*
	Nal'ibali's Story Powered Schools (SPS) project (2017–2018)	*Trained community members from Eastern Cape and KwaZulu-Natal implement SPS across 720 schools, running a range of 'reading-for-enjoyment' activities. Includes hanging libraries with 30 graded readers in English and African languages, and the publication of a bilingual newsletter for parents and teachers.*
	Funda Wande Coaching Intervention (2017–2019)	*Funda Wande in partnership with the Eastern Cape Department of Education piloted an isiXhosa HL structured pedagogic programme with their first version of lesson plans, and coaching by expert reading coaches across 30 schools.*

Year	Intervention / initiative	Description of intervention / initiative
	EGRS II (2017– 2019)	*An EFAL intervention across two districts of Mpumalanga icluding 180 schools with HLs of isiZulu or Siswati.* *Intervention 1: structured pedagogic intervention with centralised training and on-site coaching in 50 schools* *Intervention 2: structured pedagogic intervention with centralised training and virtual (instant messaging) coaching in 50 schools* *Control: 80 schools*
2019	*Living through Learning (2019–ongoing)*	*Coronation Reading Adventure Room and Literacy Action Rooms are programmes that support teachers and learners in the English literacy curriculum in Cape Town. On average, 31 schools (3,000 learners and 105 teachers) have participated annually since 2019.*
	Room to Read as part of the Read to Lead campaign (DBE) (2019)	*Created and published 20 original storybooks with 100 versions for a total of 120 storybooks in English, isiZulu, Sepedi, Siswati, Tshivenda, and Xitsonga. Distributed 100,000 copies of 'read-for-pleasure' storybooks to public schools.*
	Vula Bula Anthologies (2019–ongoing)	*The Vula Bula anthologies of graded readers (a collaboration between Molteno and Funda Wande) were distributed to all Foundation Phase learners (Grades 1–3) in the Eastern Cape.*
	Reading Support Project (2019–2020)	*Implemented in 263 schools in the same two districts as EGRS I, the Foundation for Professional Development, Molteno Language Institute, Oxford University Press Southern Africa, and Voluntary Services Overseas, sought to promote effective methodologies and improve subject knowledge, in-classroom time management, and use of LTSM through a structured pedagogic programme.*
	Integrated Reading Sector Plan (2019–2024)	*With the aim of rolling out a nationally integrated package in 2024 to support the teaching of reading in the Foundation and Intermediate Phases, the plan aims to strengthen the capacity of the system; develop and support teachers; support learners directly; mobilise parent and community support; provide (and ensure the use of) LTSM; track learner reading outcomes; research, monitor, evaluate, report on and engage in advocacy and communication around teaching reading.*
	Funda Wande Lesson Plan Intervention (2019)	*Funda Wande partnered with the Eastern Cape Department of Education to improve isiXhosa reading outcomes across 30 schools in the province through the provision of scripted lesson plans, LTSM, and coaching.*

Year	Intervention / initiative	Description of intervention / initiative
2020	*National Framework for the Teaching of Reading in African Languages in the Foundation Phase (2020)*	*The National Framework, produced by the DBE, aims to improve early reading instruction by mediating how teachers should teach reading in African languages, considering the languages' specific linguistic and orthographic features (World Bank Group 2021).*
	Funda Wande Learner Workbook Intervention (2020/2021–ongoing)	*After three years of evaluation and randomised control trials in the Eastern Cape, Funda Wande expanded its reach to three provinces: Eastern Cape, Limpopo, and Western Cape. It further developed, adapted and streamlined its programme, and offered it in the relevant home languages across each province. It provided learners with learner workbooks that integrated HL literacy and Life Skills, and were aligned to teacher guides. The 'coaching' arm of the intervention differed between Eastern and Western Cape provinces.*
	Funda Wande Teacher Assistant Intervention (2020–ongoing)	*In Limpopo, Funda Wande is implementing and evaluating the provision of LTSM with teaching assistants, rather than coaches. Trained unemployed youth with a matric qualification are used as teaching assistants, who assist teachers with administrative tasks, handle LTSM, identify and support struggling learners, and do remedial exercises with small groups.*
	Reading to Learn South Africa (2020–ongoing)	*A public benefit organisation that offers teacher development courses to teachers in the Eastern Cape, Gauteng, KwaZulu-Natal, Mpumalanga, and Western Cape, as well as to lecturers at various tertiary institutions, focusing on text-based reading methodologies.*

07

A curriculum review of South African CAPS Grades R to 3

ELIZABETH PRETORIUS, KATHLEEN RASTLE & NANGAMSO MTSATSE

Abstract

Curriculum reform is one of many elements contributing to learner performance within an education system. Since 1994, South Africa has undergone three curriculum changes, yet learner literacy performance remains consistently low. In contrast to the two preceding curricula, which were strongly undergirded by constructivist views of learning and teaching, the current Curriculum and Assessment Policy Statement (CAPS) for the Foundation Phase – implemented in 2012 – specifies content knowledge and explicit teaching more strongly. This chapter reviews CAPS for Grades R to 3 to see how it frames early grade reading acquisition, and shapes its instruction and assessment. The science of reading provides specialised knowledge that a reading curriculum in the 21st century can draw on to provide guidance on reading acquisition and to inform practices.

The review finds three main weaknesses in CAPS for the Foundation Phase: (i) by attempting to 'balance' a scientific approach to reading with Whole Language practices, which are theoretically and empirically incompatible with scientific accounts of reading acquisition, the curriculum sends out mixed messages that undermine it; (ii) the slow pace in the curriculum for developing decoding and its

KEYWORDS
early grade reading, reading curriculum, science of reading, phonics, foundational reading skills

silence on accuracy and fluency make it unlikely that South African children will be able to read for meaning by Grade 3; and (iii) the curriculum lacks an assessment barometer to serve as an early warning system in Foundation Phase to identify and remediate struggling readers.

The focus in this chapter is primarily on the phonics deficiencies in CAPS, not because phonics is the only thing that is important, but because no other reading activities will have a substantive impact until this aspect of the curriculum is addressed.

1 Introduction

Developing strong reading trajectories in children from the early years of schooling is a pivotal mandate in any education system. Children who get off to a poor start in reading tend to remain poor readers throughout schooling (Kim et al. 2019b). Even after school, reading ability can determine career paths, income, health, and full participation in civil society (e.g. DeWalt et al. 2004).

In the almost 30 years since the official demise of apartheid and the establishment of a democratic South Africa in 1994, the country has seen the implementation of three curricula. In 1998, Outcomes Based Education (OBE) was introduced, referred to as C2005 (2005 being the intended year for final implementation). Following a curriculum review in 2000, C2005 was replaced with a revised National Curriculum Statement (NCS) to address the shortcomings of C2005. Following a ministerial review in 2010, the NCS was replaced in 2012 with three documents per phase or subject, of which the Curriculum Assessment Policy Statement (CAPS) was one. The aim of this chapter is to review the current South African CAPS for Grades R to 3 as it pertains to languages and literacy. The focus is specifically on how CAPS frames early grade reading acquisition and shapes its instruction and assessment.

2 The broader context

Education systems are complex, multi-layered, and dynamic, with many contributory factors affecting learner performance. A curriculum is a product of its time and context. It reflects prevailing views of learning and teaching, as well as political and socio-economic aspirations, currents, and realities. This section briefly touches on some of these issues to provide a backdrop to CAPS.

2.1 Political and theoretical currents

In the new democratic South Africa, dismantling racial structures and addressing social and education injustices became a high priority. To this end, a progressivist model of education was favoured in the shape of Outcomes Based Education, introduced in 1998. C2005, as it was referred to, was underpinned by constructivist theories that were strongly learner-centred; it was high on generic outcomes and low on domain

knowledge, content specification and discrete skill development (Muller & Hoadley 2019). In 2002, C2005 was modified slightly as the revised National Curriculum Statement, giving slightly more attention to content, but basically retaining its constructivist tenets (Hoadley 2017).

C2005 and the revised NCS embraced a Whole Language approach to reading instruction, in which meaning is privileged, reading is viewed as a holistic process, and explicit teaching of component sub-skills regarded as reductionist and therefore downplayed. In western countries, progressive models of education displaced curricula in which content, sequencing, and pacing are specified and teaching is more explicit (Hoadley 2017). When imported into the education contexts of developing countries, such models tend to fail dismally (O'Sullivan 2001; Westbrook et al. 2013). However, in the political zeitgeist of South Africa in the first two decades after liberation, politics and education were inextricably fused, and criticism of progressivist education was equated with rejection of the new democratic dispensation (Muller & Hoadley 2019). Under the new dispensation, the curriculum was intended to be 'rich' and 'full' with a strong emphasis on learner-centred meaning-making and 'co-constructing' knowledge. Given the resource constraints (Spaull & Pretorius 2019) and serious limitations of teacher knowledge (Taylor 2019) in South Africa, combined with a pedagogic approach that denies the value of skills instruction, this aspirational curriculum failed spectacularly.

Sustained poor performance in both national and international assessments and increasing public criticism brought about pragmatic re-engagement with the curriculum. Another review of the curriculum was undertaken in 2009 (Dada et al. 2010), giving rise to CAPS, which was meant to address the troubling issues and to plug gaps in preceding curriculum policies. In contrast to the preceding curriculum, content-knowledge is more strongly specified in CAPS, explicit instruction is legitimised, the pacing and sequencing of learning activities are more clearly stipulated, formative and summative assessments are required, and textbooks and resources feature more prominently. CAPS was published in 2011 and implemented in the Foundation Phase in 2012, leading to a decade of relative curriculum stability.[1]

2.2 Review framework

The current low and slow early grade reading trajectories in South Africa are well-documented in this volume (e.g. Pretorius & Spaull; Wills et al.). The purpose of this review is to consider how CAPS might influence this trajectory, being mindful that curriculum change is not necessarily a panacea for pedagogic woes and underperformance.

Hoadley et al. (2010, 16) define a good quality curriculum as one that is "coherent, clear, unambiguous, assessable and … draws on the essential, specialized knowledge for learning from different disciplines, subjects, or areas of learning". The "essential, specialized knowledge" that a reading curriculum draws on would be from a scientific

1. Of possible interest is that the term of the Minister of Basic Education in South Africa, Ms Angie Motshekga, overlaps with this curriculum stability. She was appointed in 2010 and has remained the Minister throughout this period. Prior to this, there had been four ministers of education in 28 years.

approach to reading that is guided by converging evidence about reading acquisition across a variety of language writing systems and their linguistic features.

Reading is one of the most intensively researched domains in the discipline of psychology, stretching back more than 100 years (e.g. Huey 1908). This body of research has produced a strong consensus on the basic mechanisms of reading skill and an understanding of how this evidence base should be translated to instruction (e.g. Castles et al. 2018). The fact that most learners in South Africa exit Grade 3 with very poor decoding skills (Mohohlwane et al., this volume; Wills et al., this volume) and that 78% of Grade 4s cannot read for meaning in any language (Howie et al. 2017) is staggering in the face of the strength of this evidence base, contributory factors notwithstanding. The focus in this review is on the instructional clarity that a curriculum offers and the soundness of evidence underpinning its instructional guidance, specifically in relation to early reading acquisition in a developing country context.

At the time that CAPS was designed, there was very little research on reading in African languages. Far more research has since been undertaken in the intervening decade (cf. Pretorius & Spaull, this volume) so the review weighs local evidence against the broader science of reading.

3 CAPS and primary schooling in South Africa

Formal schooling in South Africa begins in Grade 1 at age six but nearly all government primary schools now also have a preschool year, Grade R (reception year for 5–6 year-olds). Primary school lasts from Grade R to 7 and includes three phases: Foundation Phase (Grades R to 3), Intermediate Phase (Grades 4 to 6) and Senior Phase (Grade 7).

CAPS for the Foundation Phase (FP) covers Grade R as well as Grades 1 to 3. Three learning areas are specified: Maths, Language and Literacy, and Life Skills. This review focuses on reading within the language and literacy learning area.

There are 11 official languages in South Africa, all of which serve as a language of learning and teaching (LOLT) in the Foundation Phase, depending on the school. The curriculum distinguishes between Home Language (HL), First Additional Language (FAL, the main additional language acquired by a learner in school[2]), and Second Additional Language (SAL, another additional language acquired by a learner). CAPS is available in all 11 languages, and for all language levels, i.e. HL, FAL, and SAL.

The original CAPS HL document was written in English then translated and versioned into Afrikaans and the nine African languages. In response to criticisms that CAPS reflected a largely English approach to reading, in 2020 the Department of Basic Education (DBE) brought out the National Framework for the Teaching of Reading in African Languages in the Foundation Phase (DBE 2020). This was not a revision of CAPS but rather a more fully specified adaptation and re-versioning of instructional

2. The Home Language is the chosen first language by the school governing body, usually a dominant African language spoken in the community. For the majority of African-language-speaking learners, English is the first additional language and becomes the LOLT from Grade 4 onwards.

guidelines for reading in African languages, specifically with regard to decoding and phonics.

3.1 Structure and specificity in CAPS in the Foundation Phase

Compared to C2005 and the revised NCS, CAPS is fairly comprehensive and specifies in some detail what should be taught and for how long. The following main features are highlighted, all drawn from (DBE 2011):

- Time allocation for languages, Maths and Life Skills is specified. Approximately 43% of instructional time is given to Language and Literacy.
- The four traditional language skills (listening, speaking, reading, and writing) are re-organised into three areas in FP as: *Listening and Speaking*, *Reading and Phonics*, *Writing and Handwriting*. *Thinking and Reasoning* and *Language Structure and Use* are integrated across these three language areas. Time allocations and requirements for these areas, are specified per grade per week for each of the four terms.
- Content, teaching plans and assessments for these areas are specified in detail per grade, per area, and per term, forming the bulk of the curriculum document.
- CAPS refers to the five main components of reading identified by the National Reading Panel (2000), viz. phonemic awareness, word recognition (sight words and phonics), fluency, vocabulary, and comprehension. All except vocabulary are briefly discussed.
- CAPS emphasises four different reading methods, viz. Shared, Paired, Group Guided, and Independent Reading. Teacher Read-Alouds are mentioned but not given much attention.
- Instructional time of 15 minutes is devoted to phonics daily (five times per week).
- Teachers are required to identify reading ability groups to be given individual attention in 15 minutes of Group Guided Reading per day (30 minutes for two groups per day).
- Different types of comprehension questions are identified (*literal*, *reorganisation*, *inferential*, *evaluation* and *appreciation*) and teachers encouraged to ask questions across the range of question types.
- Core and support materials are specified; teachers are advised what materials they should have and the different genres of text that should be dealt with across the grades.
- Assessment codes ranging from 1 (Not achieved) to 7 (Outstanding) and percentages are given for reading.
- In English FAL CAPS, vocabulary ranges are suggested for Grade 1 to 3. A list of the most common 300 words in English is given towards the end of the document.

CAPS focuses broadly on the *teaching* aspects of reading instruction but very little is specified in terms of learner accomplishment. Teachers are told in great detail *what* to teach for reading and *for how long*; far less attention is given to how different components of reading fit together, and very little guidance is given as to what a 'good reader' in the different grades looks like.

4 Issues under review: CAPS and the science of reading

CAPS devotes approximately 43% of instructional time in the Foundation Phase to Language and Literacy, reflecting the crucial importance of these skills for lifelong outcomes. It also refers to the Big 5 components of reading identified by the National Reading Panel (2000), thus ostensibly aligning itself to a scientific knowledge base, and presenting itself as a balanced approach to reading instruction. However, there are different ways of interpreting a 'balanced' approach. Unless a curriculum explicitly states what is meant by this, the adoption of a balanced approach is ambiguous. Most of the debates in early reading revolve around the role of phonics – how it should be taught, and for how long, and whether it should be taught at all. Perceptions of phonics in turn affect perceptions of what a balanced approach to reading entails. It is thus important to reflect on what is meant by these terms before considering the alignment between CAPS and the evidence base, and to determine what (if anything) would need to change to increase its effectiveness and efficiency.

4.1 What is phonics: a redundancy or an equaliser?

In all alphabetic writing systems, the letters of the alphabet (the code) represent individual sounds (phonemes) in a language. Knowing and blending these letter-sounds enables children to 'decode' familiar words and equips them to read words that they have not yet encountered. The term 'phonics' derives from this phonemic attribute of alphabetic writing systems.

Some approaches to early reading instruction tend to overlook the phonics basis of alphabetic writing systems and focus instead on whole words. Examples include the 'look–say' method popular in the 1950s and the Whole Language approach that arose in the early 1970s, specifically in the English-speaking world. Whole Language privileges meaning above all and assumes that reading, like spoken language, is acquired naturally through exposure to meaningful texts. The teaching of decoding is regarded as uninteresting and inauthentic (Goodman & Goodman 1979; Smith 2004; Ellis & Bloch 2021), giving rise to an aversion to phonics in some education circles.

One challenge in developing reading curricula over the past decades has been a reliance on the introspection of adults regarding their reading experience. To the literate adult, the identification of printed words is effortless and automatic, and the substantive aspects of reading concern the interpretation of text. Thus, just as literate adults do not have to break words into sounds, the progressive education movement behind the Whole Language approach argued that reading should come naturally to a child, and that instruction should be focused on the individual child's construction of meaning of whole words through experience with authentic texts (Goodman 1967; see Moats 2000). In practice, this meant doing away with any direct instruction on how the writing system works, and resorting to unhelpful practices such as memorising words based on their shapes and guessing words based on pictures or context.

Unfortunately, adult introspection fails dismally when it comes to reading. Unlike spoken language, we are not born with neural hardware for reading. There is no sense

in which reading develops naturally in the way that walking, talking, and remembering do. Instead, the scientific consensus is that reading is "acquired" through many years of instruction and practice, as the brain recycles neurons built for other functions (Dehaene & Cohen 2011) and connects the subsystems needed to use language through the visual modality (Taylor et al. 2019). To a child coming to reading for the first time, the visual symbols of writing are just arbitrary lines, squiggles and dots. The purpose of reading instruction is to provide learners with the tools to interpret these visual symbols or 'crack the code' (Castles et al. 2018; Kim et al. 2019a), and to guide their practice in the most effective manner possible.

The Whole Language philosophy that for decades dominated literacy instruction essentially saw this sound–symbol mapping relationship as a rote memorisation problem, in which children learn to recognise words "on sight" as "wholes" without any analytic strategy of breaking words into their components. However, the problem with this type of learning is that it is wholly arbitrary, difficult and unfeasible, given the vast number of words that need to be learned in English and in most other languages. The way around this problem is for children to learn the finite visual symbols of writing and how they map onto the sounds of spoken language, enabling them to 'decode' any printed word to spoken language (Rastle & Taylor 2018).

The inadequacy of a Whole Language approach for reading acquisition becomes even more evident for African languages. English has many short high-frequency words (average word length across English texts is 4 letters) (Björnson 1983). This is not the case in agglutinating languages with alphabetic writing systems such as the African languages in South Africa. In such languages, a single word can express a whole sentence, and visually similar syllables within a word need to be processed with great precision, for example in isiZulu:

Sengiyaqeda	(I am already finishing)	(Present)
Sengaqeda	(I finished)	(Remote past)
Sengizoqeda	(I am about to finish (even though you may think differently))	(Future)

Besides the cognitive burden of trying to remember hundreds of variations of each verb form, readers will miss important meaning-making morphological cues within the word unless they process all the letters in each syllable. Expecting children to figure out for themselves how visual symbols map onto spoken language in such transparent but complex orthographies is inefficient and unproductive.

The preponderance of evidence across alphabetic writing systems points to systematic phonics as being the most efficient and effective means of helping a child to discover how their writing system works (e.g. Castles et al. 2018; National Reading Panel 2000; Kim et al. 2019a). Its evidence base is rated as being the most secure of any area of pedagogy by the Educational Endowment Foundation of the United Kingdom (Educational Endowment Foundation 2022). In systematic phonics, children are provided with explicit instruction on the mapping between visual symbols and sounds and offered practice in blending decoded sounds. The instruction is 'systematic' in that spelling–sound relationships are introduced in a logical and ordered manner (usually in a dedicated 15-minute slot), so that children

are able to start using this knowledge immediately to engage in reading practice. Systematic phonics is a direct consequence of having an alphabetic writing system; its purpose is to provide children with the 'how-to' for decoding writing so that cognition is freed for comprehension. Advocating for systematic phonics is not exclusionary; it does not mean that early reading instruction consists *only* of phonics, nor does it mean that oral language should not be developed, that children should not be exposed to storybook reading, or that comprehension should not be explicitly taught. Much of the local criticism against phonics points to slippage of meaning as to what phonics entails (cf. Pretorius & Spaull, this volume).

That direct instruction in the alphabetic code facilitates early reading acquisition is one of the most well-established conclusions in cognitive and behavioural science (Stanovich 2000; Rastle et al. 2021). It is especially so for disadvantaged children (Slavin et al. 2009; Tunmer et al. 2013), and for this reason, phonics is sometimes called the 'great equaliser'. Given the high levels of poverty in South Africa and the role that socio-economic factors play in education (Spaull 2019), an evidence-based reading method that can help to reduce the achievement gap in a deeply unequal society needs to be taken seriously.

4.2 What is a 'balanced approach' in reading?

All reading researchers agree that meaning is integral to reading. The controversies in reading are not about meaning but about how one *gets* to meaning, and this is where different conceptions of a balanced approach to reading arise.

Systematic phonics has been at the heart of the 'Reading Wars' over several decades, and in many ways has been a touchstone for broader political and philosophical debates (Castles et al. 2018). In an attempt to reconcile the opposing reading approaches, a 'balanced' approach is sometimes advocated where some phonics-type activities are included in a Whole Language reading programme, for example, teaching letter-sounds 'as needed' when encountering a new word (see Moats 2000). However, such a balance falls 'betwixt and between' since the two approaches have fundamentally different premises about how reading is acquired.

Another interpretation of 'balanced' derives from a componential view of critical evidence-based elements in reading, such as the five components identified by the National Reading Panel (2000) viz. phonemic awareness, word recognition (sight words and phonics), fluency, vocabulary, and comprehension. In this view, the aim of early reading instruction is to develop ability in all these components for successful reading to occur.

Given the different interpretations of a 'balanced' reading approach, it behoves a curriculum to specify what it means when it advocates a balanced or integrated approach.

4.3 CAPS and the Whole Language legacy

The Whole Language approach to early reading was embraced in C2005 and the revised NCS. To what extent is it still adopted in CAPS? We next look at issues such as early

language development, the mixed messages in CAPS, and ambiguity around Shared Reading.

4.3.1 Grade R and spoken language foundations of reading

There is consensus amongst a wide range of reading researchers that the process of learning to read begins with spoken language. Vocabulary, grammar, and narrative ability prior to school entry predict later reading comprehension (Nation et al. 2010), and interventions to improve spoken language have causal impacts on subsequent reading comprehension (Clarke et al. 2010). Most children arrive at school with a reasonable spoken language foundation (Norbury et al. 2016). This body of research also suggests a profound relationship between socio-economic status and language ability prior to school entry (Fernald et al. 2013), perhaps as a result of diversity in conversational experiences (Romeo et al. 2018). This evidence base arises largely from monolingual contexts; the more complex multilingual and language of instruction issues characteristic of developing countries are under-researched. These language issues have broad relevance for learners around the world and while they have not received sufficient research attention in the science of reading, they are gaining research momentum in South Africa from various perspectives (Ramadiro & Porteus 2017; Makalela 2015; McKinney 2017; Kretzer & Kaschula 2021). However, some sociocultural or translanguaging proponents disavow the distinctions between different linguistic systems, and differences between spoken and written language, resulting in holistic conceptualisations of language and literacy that align with constructivism.

In theory, CAPS provides rich language opportunities in Grade R including instructional time devoted to the morning language ring, and use of routines to promote language development. However, language development in Grade R requires teachers to purposely intervene and mediate incidental learning opportunities arising through free play (i.e. capturing 'teachable moments', DBE 2011, 20). How these are implemented in practice is beyond the scope of this chapter. These strategies likely require highly skilled teachers and small class sizes that may not be consistent with reality. The Grade R curriculum encourages a play-based approach and also explicitly discourages formal instruction or use of formal assessment to determine learners' baseline language ability, recommending instead an informal approach to building a full picture of each child. Once again, this aspiration may not be consistent with class sizes and the resources available in typical South African schools. Large scale studies that have included oral language subcomponents in their EGRA assessments show poor language development in Grade R and Grade 1 (Hofmeyr, this volume). In CAPS, it is unclear how learners with low language at school entry are identified and supported.

4.3.2 Mixed messages in CAPS

Many of the practices that originate in the Whole Language philosophy appear to have been included in CAPS as a nod to that approach, as described in Table 1. The large body of research on reading acquisition suggests that instructional time spent on these practices is likely to be detrimental, for reasons given in the table.

Table 1 Harmful instructional practices in CAPS

Practice	Description	Why it is harmful
Sight vocabulary	Substantial instructional time is devoted to developing a 'sight vocabulary' of high-frequency words.	• The need for a memorised 'sight vocabulary' implies that if children are instructed to memorise words, then they will not learn to decode. Rote memorisation in English should be restricted to the few words that cannot be pronounced using typical grapheme–phoneme rules (e.g. *have*). • The notion of sight words is even more problematic in the African languages, especially for the conjunctive orthography of the Nguni languages. Productive ways of reading words in agglutinating languages require reading *through* the words relying on phonological processes, not 'recognising' whole words.
Multi-cueing	Substantial instructional time is devoted to the use of non-decoding, whole-word strategies. These include use of prediction, context, and pictures to guess words (e.g. five finger strategy).	• Multi-cueing strategies lie at the heart of the Whole Language philosophy. They undermine phonics instruction because they give children tools *alternative* to decoding. • These tools will fail as English text becomes more advanced. These strategies fail even for simple texts in African languages. Because so much morphological information is encoded in word units in agglutinating languages, being unable to process this information through decoding, and therefore resorting to guessing from pictures or making predictions, is a time-consuming and highly inaccurate way of reading in these languages.
Silent reading	There is an emphasis on silent reading across the Foundation Phase before children have the tools to be capable readers.	• The Whole Language philosophy asserts that children learn to read by imitating adults; hence, instructional time is given to children to practice their silent 'reading' (Moats 2000). However, when non-fluent readers are asked to read silently, there is no opportunity to assess their decoding skill. Seidenberg (2017, 130) observes: "Children who struggle when reading texts do not become good readers if left to read silently; their dysfluency merely becomes inaudible."
Higher-level units	Substantial instructional time is devoted to teaching higher-level units such as onset–rime combinations (e.g. *bl–ack* and *sh–ip*).	• Instruction on higher-level units introduces an ambiguity about the grain size being learnt. Instead of learning how many letters are needed for a single sound, this type of instruction forces children to pair a variable number of letters to a variable number of sounds. This type of instruction also dramatically increases the learning challenge, for very little additional benefit in the number of words that can be decoded. • The popular syllabic approach to reading in African languages also relies on a larger unit above the phonemic level (e.g. *ba*, *be, bi*, *bo, bu*). Given the syllabic nature of African languages, this approach makes sense and is helpful *if* children are explicitly made aware of the individual letter-sounds within syllables, but the whole-class chanting of syllables in a predicted sequence obscures this skill. Whether children who speak syllabic languages instinctively discern individual phonemes in this larger grain size remains to be researched, especially when syllables involve complex consonant sequences (e.g. *nga*, *ngwa*, *ntse*, *ntshwe*).

In sum, it is difficult to discern the overarching approach to reading in CAPS as it gives mixed messages regarding the knowledge base from which it draws. On the one hand it acknowledges the Big 5 from the National Reading Panel (2000); critically, it has a daily slot for phonics instruction, thereby broadly aligning with scientific knowledge about reading in alphabetic writing systems. On the other hand, it is unclear what CAPS means by a 'balanced' approach, as it adopts several Whole Language practices that actually undermine children's learning of the alphabetic code. These practices are particularly misplaced when applied to African languages and these concerns are especially relevant since 70% of children in South Africa learn to read in agglutinating African languages (Pretorius 2019). The preponderance of scientific evidence worldwide, for both opaque and transparent orthographies, shows that while strong oral language lays the foundation for reading, children learn to read more easily and effectively when decoding skills are developed through explicit instruction (Caravolas et al. 2013; Sparks & Patton 2016; Florit & Cain 2011). Decoding skills are the very skills on which text comprehension is built; they are finite and can be taught quickly.

Whole Language conceptions of early reading cannot be reconciled with evidence-based reading instruction, and it is unclear why attempts to 'balance' these approaches have been prioritised over the large body of evidence supporting code-based approaches to initial reading instruction.

4.3.3 The ambiguous role of Shared Reading

The use of Shared Reading (20 mins, three times per week) throughout CAPS serves two useful functions: (i) it provides additional language experience to boost language development; and (ii) it may help children to develop an interest in books. Shared Reading sessions introduce children to a range of printed texts (stories, poetry, plays, non-fiction). This is especially important for children who come from disadvantaged backgrounds where exposure to storybook reading may not happen. Research shows that the vocabulary used in children's books is richer than that used in spoken language directed at children (Dawson et al. 2021), with more complex syntax (Montag & MacDonald 2015). Thus, children are likely to gain valuable language input through heard exposure to books that they are not yet able to read themselves.

However, a common misunderstanding is that Shared Reading provides a vehicle for children to discover code-based knowledge (Treiman 2018). The idea is that by following text while listening to spoken language, a child will naturally learn to associate those two forms of input and figure out how the alphabetic code works. Uncritical acceptance of this proposition has been a major contributor to poor reading outcomes. Indeed, research shows that pre-readers hardly even look at the text while being read to; instead, they listen to the words and focus on the pictures (Evans & St. Aubin 2005). Thus, while the large amount of instructional time devoted to Shared Reading as a whole-class activity in CAPS is valuable in building language skills and in instilling an interest in books, it is unlikely to have a direct impact on the development of children's independent reading skill. This is especially the case in African contexts, where class sizes are often very large and there are few Big Books available in African languages.

4.4 Other pedagogical issues in CAPS and the science of reading

Over and above the poor practices associated with Whole Language that undermine any high-quality instruction provided in CAPS, there are other deficiencies in the content and sequencing of the curriculum that will limit learners' opportunity to develop the decoding skills required to read for meaning.

4.4.1 The sequencing and pacing of the different components of reading across Grades R to 3

Once children understand how the visual symbols of writing map onto spoken language, they are able to decode printed words and access their pre-existing spoken language vocabulary. Most critically, the ability to decode gives a child the power to access the meaning of virtually any printed word in their spoken vocabulary, irrespective of whether they have seen that printed word before. This property makes phonics instruction enormously efficient. Even in the relatively opaque English writing system, providing instruction on just 60 grapheme–phoneme relationships and 58 exception words that do not follow typical spelling–sound patterns allows children to access the meanings of around 75% of words encountered in the first three years of reading instruction (Solity 2020). Longitudinal research suggests that more than 99% of variation in reading comprehension by the age of seven is explained by the combination of spoken language knowledge and decoding ability (Hjetland et al. 2019).

Developing alphabetic knowledge in Grade R

Research on early reading in South Africa shows that children entering Grade 1 have very poor alphabet knowledge; for example, at the start of Grade 1, children know as few as 5–6 letter-sounds despite having spent a year in Grade R (Ardington & Meiring 2020). The Grade R year could be used more productively to give children an early and firmer footing in some basic alphabetic knowledge before Grade 1, without imposing heavy formal instruction in Grade R.

Developing foundational reading skills through systematic phonics in Grades 1 to 3

Although substantial instructional time is devoted to phonics in CAPS (15 mins, five times per week), it does not seem to be used efficiently. Large-scale longitudinal data on early reading from the various benchmark reports provide compelling evidence of the slow development of decoding skills in Foundation Phase (Ardington et al. 2020; Wills et al. 2022). Many children enter Grade 4 unable to read for meaning in either an African language or in English (cf. Wills et al., this volume).

The most serious problem with the phonics provision in CAPS is that it is too *slow*. No phonics instruction occurs at all in Grade R and spelling–sound relationships are still being introduced at the end of Grade 3. This slow pace poses a major challenge for

the development of reading comprehension because children do not have the tools to decode printed words at the point at which they need to be developing fluency through independent reading. Higher-level fluency and comprehension processes need to be the focus of Grade 2 and 3, yet basic phonics is still being taught in Grades 2 and 3.

The slow phonics pace means that all the instructional time devoted to Group Guided Reading (30 minutes, five times per week) is not going to have the impact that it is intended to have. In Grade 1, the purpose of Group Guided Reading should be to allow children to consolidate and practice their decoding skills, ultimately building the fluency needed to read rapidly for meaning. However, the slow pace of phonics means that children will not have the decoding skill needed to participate properly, possibly resorting to other strategies to guess the words.

The slow pace of phonics instruction is also completely misaligned with the targets for the writing curriculum. Writing practice should provide reciprocal strengthening of reading skills. However, at the point at which digraphs are being introduced in the CAPS phonics curriculum (Grade 2, Term 2), the writing curriculum aspires for children to be writing poetry, paragraphs, and multi-sentence stories.

CAPS should strive to complete systematic phonics instruction of the major grapheme–phoneme relationships (including digraphs and trigraphs) for all LOLTs by the end of Grade 1. This likely means starting instruction of a small number of consonants and vowels in Grade R, and dramatically increasing the pace in Grade 1. The CAPS English curriculum moves at a pace of around 1–2 graphemes per week; for comparison, England's national curriculum moves at a pace of 4–7 graphemes per week, including instruction in Year R. Research suggests that a faster pace of phonics instruction (including in Grade R) leads to superior outcomes (Vadasy & Sanders 2020; Sunde et al. 2020). This is most likely because decoding skills provide the tools needed to gain vital print experience through independent reading (Van Bergen et al. 2018; Share 1995). Research suggests that voluntary reading practices depend on a child's reading ability; poor readers choose to read less (Van Bergen et al. 2018). In low income countries, voluntary reading practices will also be constrained by resource limitations.

There is also a *lack of specificity* within CAPS on the nature of systematic phonics instruction that should be provided. Ideally, the instructional regime should minimise the amount of information that needs to be learned, and should prioritise information that allows children to begin to read independently as soon as possible. Thus, the grapheme–phoneme relationships (and also the order in which these are taught) must be those that are most useful to the child (Solity 2020; Vousden et al. 2011; Solity & Vousden 2009). Vousden et al. (2011) developed an English learning scheme that takes into account the usefulness of particular spelling–sound relationships in printed material that children encounter. Developing and using such schemes should be a priority for instruction in each of South Africa's home languages.

There is no guidance in CAPS as to how schools should evaluate the alignment of a reading programme with the science of reading. There are many English reading programmes that claim to offer systematic phonics instruction, but which are not actually aligned with the research evidence (for example, the *Units of Study* curriculum popular in the USA has been heavily criticised in recent years for the poor quality of its phonics content (Student Achievement Partners 2020)). It would be useful to develop a process for validating reading programmes or materials, or at least to specify the characteristics of an adequate phonics programme in greater detail.

The issue of faster pacing of phonics and the earlier introduction of complex consonant graphemes in African languages was addressed in the National Framework for the Teaching of Reading in African Languages in the Foundation Phase (DBE 2020). However, having this critical information in a document separate from the main curriculum document is problematic.

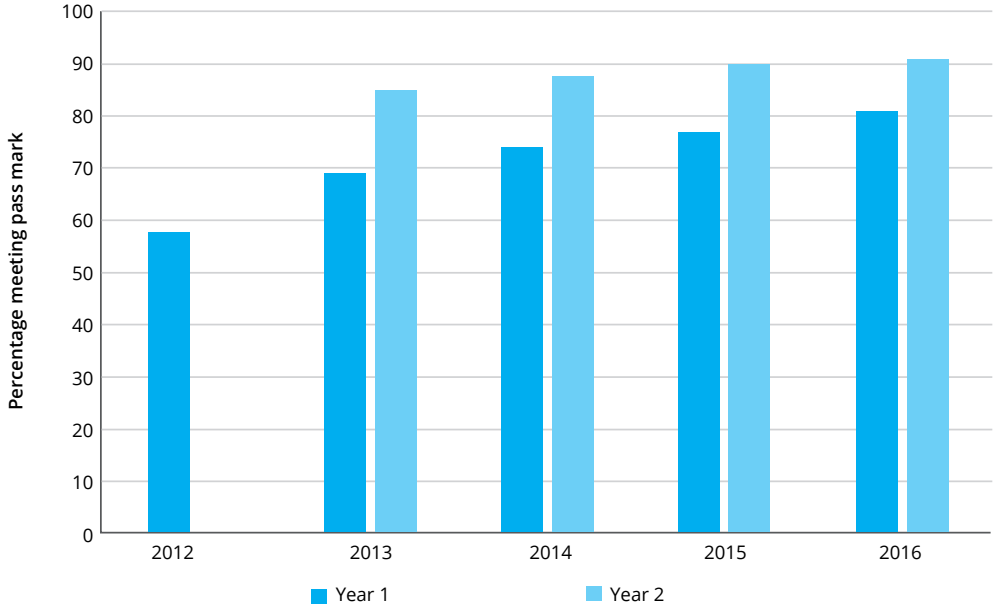
4.4.2 Assessment of phonics knowledge in CAPS

Launching children on successful reading trajectories from the start of schooling and ensuring that they stay on track during Foundation Phase are priorities. A faltering initial reading trajectory creates cracks that, if left unattended, develop into reading gaps, seldom overcome by weak readers on their own. The monitoring of reading requires reliable assessments. That 78% of South African readers in Grade 4 cannot read for meaning even at a basic level (Howie et al. 2017) suggests that basic teaching and assessment in Foundation Phase is lacking. Indeed, although CAPS encourages assessment on an ongoing basis, there are no guidelines for how to assess early reading skills, and no standard formal mandates for assessing reading progress across schools. Although assessment codes and percentages are given for 'reading and reporting' in CAPS, these are not conventional reading measures so provide no reliable measures of reading progress.

The ability to decode printed words provides the foundation for becoming a skilled reader, capable of higher-level text comprehension at speed. There is no other path to becoming a skilled reader in an alphabetic writing system. Children who have not acquired the ability to decode their writing system are unable to read for meaning. Yet, despite this vital skill, there is no formal assessment in CAPS of children's mastery of this knowledge. The simplest way to test decoding skill is to ask children to read simple pseudowords aloud. Pseudowords provide a powerful test of decoding ability because they cannot be memorised; they must be read using knowledge of the relationship between graphemes and phonemes. Wawire et al. (2021) found that performance on non-words in African languages predicted reading ability.

The use of a phonics assessment has driven dramatic improvements in England's reading outcomes over the past decade. This assessment asks children at the end of Year 1 (age 5–6) to read aloud 20 simple words and 20 simple pseudowords. Those who do not meet the expected standard are provided with additional instruction and repeat the test at the end of Year 2. In the first year of assessment implementation, only 58% of children met the expected standard, even though systematic phonics had been in the national curriculum for five years. These data suggest that it is not enough to require systematic phonics instruction in the curriculum; schools must have the means to test the effectiveness of their practice. The subsequent three years saw dramatic, year-on-year improvements, reflecting hundreds of thousands of additional children developing the foundations for successful reading (see Figure 1). This is a simple, cost-effective assessment shown to be valid and sufficiently sensitive to identify at-risk readers (Duff et al. 2014).

Figure 1 Results of the phonics screen in England



Note *Figure redrawn from Rastle (2019) and made available under CC-BY Attribution 4.0 International licence. From: osf.io/aqzm2/*

4.4.3 Assessment of fluency

Oral reading fluency is mentioned in CAPS but only in passing, and no guidelines are provided to help teachers determine whether learners are on track with their oral reading fluency. This is understandable for African languages since, at the time, lack of research on early reading in the African languages meant that the relevant data were not available (these data are now available for Nguni, Sesotho-Setswana, and EFAL readers (Ardington et al. 2020; Wills et al. 2022)). Even though fluency norms for English were available at the time, they received no attention in CAPS. Because oral reading fluency scores correlate so strongly with comprehension, they provide one of the most critical reading measures in the assessment toolkit of a Grade 2 or 3 teacher. Children who read slowly and haltingly are at risk of reading failure, and teachers need to be alert to such cracks in literacy development.

4.5 Beyond phonics

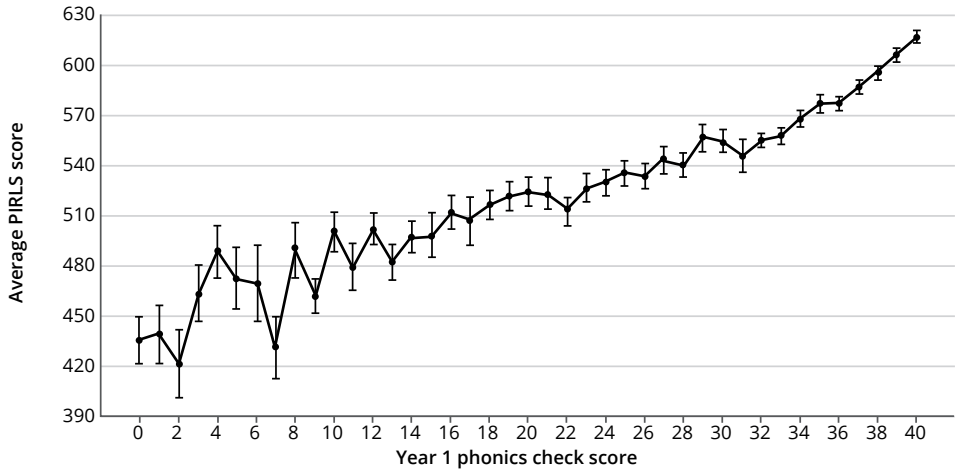
In the space constraints of this chapter, we have highlighted the main drawbacks in CAPS related primarily to decoding deficits. It is often difficult for teachers and the general public to understand the relentless focus on systematic phonics instruction. Surely, the purpose of reading is broader than this! Unfortunately, this argument is

often framed in oppositional terms, as if the *alternative* to phonics is to focus on reading for meaning.

Every reading scientist would agree that there is more to reading than phonics. Indeed, research suggests that becoming a skilled reader requires three broad sets of skills: cracking the alphabetic code, developing fluency, and text comprehension (Castles et al. 2018). Each of these sets of skills is multi-faceted and complex – mastery of them takes at least ten years. Yet, while all of these skills are vital for successful reading, they build on one another. It is not possible to develop reading fluency without decoding ability; any instructional time devoted to reading fluency is wasted if learners' phonics knowledge is not secure. Likewise, it is not possible to devote the working memory resources needed for high-level inferencing if those resources are required to decode each word.

The importance of decoding ability on broader reading comprehension is evidenced clearly in the analysis of PIRLS performance. Large-scale analysis of performance across different countries in 2006, 2011, and 2016 showed that the most important factor influencing reading achievement was socio-economic status; access to classroom libraries was another significant predictor (Lao et al. 2021). However, when looking at the most recent exercise from England specifically, analyses show that the most important predictor of reading achievement in Year 4 is that child's performance on the phonics screen in Year 1 (McGrane et al. 2017). Phonics ability remains a significant predictor even after controlling for indicators of socio-economic disadvantage, the number of books in the home, demographic factors (age, gender, ethnicity), native language status, and historic school performance (McGrane et al. 2017). In fact, Figure 2 shows a strong, positive, linear relationship between performance on the phonics screen and PIRLS reading comprehension performance three years later.

Figure 2 **Relationship between Year 1 phonics screen and PIRLS (2016) performance three years later, England**



Note *From McGrane et al. (2017); figure comprises UK public sector information licensed under the Open Government Licence v3.0.*

It is unsurprising, given the evidence base, that decoding ability should be the strongest predictor of reading comprehension three years later. However, that decoding ability is more influential than variables associated with disadvantage may be surprising to many readers, and provides further evidence for the notion of phonics as a 'great equaliser'.

5 Recommendations and conclusion

There is undeniable evidence that, irrespective of the language in which reading is taught, learners in the Foundation Phase in South Africa are not acquiring foundational reading skills that enable them to read fluently, with understanding and enjoyment. There are many contributory factors. The science of reading provides 'essential, specialised knowledge' that a reading curriculum in the 21st century can draw on to provide guidance and inform reading practices.

Our focus in this chapter has primarily been on the deficiencies in the CAPS approach to phonics, not because phonics is the only thing that is important, but because no other reading activities will have a substantive impact until this aspect of the curriculum is addressed. While there are several positive aspects to the CAPS curriculum, there are three main factors that undermine it:

- CAPS attempts to 'balance' a scientific approach to reading with Whole Language practices, which are theoretically and empirically incompatible with scientific accounts of reading acquisition. This ambiguity disrupts curriculum coherence and undermines it with mixed messages.
- The slow pace in the curriculum in developing decoding skills, and its silence on accuracy and fluency, make it unlikely that South African children will acquire the skills necessary to read for meaning during the Foundation Phase.
- There is no assessment barometer in CAPS to serve as an early warning system in the Foundation Phase. The lack of curriculum guidance on what successful reading looks like in different grades across different languages, and the lack of a rigorous decoding assessment to identify and remediate struggling readers means that instructional time in South African classrooms is not being used effectively. The recent evidence-driven guidelines on letter–sound and fluency benchmarks in the DBE's Benchmark reports (Ardington et al. 2020; Wills et al. 2022) should help in establishing stronger foundational skills.

The decision to adopt a curriculum that specifies the content and pacing of instruction in as much detail as CAPS does presents an opportunity. Aligning curriculum content more closely with the science of reading would provide a foundation for the delivery of high-quality, evidence-based instruction to hundreds of thousands of children across the country. Although the slow pace of phonics, amongst other things, was addressed in the National Framework for the Teaching of Reading in African Languages in the Foundation Phase (DBE 2020), we recommend that all the above limitations be addressed in a single revised CAPS document, for each language.

References

Ardington, C. & Meiring, T. (2020). Impact Evaluation of Funda Wande Coaching Intervention Midline Findings. Cape Town: SALDRU, University of Cape Town.

Ardington, C., Wills, G., Pretorius, E., Deghaye, N., Mohohlwane, N., Menendez, A., Mtsatse, N. & Van der Berg, S. (2020). Technical Report: Benchmarking Early Grade Reading Skills in Nguni Languages. Stellenbosch: ReSEP, Stellenbosch University. Cape Town: SALDRU, University of Cape Town. Chicago, ILL: NORC at the University of Chicago. Pretoria: DBE.

Björnsson, C. H. (1983). Readability of newspapers in 11 languages. *Reading Research Quarterly* 18(4), 480-497.

Caravolas, M., Lervåg, A., Defior, S., Seidlova-Makora, G. & Hulme, C. (2013). Different patterns, but equivalent predictors, of growth in reading in consistent and inconsistent orthographies. *Psychological Science* 24(8),1398–1407.

Castles, A., Rastle, K. & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest* 19(1), 5–51.

Clarke, P. J., Snowling, M. J., Truelove, E. & Hulme, C. (2010). Ameliorating children's reading-comprehension difficulties: A randomized controlled trial. *Psychological Science* 21(8), 1106–1116.

Dada, F., Diphelo, T., Hoadley, U., Khembo, E., Muller, S. & Volmink J. (2010). Final Report of the Task Team for the review of the Implementation of the National Curriculum Statement. Pretoria: DBE.

Dawson, N., Hsiao, Y., Tan, A. W. M., Banerji, N. & Nation, K. (2021). Features of lexical richness in children's books: Comparisons with child-directed speech. *Language Development Research* 1(1), 9–53.

Dehaene, S. & Cohen, L. (2011). The unique role of the visual word form area in reading. *Trends in Cognitive Science* 15(6), 254–62.

Department of Basic Education (DBE). (2011). Curriculum and Assessment Policy Statement. Foundation Phase Grade R–3. English Home Language. Pretoria: DBE.

Department of Basic Education (DBE). (2020). National Framework for the Teaching of Reading in African Languages in the Foundation Phase. Pretoria: DBE.

DeWalt, D. A., Berkman, N. D., Sheridan, S., Lohr, K. N. & Pignone, M. P. (2004). Literacy and health outcomes: a systematic review of the literature. *Journal of General Internal Medicine* 19(12), 1228–1239.

Duff, F. J., Mengoni, S. E., Bailey, A. M. & Snowling, M. J. (2014). Validity and sensitivity of the phonics screening check: Implications for practice. *Journal of Research in Reading* 38 (2), 109–123.

Educational Endowment Foundation. (2022). Teaching and Learning Toolkit. From: educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit Accessed 2022-09-09.

Ellis, G. & Bloch, C. (2021). Neuroscience and literacy: An integrative view. *Transactions of the Royal Society of South Africa* 76(2), 157–188.

Evans, M.-A. & St. Aubin, J. (2005). What children are looking at during shared storybook reading: Evidence from eye movement monitoring. *Psychological Science* 16(11), 913-920.

Fernald, A., Marchman, V. A. & Weisleder, A. (2013). SES differences in language processing skill and vocabulary are evident at 18 months. *Developmental Science* 16 (2), 234–248.

Florit, E. & Cain, K. (2011). The simple view of reading: Is it valid for different types of alphabetic orthographies? *Educational Psychology Review* 23, 553–576.

Goodman, K. S. (1967). Reading: A psycholinguistic guessing game. *Journal of the Reading Specialist* 6(4), 126–135.

Goodman, K. S. & Goodman, Y. M. (1979). Learning to read is natural. In Resnick, L. B. & Weaver, P. A. (Eds), *Theory and Practice of Early Reading*. 137–154. Hillsdale, NJ: Erlbaum

Hjetland, H. N., Lervåg, A., Lyster, S.-A. H., Hagtvet, B. E., Hulme, C. & Melby-Lervåg, M. (2019). Pathways to reading comprehension: A longitudinal study from 4 to 9 years of age. *Journal of Educational Psychology* 111(5), 751–763.

Hoadley, U. (2017). *Pedagogy in Poverty: Lessons from Twenty Years of Curriculum Reform in South Africa*. London: Routledge.

Hoadley, U., Murray, S., Drew, S. & Setati, M. (2010). *Comparing the Learning Bases: An Evaluation of Foundation Phase Curricula in South Africa, Canada (BC), Singapore and Kenya*. Pretoria: Umalusi

Howie, S., Combrinck, C., Tshele, M., McLeod Palane, N. & Mokoena, G. (2017). PIRLS 2016: South African Highlights Report. Pretoria: University of Pretoria.

Huey, E. B. (1908). *The Psychology and Pedagogy of Reading*. London: Macmillan.

Kim, S., Raza, M. & Seidman, E. (2019a). Improving 21st-century teaching skills: The key to effective 21st-century learners. *Research in Comparative and International Education* 14(1), 99–117.

Kim, Y.-S. G., Lee, H., & Zuilkowski, S. S. (2019b). Impact of literacy interventions on reading skills in low-and middle-income countries: A meta-analysis. *Child Development* 91(2), 638–660.

Kretzer, M. M. & Kaschula, R. H. (2021). Language policies and schools in increasingly mobile societies: Examples from Eastern Cape, Gauteng, Limpopo and North West. In Van der Walt, C & Pfeiffer, V. (Eds), *Multilingual Classroom Contexts: Transitions and Transactions*. 11–138. Stellenbosch: Sun Media Press.

Lao, C., Lee, S.-Y., McQuillan, J., & Krashen, S. (2021). Predictors of reading ability among ten-year olds: Poverty (negative), school libraries (positive), instruction (zero), early literacy (zero). *Synergy* 19(2). From: slav.vic.edu.au/index.php/Synergy/article/view/533 Accessed 2022-09-09.

Makalela, L. (2015). Breaking African language boundaries: Student teachers' reflections on translanguaging practices. *Language Matters* 46(2), 275–292.

McGrane, J., Stiff, J., Baird, J.-A., Lenkeit, J. & Hopfenbeck, T. (2017). Progress in International Reading Literacy Study (PIRLS): National Report for England. Oxford: Oxford University Centre for Educational Assessment.

McKinney, C. (2017). *Language and Power in Post-Colonial Schooling: Ideologies in Practice*. New York, NY: Routledge.

Moats, L. C. (2000). Whole Language lives on: The illusion of 'balanced' reading instruction. Washington, DC: Thomas B. Fordham Foundation. From: eric.ed.gov/?id=ED449465 Accessed 2022-09-09.

Montag, J. L. & MacDonald, M. C. (2015). Text exposure predicts spoken production of complex sentences in 8- and 12-year-old children and adults. *Journal of Experimental Psychology: General* 144(2), 447–468.

Muller, J. & Hoadley, U. (2019). Curriculum reform and learner performance: An obstinate paradox in the quest for equality. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 147–168. Cham: Springer.

Nation, K., Cocksey J., Taylor, J. S. & Bishop, D. V. (2010). A longitudinal investigation of early reading and language skills in children with poor reading comprehension. *Journal of Child Psychology & Psychiatry* 51(9), 1031–1039.

National Reading Panel. (2000). Teaching Children to Read: An Evidence-based Assessment of the Scientific Research Literature on Reading and its Implications for Reading Instruction. Rockville, MD: NICHD.

Norbury, C. F., Gooch, D., Wray, C., Baird, G., Charman, T., Simonoff, E., Vamvaks, G. & Pickles, A. (2016). The impact of nonverbal ability on prevalence and clinical presentation of language disorder: evidence from a population study. *Journal of Child Psychology and Psychiatry* 57 (11), 1247–1257.

O'Sullivan, M. C. (2001). Communicative approaches to teaching English in Namibia: The issue of transfer of Western approaches to developing countries. *International Journal of Early Years Education* 9(1), 51–61.

Pretorius, E. J. (2019). Getting it right from the start: Some cautionary notes for early reading instruction in African languages. In Spaull, N. & Comings, J. P. (Eds), *Improving Early Literacy Outcomes: Curriculum, Teaching and Assessment*. 63–80. Leiden: IBE/BRIL.

Ramadiro, B. & Porteus, K. (2017). Foundation Phase Matters: Language and Meaning in South African Rural Classrooms. East London: Magic Classroom Collective Press.

Rastle, K. (2019). The journey to skilled reading. In Murphy, J. (Ed), *The ResearchED Guide to Literacy*. Woodbridge: John Catt Educational.

Rastle, K. & Taylor, J. S. H. (2018). Print-sound regularities are more important than print-meaning regularities in the initial stages of learning to read: Response to Bowers & Bowers (2018). *Quarterly Journal of Experimental Psychology* 71(7), 1501–1505.

Rastle, K., Lally, C., Davis, M. H. & Taylor, J. S. H. (2021). The dramatic impact of explicit instruction on learning to read in a new writing system. *Psychological Science* 32(4), 471–484.

Romeo, R. R., Leonard, J. A., Robinson, S. T., West, M. R., Mackey, A. P., Rowe, M. L. & Gabrielli, J. D. E. (2018). Beyond the 30-million-word gap: Children's conversational exposure is associated with language-related brain function. *Psychological Science* 29(5), 700–710.

Share, D. L. (1995). Phonological recoding and self-teaching: Sine qua non of reading acquisition. *Cognition* 55(2), 151–218.

Seidenberg, M. (2017). *Language at the Speed of Sight*. New York, NY: Basic Books.

Slavin, R. E., Lake, C., Chambers, B., Cheung, A. & Davis, S. (2009). Effective beginning reading programs: A best-evidence synthesis. *Best Evidence Encyclopedia*. Baltimore, MD: Johns Hopkins School of Education, Centre for Data-Driven School Reform.

Smith, F. (2004). *Understanding Reading*. Hillsdale, NJ: Erlbaum.

Solity, J. E. (2020). Instructional psychology and teaching reading: Ending the reading wars. The *Educational and Developmental Psychologist* 37, 123–132.

Solity, J. E & Vousden, J. (2009). Real books vs reading schemes: A new perspective from instructional psychology. *Educational Psychology* 29(4), 469–511.

Sparks, R. & Patton, J. 2016. Examining the simple view of reading model for United States high school Spanish students. *Hispania* 99(1), 17–33.

Spaull, N. (2019). Equity: A price too high to pay? In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 1–24. Cham: Springer.

Spaull, N. & Pretorius, E. J. (2019). Still falling at the first hurdle: Examining early grade reading in South Africa. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 147–168. Cham: Springer.

Stanovich, K. E. (2000). *Progress in Understanding Reading: Scientific Foundations and New Frontiers*. New York, NY: Guildford Press.

Student Achievement Partners (2020). Comparing reading research to program design: An examination of teachers college units of study. From: https://achievethecore.org/page/3240/comparing-reading-research-to-program-design-an-examination-of-teachers-college-units-of-study Accessed 2022-10-26.

Sunde, K. Furnes, B & Lundetræ, K. (2020). Does introducing the letters faster boost the development of children's letter knowledge, word reading and spelling in the first year of school? *Scientific Studies of Reading* 24(2), 141–158.

Taylor, N. (2019). Inequalities in teacher knowledge in South Africa. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 263–282. Cham: Springer.

Taylor, J. S. H., Davis, M. H. & Rastle, K. (2019). Mapping visual symbols onto spoken language along the ventral visual stream. *Proceedings of the National Academy of Sciences* 116(36), 17723–17728.

Treiman, R. (2018). What research tells us about reading instruction. *Psychological Science in the Public Interest* 19(1), 1–4.

Tunmer, N., Chapman, J W., Greany, K. T., Prochnow, J. E. & Arrow, A. W. (2013). Why the New Zealand National Literacy Strategy has failed and what can be done about it: Evidence from the Progress in International Reading Literacy Study (PIRLS) 2011 and Reading Recovery Monitoring Report. Palmerston North: Massey University Institute of Education.

Vadasy, P. F. & Sanders, E. A. (2020). Introducing grapheme-phoneme correspondences (gpcs): Exploring rate and complexity in phonics instruction for kindergarteners with limited literacy skills. *Reading and Writing: An Interdisciplinary Journal*. Advance online publication. From: https://doi.org/10.1007/s11145-020-10064-y Accessed 2022-10-26.

Van Bergen, E., Snowling, M. J., De Zeeuw, E. L., Van Beijsterveldt, C. E., Dolan, C. V. & Boomsma, D. I. (2018), Why do children read more? The influence of reading ability on voluntary reading practices. *Journal of Child Psychology and Psychiatry* 59: 1205–1214.

Vousden, J. I., Ellefson, M. R., Solity, J. & Chaterd, N. (2011). Simplifying reading: Applying the simplicity principle to reading. *Cognitive Science* 35, 34–78.

Westbrook, J., Durrani, N., Brown, R., Orr, D., Pryor, J., Boddy, J., & Salvi, F. (2013). Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries. Final report. Education Rigorous Literature Review. London: EPPI-Centre, University of London.

Wawire, B. A., Piper, B. & Liang, X. (2021). Examining the simple view of reading in Kiswahili: Longitudinal evidence from Kenya. *Learning and Individual Differences* 90, 102044.

Wills, G., Ardington, C., Pretorius, E. J., Pooe, E. & Ramagoshi, R. (2022). Benchmarking early grade reading skills: Setswana and English First Additional Language. Technical report. Khulisa Management Services. Pretoria: DBE.

08

Professionalising teaching: The case of language and literacy

NICK TAYLOR & MONICA MAWOYO

Abstract

Research conducted over more than a decade indicates that, with few exceptions, South African education faculties only pay lip service to policy set by government regarding the initial education of primary school teachers, that they neglect the poor language and mathematics skills of their students, and give scant attention to research on reading pedagogy. As a consequence, newly qualified teachers, through no fault of their own, are not competent to teach the school curriculum.

There are indications that this situation is changing in the areas of standards development, the formulation of more appropriate curricula, and in the development of assessment instruments. However, these initiatives have a long way to go before they reach critical mass, and the extent to which this goal is achieved, depends, first and most fundamentally, on the extent to which teacher educators, across the board, offer curricula that inculcate in their students the required knowledge and skills. This is the essence of any profession and in South Africa, pockets of the initial teacher education system are waking up to this task. Nevertheless, given the complacency and lack of capacity in large parts of the system, widespread change will be facilitated by nudges from the outside.

KEYWORDS
initial teacher education, language proficiency, literacy, reading pedagogy, standards, Bachelor of Education, quality assurance

If Bachelor of Education (BEd) students are to progress to the point where they are able to teach the primary school curriculum, something in the order of one-quarter, each, of the total BEd programme should be dedicated to languages and to maths. Education faculties will find it hard to achieve this, since it will require sacrificing some current courses, but the Department of Higher Education and Training (DHET) can assist by setting explicit specifications in this regard. Second, DHET and the Council on Higher Education (CHE) need to execute their statutory quality assurance mandates, ensuring not only that the intended curricula meet policy specifications, but also that the implemented and attained curricula fulfil these intentions.

1 Introduction

Although the South African school curriculum for languages and literacy (L&L) is not above criticism (see Pretorius et al., this volume), both the topics – speaking, decoding, comprehension, vocabulary, and writing – and their pacing are clearly explicated at successive grade levels (DBE 2011). Essentially, the L&L curricula, for each of the 11 official languages, include the five components recommended by the Reading Panel of the United States, in its review of the research literature concerning effective reading pedagogy more than two decades ago: phonemic awareness, phonics, fluency, vocabulary, and comprehension (National Reading Panel 2000).

This suite of elements constitutes the core of what many have been referring to as the 'science of reading' (Goodwin & Jimenez 2020; Goodwin & Jimenez 2021) for nearly two decades (Snowling & Hulme 2005). As the research described below will show, the one constituency in South Africa that, until relatively recently, has seemingly been oblivious to what teachers are expected to know and be able to do after being declared qualified to teach in South African schools is the one charged with awarding the qualifications, namely, university-based teacher educators.

Concern has long been expressed regarding the highly variable and generally poor quality of BEd programmes responsible for educating the country's primary school teachers. Thus, in 2005, well before the introduction of the current curriculum, the Higher Education Quality Committee undertook a wide-ranging review of teacher education programmes, motivated by concerns about the quality of initial teacher education (ITE) (CHE 2010). Of the 81 programmes reviewed, only 39 (48%) received full accreditation, with 18 (22%) either not accredited at all or 'on notice of withdrawal', and the remainder being conditionally accredited. Across all four types of programmes reviewed – MEd, BEd, PGCE and ACE – the review questioned:

> *... the extent to which academics responsible for these programmes understand the nature and purpose of each of them and how they are to respond to South Africa's specific needs in the area of teacher education. (CHE 2010, 147).*

It is not known to what extent the review resulted in action taken against those institutions whose courses failed to receive full accreditation, but it is clear from the research described below that the overall quality of the L&L components of many BEd curricula remains far below where it needs to be if newly qualified teachers are to be effective in teaching children to read proficiently.

2 What would it mean to professionalise teaching?

There has been debate for many years as to whether teaching constitutes a profession, with many commentators concluding that it does not qualify as a true profession. According to Darling-Hammond and Hyler (2013), all professions share three features: an ethical commitment to the best interests of their clients, practices based on a common body of knowledge, and policing of the standards of practice by the profession itself. Abbott (1988) agrees: professional practice is driven by a shared set of standards.

A professional knowledge base is neither static nor without disputes and alternative proposals among members. But there is a core of propositions, subscribed to by a general consensus of members and largely adhered to in their practices. Most important, these practices are effective in providing specialist services to an evolving society in which the division of labour becomes increasingly specialised (Durkheim 1893). The knowledge base on which each profession is founded grows, as new techniques are developed, and theory collides with practice in the workplace: the resultant resolution is digested through academic publications, conference debates and public media. Ultimately, new knowledge is incorporated into revisions of the codes of professional practice, and public trust in the profession consolidated.

If the L&L curricula in BEd programmes are to move towards professionalism, then convergence would begin to occur, within and across education faculties, about what it would mean to teach prospective primary school teachers how to teach reading and writing, and faculties would become increasingly effective in producing high quality teachers. This would not necessarily require consensus among teacher educators, but increasing convergence, based on what is known – theoretically and empirically – about reading, writing, and language proficiency. The following section provides evidence of how far many South African faculties currently are from this ideal, and consequently how far teachers are from being educated as professionals.

3 Research on BEd Language and Literacy curricula

3.1 Subject content knowledge

An investigation into the quality of the National Senior Certificate (the examination taken at the end of the twelfth grade of schooling), commissioned by the Department of Basic Education, indicates that school leavers who matriculate in an English First Additional Language (EFAL) stream (some 70% of the annual cohort) are likely to enter university with low proficiency in all languages, including their home language where this is not English (DBE 2014). This problem is particularly acute in EFAL, the medium of instruction in most schools from Grade 4. In addition, those applying to education faculties are among the academically weakest applicants to any faculty (CEA 2019). This points to an urgent need to provide student teachers with intensive

courses of study in the languages for which they will be responsible when they enter service. In this regard, it has been asserted that the subject content knowledge required for teaching L&L in the primary school is for teachers to attain at least the High International Benchmark on a PIRLS[1]-type test (Taylor, forthcoming). This follows from the self-evident logic that teachers are unable to inculcate in learners reading comprehension skills that they themselves do not possess. Clearly there is a large gap between the language skills of students entering ITE and what teachers need in order to be effective in schools.

The extent to which this gap is being addressed was one focus of the Initial Teacher Education Research Programme (ITERP), which followed the CHE Review in 2012. ITERP undertook detailed studies of the Mathematics and L&L curricula at five universities, for students following BEd programmes for the Intermediate Phase (IP) (Deacon 2016; Bowie & Reed, 2016). The sample represented a cross-section of university types, from the most highly resourced, to the most disadvantaged. At the time of the survey, these institutions produced 49% of all BEd graduates in the country (DHET 2013).

Regarding the English language component of these programmes, the variation across universities was striking, with English courses for specialist English teachers constituting only 15% of the overall degree at one university, while the comparable figure for another was 31% (Bowie & Reed, 2016). But it was the very limited attention allocated to L&L in curricula for teachers *not* specialising in teaching English that was of most concern. Reed notes that despite the frequent complaint by lecturers interviewed in the survey that many students enter university with a weak proficiency in English, three of the universities provided no English subject knowledge for students not specialising in this subject (Reed 2014).

In a follow-up study conducted eight years later, Reed interviewed lecturers and analysed both the Foundation Phase (FP) and IP L&L curricula in a sample of ten BEd programmes. On the question of subject content knowledge, she found that, at six of the institutions, little space was given to English, and in particular how to use English as a medium of instruction (Reed 2020). Four of these institutions provide a more rigorous programme in subject content knowledge in languages to their students, but the widely divergent ways in which they structure these courses indicates little communication between education faculties concerning the initial education of teachers. But what is of most concern is the scant attention paid to developing students' L&L skills at the other six universities included in the sample

This conclusion is reinforced by data emerging from Reed's analysis of the L&L curricula of another sample of 16 universities (Reed 2020). Regarding the policy requirement that all teachers whose home language is not an African language have at least conversational competence in an African language (DHET 2015), an additional concern revealed in this investigation is that only nine of the universities provided for this. In a number of the other seven, the number of credits allocated to this provision (no more than 8% of the total) indicates no more than lip service paid to this requirement.

1. Progress in International Reading Literacy Study

3.2 Pedagogical content knowledge

Regarding the pedagogical content knowledge (PCK) components of the curricula, Reed found that only seven of 16 universities give more than passing attention to reading pedagogy, and some of these institutions mention only one component of literacy, or only one approach to teaching reading (Reed 2020). With credits ranging from six to 48, out of a total of 480, Reed expresses extreme concern at the paucity of attention given to teaching learners about writing and integrating it into the teaching of reading.

These findings are replicated in a study of the L&L curricula for African languages at 12 universities offering BEd programmes in isiZulu and/or Sesotho, which concluded that:

> *No particular attention is given to the question of how to teach a child to read. There is reference to the use of reading texts and different genres and even the fact that grammar is taught based on reading texts or oral work but no mention is made of how to teach children to read. What is lacking is a comprehensive and integrated evidence-based method of teaching reading (SIRP 2020, 22).*

3.3 Assessment

The aims of the assessment working group of the PrimTEd research programme are to assess the knowledge in mathematics and language of BEd students (Kanjee et al. 2018). In mathematics, the team constructed a test composed of items drawn from the primary school curriculum and administered it to first- and fourth-year students at three institutions. The weighted mean scores for the two groups were 52% and 54%, respectively (Bowie et al. 2019), indicating not only the weak foundational knowledge that students bring to their teacher education programmes, but also the ineffectual job that these universities are doing in addressing this problem over four years of study (Alex & Roberts, 2019). Similar patterns were found for first- and fourth-year student scores on a cognitive academic language skills test, where the difference between the two groups drawn from 11 universities was 3.4 percentage points (Roberts 2022).

3.4 Teaching practice

An examination of the teaching practice component of the BEd programmes at the five target institutions constituted an important aspect of the ITERP study. Deacon concluded that teaching practice is the area with the greatest variation across the case studies (2016). The total time spent by students in schools varies between ten and 35 weeks; at all except one institution, teaching practice takes place mostly in suburban schools, most supervisors are not subject specialists, and in at least two institutions it is possible for students to pass teaching practice despite performing poorly in a classroom, or even without being assessed on their classroom expertise at all.

In a detailed study of these practices, Rusznyak and Bertram distinguished between those programmes in which content knowledge, PCK and general pedagogic knowledge (such as classroom management and teachers' relationships with learners) were integrated into a holistic assessment of teachers' classroom competence, and

those programmes in which competence was assessed by scoring each of a large number of criteria in an 'atomistic' way, with a final mark allocated by adding the scores of individual components (2015).

The danger of adopting the latter approach – followed by three of the five institutions – lies in the fact that a sound grasp of content knowledge is one of many criteria that contribute to a student's overall mark, and it is possible in such cases that students could misunderstand the content they teach but still obtain a credit for their teaching practical on the strength of other dimensions of their teaching. In contrast, at institutions following an integrated approach to teaching practice, students' understanding of content knowledge is considered a non-negotiable, where misunderstanding content knowledge constitutes justifiable grounds for a 'no credit' result (Rusznyak & Bertram 2015). An important implication of the 'atomistic' model is that the assessor would need to have either a subject specialisation or a working knowledge of the demands of different subjects and their pedagogic implications, which was not always the case in the three institutions that adopted this conception of the practical.

3.5 Capacity and the coherence of BEd programmes

In his overview of the ITERP research, Deacon noted the following matters of concern (2016):

- Three of the five programmes lacked a strong underlying logic and coherence. In contrast, programmes offered by the other two institutions in the sample displayed more structural and conceptual coherence, emphasising the development of deep subject and pedagogical content knowledge, together with strong awareness of the theoretical principles and purposes of education. The basis for this coherence appeared to be a coherent set of beliefs about ITE, grounded in respected theoretical models and shared by the majority of staff.
- Students are accepted into BEd programmes without any reference to what motivates them to become teachers.
- With some notable exceptions, teacher educators at the five institutions comprising the sample, generally have low expectations of the academic quality of students (including weak subject content knowledge, lack of proficiency in English, and generally poor reading and writing skills), which are not always counterbalanced by any concerted or structured attempt to address these shortcomings.

In her report, Reed noted that interviews with teacher educators revealed that at only four of the ten universities in one sample was it apparent that all lecturers concerned had an understanding of the theory and practice of effective reading pedagogy (2020). At the other six institutions, a number of lecturers were unaware of their own lack of understanding of the research literature on theories and practices on teaching reading; at some universities, a lack of scholarly leadership was evident.

4 Moves to professionalise initial teacher education

The picture painted by the research evidence indicates not only that faculties of education follow widely divergent curricula for primary school teachers in training, but that the quality of these curricula is inadequate for preparing graduates to teach L&L effectively. This situation began to change around the time of the CHE Review in 2010, with a number of initiatives emerging from government policy-makers and quality-assurers, and from within the universities themselves.

4.1 Policy

At the time of the CHE Review, ITE qualifications were governed by the *Norms and Standards for Educators* (DOE 2000). In line with the spirit of the time, this document was phrased in the language of outcomes-based education (OBE), filled with terms such as 'critical cross-field outcomes', 'learning areas' and the like. No mention was made of school subjects. However, just as the review of the OBE curriculum for schools was to lead to the replacement of Curriculum 2005 (Review Committee 2000), so the CHE Review resulted in the replacement of the Norms and Standards with the first iteration of the Minimum Requirements for Teacher Education Qualifications (MRTEQ) (DHET 2011).

While the disappearance of OBE language in the 2011 version of MRTEQ is striking, the revised policy governing ITE continued to avoid all reference to school subjects, in contrast to successive versions of the school curriculum, which increasingly assumed a subject focus, culminating in the Curriculum and Assessment Policy Statements (CAPS) (DBE 2011), which feature school subjects front and centre. The present paper is not the appropriate place to rehearse the debate around subject-based curricula versus various 'progressive' alternatives, such as OBE or the competence-based curriculum. Rather, and without glossing over the fact that one of us has defended the former approach (Taylor 2012), we take a pragmatic view on this issue, consisting of two lines of argument. First, whatever the specific form of curriculum organisation, children need strong skills in literacy and numeracy if they are to negotiate schooling with any success. Second, whatever the convictions of ITE teacher educators concerning curriculum organisation, CAPS is subject-focused, and teachers are required to follow it. It follows that BEd courses should equip primary school teachers with the knowledge and skills required to teach literacy and numeracy. This is not to imply that the CAPS curriculum should be the sole focus of ITE programmes: rather, that their undergraduate education should prepare teachers to impart any curriculum, whichever way the whims of policy-makers may lead them.

However, it is clear that, in formulating the 2015 version of MRTEQ, policy-makers were not following their whims, but aligning ITE with developments regarding the school curriculum, while taking account of the research described above. Thus, MRTEQ 2015 noted that the CHE Review had '... provided valuable information on the quality and design of programmes and highlighted several aspects that are addressed

by the policy' (DHET 2015, 10). The dedication of this iteration of MRTEQ to subject-focused curricula, with special attention to languages and mathematics, is evident from the specifications listed in Figure 1.

Figure 1 **Programme standards**

In respect of the BEd (Foundation Phase Teaching)

- Teachers must be capable of teaching all four subjects (Home Language, First Additional Language, Mathematics and Life Skills).
- Students must specialise in Home Language teaching in one of the official languages, together with English First Additional Language teaching.
- Students who select Afrikaans or English as HL and English or Afrikaans as FAL must also study an African Language at basic conversational level.
- If a student selects to study an African Language at Home Language level, the student must study English at First Additional Level, and could study Afrikaans at basic conversational level.

In respect of the BEd (Intermediate Phase Teaching)

- Students much specialise in the teaching of two languages (comprising Home Language teaching in one of the official languages and First Additional English Language teaching). The same requirements concerning English, Afrikaans and an African language applicable to FP teachers are specified.
- Students must specialise in at least two other subjects chosen from Intermediate Phase Mathematics, Science and Technology, Life Skills and Social Sciences.
- Students must have sufficient broad background knowledge to understand the requirements of all subjects in the Intermediate Phase curriculum.
- In particular, students that do not select Mathematics as one of their four teaching specialisations must nevertheless develop a good understanding of the fundamental mathematical concepts that underpin the Intermediate Phase Mathematics curriculum up to at least NQF Level 5.

Note *From DHET (2015)*

A number of developments subsequent to the publication of MRTEQ 2015 caused DHET in 2018 to issue a new set of proposals in the form of a discussion document that put forward a number of policy amendments. Among these developments was the publication of the ITERP research, which, the discussion document noted, had:

> *... highlighted a number of gaps in existing programmes that should be addressed pertaining to disparate admission requirements, disparate credit and time allocation for the development of teaching specialisations, wide variation in the nature, depth and breadth of content in teacher education programmes and the nature of the Teaching Practice component of initial teacher education programmes (DHET 2018, 5).*

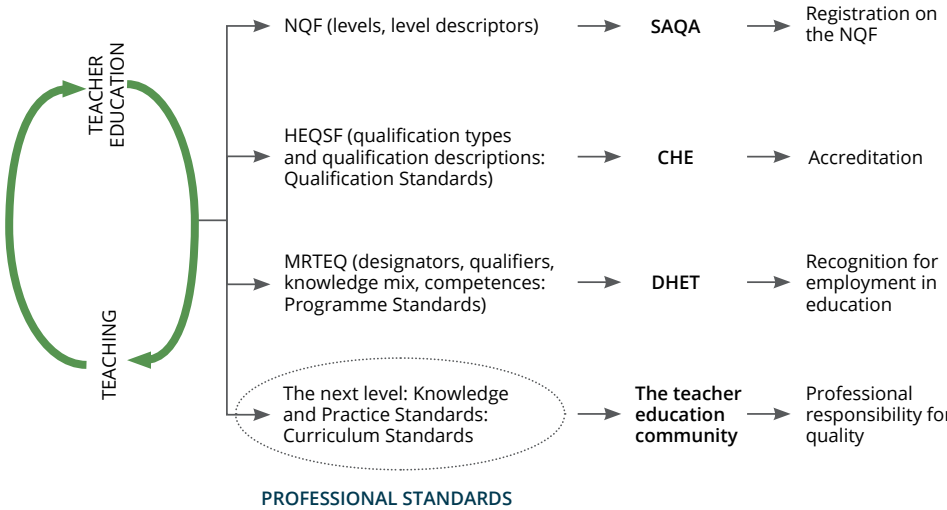
The 2018 MRTEQ draft addressed each of the issues listed in this quote, including raising the entrance requirements to the BEd, but, since these proposals remain moot

at the time of writing, they will not be discussed here. What they do reveal, however, is the sensitivity of policy-makers to research findings, in their efforts to improve the practice of ITE.

4.2 Standards

Another significant development precipitated by, or at least accompanying, the CHE *Review* released in 2010 was the publication of the Integrated Strategic Planning Framework for Teacher Education and Development in South Africa (ISPF) (DBE & DHET 2011). The ISPF sketches a complex architecture, encompassing both ITE and continuing professional development, and involving a host of actors including DBE, DHET, quality assurance agencies (CHE and SACE, the South African Council for Educators), provincial departments of education, universities, and other providers. Most pertinent to the present discussion were the ISPF's recommendations regarding the formulation of standards for teacher education, A set of standards of increasing granularity were envisaged nested within each other, an idea captured by Green, then Chief Director for Teacher Education at DHET, in Figure 2.

Figure 2 **A nested approach to standards in teacher education**



Note *From Green (2019).*

Discussing the different kinds of standards shown in Figure 2, Green noted that the specifications regarding teacher qualifications contained in the 2015 version of MRTEQ (such as those listed in Figure 1) are examples of *programme* standards that should be met by all teacher education qualification programmes. On the other hand, the draft professional teaching standards issued by SACE in 2018 listed in Figure 3 (below) exemplify the *professional* standards, and govern the domain of teaching (SACE 2018).

Situated between, and distinct from, both the programme standards and professional standards are the *Knowledge and Practice Standards* (KPS), which are applicable to specific subject areas or areas of teacher expertise. The purpose of the KPS is to guide curriculum design and professional practice. The ISPF and MRTEQ 2015 both

specify that, while the process of developing the KPS should be facilitated by DHET, the actual development should be done by subject experts and the teacher education sector (DBE & DHET 2011; DHET 2015). The allocation of this task to practicing teacher educators is indicative of the commitment of policy-makers to the professionalisation of the field, since it is the practitioners of any profession who maintain standards and regulate practice.

PrimTEd was an initiative established by DHET to conduct research, develop assessment instruments and teaching materials and, most importantly, to construct sets of standards for mathematics and L&L for the preparation of primary school teachers. Although DHET led this process, the work was done by groups of university-based educators involved in ITE, with particular focus on the FP and IP (Abrahams, 2021). The KPS for L&L consist of four separate sets of standards (PrimTEd 2020):

1. *Knowledge*: Graduate teachers have knowledge of language and literacy and how to teach learners to read and write.
2. *Practice*: Graduate teachers can organise systematic language and literacies instruction with a focus on reading and writing, guided by the requirements of the curriculum.
3. *EFAL*: Graduate teachers demonstrate that they understand the knowledge, skills, and processes required to teach English First Additional Language (EFAL) as a subject and as the general medium of instruction.
4. *FAL*: Graduate teachers demonstrate that they understand the knowledge, skills, and processes required to teach African languages or Afrikaans as First Additional Languages.

The *knowledge* standards are composed of 21 detailed statements, with the other three sets consisting of six each. To give a sense of the level of detail of the KPS, the first two knowledge standards are listed in Table 1.

Table 1 The first two PrimTEd knowledge standards for L&L

Standard	Evidence of achievement
1. Demonstrate basic knowledge of the key components of language.	1.1 Explanations can be given of six basic components found across languages: phonology, morphology, grammar, syntax, semantics, and pragmatics. 1.2 Essential simple language terms can be used. 1.3 A basic comparative knowledge of similarities and differences in the components across the South African languages is described.
2. Demonstrate knowledge of basic grammatical concepts that are necessary for language and literacy teaching.	2.1 Knowledge of, and the ability to explain the following grammatical features, is demonstrated: • word classes (e.g. nouns, verbs, adjectives, articles, conjunctions, pronouns) • grammatical functions in sentences (e.g. subject, verb, object) • grammatical constructions (e.g. subject-verb agreement/concordial agreement, conjunctions) • syntax (e.g. word order and the relationship between words and sentences). 2.2 Knowledge of when it is appropriate to teach elements of grammar. 2.3 Basic differences in the grammatical structures of English and Afrikaans (as analytic or isolating languages) and African languages (as agglutinating languages) are identified and explained.

Note *From PrimTEd (2020) 21–22.*

Essentially, the KPS give substance to both the broad policy statements of the programme standards shown in Figure 1 and the high-level *professional teaching standards* that govern teaching, providing guidance for the development of curricula, assessment instruments, teaching and learning materials, and routines for deploying these resources in classrooms.

4.3 Curriculum and assessment

To date, the PrimTEd KPS have provided the framework for the development of three new curricula:

- The University of Johannesburg has developed the Maths for Primary Teachers (M4PT) course, which was piloted with all first-year BEd students at that institution in 2019; an expanded version is being piloted in six institutions from 2021 to 2025 (Roberts 2022).
- Rhodes University has developed the Advanced Certificate in Foundation Phase Literacy Teaching (AdvCert) in isiXhosa. The AdvCert is offered by Rhodes part-time over two years to teachers in service. The AdvCert is discussed in some detail in Murray et al. (this volume).
- The Centre for African Language Teaching at the University of Johannesburg has developed a seven-module course in reading pedagogy in EFAL, and isiZulu and Sesotho (the Sesotho and isiZulu Reading Project, or SIRP). Academics from the 12 universities that offer BEd programmes in one or both of the latter have participated in the writing of these modules.

The assessment component of PrimTEd is continuing its work in developing assessment instruments in language and mathematics. The aim is to make these available to all higher education institutions (HEIs), public and private, to diagnose gaps in student knowledge, and to track progress on bridging these gaps over the course of the BEd.

The three curriculum initiatives (M4PT, AdvCert and SIRP), together with the PrimTEd assessment programme, have attracted participation from a total of 19 public universities and two private HEIs. However, the participation of one or two faculty members in developing and piloting a new curriculum, or administering the assessment instruments to their students, is very different from these initiatives becoming embedded in the programmes of their faculties. Although these are promising developments, there is a long road to travel, first, to establish the efficacy of these initiatives, and second, to incorporate them into mainstream BEd programmes.

5 Conclusion

In a profession, research, policy, and practice interact symbiotically to deliver services to society. The narrative outlined in this paper indicates that, with respect to the preparation of primary school teachers in South Africa, teacher educators, with few exceptions, have in the past only paid lip service to policy set by government, neglected

the poor language proficiency of their students, and given scant attention to research on literacy pedagogy. As a consequence, newly qualified teachers, through no fault of their own, are not competent to teach the school curriculum. There are indications that this situation is changing in the areas of research, standards development, the formulation of more appropriate curricula for L&L courses for the BEd, and in the development of assessment instruments to track the progress of students in attaining the Knowledge and Practice Standards required for primary school teaching.

However, these developments have a long way to go before they reach critical mass across the higher education institutions licensed to qualify teachers, and the extent to which this goal is achieved, depends on three related factors. First, and most fundamentally, it depends on the extent to which teacher educators heed the advice of City and her colleagues:

> *In the history of professions, social status and political authority accrues to occupations that seize it, not to those that wait patiently for public authorities to bestow it. Professions become professions by deliberately taking control of the means of production in their sphere of authority, by exercising strong influence and control over the terms and conditions of their practice, and by making judgments about what constitutes acceptable levels of knowledge and skill for practitioners.* (City et al. 2009, 188)

As this quote indicates, the primal force behind a profession comes from within, from practitioners taking charge of their own standards of practice and developing the knowledge and skills among novices that are required to deliver the services expected of them. In South Africa, pockets of the ITE system are waking up to this opportunity. However, given the widespread lack of capacity, even ignorance, in large parts of the system identified in the research detailed above, widespread change will be facilitated by nudges from the outside. Two opportunities for such nudges occur in the system.

The first of these opportunities lies in the field of policy. Our narrative has highlighted the seminal role played by policy-makers over the last decade and more, in channelling ITE providers towards embarking on the road to professionalism. There is one more step DHET can take in building even more explicit guidance into the MRTEQ specifications. If BEd students are going to progress from the very poor language and mathematics skills they exhibit on entry, to a point where they are able to confidently teach the primary school curriculum, then they need to spend considerably more time studying these foundation disciplines. Something in the order of one-quarter, each, of the total BEd programme should be dedicated to languages and to maths.

Many education faculties will find this target difficult to achieve, given that some courses in their current curricula will have to be to be sacrificed to achieve it. Furthermore, in the name of academic autonomy, some are likely to resist the idea of participating in the formulation of a set of standards. Given the destruction wreaked on the universities by the apartheid regime, it is understandable that the present government is reluctant to make explicit recommendations regarding the content of the curriculum. However, if the choice is between the present laissez-faire approach, on the one hand, which results in tens of thousands of incompetent teachers pouring into schools every year and millions of illiterate and innumerate learners flooding into

high schools, and, on the other hand, insisting that the universities fulfil their contract with society to produce competent teachers, the choice faced by DHET is obvious.

This chapter took as its point of departure the CHE Review of teacher education qualifications published in 2010. In concluding, it is appropriate that we come full circle, back to the issue of quality assurance. This brings us to the second external pressure point that can be applied to encourage education faculties to up their game – how assiduously DHET and CHE execute their statutory quality assurance mandates. The question must be asked: to what extent did CHE hold accountable those institutions whose programmes failed to clear the bar set in the 2010 Review? Apparently, very little, according to the research detailed above. Quality assurance entails ensuring not only that the intended curricula submitted for accreditation meet policy specifications, but also that the implemented and attained curricula fulfil these intentions. Ultimately, quality assurance must serve the public interests of learners, parents and the broader society – not the entrenched interests of academic teacher educators.

References

Abbott, A. (1988). *The System of Professions: An Essay on the Division of Expert Labour*. Chicago, IL: University of Chicago.

Abrahams, M. (2021). Evaluation of the Primary Teacher Education (PrimTEd) Project: Outcomes. Report No. 3. Cape Town: Southern Hemisphere.

Alex, J. & Roberts, N. (2019). The need for relevant initial teacher education for primary mathematics: Evidence from the Primary Teacher Education Project in South Africa. *Proceedings of the 27th Annual Conference of the Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE)*, 59–72.

Bowie, L. & Reed, Y. (2016). How much of what? An analysis of the espoused and enacted mathematics and English curricula for Intermediate Phase student teachers at five South African universities. *Perspectives in Education* 34(1), 102–19.

Bowie, L., Venkat, H. & Askew, M. (2019). Pre-service primary teachers' mathematical content knowledge: An exploratory study. *African Journal of Research in Mathematics, Science and Technology Education* 23(3), 286–97.

Centre for Educational Assessments (CEA). (2019). The National Benchmark Tests. National Report: 2019 Intake Cycle. Cape Town: CEA, University of Cape Town.

City, E., Elmore, R., Fiarman, S. & Teitel, L. (2009). *Instructional Rounds in Education: A Network Approach to Improving Teaching and Learning*. Cambridge, MA: Harvard University Press.

Council on Higher Education (CHE). (2010). Report on the national review of academic and professional programmes in education. *HE Monitor* 11. Pretoria: CHE.

Darling-Hammond, L. & Hyler, M. (2013). The role of performance assessment in developing teaching as a profession. *Rethinking Schools* 27(4).

Deacon, R. (2016). The Initial Teacher Education Research Project: Final Report. Johannesburg: JET Education Services.

Department of Basic Education (DBE). (2011). National Curriculum Statements (NCS) Grades R–12. Pretoria: DBE.

Department of Basic Education (DBE). (2014). Ministerial Task Team Report on the National Senior Certificate (NSC). Pretoria: DBE.

Department of Basic Education (DBE) & Department of Higher Education and Training (DHET). (2011). Integrated Strategic Planning Framework for Teacher Education and Development in South Africa. Pretoria: DBE & DHET.

Department of Education (DOE). (2000). National Education Policy Act, 1996: Norms and Standards for Educators. Government Gazette 20844, 4 February.

Department of Higher Education and Training (DHET). (2011). The Minimum Requirements for Teacher Education Qualifications. Government Gazette 34467, 15 July.

Department of Higher Education and Training (DHET). (2013). Trends in Teacher Education 2012. Pretoria: DHET.

Department of Higher Education and Training (DHET). (2015). Revised Policy on the Minimum Requirements for Teacher Education Qualifications. Government Gazette 38487, 19 February.

Department of Higher Education and Training (DHET). (2018). The Minimum Requirements for Teacher Education Qualifications (as Revised 2018). Draft for Comment, Issued 29 October 2018. Pretoria: DHET.

Durkheim, E. (1893/1997). *The Division of Labour in Society*. New York, NY: The Free Press.

Goodwin, A. & Jimenez, R. (2020). The science of reading: Supports, critiques, and questions: From the editors. *Reading Research Quarterly* 55(S1).

Goodwin, A. & Jimenez, R. (2021). The science of reading: Supports, critiques, and questions: From the editors. *Reading Research Quarterly* 56(S1).

Green, W. (2019). Standards in Teacher Education. Presentation to PrimTEd Annual National Dialogue, 17 October 2019. Johannesburg: JET Education Services.

Kanjee, A., Roberts, N., Moloi, M., Bowie, L., Hlungulu, N., Alex, J. & Ndlovu, Z. (2018). Challenging cultures of assessment data use to improve learning and teaching: Findings from the PrimTEd Project. *Book of Abstracts, 6th Annual South African Education Research Association*, 145–46.

National Reading Panel. (2000). Teaching Children to Read: An Evidence-based Assessment of the Scientific Research Literature on Reading and its Implications for Reading Instruction. Rockville, MD: NICHD.

PrimTEd. (2020). Knowledge and Practice Standards for Primary Teacher Education Graduates: Language and Literacy. Johannesburg: JET Education Services.

Reed, Y. (2014). Initial Teacher Education Research Project: Report on English Courses for Intermediate Phase Student Teachers at Five Universities. Johannesburg: JET Education Services.

Reed, Y. (2020). Foundation and Intermediate Phase BEd Programmes: Language and Literacies Components. Johannesburg: JET Education Services.

Review Committee. (2000). A South African Curriculum for the Twenty First Century: Report of the Review Committee on Curriculum 2005. Pretoria: DOE.

Roberts, N. (2022). PrimTEd 2.0 Testing and Maths for Primary Teachers. Presentation to OMT Hackathon, Johannesburg, 24 June 2022. Johannesburg: JET Education Services.

Rusznyak, L. & Bertram, C. (2015). Knowledge and judgement for assessing student teaching: A cross-institutional analysis of teaching practicum assessment instruments. *Journal of Education* 60, 31–61.

Sesotho and isiZulu Reading Project (SIRP). (2020). Report on Teaching Reading in Sesotho and isiZulu at HEIs. Johannesburg: JET Education Services.

Snowling, M. & Hulme, C. (2005). *The Science of Reading: A Handbook*. Oxford: Blackwell.

South African Council for Educators (SACE). (2018). Professional Teaching Standards: Draft for Consultation with Teachers & Subject and Phase Specialists. Pretoria: SACE.

Taylor, N. (2012). Curriculum 2005: Finding a balance between school and everyday knowledges. In Hoadley, U. & Jansen, J. (Eds), *Curriculum: Organising Knowledge for the Classroom (3rd edition)*, 255–61. Johannesburg: SAIDE & OUP.

Taylor, N. (forthcoming). The PIRLS Assessment Framework: Implications for Teacher Education, in Van Staden, S. (Ed), *Tracking Changes in Reading Literacy Achievement over Time: A Developing Context Perspective*. Leiden: Brill.

09

Room to Read's use of decodable stories in their structured literacy programme

JACQUI DORNBRACK & TITUS KAZUNGU

KEYWORDS
decodable texts, just right texts, levelled texts, lesson-to-text match (LTTM), scope and sequence, National Framework for the Teaching of Reading in African Languages in the Foundation Phase, explicit and systematic phonics

Abstract

The provision of high-quality, research-based learning and teaching support materials (LTSM) to schools is critical for reading and writing instruction and development. Common texts in primary schools are basal or levelled readers that provide early grade children with simple texts to practise their reading skills. Ideally, children should be given texts that are 'just right'. 'Just right texts' are those that can be read with 95% accuracy or higher (Clay 1991; Allington et al. 2015). When children are provided with texts most of which they can read, their sense of control and autonomy increase, leading to improved self-efficacy (Wigfield et al. 2016). However, there is an assumption that children will be able to read these texts because they are simple. If the graphemes and words in the text have not been explicitly taught, this might not be the case, especially for African languages, which have complex consonant structures that result in lengthy words. Decodable texts can be useful as, by definition, they are not only phonically regular and levelled, but they have a strong lesson-to-text match. Room to Read has developed decodable texts for their Grade 1 and Grade 2 isiZulu and Sepedi Learner Books, which contain daily structured lessons along with a specifically designed decodable text. The target grapheme, syllables and words

appearing in the text are explicitly taught in the lesson. This prepares children to engage fully with the decodable text, facilitating accuracy, fluency, and comprehension. Thus, we argue that 'just right texts' need to be accompanied by what the authors refer to as 'just right instruction' for maximum benefit.

1 Introduction

Various interventions have been implemented to address the low literacy rates in South Africa. These include structured lesson plans, scripted lessons, coaching, the provision of anthologies of levelled texts, and workbooks by the Department of Basic Education (DBE), with the aim of improving literacy instruction and classroom practices. According to the 2022 Reading Panel Report (Spaull 2022, 6), there has been a 'consistent improvement in reading outcomes since at least 2006'. Concerningly, the report also states that the current progress in reading improvement is too slow to reach the intended goal, which is the National Development Reading goal of every child reading for meaning by the age of ten by 2030 (National Planning Commission 2012). One of the key factors to consider in supporting more efficient progress is the provision of high-quality teaching and learning materials in home languages.

Providing sufficient high-quality, research-based learning and teaching support materials to schools is critical for reading and writing improvement (Fredriksen et al. 2015). The DBE Workbooks and levelled anthologies provided to South African Foundation Phase classrooms may be effective as supplementary material, but, to date, there is no standardised national literacy 'textbook' containing comprehensive daily literacy lessons explicitly covering all five reading components (phonemic awareness, phonics, vocabulary, fluency, and comprehension), and including a decodable connected text for each lesson. We illustrate in this chapter, using examples from Room to Read's literacy programme, that efficient phonics and literacy instruction in the early grades requires both sufficient and carefully designed texts: 'just right texts' (Clay 1991; Allington et al. 2015) as well as 'just right instruction'. 'Just right instruction' refers to the explicit teaching of the target letter to prepare the child to be able to decode the provided text.

1.1 Decodable texts and levelled texts in African languages: Room to Read's approach

While there are numerous studies on the use and development of decodable and levelled texts in the teaching of reading in English (Clay 1991; Fountas & Pinnell 2006; Mesmer 2001; Mesmer 2005), this is not the case for African languages. Until recently, teaching reading in African languages has depended heavily on approaches and methodologies based on teaching reading in English. These approaches are not always appropriate for languages with transparent orthographies (DBE 2020).

The distinctive phonological and morphological features of African languages lend themselves to explicit and systematic teaching of the five components of teaching

reading. Thus, the focus of Room to Read is on the explicit teaching of phonological awareness and phonics, as well as the inclusion of decodable connected texts. These provide children with an opportunity to apply their newly learnt phonics. The Room to Read Learner Books allow children to start reading connected texts as early as six weeks into Term 1 of Grade 1.

In this chapter, we describe how Room to Read addresses two questions relevant to decodable texts, namely:

1. How are decodable texts written to align with instruction in order to achieve a strong lesson-to-text match?
2. Other than phonic regularity and simple texts, what else should be considered to encourage children to benefit from such texts?

2 Literature on levelled readers and decodable texts

2.1 Why do children need access to levelled, decodable texts when learning to read?

Providing children with regular and frequent opportunities to practise and apply the skills they have been taught is an undisputed requirement of reading development (Nathan & Stanovich 1991; Abadzi 2013; Pikulski & Chard 2005). Rastle (2022) likens learning to read to learning to play a musical instrument. She argues that it is a skill that needs to be explicitly taught and that a learner needs sufficient opportunities to practise. She further explains that a novice piano player would not be required to play a piece by Chopin. Instead, a novice would practise a simple piece with a few repeated notes that had been explicitly taught. Only when these were mastered, would she be required to attempt more complex pieces. This can be applied to teaching novice readers. As recommended in any good phonics programme, after teachers have explicitly taught specific sounds and letters, they should provide children with an opportunity to apply their newly learnt skill to a text containing these specific letters (International Literacy Association 2019). Allowing them to apply the skills to make meaning of a connected text allows children to see the purpose of decoding skills.

2.2 'Just right texts' and 'just difficult enough texts'

Fountas and Pinnell (2006, 9) argue that it is important to "select texts that allow individuals to read for meaning, draw on the skills they already control, and expand their current processing strategies". Research shows that "children are more likely to want to read and to learn content when the text can be read with a high level of accuracy and comprehension" (Allington et al. 2015, 492). In order to read accurately, children must have mastered decoding strategies so that they can focus on making meaning of the text. We also know that younger children reading less difficult texts leads to

higher achievement gain (Fountas & Pinnell 2006; Rog & Burton 2002). If texts are too difficult, children become frustrated and demoralised and 'reading becomes a task to be avoided' (Fountas & Pinnell 2006, 4). If texts are too easy, children will not progress in their literacy development. So, the ideal is to provide beginner readers texts that are 'just right', in other words, that can be read with 95% accuracy or higher. To achieve 95% accuracy, children will need to know most of the letters used in the words of the text, and have sufficient phonemic awareness to be able to segment and rebuild unfamiliar words quickly and accurately.

When children are given 'just right texts', they gain a sense of control, and independence increases. This increases their self-efficacy (Wigfield et al. 2016). Fountas and Pinnell argue that "easy reading gives students 'mileage' as readers and builds confidence. They process a great many words and build up rapid word recognition as well as fluency in processing" (2006, 9). This motivates them to read more and with the increased reading, their reading improves. This is what Stanovich (1986) refers to as the Matthew Effect. The strong readers read more and become more proficient, prompting them to keep reading. The less skilled readers struggle to read and therefore read less; this hampers the development of automaticity and reading speed. These negative effects multiply. Therefore, we support the argument that for early readers to become proficient readers who are engaged in text while self-regulating and building vocabulary knowledge, the text must appropriately match the children's reading level (Allington et al. 2012).

However, we argue that despite it being critical to provide and match children with 'just right texts', this is insufficient. To ensure that these texts can be read with meaning, they need to be accompanied by what we term 'just right instruction'. This refers to explicit phonics instruction on the graphemes, syllables, and words that the children will encounter in the text they are asked to read.

2.3 What is the difference between levelled, basal, and decodable texts?

Basal readers, primers, levelled texts, graded texts, 'little books', and decodable texts all refer to specifically designed reading materials written for the purpose of supporting early readers to read independently, and are usually written for commercial gain (Hoffman et al. 2002, 2). They all tend to be small books with simple texts that have a strictly controlled vocabulary; usually 'the same small set of words' repeated, which was seen 'as the key to promoting decoding abilities' (Hoffman et al. 2002). In the 1980s and 1990s, a significant number of these books "used the term 'progressive' in their titles, not to imply a 'new approach' to teaching reading, but as a description of the leveled nature of the books in the program" (Hoffman et al. 2002, 2). However, despite all these types of readers sharing an overall intention, there are differences in the content, approach and design, influenced by ideological, political, and educational viewpoints.

The early United States basal readers, such as the 'Dick and Jane' books written by William Gray in the 1930s, used a 'look–say' reading approach that encouraged children to repeatedly encounter a short text with strictly controlled vocabulary. However, these basals were criticised for their lack of systematic phonics instruction. These criticisms

led to less strict vocabulary control and an increase in phonic skills taught in the 1970s and 1980s. However, 'basal bashing' continued in the 1980s with comments on the over-emphasised yet unsystematic focus on coding, and the lack of emphasis on meaning, which was regarded as "trivial and boring" (Goodman & Shannon 1988, in Hoffman et. al. 2002, 2). In the 1990s, the lack of engaging texts for children to read, as well as the influx of literature-based 'little books' from Australia and New Zealand, prompted United States publishers to include more literature-based stories. The 'little books' took a Whole Language approach. More emphasis was placed on the aspect of levelling or grading stories. Levelled texts are typically stories with increasing levels of difficulty (Cunningham et al. 2005 in Davidson 2013). Still referred to as basal readers, these stories start with very simple texts, and gradually become more complex. They focus on teaching reading either by a code-emphasis approach or a meaning-emphasis approach. A code-emphasis approach relies heavily on the explicit teaching of phonemic awareness, letter-sound relationships, blending, and word attack skills.

The decodable text can be added to this list of specifically designed reading material for early readers. Mesmer (2001; 2005) argues that decodable texts have two distinctive features: one is that they have *phonic regularity,* and the other is that they have a strong *lesson-to text match*. Phonic regularity refers to:

1. the recurrence of regular patterns;
2. one-to-one letter-sound correlation (grapheme–phoneme correlation); and
3. clustering of words with similar word patterns in the text (Mesmer 2005, 63).

However, it is important that the presence of regular patterns and repeated use of words in texts does not on its own make texts decodable. Children also need the necessary code-based knowledge to decipher the texts.

Often publishers claim that texts are 'decodable', meaning that the words in the text use regular patterns and similar parts of words appear frequently. However, a text containing words with regular patterns and frequent recurrences of similar parts of words may not necessarily enable children to read and understand it (i.e. decode the phonics content to derive meaning). This is where the *lesson-to-text match* comes in, a feature specific to decodability. Lesson-to-text match refers to an *explicitly taught* correlation between sounds, letters, syllables, and words, and the letters, syllables, and words used in the text.

Reading decodable texts, after having been explicitly taught the letters, syllables and words that form the text, provides a context for the reader to apply the phonics instruction, as well as consciously focus on the newly taught letters and sounds. This link – between the explicitly taught graphemes and a text including those new graphemes and the ones learnt in previous lessons – is key to developing reading skills. When children have an opportunity to apply the newly learnt skills to make sense of a simple text, they see the reason for their efforts. Davidson (2013, 3) claims that "when a child learning to read is given a short story with words comprised of the letters and sounds the child has learned, that child can actually read the story. This accomplishment can be quite thrilling." Davidson further maintains that "decodable texts for young children need to be directly tied to the instructional scope and sequence of skills so that they get practice as they learn beginning letter (symbol) sound patterns" (2013, 3). This is why it is critical that decodable stories are located within a

broader, structured literacy programme designed around a scientifically based scope and sequence of letters – a programme in which these letters are explicitly taught.

In summary, the different types of texts for beginning readers are shown in Table 1:

Table 1 Texts for beginner readers

Text type	Key features
Basals or primers or readers	• can be used as umbrella terms for all reading books specifically written for people just beginning to read • usually use controlled vocabulary • can be phonics- or meaning-focused, i.e. phonically regular or whole language • usually levelled, starting with simple texts and becoming gradually more complex
Levelled readers or graded readers (a subset of basals or primers or readers)	• can be based on phonics or take a Whole Language approach • pay careful attention to increasing level of difficulty in terms of graphemes, words, text length, sentence length and type, and topic • concept of 'just right texts' and 'just difficult enough texts' (Clay 1991)
Little books	• linked to Reading Recovery, a programme developed in New Zealand • Whole Language approach with a focus on meaning • levelled: increasing length and language complexity
Decodable texts	• phonics based • focus on developing decoding skills and comprehension • levelled • instructional consistency: graphemes and words in text directly linked to explicitly taught letters and words in linked lesson • concept of lesson-to-text match

Decodable texts provide a textual scaffold for the beginning reader. When readers receive explicit phonics instruction and thereafter have opportunities to decode connected text written with the letters just taught, they are more likely to internalise and apply that instruction than if they were given less decodable texts (Adams 1990; Adams 1997; Mesmer 1999; Mesmer 2001; Mesmer 2005). Adams (1990; 1997) argues that reading connected texts allows readers to internalise and generalise letter-sound knowledge. Research by Mesmer (2005) showed that when children received highly decodable texts, as compared to the control group who received the same phonics instruction but were given less decodable texts to read, the treatment group performed better in applying letter-sound knowledge, and read with more accuracy and self-reliance than the control group. However, using decodable texts for reading practice can only be effective if children have a strong alphabetic knowledge: they are of little use for children at a pre-alphabetic or early, partial alphabetic stage of reading (Ehri 1995). Simple decodable texts, if read with meaning, can form a bridge to reading more complex, rich texts (Davidson 2013). Decodability, however, is not a panacea to reading development. It is a temporary support, like training wheels on a bicycle (Mesmer 1999).

Most studies on decodability and the use of 'just right texts' have been based on teaching reading in English. The focus in this chapter is on teaching reading in the Foundation Phase (Grades R to 3) in African languages. Teaching literacy in African languages needs to consider the unique structures and linguistic features of African languages, which have a complex consonant system consisting of many digraphs,

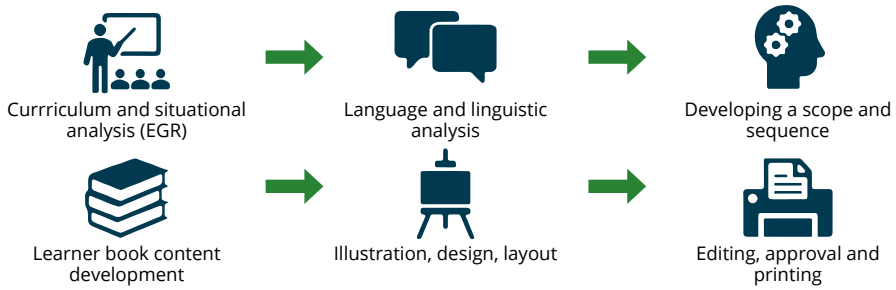
trigraphs, and blends (DBE 2020, 24). The Nguni languages (isiNdebele, isiXhosa, isiZulu, and Siswati) have a conjunctive orthography and very long words, for example, the isiXhosa word *azisebenzisile* ('he didn't use them') has 14 letters and seven syllables (incorporating the negative form, pronoun, root verb and tense all in one word) – compared to the four short words of no more than two syllables each for the English equivalent. Having such long words to decode poses a higher cognitive demand for the child, who must identify all the letters and syllables and then build them into a word with meaning. This also increases the demand for working memory, which is essential for comprehension. The DBE has therefore advised to those teaching reading in African languages that "building strong decoding skills during the Foundation Phase is very important for reading for meaning" (DBE 2020, 20). They further stress that children need to develop stamina in order to quickly and accurately decode long words with complex consonant combinations (DBE 2020). This stamina is developed through daily practice and routinised processes.

Room to Read's literacy programme deliberately includes ten routine steps focused on teaching decoding strategies and ending in children reading a decodable text. This is to build up decoding skills, and the reading stamina mentioned above. We now address our first question: how does Room to Read write decodable texts in such a way that they align with instruction to achieve a strong lesson-to-text match?

3 How does Room to Read write decodable texts?

The development of decodable texts requires a clear and systematic approach (Davidson 2013). When developing decodable texts for early grade reading instruction in African languages, the frequency of graphemes and phonemes needs to be considered. Figure 1 shows six broad steps that Room to Read takes in developing decodable stories.

Figure 1 **Room to Read's step-by-step process of writing decodable texts for early grade reading**



3.1 Curriculum and situational analysis

When producing a decodable text in a new target language, the first step taken by Room to Read is to analyse the existing curriculum to establish the official approach used

for teaching reading and writing in early grades. This includes checking whether the government education system uses a Whole Language, phonics, balanced or an eclectic approach to teaching reading skills. The process includes analysing and understanding the country's language of instruction policy in the early grades. This feeds into the pedagogical decisions that will be used in the LTSM development process. In addition, analyses of existing reading achievement data in the country, including oral reading fluency and comprehension for the specific language being analysed, are necessary.

3.2 Language and linguistic analysis

Gove and Wetterberg (2011) argue that curriculum and material developers need to ensure that LTSM for early grade reading instruction correctly reflects the linguistic composition of the target language. For example, an important linguistic consideration in African languages is the use of syllables. This is because the syllabic structure of most African languages in South Africa influences both the structure and length of words, which could affect reading acquisition. Such essential information is gained through a review of published and unpublished academic and analytical work in the target language. This includes examining the orthography, grammar, and phonology of the language. For example, readers of languages with transparent orthographies (i.e. those with a one-to-one letter-sound correspondence – most African languages, cf. Mohohlwane et al., this volume) are able to decode words using simple letter–phoneme conversions (Trudell & Schroeder 2007). To decode new words and develop fluency in blending sounds and syllables, the reader must be able to recognise the phonemes of the target language, and intuitively grasp its syllable structure, morphology, and orthography (Trudell & Schroeder 2007; Room to Read 2014). For example, if a language has a number of high-frequency, complex letter sequences that are essential to decoding, it is sensible to introduce these earlier in the sequence.

3.3 Developing a scope and sequence

The scope of graphemes refers to the entire list of graphemes present in a language, including single letters (vowels and consonants), digraphs, trigraphs, and consonant clusters or blends. In order to compile a comprehensive list of graphemes, word lists and a corpus are generated from mother-tongue speakers who are also competent in English. The word lists are organised alphabetically with their part of speech and English meaning. In total, the corpus needs to consist of more than 8,000 words (SIL International n.d.), in order to be used for the development of a comprehensive word list of more than 4,000 words, which will form the base from which texts will be written. The text data are collected from stories and texts in the language. The word lists generated from the target language are helpful when analysing grapheme frequency, while also providing words with target graphemes, thus assisting writers (see Section 3.4).

While the letter-teaching order is key in this step, it is not the only consideration when developing a scope and sequence. Other considerations include: governmental decisions; ease of sound production by learners (e.g. starting with single vowels, moving to consonants, digraphs, blends and trigraphs); utility and usefulness (i.e.

creating words that are simple and familiar); visual similarity and appearance (*b* and *d*, *p* and *q*, *m* and *w*), and phonemic similarity and differentiation (*s* and *z*, *l* and *r*, *p* and *b*, *g* and *k*).

3.4 Content development: writing decodable text or stories

Using a feature called the buildable word search, PrimerPro software can produce a list of words and phrases that are decodable focusing on taught graphemes (SIL International n.d.). This list can suggest characters, settings, and themes from which writers can develop stories and texts. For example, the isiZulu buildable word search for the digraph *ch* from the word list includes words *chaphaza* (splash), *chakide* (weasel), and *chimbi* (pond). The writer could therefore develop a story with the main characters being a *weasel*, in a setting next to a *pond*, and some of the actions could include *splashing* water or mud. Many decodable stories are narrative realistic fiction and fantasy that have a simple plot (beginning, middle and ending), one or two characters, and a simple conflict resolution. As texts grow in complexity and size, other genres (such as narrative and expository non-fiction, and poetry) are also integrated. The nature of these stories ensures that they support learners in decoding, building fluency skills, and in comprehension activities.

Room to Read writers are trained during intensive workshops on the art of writing decodable texts. Included in their training is the importance of focusing on key elements of children's stories, such as humour, visual writing,[1] repetition, rhyme, and rhythm, all of which help to create engaging and interesting texts and stories for children. A writing workshop to develop all the decodable stories for one grade usually takes five days. This is followed by months of review, editorial work and quality control at different levels of the organisation and the government. Room to Read uses checklists to review and edit the decodable texts to ensure they are of the highest quality to support learners' reading and writing acquisition. These checklists include guidance on the number of words per level, the sentence complexity, and the number of 'sight words' (i.e. words that learners cannot yet decode as they have not yet been taught their letter-sounds[2]) as well as the required levels of comprehension questions.

Editing and proofreading is an important part of producing high-quality materials devoid of errors. Room to Read editors are usually familiar with the concept of decodability, the phonics approach, and Room to Read's philosophy of developing reading instruction materials for skills development and enjoyment. The aim is to ensure that every child in a project school has their own copy of the book to use during

1. Visual writing is a term used to describe vivid writing that paints a picture for the reader.
2. 'Sight words' can refer to two slightly different concepts. In transparent orthographies, all words are technically decodable so in this context a sight word refers to words that contain letters that have not yet been taught. In opaque orthographies (such as English), sight words are those that cannot be sounded out because they are not spelt using phonetically regular patterns. Instead, children are taught to recognize them by sight (as a whole word).

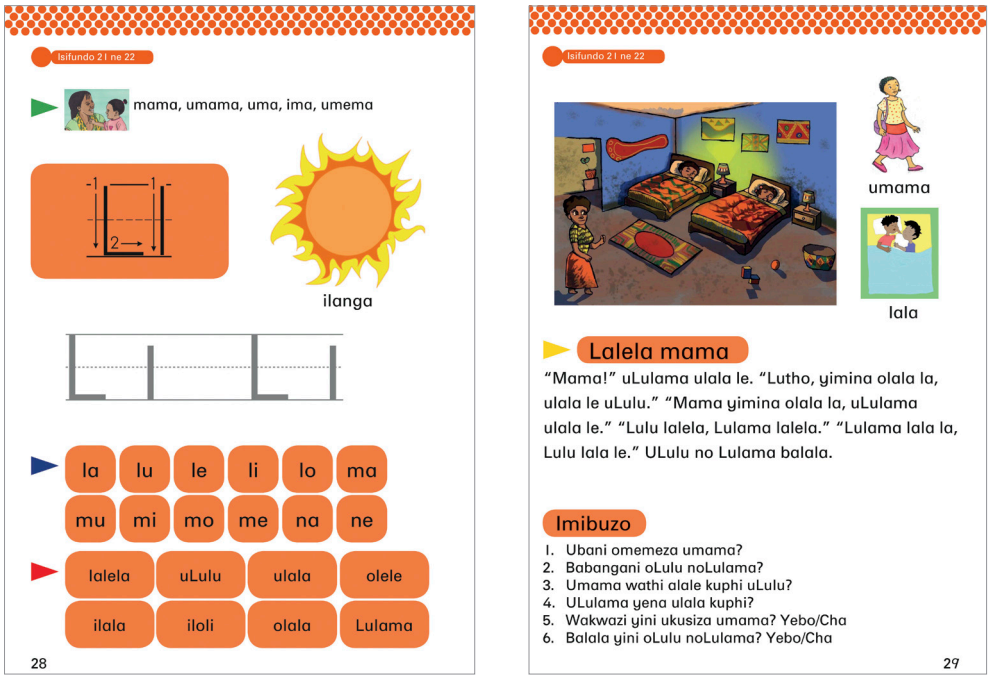
the reading class (Piper & Mugenda 2012; Neuman 2004) and that the books are durable, for vigorous and extended classroom usage.

4 Other than phonic regularity and simple texts, what else should be considered to encourage children to benefit from such texts?

4.1 Instructional design

When writing the content of a lesson to accompany a decodable text, it is key to consider instructional design. This refers to how the selected words manifest the instructional strategy in building up children's decoding skills (Hoffman et al. 2002). Once the stories are completed, they are placed in a Room to Read design template. The lesson content is based on the target letter and specific language requirements. For example, many South African languages are syllabic, and therefore instead of learning sounds and directly blending those sounds into words (as in English), there is a need for an intermediary step – first blending sounds into syllables and then syllables into words. The template includes ten steps for teachers to follow in each lesson. Teachers are trained and coached to use this structured pedagogical approach. Having a structured

Figure 2 An example of a lesson in Grade 1 Term 1 Week 5



Note *From Room to Read, Grade 1 Term 1 Week 5 for isiZulu.*

lesson plan increases the fidelity of the programme and ensures that the lesson includes all the phonics needed for the child to be able to decode the connected text at the end of the lesson. This addresses a concern (Mesmer 2005) about a possible discrepancy between the planned literacy lesson and the actual one when examining the lesson-to-text match, as well as ensuring fidelity to the structured programme.

The lesson in Figure 2 is taken from Grade 1 Term 1 Week 5 for isiZulu. This is the first connected text that the children encounter in Grade 1. The target letter for this lesson is L l. The previous graphemes that have been taught are the vowels plus the letter *M m*.

The text in Figure 2 (below the heading 'Lalela mama') is about the twins Lulama and Lulu who are arguing about which bed to sleep in. They call their mother to mediate, and she tells them where to sleep.

The Room to Read weekly programme is organised into five days: Day A (first target letter taught), Day B (first target letter revised), Day A (second target letter taught), Day B (second target letter revised), Day C (both letters revised). Each day, ten steps are followed:

Room to Read daily lesson steps

Step 1: Review letters, syllables and words (I do, We do, You do)
Step 2: Practise new sound
1. Identify sound of the day
2. Day A: Blend sounds to say syllable
3. Day A: Blend syllables to say words
4. Day B: Segment syllables to say the sounds
5. Day B: Segment words to say syllables

Step 3: Read and trace letter of the day
Step 4: Day A: Blend in to read syllables, or Day B: segment to read syllables
Step 5: Day A: Blend in to read words, or Day B: segment to read words
Step 6: Learn new words from decodable text
Step 7: Predict from pictures and the title of decodable text
1. Day A and Day C: Prediction of the story, or Day B: Discussion of the story

Step 8: Read the story or text
Step 9: Answer comprehension questions
1. Day A: Orally
2. Day B: In writing
3. Day C: Orally and in writing

Step 10: Practise writing
1. Day A and Day B: Practise the letters, words and sentences of the day
2. Day C: Dictation: letters, words and sentences

For the lesson in Figure 2, teachers start with revising the words taught in the previous lesson (Step 1). This is followed (Step 2) by the introduction of the target grapheme (in the lesson in Figure 2, this is the letter *l*. Firstly, children are taught how to sound the letter and then to identify the individual sound in words. Thereafter (Step 3), children are taught how the sound is formed in print. In Steps 4 to 6, teachers focus on the syllables and words that contain the target grapheme. Words are read and the meaning of the

words are explained and used in sentences. Many of the words they read in the grid are used in the story. This prepares them for reading the decodable story. In Steps 7 and 8, children are encouraged to predict what the story will be about from the picture and title; they then read the text themselves. Teachers are trained to walk around the classroom as the children are reading independently, to monitor and support them reading the words, and practising fluency and comprehension. The teacher asks the children the questions in Step 9 to check if they have understood what they have read. Later in the year, the children are able to read the questions independently. In Step 10, children have an opportunity to write. Thus, one lesson contains all five reading components: phonological awareness, phonics, vocabulary, fluency, and comprehension (Armbruster et al. 2006). Children are taught to decode the text in order to make meaning of what they are reading.

In the short story text 'Lalela mama' in Figure 2, there are 32 words, 27 of which contain the target letter. The other words contain the vowels and the letter *M m*, which has previously been taught. Decodable story writing in Room to Read allows for one or two high-frequency, common words, referred to as 'sight words' in the sense that the graphemes of the word have not yet been taught. One of the sight words in this text is *yimina* (it's me). This word is needed for coherence in the story and so, even though it contains graphemes (*y* and *n*) that have not yet been taught, it is necessary to include it. Another sight word in this story is the word *lutho* (nothing), which contains the digraph *th*. This word will be taught as a 'sight word' since the children will not yet have been taught digraphs. The teacher will support the learners by reading these words herself.

Table 2 Use of regular patterns in lesson text

Syllable or word part or word	Number of appearances in the text
la	26
lu	10
le	6
lala	8
lula	5
lulu	4
ama	5

The lesson in Table 2 has been designed to align with the graphemes and words appearing in the text. The text not only includes phonically regular letter patterns but also clusters together words with similar word parts such as *la*, *lala*, *lula*. This is what Mesmer (2001) is referring to when she stresses the importance of grouping words with similar word parts in close proximity, so that children can have multiple opportunities to decode a pattern repeated frequently in one text. Since the text is comprised of letters that have been explicitly taught, this can be said to have a strong lesson-to-text match and could be considered to be 'just right instruction' and a 'just right text' for the children at this level.

4.2 Accessibility

Accessibility can be defined as "the degree of decoding demands placed on the reader to recognise the words in the text" (Hoffman et al. 2002, 4–5). "Decoding demands" refer to two factors: decodability, and familiarity of the text. Decodability is established through the strong lesson-to-text match, while familiarity comes from the use of phonically regular clusters of words and word parts, together with surrounding linguistic and design support. The words used in Figure 2 are familiar daily words that are woven together in the familiar context of children sleeping in their beds. The aim of illustrations in a Room to Read decodable story is to support the meaning of the story and not to tell the whole story. Illustrations should activate learners' curiosity and desire to read the text. The picture of the twins sleeping and their mother standing in the room provides a context for the children to understand the words (*mother*, *sleep*, *bed*, *listen*). In a mirror of the predictability of the text, every lesson is structured in the same way and the previous day's letters are revised. At the end of the week, both new target letters and words are revised.

4.3 Engaging features

Texts that contain phonically regular words and word parts may seem trivial or even boring, which could discourage children from wanting to read them. All texts, even simple ones that children read in their first few weeks at school, need to engage their readers. Engagement is achieved through content, language and design (Hoffman et al. 2002). The *content* is what the story is about, including characters, plot and setting. *Language* refers to the way in which the ideas are represented, including word choice, sentence structure, vocabulary level, and cultural and contextual relevance. *Design* is the visual representation of the text.

The story content is simple and relatable and there is an element of fun as the twins argue about whose bed is whose. Most children can relate to this; they do not want to go to sleep yet and so start arguing with their siblings. The illustrations are culturally relevant. From a language perspective, the words are simple, and the children's names are familiar in the community and sound similar. As words, the names *Lulu* and *Lulama* contain alliteration and assonance. Most words are either two or three syllables, although there is one four-syllable word, which is repeated.

Careful consideration has gone into the design factors for each double spread. The left-hand side in Figure 2 supports phonological awareness, phonics and letter formation activities. There is a deliberate inclusion of previously taught words as review words at the top of the left-hand page. The right-hand side of the double spread is developed to support vocabulary, fluency development, and comprehension. The large composite illustration is to support learners in predicting the gist of the story as well as later comprehension activities. Prediction is key in engaging learners before, during, and after reading the decodable story. For Grade 1 there are two small illustrations to the right that support the teaching and learning of vocabulary in preparation for fluency development. Each double spread ends with a list of six questions that are a culmination of the comprehension activities and a form of assessment. The questions for most narrative decodable texts focus on what, where, when, why, who, and how.

In Grade 1, questions are largely literal, with Grade 2 texts including some inference-based questions, and activities on summarisation and retelling of the story.

Another component of engagement is the typeface (font type and size) as well as the textual spacing and format. Fonts for early literacy need to be literacy fonts, which use a standardised simple form of letter shapes as taught in the early grades. The size of font is large enough that children will not struggle to read the text and sufficient white space is provided so that the page remains uncluttered.

4.4 Progression

During the two-year instruction component of the literacy programme, learners are provided with the skills to transition from non-readers to fluent readers who comprehend what they read.

Table 3 Room to Read instructional phases

	Room to Read Grades 1 and 2 literacy instructional phases (sample)			
Foundational phase: Foundational skills development	Phase 1: Early phonics phase	Phase 2: Decodable phase		Phase 3: Post-decodable phase
2 weeks	10 weeks	18 weeks	22 weeks	8 weeks
Grade 1			Grade 2	

4.5 A systematic approach to teaching graphemes

Room to Read uses an explicit and systematic approach to teaching graphemes. For example, the sequence of letters in Room to Read is based on the analyses described above, identifying the most frequently used letters. For isiZulu, according to this analysis, all the vowels appear more frequently than the most frequent consonants, m and l. Using the most frequent letters when developing decodable stories is important because it ensures that decodable words can be formed using the letters being taught first. It also means that learners do not need to wait a long time to be able to decode words and sentences.

In developing decodable texts for phonics instruction, Room to Read considers the pacing of content, including when and how different graphemes are taught. Most African languages have many graphemes, which need to be taught explicitly if learners are to read with fluency by the end of Grade 2. Room to Read materials aim to teach two graphemes per week, incorporating weekly and termly reviews. This ensures that learners spend adequate time on each of the graphemes in the target language.

6 Conclusion

Learning to read is a complex process that requires explicit and systematic phonics instruction, leading to decoding and comprehension skills. Explicit instruction is particularly important in South Africa as many African languages have conjunctive orthographies, resulting in words that contain many morphemes and word parts. To decode these long words, children need well-developed decoding skills that they can apply accurately and quickly. Research has shown that providing children with 'just right texts' supports reading development as it allows them to experience success – this in turn motivates them to keep practising.

This chapter has explained Room to Read's approach to developing texts that are 'just right', meaning that children can read at least 95% of the text. However, the concept of 'just right texts' is developed within the context of 'just right instruction'. For a text to be 'just right', a child will need to have been explicitly taught the letters, syllables and words that appear in the text. Additionally, Room to Read use a defined letter-teaching sequence, which has been developed for the specific language. This encourages teachers to systematically follow the teaching order and ensure that each grapheme has been covered. Including a connected decodable text at the end of each lesson gives children an opportunity to read a text on their own. The text also includes other scaffolds, such as word grids and colourful illustrations, to support meaning-making. When children can read a short text and understand it, they experience success. This builds confidence and motivates them to keep reading. This is the start of a positive reading cycle where children build confidence and have a sense of control of their reading development. We want to stress, however, that decodable stories are useful as "training wheels" (Mesmer 2005, 62); once children can read independently, with meaning, they would have outgrown decodable stories and would need to be exposed to richer, denser texts.

While we take heed of the argument (Hoffman et al. 2002) that teaching and learning are complex and that no textbook or teacher training programme is foolproof, we suggest that teachers should have 'literacy textbooks', containing structured literacy lessons including daily, levelled decodable texts so that children can practice the skills they have just been taught. Training and supporting teachers to use these resources is essential.

References

Abadzi, H. (2013). Literacy for All in 100 Days? A Research-based Strategy for Fast Progress in Low-income Countries. Global Partnership for Education WP Series on Learning. Washington, DC: World Bank.

Adams, M. J. (1990). *Beginning to Read: Thinking and Learning about Print*. Cambridge: MIT Press.

Adams, M. J. (1997). Myths and realities about words and literacy. *School of Psychology Review* 26, 425–436.

Allington, R. & Gabriel, R. (2012). Every child, every day. *Educational Leadership* 69, 10–15.

Allington, R., McCuiston, K., Billen, M. (2015). What research says about text complexity and learning to read. *The Reading Teacher* 68(7), 491–501.

Armbruster, B. B., Lehr, F., Osborn, J. & Adler, C. R. (2006). *Put Reading First: The Research Building Blocks of Reading Instruction: Kindergarten through Grade 3 (3rd edition)*. Washington, DC: National Institute for Literacy.

Clay, M. M. (1991). Introducing a new storybook to young readers. *The Reading Teacher* 45(4), 264–273.

Cunningham, J. W., Spadorcia, S. A., Erickson, K. A., Koppenhaver, D. A., Sturm, J. M. & Yoder, D. E. (2005). Investigating the instructional supportiveness of leveled texts. *Reading Research Quarterly 40*, 410–427.

Davidson, M. (2013). Books that Children Can Read: Decodable Books and Book Levelling. Final report. USAID.

Department of Basic Education (DBE). 2020. National Framework for the Teaching of Reading in African Languages in the Foundation Phase. Pretoria: DBE

Ehri, L. C. (1995). Phases of development in learning to read by sight. *Journal of Research in Reading* 18, 116–125.

Fountas, I. & Pinnell, G. S. (2006). *Levelled Books K–8. Matching Texts to Readers for Effective Teaching*. Portsmouth: Heinemann.

Fredriksen, B., Brar, S. & Trucano, M. (2015). Getting Textbooks to Every Child in Sub-Saharan Africa: Strategies for Addressing the High Cost and Low Availability Problem. From: openknowledge.worldbank.org/handle/10986/21876 Accessed 2022-09-13.

Goodman, K. S. & Shannon, P. (1988). *Report Card on Basal Readers*. Katonah, NY: R. C. Owen.

Gove, A. & Wetterberg, A. (Eds) (2011). The Early Grade Reading Assessment: Applications and Interventions to Improve Basic Literacy. Research Triangle Park, NC: RTI International.

Hoffman, J. V., Sailors, M. & Patterson, J. (2002). Decodable texts for beginning reading instruction: The Year 2000 Basals (Report No. 1-016). Ann Arbor: University of Michigan School of Education.

International Literacy Association. (2019). Meeting the Challenges of Early Literacy Phonics Instruction. Literacy Leadership Brief. Newark, DE: International Literacy Association.

Mesmer, H. A. E. (1999). Scaffolding a crucial transition using text with some decodability. *The Reading Teacher* 53(2), 130–142.

Mesmer, H. (2001). Application of letter/sounds in first grade. National Reading Conference. *National Reading Conference Yearbook* 50, 444–459.

Mesmer, H. (2005). Text decodability in the first grade reader. *Reading & Writing Quarterly* 21, 61–86.

Nathan, R. G. and Stanovich, K. E. (1991). The causes and consequences of differences in reading fluency. *Theory into Practice* 30(3), 176–184.

National Planning Commission (2012) National Development Plan 2030: Our Future – Make it Work. Pretoria: The Presidency.

Neuman, S. B. (2004). The effect of print-rich classroom environments on early literacy growth. *The Reading Teacher* 58(1), 89–91.

Pikulski. J. & Chard, D. (2005). Fluency: Bridge between decoding and reading comprehension. *The Reading Teacher* 58(6), 510–519.

Piper, B. & Mugenda, A. (2012). The Primary Math and Reading (PRIMR) Initiative: Baseline report. (EdData II). Research Triangle Park, NC: RTI International.

Rastle, K. (2022). Ending the "Reading Wars": How Insights From Cognitive Science Can Improve Children's Reading in South Africa. Presentation at Literacy Lekgotla, Stellenbosch, 2 February 2022.

Rog, L. & Burton, W. (2002). Matching texts and readers: Levelling early reading materials for assessment and instruction. *The Reading Teacher* 55(4), 348–356.

Room to Read (2014). Developing the Scope and Sequence for Grades 1 and 2 Literacy Instruction. San Francisco, CA: Room to Read.

SIL International (n.d.). PrimerPro FAQ. Software. From: software.sil.org/primerpro/support/faq/ Accessed 2022-09-14.

Spaull. N. (2022). Background Report: 2030 Reading Panel. www.readingpanel.co.za/resources Accessed 2022-09-14.

Stanovich, K. 1986. Matthew Effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly* 21(4), 360–407.

Trudell, B. & Schroeder, L. (2007) Reading methodologies for African languages: Avoiding linguistic and pedagogical imperialism. *Language, Culture and Curriculum* 20(3), 165–180.

Wigfield, A., Gladstone, J. & Turci, L. (2016). Beyond cognition: Reading motivation and reading comprehension. *Child Development Perspective*. September 10(3), 190–195.

10

Developing the Funda Wande Literacy and Life Skills Grade 1 Workbook and Teacher Guide

NANGAMSO MTSATSE

Abstract

Although structured pedagogy has only recently gained prominence as a preferred type of education intervention, it has been implemented for decades. First as a method for teaching children about religious scriptures (Beatty 2011), before being adopted in general education systems to improve learning outcomes and increase standardisation. The nature and characteristics of structured pedagogy programmes have evolved over time, from providing high-level guides to more specific support to teachers on discrete skills. As the evidence of meaningful impacts on learning outcomes in low- and middle-income countries increases, so too does the popularity of the structured pedagogy approach. In the Gauteng Primary Language and Mathematics Strategy, the Early Grade Reading Studies, and the Funda Wande programme, South Africa has implemented three versions of structured pedagogy. Mindful of important critiques of structured pedagogy – including the lack of consideration for sociocultural factors, and reduced teacher autonomy – Funda Wande has taken a scientific approach to developing a teacher guide and learner workbook in a structured programme currently implemented across three provinces (Eastern Cape, Limpopo and the Western Cape) in South Africa. This chapter

KEYWORDS
structured pedagogy, early grade reading, content development principles, learning design

describes the development and decision-making processes involved in creating this programme, especially with regard to content, curriculum, and design principles. The programme incorporates a set of basic principles aimed at increasing both teacher fidelity to the programme and learner use of the materials provided (principally, a workbook and anthology of graded readers). It is hypothesised that improvements in all three elements of Elmore's instructional core – teacher instructional behaviour, learning content, and learner engagement – should lead to an improvement in learning outcomes. After one year of intervention, the Funda Wande programme has had a substantial causal impact on reading outcomes in both Limpopo (0.44 SD improvement) and the Eastern Cape (0.17 SD improvement).

1 Introduction

In the past decade, there has been increased appetite for, and attention to, Foundation Phase structured programmes across low- and middle-income countries, driven in part by the low literacy and numeracy performance in these countries. In South Africa in particular, three examples of evaluated and highly effective structured pedagogy programmes have arisen: the Gauteng Primary Language and Mathematics Strategy (GPLMS), the Early Grade Reading Studies (EGRS), and Funda Wande (FW). International examples include the Primary Math and Reading Initiative in Kenya (Piper & Mugenda 2014), READ India in India (Dutt et al. 2017), and the Northern Education Initiative Plus in Nigeria (Mutima 2021), amongst others. The aim of this chapter is to systematically document the conceptualisation of the FW Workbook, as well as the content and design principles that underpinned the development process. The author led the development process of the FW materials and is thus well-placed to document the design and approach in this structured pedagogy programme.[1]

2 Structured pedagogy and the instructional core

The term 'structured pedagogy' is broadly defined as a coordinated and guided approach towards the learning and teaching of the curriculum; it includes comprehensive and systematic lesson plans for the teacher, aligned learner materials, teacher training and ongoing classroom support.

Structured pedagogy is an approach to teaching that has been used for many decades. A recent overview of this topic by Piper et al. (2021), describes the origin and history of this approach. As they explain, it was initially developed before the 1600s to teach religious scriptures in the Ethiopian Orthodox Church. In the 1830s, Germany was the first country to implement school-based structured pedagogy. In this instance, the Froebelian approach – as it was called – targeted schoolmasters, guiding them regarding what and how to teach (Wagaw 1979).

1. The author is currently the CEO of Funda Wande; this chapter therefore uses 'we' to refer to the Funda Wande development team, since this is more accurate than 'they'.

From the mid-1830s to 1920, the United States (US) used structured pedagogy programmes to increase access and standardisation in the public school system, introducing the McGuffey readers (Piper et al. 2021). In the 1930s, demand shifted towards materials that were less structured but still provided suggestions for activities, discussions, and ideas for the teacher (Woodward 1986). Critiques at the time suggested, in summary, that the content should rather be more fluid, should respond to context, should promote teacher autonomy, and stimulate teacher–learner discourse (Piper et al. 2021).

In the 1960s, in the US in particular, structured pedagogy had developed from broad guidelines to explicit skills. Programmes such as Reading Mastery were used to improve learning outcomes, mostly in disadvantaged and low socio-economic status schools. The first example of scaled, structured pedagogy implementation in the US was the No Child Left Behind Act (2002), which required all states receiving particular funding to implement a scientifically based programme including components outlined by the US National Reading Panel (2000). Of this funding, 97% went to structured materials and training (2000). These were initiatives that aimed to improve education outcomes and standards at a large scale. At the same time, the United Kingdom mandated structured pedagogy for reading, achieving an increase of 12% in reading performance in just over four years (Mourshed et al. 2010). By 2010, two-thirds of US state elementary schools were using a core reading and maths instructional programme (Mourshed et al. 2010).

In Singapore, after the success of a very strong, structured maths programme, the Ministry of Education mandated a structured approach in the national curriculum (Piper et al. 2021). Countries such as China and Vietnam have also used structured pedagogy to improve system learner outcomes (Piper et al. 2021). Most recently in Africa, USAID-funded reading and numeracy programmes will only implement structured pedagogy.

Elmore's instructional core is the framework that underpins Funda Wande's own structured pedagogy programme. This is a framework that attributes improved learner achievement to three interdependent components; at the teacher level, it refers to the teachers' knowledge and instructional skills; at the learner level, it refers to the students' engagement with their own learning process; and lastly, at the content level, it refers to what is being taught. Through addressing each element, combined in the instructional task, student learning can be improved (Elmore 2009). Funda Wande aims to address each element of Elmore's core by providing a teacher's guide intended to improve ongoing pedagogy, as well as instructional training and support. Each learner receives a highly visual, engaging workbook, and a graded anthology aligned to the instructional practices in the teacher guides; these are systematically completed – allowing a day-by-day increase in task complexity. The content for the teacher is based on the science of reading and how children learn to read in African languages.

2.1 Characteristics of structured pedagogy programmes for literacy

A common characteristic of structured pedagogy programmes for literacy development is the gradual release approach described by Piper et al. (2021). This refers to a four-stage

process: (i) demonstration by the teacher ('show me how'), (ii) scaffolding through guided practice by the teacher with the learner ('help me do it'), (iii) independent application by the learners ('let me do it myself'), and (iv) assessing what has been learnt ('review what I learnt'). The amount of teacher support required decreases from stage 1 to stage 4 (Piper et al. 2021, 4). This four-stage process underpins the lesson plans and teacher guides, for example the Funda Wande Grade 1 isiXhosa lesson plans (Funda Wande 2019b).

The concept of sequential, structured lesson plans conflicts with the view of Shalem et al. (2018) who suggest that increased attention to lesson plans has taken away teacher autonomy, is de-skilling the teaching profession, and reducing the work of teachers to that of mere technicians. They argue that structured programmes should foster conditions that can equip teachers to take advantage of the materials provided while also using their own autonomy to make instructional decisions. These are important points that need to be considered when developing and implementing a structured pedagogy programme for literacy development in South Africa.

Despite these views, there has been increasing evidence of lower-middle income countries improving literacy learning outcomes through the implementation of structured pedagogy, which has provided FW with the rationale to pilot programmes across three provinces. Two examples of the research underpinning the programme are discussed in Section 2.2.

2.2 Evidence of structured programmes improving learning outcomes

Graham and Kelly (2018) reviewed structured early grade reading interventions in 18 low-income countries and found that:

1. The large majority of these interventions have a significant impact on at least one of three literacy sub-tasks, each measuring different skill levels.
2. In many cases, the effect sizes are equivalent to more than half a year of schooling.
3. The cost of implementation varied greatly.
4. An effect size of 0.25 standard deviations (SD) on oral reading fluency appears to be the most basic level for a substantive positive result in a middle-income country.

Piper's review of early grade reading interventions (2021) similarly concluded that the impact of structured programmes was substantial. The average effect size in the comparative studies of low-income countries was 0.14 SD, with the 50th percentile at 0.15 SD and the 90th percentile at 0.38 SD.

Both these review studies provide quantitative evidence of how structured pedagogy makes a significant difference in terms of learning gains, giving benchmarks and indicators for what can be considered a real achievement in contexts such as South Africa. Both provided the material development and implementation teams at Funda Wande with guiding principles.

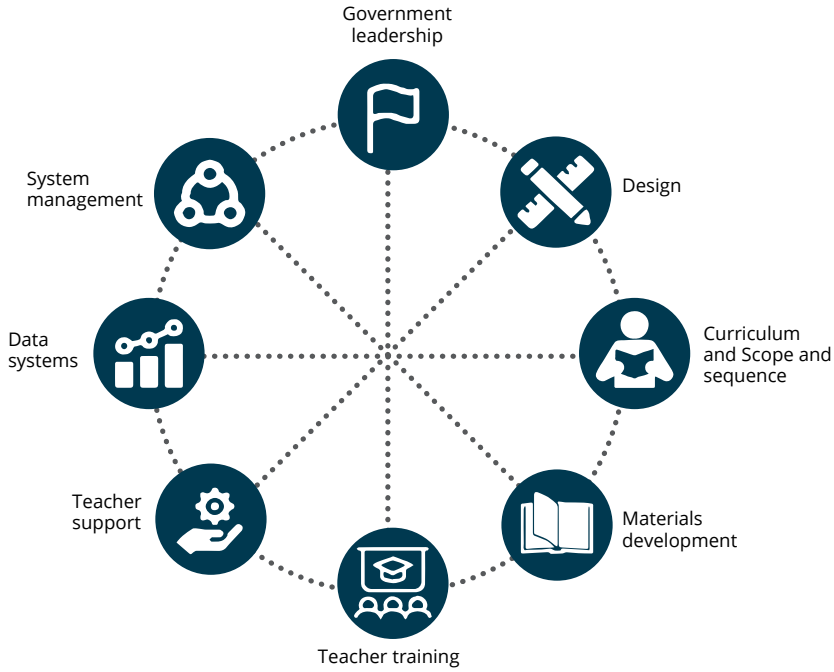
However, in many of the reviews of these studies, there is still a modest understanding of *how the quality of material and implementation* practically impacts learning. For example, how does material design impact fidelity to a programme and change teacher behaviour? How much does teacher support and training improve

the practice of teaching reading? This is the type of question that the FW programme aimed to address. The curriculum and design of the structured materials provided us with a worthwhile opportunity to learn more about the quality and take-up of structured pedagogy.

2.3 Funda Wande's rationale for a structured pedagogy

The Funda Wande programme was initiated to address early reading development and reading comprehension issues in South Africa. The programme uses a structured pedagogical approach that was inspired by international and local initiatives, specifically building upon lessons from local interventions like GPLMS (Fleisch 2018) and EGRS (Kotzé et al. 2019), as well as USAID-funded and RTI-implemented programmes across Africa. In both local examples, the interventions are aimed at addressing and improving learner performance through Elmore's instructional core, by increasing the skills and knowledge of the teacher, changing the role of learners, and increasing the complexity of content. Providing the first study to show causal improvements in reading outcomes (Cilliers et al. 2019), the structured materials and coaching support of EGRS was especially influential in 2017 and 2018 when FW was being developed. Although structured pedagogy is part of the package that FW advocates, the theory of change and the approach itself are holistic. The approach acknowledges that improving early grade outcomes requires a system-wide approach targeting multiple levels as shown in the RTI model (2021) in Figure 1.

Figure 1 **Investments for successful structured pedagogy programmes**



Note *From Piper et al. (2021), 1.*

Piper et al. (2021) provide a holistic overview of the necessary components of scalable structured interventions. FW focused on three elements of this framework: (i) design, (ii) curriculum, scope and sequence, and (iii) materials development; these are also the focus of this chapter.

3 Conceptualisation and development of the Funda Wande Workbook

3.1 Background context for the move towards a workbook approach

As noted in Section 2.3, Funda Wande was conceptualised in 2017, with its first intervention – targeting inputs at the teacher level only, in the Eastern Cape – providing lesson plans, learning and teaching support material (LTSM), and a teacher coach in 29 schools. From 2019 onwards, this took the form of a Randomised Control Trial (RCT) with an additional 30 control schools (i.e. 59 schools in total in the study). The programme also made use of classroom-based videos that demonstrated good practice in South African classrooms (for example, see Funda Wande (2019a) for the instructional video on gradual release), and the Vula Bula anthologies of graded texts for reading practice (see Katz & Rees 2022)

After the first year of implementation, the evaluation showed that the FW intervention had a statistically significant 0.17 SD impact on learners' reading proficiency, compared to control schools. The positive overall effect was driven by an improvement in all the sub-domains of reading proficiency that could reliably be assessed, including recognition of letter-sounds, oral reading fluency, productive listening, simple and complex consonants, and reading comprehension (Ardington 2019). At the time of publication, EGRS I (in the North West), with an effect size of 0.14 (Cilliers et al. 2019; Ardington 2019, 64), was the only other RCT measuring school-level interventions. Although the FW intervention was only slightly more impactful than the EGRS I intervention, both posed questions about what shifted teacher practices, the high dosage required, the different but multiple inputs of the programme, and the cost of implementation. After the first year of implementation, the FW team embarked on a research development exercise, conducting focus groups with teachers, and, in the provincial education department, heads of department and district officials, to better understand their experiences and gather feedback on the programme (see Appendix 01 for a summary of the feedback).

From this, the FW team prioritised three main revisions for the second iteration of the programme: (i) focus: do more by doing less; (ii) behaviour change: focusing instructional content on changing teacher behaviour and practice; and (iii) supporting low levels of teacher content knowledge.

3.1.1 Doing more by doing less

The proportion of teachers fully implementing the programme daily is an important metric determining the effectiveness of a structured pedagogy intervention (Piper et al. 2021). To answer the question, 'What are those levers of change that would increase adherence to the programme?', the FW team had to rethink the factors that contribute to consistent uptake. The answer was twofold. First, we should aim *not to create additional work for teachers* as this was likely to create a sense of burden and complication on top of their current responsibilities (so the programme should help them to do their jobs, rather than add new tasks). Secondly, the materials should simplify the execution of the curriculum as much as possible.

3.1.2 Instructional content focuses on changing teacher behaviours and practice

Bearing in mind the teacher threshold (i.e. how many new instructional practices or methods, and therefore additional work, a teacher will be required to implement at any one time) (Piper et al. 2021), FW needed to be realistic about how much new information teachers can take on board at once. We also needed to be mindful of how much effort it would take to 'unlearn' old habits. For example, if mastery in teaching a particular skill requires doing ten things very well, the programme would first need to prioritise the top three elements; then, as teachers perfected their skills, the programme would introduce new concepts incrementally – rather than introducing all ten new concepts at once. So, in Group Guided Reading, coaches would initially focus on timeliness in getting to the mat, so that it does not take a quarter of an hour, rather than focus on timeliness *at the same time as* baseline assessment, comprehension questions, and developing fluency.

3.1.3 Supporting low levels of teacher content knowledge

Research has shown that there are widely differing teacher content knowledge competencies in the teaching of reading and writing in the early years (Hoadley 2017; Muller & Hoadley 2019; O'Sullivan 2001; 2002). The vast majority of South African teachers adopt teaching methods and approaches that they themselves experienced in schools, which often include rote learning, teachers as sole facilitators of learning, and limited opportunities for learners to ask questions or speak (Hoadley 2016; Mtsatse forthcoming). As a result, the FW development team needed to be cognizant of this, and the possible large variation in levels of teacher content knowledge across the country and education districts, and within schools themselves.

The situation is the same for learner abilities. Studies that implement the approach of Teaching at the Right Level (TaRL) have shown the importance of differentiated teaching in order to improve learning outcomes (Strydom 2018).

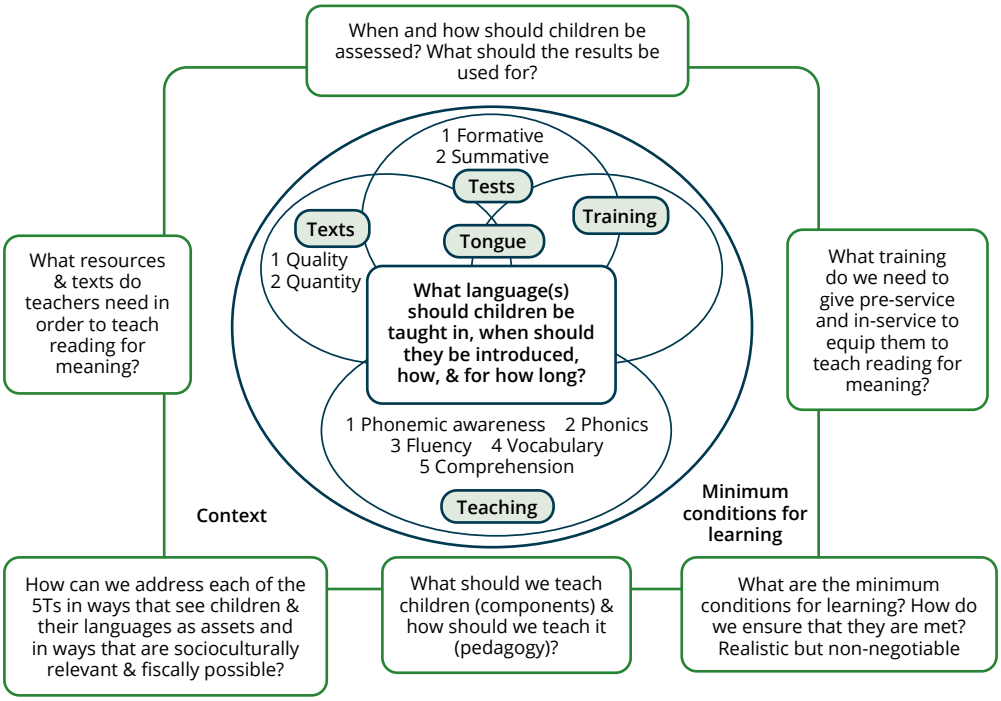
3.2 Content and curriculum principles of the FW Workbook and Teacher Guide

Because of the three cycles of revision derived from the evaluation and other research, the FW team decided to introduce a new element into the programme, the FW Learner Activity Workbook (the workbook), which would target learners directly, irrespective of the content knowledge of the teacher. The rationale was that this format would better meet the needs of South African teachers, and would help to standardise the support that FW provides. An aligned teacher's guide would accompany the workbook. The full-colour workbook integrates Home Language and Life Skills into a single workbook, and covers the full curriculum for both learning areas. The workbook and teacher guide followed Bulat's '5Ts' model (Bulat et al. 2017).

3.2.1 The 5Ts model

The content and curriculum framework for the development of the workbook focused on the 5Ts model adopted from Bulat et al. (2017), shown in Figure 2. The model provided guiding principles for what was defined as ingredients for successful material development.

Figure 2 **The 5Ts model and questions arising from it**



Note *From Spaull (2019), 3.*

Teaching is the first T in the 5Ts' model. It is widely acknowledged that the Big 5 (phonemic awareness, phonics, fluency, vocabulary, and comprehension) should be

taught explicitly in the Foundation Phase (National Reading Panel 2000; Spaull et al. 2020; Pretorius et al., this volume). The Big 5 would be explicitly scripted into, and form part of, the overarching content in the workbook, which was heavily underpinned by evidence from research on the science of reading.

Tongue is the second T in the model. Again, a body of research makes the argument for the benefits of learning how to read in a first language and mastering the foundational skills in that language before being introduced to an additional language (Cummins 2003). For this reason, the full focus of the FW team was on Home Language rather than EFAL development.

The FW programme is implemented in Quintile 1–3 schools across three provinces where the languages of learning and teaching are Afrikaans, isiXhosa, and Sepedi. The choice of languages was determined by two main factors. Firstly, it was desirable to have the first version of the workbook in each of the South African language subgroups (i.e. one each in the Germanic languages, the Nguni languages, and the Sesotho-Setswana languages), as this provided the opportunity to address the issue of materials for use in the South African multilingual context. Secondly, it was appropriate to be mindful and sensitive to versioning and language orthographies and yet aim for a uniform programme.

The third T is *Text*, which means mapping out the type of resources and texts that are required to teach reading and writing in the Foundation Phase. The South African Human Rights Commission (2021) has suggested a list of basic reading resources for the Foundation Phase – endorsed by the Minister of Basic Education – that has been included in the Right to Read and Write campaign (SAHRC 2021). FW therefore assessed the resources that were accessible in typical Quintile 1–3 schools and could cost-effectively be provided at scale. Where guidelines required something not easily accessible, for example, levelled readers, or access to a variety of different text-types, FW would provide the materials either in the workbook or separately (for example, as anthologies or as Big Books). For any other materials, explicit instructions on how to create or source the resources would be provided.

The fourth T is *Training*. The type of training that accompanied the materials needed to cover two main aspects: firstly, what teachers need to know about teaching reading effectively, and secondly, how to teach reading using the FW structured programme. Each of the three provinces followed a unique approach regarding training (in the Eastern Cape: coaches; in Limpopo: teaching assistants (TAs); and in the Western Cape: subject advisors). This will be discussed in detail in Section 6.

The fifth T is *Tests*. Studies by Schuld et al. (2017), Hoadley (2017) and Mtsatse (forthcoming) have shown the very limited assessment practices in Foundation Phase classrooms. Assessment is mainly seen as an exercise in compliance, rather than assessment for learning. The FW programme aimed to unpack when and how learners should be assessed, how to use the results to improve teaching and learning, and how to make assessment integral to the workbook. The workbook thus set out an assessment plan for informal and formal assessment per term. Rubrics and an outline of competencies for assessment were also provided in the teacher guide (e.g. see page 203–206 of the Grade 1 Term 4 Teacher Guide). It was vital that assessments were aligned to the Curriculum and Assessment Policy Statement (CAPS) and used the curriculum's required mark allocation. In developing its assessment plan, FW would have preferred to have had more freedom from the demands of the curriculum

and those of the Department of Basic Education, as these requirements sometimes complicated the process. The first iteration of the Grade 1 workbook included a very simple test of achievement of critical benchmarks, together with extremely simple marking and recording rubrics for teachers. For example, at the end of Grade 1 Term 2, the assessment is whether the child can read and write all single letter-sounds. In a sense, there is a simplified EGRA-type assessment at the end of each workbook. However, this approach was resisted by DBE officials and was eventually replaced by more CAPS-compliant assessment tools.

3.2.2 The 'Goldilocks' approach

Earlier in the chapter, teacher content knowledge and common instructional practices were mentioned as a priority area and a driver of the shift from lesson plans to a workbook approach. Working out how to develop and deliver a programme that catered to teachers at different levels in one teacher guide was the biggest challenge the team grappled with in the entire process. At every stage, the team had to determine the level of 'scriptedness' (the level of guided instructions) that teachers needed to feel that what was required of them was manageable and implementable.

Figure 3 English translation of the Grade 1 Term 2 Teacher Guide depicting the 'Goldilocks' approach

Note *Funda Wande, Grade 1 Term 2, Teacher Guide, page 17. From: fundawande.org/learning-resources?i=12#learningResourcesHolder*

As the decision had been made to replace lesson plans with a workbook and accompanying teacher guide, the focus of this aspect of the programme was the teacher guide. This became an experiment in whether it was possible to develop effective materials in a context with widely varying, but generally low, teacher content-knowledge and competence. For the teacher guide, the FW team decided that each lesson would include three levels of input – what FW called the 'Goldilocks' approach (Figure 3). Level 1, featuring a visual cue that requires just a glance at the teacher guide by the teacher, assumes that she is familiar with the pedagogies and can interpret the photograph. Level 2, for teachers who need slightly more guidance on what to do, includes headings or subheadings in bold, and sometimes further visual cues. Level 3 is aimed at teachers who need a lot more support and guidance on what to teach and how to teach, and therefore consists of explicit teacher instructions.

In addition to the Goldilocks approach, other organisational and conceptual tools were added to mitigate the variable content knowledge of teachers. Each theme includes an overview to guide the teaching of the topics over two weeks. By providing background knowledge of the theme topics, targeting relevant vocabulary, and explaining the rationale behind the topic selection, the overview reduces the time teachers need for additional research. The theme overview also includes photographs of theme tables, put together by teachers in the participating schools, as stimuli and examples to teachers of how they might enrich the learning environment in their classrooms (Figure 4).

Figure 4 English translation of an example of a teacher guide theme overview spread

Theme concepts

Theme 2: Picture maps (Weeks 3–4)

Week 3 A visit to the zoo

Week 4 Ruby's walk

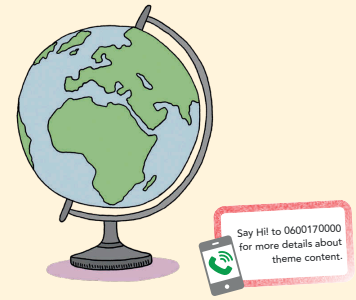
Picture maps

Purpose: Learners will understand the concept of a map. They learn that it is a drawing of a place using a view from above. They will interpret and work with simple picture maps of familiar places. Their **Visual and Geographical skills**, as well as their **Technological process skills** are developed through *observing, interpreting, measuring*, and *drawing*.

Why do we need maps?

Purpose: Learners will understand the purpose of maps in our lives, and how to read and use simple picture maps, preparing them for later map work. **Social science concepts** of *place and relationships* will be developed as well as learners' visual literacy.

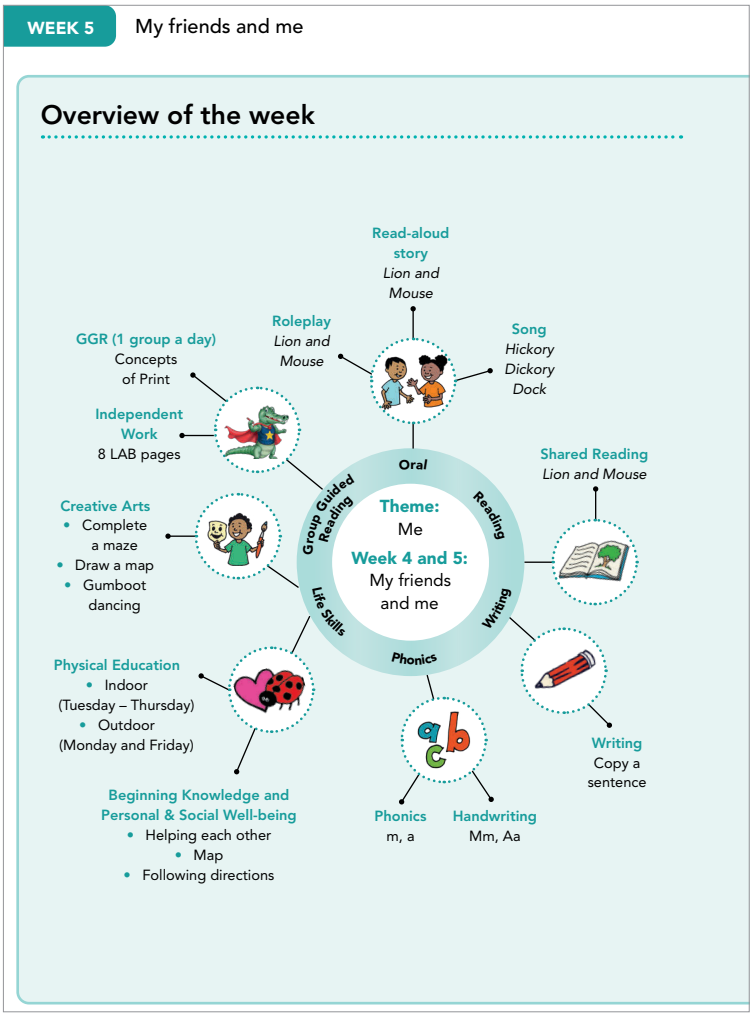
- Using a zoo map
  Purpose: Learners will see the concept of a picture map applied to a place of interest, that is, a zoo. This will capture their imagination and demonstrate the usefulness of maps. Through interpreting, and then constructing their own map of a zoo, **Natural science concepts** of *life and living*; **Social science concepts** of *conservation* and *place* and **Scientific process skills** of *enquiry* will be developed.



Note *Funda Wande, Grade 1 Term 4, Teacher Guide, page 14–15. From: fundawande.org/learning-resources?i=12#learningResourcesHolder*

Each week also includes a lesson overview (Figure 5) serving multiple preparation and consolidation purposes for teachers. Teachers are trained and expected to use the lesson overview to understand what they need to prepare for the upcoming week, and then to check that the lessons have been completed.

Figure 5 English translation of the weekly lesson overview from the teacher guide



Note *Funda Wande, Grade 1 Term 1, Teacher Guide, page 78. From: fundawande.org/learning-resources ?i=12#learningResourcesHolder*

3.2.3 Full curriculum coverage

The FW Workbook covers the full curriculum time allocation for Home Language. This equates to 7–8 hours of teaching per week. Together with the teacher guide, the workbook thus includes lessons for Listening & Speaking (teacher guide only), Reading, Phonics, Writing, and Handwriting. A decision was made to focus on multiple opportunities to teach and enrich the children's reading experience. For example, a

more complex and language-rich vocabulary text is read by the teacher during Read-Aloud lessons, while a shorter, illustrated version of this text is provided at the learners' level for Shared Reading. It should be noted that this full-curriculum approach contrasts with other programmes such as Room to Read (which only covers part of the Language curriculum, usually providing one hour of programming per day) and EGRS (which did not include Life Skills). In addition to the FW Language and Life Skills programme (workbook and teacher guide), teachers are provided with the Bala Wande Mathematics programme (workbook and teacher guide) that follows similar design principles (see Sapire et al. 2022).

3.2.4 Life Skills integration

The decision to integrate the Foundation Phase subject of Life Skills with Home Language, in the workbook and teacher guide, created an interesting discussion amongst the team as well as with provincial curriculum officials. There were three primary reasons for integrating Life Skills into the workbook:

1. It maximised reading opportunities across the curriculum, conscripting the time spent on Life Skills into the service of literacy.
2. Life Skills provided the content knowledge underpinning the literacy learning. General knowledge development is key for reading comprehension and vocabulary development, and will also strengthen knowledge of the topics that need to be covered in Life Skills.
3. Conversely, the language skills taught through the texts and activities in Life Skills underpin the development of reading and writing skills, but in a relevant context.

Although CAPS explicitly encourages such an integrated approach, it was initially opposed by partnering government departments. However, the rationale together with acknowledgement of limited Life Skills teaching led to the inclusion of Life Skills as an experiment – on how to use the Life Skills curriculum to serve literacy development at the same time as achieving the Life Skills objectives, and to determine whether including Life Skills would encourage teachers to teach that subject.

3.2.5 Page-by-page pacing at a teacher and learner level

Not needing the teacher to use multiple resources was the biggest learning from the lesson plan approach that FW initially used. The principle underpinning the FW package is that teachers can find everything they need in their teacher guide; this simplifies the package thereby maximising use. Co-developed and completely integrated, the workbook and teacher guide are both organised around a sequenced, page-by-page pacing that enables teachers and learners to easily pick up from where they left off. This became even more useful during the rotational timetabling necessitated by Covid-19, which involved teachers working with different groups of learners on different days.

3.2.6 Scope and sequence

The first step in developing materials is to establish a yearly and termly plan, and identify the scope and the sequence of the programme. This was done at the beginning of each

year and again at the beginning of each term; at FW, this involved the lead writers, language leads and versioners. Initially, departmental officials were not involved in this planning, but FW realised that this was an omission; they now also contribute to developing the term plans. This collaborative approach led to a language-sensitive, curriculum-compliant, and enriched programme.

The scoping process included making key decisions around the sequencing and pacing of phonics teaching. The phonics scope and sequence process was led by a language lead in consultation with provincial curriculum officials and teachers themselves. Each language took a slightly different approach depending on the needs of the language. For example, the Afrikaans team co-created the scope and sequence together with the Western Cape Deputy Chief Education Specialist, and the Afrikaans Master Teachers Reference Group (30 teachers identified by the provincial education department). The isiXhosa team followed the National Framework for the Teaching of Reading in African Languages in the Foundation Phase (issued by the DBE in 2020) without changes, since both Eastern and Western Cape curriculum officials were satisfied with the framework recommendations. Sepedi followed the scope and sequence of the National Framework, with minor changes agreed with curriculum and district officials in the Limpopo education department. The scope and sequence were then inserted into the termly plan from the teacher guide, and integrated into the workbook. See Appendix 02 for the details of scope and sequence.

3.2.7 Variety of text-types

Learning to read involves not only explicit teaching of phonics but also practice in reading levelled text. Most classrooms in South Africa are not print-rich; FW therefore aims to provide rich and varied texts in the programme. FW believes that exposing learners to multiple, levelled texts, as well as different text-types and different text organisers – such as tables and diagrams – develops reading skills, allows children to interact with print in different formats for different purposes, and, most importantly, builds motivation for reading for enjoyment. For this reason, in each theme in the workbook, there is a language-rich Read-Aloud story, a Shared Reading text, and an information text linked to Life Skills, in addition to the material in the Vula Bula anthologies. These texts are written at different levels, depending on the level of support offered through the suggested pedagogy. For example, the Read-Aloud story (read by the teacher) has complex sentences with more details and a rich vocabulary. A simpler version of the same text is used for the Shared Reading activity done by both the learner and teacher.

3.3 Using Group Guided Reading to maximise learner differentiation

Despite recent discourse around the realities of implementing Group Guided Reading (GGR) in large class-sizes that require routines, teachers often choose to skip this component of the curriculum entirely. The FW development team felt strongly that GGR was a real opportunity for teachers to give some individualised, differentiated attention to children in these typically large classrooms. Additionally, it is another

space to encounter a variety of texts, while presenting an opportunity for teachers to give targeted remedial support and activities to struggling learners.

Breaking this down in order to encourage teachers to attempt to conduct GGR effectively, FW needed to include the following support:

- the Molteno Vula Bula anthology series, which takes a methodical, graded approach in developing phonically controlled text (Katz & Rees 2022), with evidence of impact when using these books (Ardington & Spaull 2022);
- whole-class activities that could be deployed while the teacher is doing GGR with a small group. In Grade 1, these activities consist of practice pages that serve as revision, paired and individual reading, and the completion of DBE Workbook pages, linked to the FW Workbook. All of these can be completed independently without teacher support. Nevertheless, it is important that in the first four weeks of the year, the teacher focuses on establishing routines that minimise classroom management requirements and ensure that learners know exactly what to do independently;
- guidelines for the development of reading in ability groups.

4 Design principles of the FW Workbook

From inception, the FW mission has been to develop open-access, high-quality resources that mirror the children's lives and extend their skills and knowledge. We therefore aimed to deliver workbooks that are exciting and that motivate learners to engage with them.

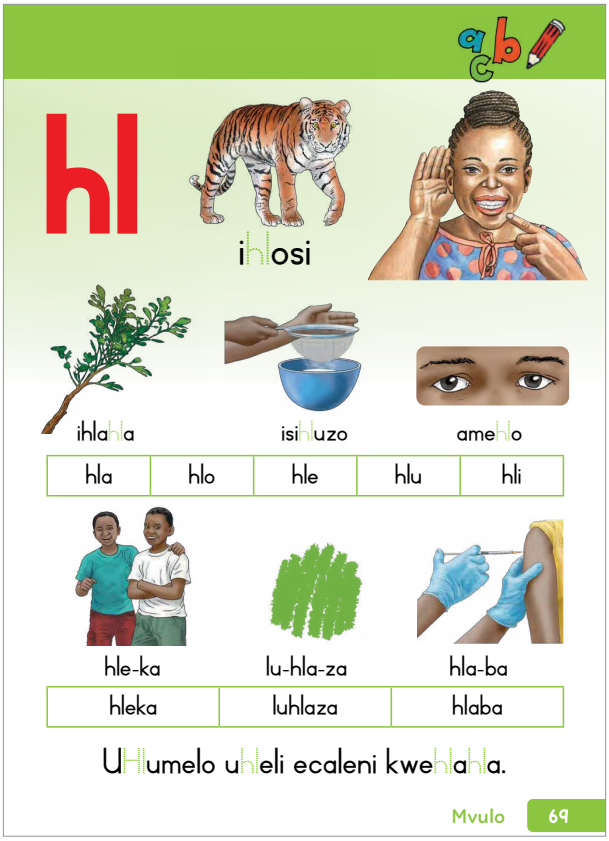
In order to motivate use, the FW team took great care to develop the workbook and teacher guide in line with the principles discussed in Section 3. In addition, they agreed on a highly visual approach to the design and layout. The five design principles underpinning this decision were: (i) clear visual hierarchy, (ii) simplicity, (iii) focus points, (iv) good use of white space, and (v) consistency.

Visual hierarchy refers to aspects of the page layout and design that guide the user's eye to the portion of the content that is most important, in the correct sequence. Images and graphics on each page are placed in a way that orientates the teacher and learner towards what they need to do. In the teacher guide, the weekly overview uses lesson icons and is colour-coded to convey meaning. Both the teacher guide and workbook follow the same weekly colour sequencing for ease of reference and ease of location. In both books, the flow diagram for the daily lesson plan summarises the order of the lessons to be taught for the day. Visual cues, icons and thumbnail images are used in the teacher guide to give a quick reference to the workbook page. In instances where teachers need to write on a board, a clear board graphic with the specific text is added. The teacher guide has numerous 'real-world' photographs of teachers who look like the teachers in intervention schools, and classroom contexts that are 'realistic but slightly aspirational' rather than completely ideal.

The workbook takes a similar approach. On each page, there is a clear icon indicating which lesson it is, a weekly colour stripe and a daily flow diagram. The visual hierarchy principle is applied to each page. For example (Figure 6), for teaching letter-sounds, the visual hierarchy starts with an enlarged capital and lower case version of the

letter, which is most important, followed by an illustration showing how to sound out the letter. Next, in a smaller font, a set of three vocabulary words is provided, so that the learner can see and hear the letter in familiar words. Third, the learner practises writing both capital and lowercase. Lastly, there is a sentence that includes the letter so that the learner identifies the letter in a full-text context.

Figure 6 **Example of a phonics page in the Funda Wande workbook**



Note *Funda Wande, Grade 1 Term 3, isiXhosa Workbook, page 69. From: fundawande.org/learning-resources?i=12#learningResourcesHolder*

Simplicity is another focus of the design approach taken, with the aim of creating a distraction-free learning package that is not just a clutter of texts. FW was strict about the quantity of text provided for teachers. Some teachers are not keen or competent readers themselves, and the concern was teachers' reading thresholds. The decision was taken to provide short, simple instructions as a way of lessening the cognitive demand of working with the materials.

For the workbook, simplicity needed to be balanced with the purpose of a lesson or activity. At Grade 1 level, for example, the content team paid careful attention to text length, providing short instructions and practice examples rather than further text.

Focus points are also important on each page. These are a primary area of interest on the page that attracts the user as soon as they arrive at a section, and that then draws

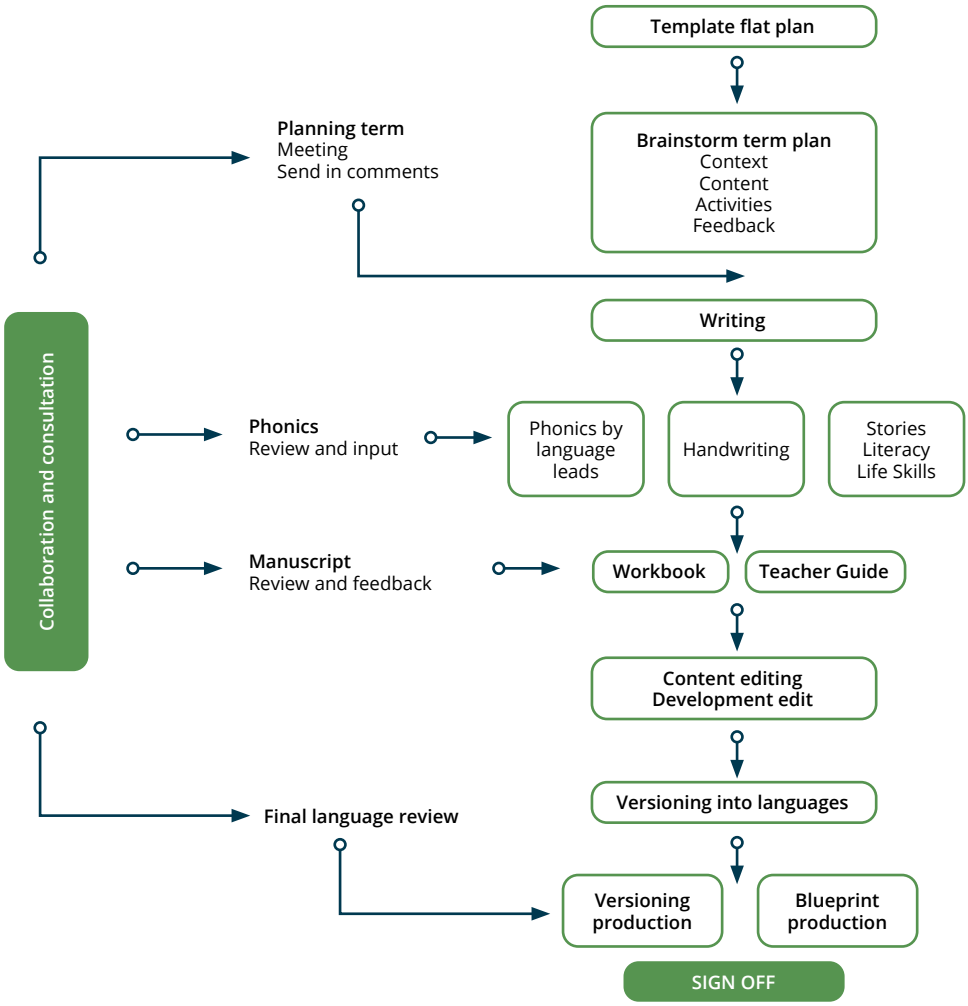
them gradually into the text. Without the focus point, the user's attention is easily scattered.

By balancing out the busier parts of the page, *good use of white space* reduces clutter and provides a visual breather to users. FW used white space in both the teacher guide and workbooks to enhance clarity and readability.

Consistency of design can be a powerful learning tool especially as the human brain processes images faster than text (Hirtz 2021). Readers also comprehend the content better and faster when textual content is supplemented with images, rather than large blocks of text alone (Hirtz 2008). For easier mapping and referencing, visual cues, icons and images are used consistently throughout the materials.

5 Design process

Figure 7 A high-level view of the FW workbook development process



Criticism aimed at most Foundation Phase materials in South Africa is that they are often not developed by home-language speakers and take a translation approach rather than a versioning approach (i.e. isiXhosa materials are first developed in English by experts in English Home Language and then translated into isiXhosa). At the first workbook development meeting in 2020, the FW team looked carefully at who would lead the writing of the workbook, who the language leads would be, what the team of versioners would look like, and the consultants and collaborations that would be required (Figure 7). As an organisation, we aimed to develop African-language expertise and to give African-language experts a space to lead, empowering them with the authority to make decisions about content and process. As much as we need to develop a set of materials, capacity-building has remained central to this project. We therefore hope that, by the end of the project, we will have generated a cohort of African-language literacy practitioners who not only implement programmes but have a strong grounding in materials development – an area in which white women are currently considerably over-represented. Although FW has been open to partnering and we initially collaborated with another literacy NGO, competing priorities, project deliverables and timeframes made this difficult. However, we have maintained dedicated consultation with provincial curriculum colleagues across three provinces, including subject advisors and master teachers. It has become increasingly evident that it is important to either co-create with the province or national government, or incorporate their input into our materials as we go along. Not only does this strengthen the quality of the resources but it also yields greater buy-in from government officials. See Appendix 03 for the detailed consultation process.

6 The Funda Wande interventions

Funda Wande is currently running three RCTs across three provinces with different modalities testing for scale. All interventions include learning materials in the form of teacher guides, learner workbooks, and classroom-based videos. This provides an excellent opportunity to test the efficacy of different types of support using the same LTSM, albeit in different languages. In the Eastern Cape, a 59-school RCT aims to use Foundation Phase coaching to support and train teachers on the use of the workbook. The Limpopo intervention includes an RCT of 120 schools that aims to use TAs to tackle the dual crises of youth unemployment and poor Foundation Phase learning outcomes. Here, the TAs support the teacher in the implementation of the workbook programme by helping with classroom management, small group activities, and remedial exercises. The Western Cape intervention is currently being piloted in 100 schools, while assessing the feasibility and viability of a province-wide scaling model for the implementation of the workbooks.

In 2021, we implemented a workbook programme in the Eastern Cape for literacy and numeracy, also with coaches. Although this intervention did not see the same success as the lesson-plan intervention in 2019 (pre-pandemic), it did exceed the outcomes seen in 2021 (during the pandemic), especially on higher-order literacy skills, with similar outcomes for numeracy. Taken together, these results indicate that coaches and lesson plans, while effective in shifting outcomes in non-pandemic times, are not enough to shift literacy outcomes in the midst of school closures and rotational

timetables. However, workbooks are effective for some literacy and numeracy domains even with minimal content coverage.

In addition, in 2021, we implemented the workbook programme in Limpopo with TAs to directly support teachers, rather than providing coaches (see Makaluza & Mpeta 2022). The independent evaluation found that learners in FW schools with TAs outperform their peers in control schools by 0.45 SD in reading, 0.22 SD in early numeracy, and 0.38 SD in the written Early Grade Maths Assessment (Ardington 2021). In comparison with other programmes, namely the EGRS and our own coaching programme in the Eastern Cape, the effect size of the TA intervention is two to three times higher. Furthermore, whilst EGRS focused only on literacy, the Limpopo intervention focuses on both literacy (*Funda* Wande) and numeracy (*Bala* Wande) and was effective in improving learner results for both. There are no other known within-school interventions in South Africa that have been shown to shift learning outcomes to the same extent in literacy, nor are there any current programmes that target both literacy and mathematics in the same schools (the last programme to do so was GPLMS). This is particularly exciting given what we learnt from the Eastern Cape intervention – namely that workbooks and coaches are not enough to substantially shift literacy and numeracy outcomes, across all evaluated domains, during pandemic times when there was substantially less support. The combination of workbooks and TAs seems to be more effective: amidst school closures and rotational timetables, it far exceeded the pre-pandemic standard.

7 The future of the Funda Wande structured pedagogy

Funda Wande remains committed to an early reading programme with a structured pedagogy approach provided in the home language of learners and teachers, in the form of workbooks and teacher guides. Evaluation results have indicated promising learning improvements in the schools where the FW programme is implemented. However, FW strongly believes that we need to continue to pilot and experiment with materials and training in order to develop a sustainable scalable model that will shift teacher behaviours towards more efficient and effective ways of teaching reading, thus improving learner outcomes.

We hope to provide the programme in at least five South African languages by the end of 2023/2024, which is in line with the current demands. We are already experiencing demand for scale in the Western Cape and have initiated conversations with both Eastern Cape and Limpopo about the feasibility of rolling out the FW Workbook. At this stage, the financial sustainability of yearly procurement of the materials is the big question asked by all provincial partners, which demands serious consideration. With the data-driven evidence of the implementation of the workbook, we envisage engaging more deeply with the DBE Workbook team to share our learning and successes.

There are many materials in the system, but very few that have been piloted or independently evaluated to measure whether these materials are actually used, and

the extent to which these materials do or do not improve learning outcomes. As a research-centred organisation, we believe in documenting our approach to literacy and mathematics materials development, and transparently reporting any changes in learner outcomes and teacher practices. The accumulating quantitative and qualitative evidence suggests to us that there is much value in a learner-level, clearly sequenced, full-curriculum workbook with corresponding teacher guide. While teachers need considerable support in order to shift teaching practices and learning outcomes, they also need easy-to-follow engaging materials that are aligned to the intervention and training, aligned to the curriculum, and aligned with research on how children learn to read.

Acknowledgements

I would like to express my special thanks to Dr Debbie Botha for her guidance and constructive critique of the chapter. I would also like to acknowledge Dr Clare Verbeek for her contribution to the Funda Wande Workbook development process.

References

Ardington C. (2019). Funda Wande Eastern Cape Intervention: Baseline Report. Cape Town: SALDRU, University of Cape Town.

Ardington C. (2021). Funda Wande Limpopo Midline Report. Cape Town: SALDRU, University of Cape Town.

Ardington, C. & Spaull, N. (2022). Sequenced for success: Evaluating the impact of openly licensed Vula Bula anthologies of graded readers on early grade reading outcomes in South Africa. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Beatty, B. (2011). The dilemma of scripted instruction: Comparing teacher autonomy, fidelity, and resistance in the Froebelian kindergarten, Montessori, direct instruction, and Success for All. *Teachers College Record* 113(3), 395–430.

Bulat, L., Clark, S. & Shutova, E. (2017, September). Speaking, seeing, understanding: Correlating semantic models with conceptual representation in the brain. *Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing*, 1081–1091.

Cilliers, J., Fleisch, B., Prinsloo, C. & Taylor, S. (2019). How to improve teaching practice? An experimental comparison of centralized training and in-classroom coaching. *Journal of Human Resources* 55(3), 926–962.

Cummins J. (2003). Basic interpersonal communicative skills and cognitive academic language proficiency. *BICS and CALP*. Accessed 2010-07-25.

Dutt, S. C., Kwauk, C. & Robinson, J. P. (2017). Pratham's READ India Program: Taking Small Steps toward Learning at Scale. Washington, DC: Center for Universal Education at Brookings.

Elmore, R. (2009). The instructional core. In City, E. A., Elmore, R. F., Fiarman, S. E. & Teitel, L. (Eds), *Instructional Rounds in Education: A Network Approach to Improving Teaching and Learning*. Cambridge, MA: Harvard Education Press.

Fleisch, B. (2018). *The Education Triple Cocktail: System-wide Instructional Reform in South Africa*. Cape Town: UCT Press.

Funda Wande (2019a). Gradual release video. From: www.youtube.com/watch?v=_bp16CUTZ0Q Accessed 2022-09-14.

Funda Wande. (2019b). Lesson Plans Term 1 isiXhosa HL Grade 1. From: fundawande.org/img/cms/resources/ Accessed 2022-09-14.

Graham, J. & Kelly, S. (2018). How Effective are Early Grade Reading Interventions? A Review of the Evidence. Washington, DC: World Bank.

Hirtz S. (2008). The impact of technology on education. In Hirtz, S. (Ed), *Education for a Digital World: Advice, Guidelines and Effective Practice from Around the Globe*. Vancouver: BCcampus and Commonwealth of Learning.

Hoadley, U. (2017). *Pedagogy in Poverty: Lessons from Twenty Years of Curriculum Reform in South Africa*. London: Routledge.

Katz, J, & Rees, S. (2022). Molteno's Vula Bula: Conceptualisation, development and implementation. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Kotzé, J., Fleisch, B. & Taylor, S. (2019). Alternative forms of early grade instructional coaching: Emerging evidence from field experiments in South Africa. *International Journal of Educational Development* 66, 203–213.

Makaluza, N. & Mpeta, B. (2022). Two birds with one stone: Improving Grade 1 learning outcomes using Funda Wande teaching assistants in Limpopo 2021–2022. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Mourshed, M., Chijioke, C. & Barber, M. (2010). How the World's Most Improved Systems Keep Getting Better. New York, NY: McKinsey & Company. From: www.mckinsey.com/industries/education/our-insights/how-the-worlds-most-improved-school-systems-keep-getting-better Accessed 2022-09-15.

Mtsatse N. (forthcoming). Teacher assessment practices in rural Eastern Cape and KwaZulu-Natal. (Unpublished doctoral thesis). Stellenbosch University, Stellenbosch.

Muller, J. & Hoadley, U. (2019). Curriculum reform and learner performance: An obstinate paradox in the quest for equality. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 109–125. Cham: Springer.

Mutima, S. (2021). Northern Education Initiative (NEI+): Endline Performance Evaluation Report. Washington, DC: USAID/Nigeria.

National Reading Panel. (2000). Teaching Children to Read: An Evidence-based Assessment of the Scientific Research Literature on Reading and its Implications for Reading Instruction. Rockville, MD: NICHD.

O'Sullivan, M. C. (2002). Reform implementation and the realities within which teachers work: A Namibian case study. *Compare: A Journal of Comparative and International Education* 32(2), 219–237.

O'Sullivan, M. C. (2001). Communicative approaches to teaching English in Namibia: The issue of transfer of Western approaches to developing countries. *International Journal of Early Years Education* 9(1), 51–61.

Piper, B. & Mugenda, A. (2014). The Primary Math and Reading (PRIMR) Initiative: Endline Impact Evaluation. Washington, DC: USAID/Kenya.

Piper, B., Ralaingita, W., Meijia, J., Dubeck, M., DeStefano, J., Stern, J., Jordan, R. & Sitabkhan, Y. (2021). A How-To Guide: Structured Pedagogy. RTI Press. From: scienceofteaching.site/how-to-guides/learning-outcomes/topic/lesson-1/ Accessed 2022-09-14.

Sapire, I., Isaac, P., Mpofu, S., Sako, L., Seoloana, M., Ndamase, T. & Mafilika, V. (2022). The implementation of the Bala Wande programme in Grade 1 in three provinces: Lessons learned. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Schuld, N., Kanjee, A. & White, T. (2017). Tinder or flint: Igniting Grade 2 teachers' understanding of learning, teaching and assessment. *Journal of Education* 70, 109–132.

Shalem, Y., De Clercq, F., Steinberg, C. & Koornhof, H. (2018). Teacher autonomy in times of standardised lesson plans: The case of a primary school language and mathematics intervention in South Africa. *Journal of Educational Change* 19(2), 205–222.

South African Human Rights Commission (SAHRC). (2021). The Right to Read & Write. Johannesburg: SAHRC.

Spaull, N. (2019). Learning to read and write for meaning and pleasure. In Spaull, N. & Comings, J. (Eds), *Improving Early Literacy Outcomes: Curriculum, Teaching and Assessment*. Leiden: IBE UNESCO & Koninklijke Brill NV.

Spaull, N., Pretorius, E. & Mohohlwane, N. (2020). Investigating the comprehension iceberg: Developing empirical benchmarks for early-grade reading in agglutinating African languages. *South African Journal of Childhood Education* 10(1), 1–14.

Strydom L. (2018). Reflections from the 2019 TaRL Workshop: Learning about a child-centred education approach. From: www.teachingattherightlevel.org/workshop-reflections-child-centred-education-approach/ Accessed 2022-09-14.

Wagaw, T. G. (1979). *Education in Ethiopia: Prospect and Retrospect*. Ann Arbor: University of Michigan Press. Ann Arbor, MI: University of Michigan Press.

Woodward, A. (1986) Learning to read: A historical study of reading textbook teachers' guides, 1920–1980. *Book Research Quarterly* 2(1), 53–77.

appendix /01

Table 1 Summary of teacher and stakeholder feedback on the Funda Wande intervention in 2019

Compliance with and accountability to other provincial directives	Training & monitoring	Materials implementation & fidelity
Teachers are required to comply with provincial and district curriculum requirements. Contradictions between the FW programme and the curriculum requirements often caused confusion and misalignment. For example, initially, the assessment framework of the lesson plan programme required the teacher to administer weekly informal assessments and set aside one week in a term to administer formal assessment. The curriculum on the other hand, required bi-weekly informal assessment with formal assessment spread over four weeks.	*A lack of understanding on how to effectively support teachers in the absence of the literacy coach meant that teachers relied solely on teacher coaches for support. This was despite the fact that HODs and subject advisors had been given bursaries and enrolled in the Advanced Certificate in Foundation Phase Literacy Teaching at Rhodes University.*	*The FW resource pack provided to teachers included multiple components, e.g. alphabet friezes, DBE posters, Vula Bula Big Books, Vula Bula flash cards, Vula Bula anthologies, per child. This was on top of existing materials (DBE Workbooks). As a result, teachers felt overwhelmed and confused by the multiple moving parts and how they all fitted together.*
Subject Advisors monitoring teachers on other programmes such as NECT and Jolly Phonics meant less priority was given to fully implementing the Funda Wande programme.	*Incorrect assumptions about teacher content and pedagogical knowledge. Training and materials need to be pitched at the right level for the teachers, i.e. meet the teachers where they are.*	*The programme required much more teacher effort, motivation, and preparation time in order to implement the lesson plan and maximise the use of the resources. One HOD commented that "The programme means our teachers have to work harder."*
Teachers are often measured on how many pages of the DBE Workbook learners complete per term or year. Elements of teaching (like Read-Alouds or Group Guided Reading) did not result in 'documented' evidence of learning (like pages covered), and so were often skipped.	*Lack of understanding of how learners learn how to read and of the science of teaching reading was evident.*	*There was a considerable difference between the teacher that the designers of the lesson plans had in mind and the actual teachers in the classroom. Teachers need to ask critical and high-level cognitive questions, give attention to small-group teaching, and create a space for learners to ask questions. These were all foreign practices to most teachers in the intervention schools as shown by the research of Hoadley and Boyd (this volume).*

Note *Funda Wande data, table compiled by author.*

appendix /02

Term 1 content

Table 2 English version: example of a Funda Wande Teacher Guide term plan

Week	Theme	Read Aloud Story	Shared Reading Story	Life Skills text (Beginning Knowledge)	Independent Writing	GGR and Independent Work	Phonics	PSWB	Creative Arts
1	Orientation **Starting school**	Lazy Lunga	n/a	n/a	n/a	n/a	Orientation		
2	Me **What I can do**	First day at school	What can you do?	Sequential diagram (Shared R routine)	Draw self Write name	Learn to work independently (8 IW pages)	Orientation	Making friends	Cut-and-paste face Songs Classroom rules
3	Me **What I can do**	Animals can dance	We can dance	Instructional text (make a music shaker)	Write name Copy sentence	**Baseline Assessment** (11 IW pages)	Orientation	We are unique	Music shaker Dance
4	Me **Me and my friends**	The circle game	I like cake	Diagram (food pyramid) Table of comparison	Complete sentence: I like … **Formal Assessment**	**Baseline Assessment** (10 IW pages)	Orientation	Sharing is caring	Drawing (food pyramid); Guessing game
5	Me **Me and my friends**	Lion and Mouse	Lion and Mouse	Map (Vusi goes to Sipho's house)	Drawing Copy caption **Formal Assessment**	Concepts of Print (8 IW pages)	S: M & A X: B & A A: S & A	Helping each other	Maze Draw a map Gumboot dancing
6	School **School Supplies**	Freddie Frog starts school	The school bag	Shopping list	School list	Concepts of Print (8 IW pages)	S: D & I X: L & U A: M & O	Talking about fears	Colour in Draw a backpack Role play
7	School **Colours at school**	The surprise	New crayons	Information text (Rainbow experiment)	My pencil case list	**Formal Assessment** (10 IW pages)	S: K & E X: M & I A: L & E	Helping/ respecting our elders	Weaving Mixing colours Role play
8	Healthy habits **Sleep**	Hare and Tortoise	Hare and Tortoise	Cycle diagram (Sleep cycle)	Complete story map	**Formal Assessment** (10 IW pages)	S: L & O X: K & E A: D & G	What to do with nightmares	Fortune teller Card game Dramatise dreams
9	Healthy habits **Keeping clean**	How elephant got his trunk	Time to clean, Ezra!	Poster (washing hands)	Recount Use time markers	Emergent Reading (8 IW pages)	S: S & U X: S & O A: Revision	Listening to our parents	Draw a portrait Dramatise story
10	Weather **Sun, wind and rain**	Wind and Sun	Ants walking	Information text (What is a tornado?)	Write sentence	Emergent reading (8 IW pages)	Revision of all letters	Dealing with misfortune	Make a windmill Wind painting Weather forecast

Note *Funda Wande English Home Language and Life Skills Grade 1 Term 1 term plan, page 3. From: fundawande.org/learning-resources?i=12#learningResourcesHolder*

appendix /03

Table 3 Partnership involvement in the Funda Wande consultation process

The consultation process indicating who is involved and when		
Stage	**Activity**	**Who is involved?**
1	*Development of the template and flat plan*	*Funda Wande content and production team*
2	*Term planning: content, context, activities, and assessment*	*Funda Wande content team*
3	*Term plan sent to government officials for comments and feedback*	*ECDOE, LPDOE, and WCED*
4	*Lesson plan writing*	
4.1	*Language-specific phonics development*	*Funda Wande language leads, versioners, and provincial departments*
4.2	*Manuscript writing: Life Skills, reading, and handwriting*	*Funda Wande writers*
5	*Phonics lessons sent to government officials for inputs and comments*	*Funda Wande language leads, and ECDOE, LPDOE, and WCED*
6	*Complete English manuscript sent to government officials for inputs and comments*	*ECDOE, LPDOE, and WCED*
7	*1st draft English manuscripts sent for development edit*	*Funda Wande production team*
8	*Final English blueprint manuscript sent for versioning*	*Funda Wande language leads, versioners, and provincial departments.*
9	*Layout and design*	
9.1	*English blueprint goes into production*	*Funda Wande production team*
9.2	*Versioned manuscript goes into production*	*Funda Wande production team*
10	*Versioned booklets sent to government for final proofing*	*ECDOE, LPDOE, and WCED*
11	*Final sign-off*	*Funda Wande language leads and editors*
12	*Sent to print*	*Funda Wande production team*

11

In-service teacher education for Foundation Phase literacy: The case of the Advanced Certificate in Foundation Phase Literacy at Rhodes University

SARAH MURRAY, NICK TAYLOR & SIBHEKINKOSI ANNA NKOMO

Abstract

This chapter describes the genesis of the Advanced Certificate in Foundation Phase Literacy Teaching, a newly accredited, in-service course in early literacy teaching developed by Rhodes University in collaboration with Funda Wande, a not-for-profit organisation (NPO). The chapter also reports on an evaluation of the programme. The chapter begins by describing what motivated the course – the extreme inequality in reading achievement, a result in part of inadequate teacher education – and the potential contribution that improvements to in-service education could make. The Advanced Certificate seeks to address this challenge by providing a quality in-service programme, appropriate to context, in teaching reading and writing in the early grades. The curriculum is described in some detail, together with information about the cohorts of students who have completed the course: curriculum specialists, subject advisors, school principals, heads of department, teachers and literacy coaches. The chapter then goes on to describe the evaluation, which drew on two documents – the PrimTEd Knowledge and Practice Standards for Primary Teacher Education Graduates: Language and Literacy (2020), and the National Framework for the Teaching of Reading in African Languages in the Foundation Phase (DBE 2020)

KEYWORDS
Foundation Phase, early literacy, early grade reading and writing, in-service teacher education, professional development, evaluation

– to develop a framework for evaluating the curriculum. The evaluation concluded that the intended and attained curriculum had been successfully achieved. For reasons of time and cost, the evaluation of the implemented curriculum was restricted to feedback from students, who expressed satisfaction in this regard. The chapter concludes with a report on a webinar at which the evaluators presented their findings. The respondents expressed concern that it was not possible to evaluate the implemented curriculum more rigorously. However, they noted that the programme had the right mix of actors: the provincial education department, an NPO running a literacy intervention in the province, and a university that could provide conceptual depth for the course. An evaluation focussing on implementation is planned for 2022.

1. Introduction

One of the major challenges facing South African education is how to improve the quality of literacy teaching in the Foundation Phase. That 78% of learners are unable to read for meaning after three years of formal schooling has been described as a binding constraint on the education system, for if children are not able to read independently and gain knowledge from books, this places a barrier to further learning across all subject areas (Howie et al. 2017; Van der Berg et al. 2016). Although there are a number of factors that contribute to reading achievement or the lack thereof (Hoadley 2010), the quality of teaching is seen by many researchers as critical to improving children's literacy in the Foundation Phase (Pretorius 2022; Taylor & Taylor 2013).

The urgency for improvement in learners' reading ability is heightened by socio-economic inequalities in both literacy and, more broadly, educational achievement. South Africa has been described as having two education sub-systems operating side by side, one that operates in a minority of socio-economically advantaged, formerly white and Indian schools that charge fees, and another disadvantaged, no-fee system that serves the majority of learners (Spaull 2013; Taylor & Taylor 2013). Taylor and Taylor (2013) report that, as early as Grade 5, an achievement gap equivalent to two years of learning opens up between learners in advantaged and disadvantaged schools, and that this increases as they move up the school. Further inequalities are evident between rural and urban schools, and between children who learn to read in either Afrikaans or English, and those who learn to read in African languages (Chetty et al. 2017; Smith 2011; Howie et al. 2017). Research shows that children learning to read in African languages in no-fee schools are falling behind reading benchmarks as early as Grade 1 (Ardington et al. 2020; Mohohlwane et al., this volume). In addition, the Covid-19 crisis has exacerbated existing inequalities across and within the education system since learners lost about 1.3 years of learning due to rotational timetables and school closures (Spaull 2022).

Although improvements in the reading achievement of South African learners between 2006 and 2016 have been documented (Gustafsson 2020), these come off a low base and performance remains poor overall, added to which there are extreme inequalities in the test results (Hofmeyr 2020; Spaull 2022). Furthermore, the pace of improvement is not fast enough to ensure that the majority of learners will be able to

read for meaning by 2030, the goal set by the President of South Africa and the Minister of Basic Education (Spaull 2022).

Whereas Taylor and Mawoyo (this volume) deal with the urgency of improving pre-service teacher education to reduce the achievement gap, this chapter reports on an in-service professional development course designed to improve the quality of early literacy teaching, and an external evaluation of this course. The first author of this chapter was involved in the development of the course and became the coordinator; the second and third authors were the evaluators.

2 Literature review

2.1 The quality of early literacy teaching

It is important not to underestimate the challenges faced by teachers in disadvantaged rural and township schools where classes are often large, resources are scarce, and children come from homes with few books and little support for reading and writing (Allais et al. 2019; Ramadiro & Porteus 2017). That said, classroom-based research shows that the quality of literacy teaching in the majority of these schools is poor (Hoadley 2012). Teachers are reported to have low expectations of learners and to provide minimal support for learners with difficulties; pacing is described as slow, and time is often wasted, with the result that curriculum coverage is limited (Hoadley 2012; Hoadley 2018; Hoadley and Boyd, this volume). Teaching exhibits low levels of cognitive demand, over-reliance on choral methods, minimal focus on meaning, weak feedback and assessment, and infrequent interaction with books (Taylor & Moyane 2005; Reeves & Muller 2005).

As reported in the Taylor and Mawoyo chapter, research points to shortcomings in initial teacher education both in universities and in the former colleges of education in preparing students to teach reading and writing in the Foundation Phase (Baxen & Botha 2016; Taylor 2016; Reed 2019). Frequently, an English teaching methodology dominates and there are few written resources available in African languages (Plüddemann et al. 2010). A review of the curricula for teaching reading in the Foundation and Intermediate Phases in isiZulu and Sesotho carried out in 12 higher education institutions reported that little attention was paid to how to teach reading; in the words of the authors, "A structured and systematic approach is missing" (SIRP 2019, 24). As a result, students' subject content knowledge and pedagogical content knowledge (Shulman 1986) are generally weak: their own levels of literacy in both their home language and English are frequently poor (DBE 2014; CEA 2019), and they have a limited understanding of the processes involved in learning to read and how to apply this knowledge in the classroom (Fleisch & Dixon 2019; Hoadley 2017).

In an Advisory Note to the recently formed local 2030 Reading Panel, Pretorius, an early literacy specialist, stated:

> *Teacher training is critical, especially in the Foundation Phase, as this is when foundational reading and meaning making skills are developed and formative reading attitudes and habits formed. Teachers who lack content and pedagogical content knowledge about*

> *reading and its development, and who are themselves not skilled readers, can seriously impede learners' early reading trajectories (2022, 2).*

Hoadley (2022) makes the point that teacher education courses should be designed with the typical classroom in mind, taking account of the literacy resources available and what works best in these circumstances. It is not only teachers who would benefit from courses of this nature. In a study of literacy leadership, Taylor et al. (2019) found that school principals and their deputies, and Foundation Phase heads of department (HODs) lacked the requisite knowledge to provide leadership for literacy in their schools. If the impact of in-service education courses is to be felt in classrooms, strong instructional leadership is required at all levels of the education system (RMC Research 2007), including that of provincial education departments where subject advisors are responsible for teachers' professional development.

In 2015, in an effort to improve the quality of initial teacher education, the Department of Higher Education (DHET), with the support of the European Union, set up the Primary Teacher Education Project known as PrimTEd (Taylor & Mawoyo, this volume). This four-year project collaborated with lecturers from all South African universities offering primary teacher education courses, to improve the quality of reading and mathematics instruction. One of the outputs of the project was a set of Knowledge and Practice Standards for Primary Teacher Education Graduates in both Home Language and English as a First Additional Language (EFAL) (PrimTEd 2020). The Department of Basic Education (DBE), on the other hand, developed a National Framework for the Teaching of Reading in African Languages in the Foundation Phase (DBE 2020), which is available in all nine official African languages. The National Framework outlines the core components of reading that underpin the teaching of literacy in the early grades: language proficiency (with an emphasis on emergent literacy), decoding, comprehension, and reader response, in African languages specifically. It also examines the differences between the orthographies and linguistic structures of African languages and English, and how these impact on the teaching of decoding (Acha et al. 2010; Nelson Mandela Institute for Education and Rural Development n.d.; Probert 2019; Rees 2016). It describes the stages of literacy development, methods of teaching reading and writing employed in the Curriculum and Assessment Policy Statement (CAPS) (DBE 2011a; DBE 2011b), and how to integrate these to create an effective programme of classroom instruction. Both these documents have been used as sources in the development of a framework to evaluate the course described in this chapter, the Advanced Certificate in Foundation Phase Literacy Teaching at Rhodes University.

2.2 The case of the Advanced Certificate in Foundation Phase Literacy Teaching

The initiative for a specialist, in-service qualification in Foundation Phase literacy teaching has its origins in research carried out at Stellenbosch University into the binding constraints that prevent education in South Africa from fulfilling its purpose (Van der Berg et al. 2016). The findings of this research identified learners' inability

to read for meaning and pleasure by the end of Grade 3, as well as teachers' weak content knowledge and skill in teaching reading, as major barriers to achieving quality education for all. As part of this study, a team of academics with early literacy research and educational experience from four different universities was asked to draw up a detailed outline of an in-service course to teach Foundation Phase teachers (and other literacy professionals such as subject advisors, literacy coaches and publishers) how to teach reading (Pretorius et al. 2016; Spaull et al. 2016). The team took the position that teaching reading requires professional expertise and should be evidence-based; it should also enable learners to become bilingual and biliterate, and hold the prevention of reading failure as a top priority. Van der Berg et al. (2016, 59) recommended that the course should be developed, piloted and evaluated.

In 2018, Funda Wande, a not-for-profit literacy organisation led at that time by Nic Spaull, embarked on a collaboration with the Centre for Social Development (CSD)[2] at Rhodes University to develop and implement a specialist course for teachers in Foundation Phase literacy teaching. The university began the process of getting the course approved by the DHET and the Council on Higher Education. During that year, Funda Wande hosted a series of workshops to which Foundation Phase practitioners and lecturers with experience of working in Foundation Phase teacher education were invited to map out the content of the course. Work also began on an online, self-study course in teaching Reading for Meaning[3] with accompanying booklets for each module that can be downloaded from the Funda Wande website.[4]

The Rhodes Advanced Certificate in Foundation Phase Literacy Teaching was designed as a two-year, part-time, professional in-service course for educators involved in literacy teaching at this level (teachers, subject advisors, coaches, etc.), consisting of 12 modules, each worth ten credits on the National Qualifications Framework (NQF), as in Table 1.

Table 1 Course outline

Year 1	Year 2
Module 1: CAPS reading activities	Module 7: Teaching EFAL in the Foundation Phase 1
Module 2: Emergent literacy	Module 8: Teaching EFAL in the Foundation Phase 2
Module 3: Teaching decoding	Module 9: Creating a culture of reading
Module 4: Teaching vocabulary	Module 10: Inclusive education
Module 5: Teaching comprehension	Module 11: Reading assessment and remediation
Module 6: Teaching writing and handwriting	Module 12: Planning and progression

The first six modules provide the foundational knowledge for teaching reading in children's home language. The first module introduces the Big 5 (phonemic awareness, phonics, fluency, vocabulary, and comprehension) (National Reading Panel 2000; Snow & Juel 2005) and shows how these relate to the reading activities recommended in the Foundation Phase CAPS. The module also demonstrates how to teach the activities

2. Since the beginning of 2022, the CSD has been part of the Department of Primary and Early Childhood Education at Rhodes; prior to that it was part of the Education Faculty, which is still the case.
3. The Reading for Meaning course may be found at this link: https://funda.fundawande.org/
4. The booklets may be downloaded at this link: https://fundawande.org/learning-resources

(teacher Read-Alouds, Shared, Paired, Group Guided, and Independent Reading) and explains how they support learners to become independent readers (the 'gradual release of responsibility' model) (Duke & Pearson 2002). The second module introduces the main components of reading (decoding, comprehension, response), and shows how children's language and literacy unfold, with particular reference to developing learners' emergent literacy in Grade R (Whitehurst & Lonigan 1998). The subsequent four modules of Year 1 deal with the main components of reading and writing and how to teach and assess them. The modules include comparisons of the linguistic structure and orthography of African languages and English, and how this impacts the teaching of decoding and spelling (Katz & Rees n.d.).

In Year 2, the course broadens out. Modules 7 and 8 deal with teaching literacy in EFAL since the majority of Foundation Phase teachers in South Africa (and particularly those in no-fee township and rural schools) are required to teach English alongside the learners' home language. Teachers are introduced to six principles for teaching additional languages, and shown how to implement them in their teaching and assessment. Module 9 explains and illustrates how to create a culture of reading in classrooms and schools, including issues of identity, and how to motivate and engage learners in reading. It has a section on children's literature, including how to access texts in African languages. Module 10 deals with inclusive education. It discusses barriers to learning (systemic, socio-economic, and internal), how these intersect, and how to support learners by building resilience and self-regulation, and using differentiated instruction. It looks at barriers specific to literacy, the importance of identifying and addressing these early, how to do this, and what support is provided for teachers by the DBE. Module 11 examines the role of assessment and feedback in learning to read and write. It introduces teachers to different tools for assessment, explains how to use them to assess the different components of reading, and demonstrates what effective feedback looks like. It looks at the role of norms and benchmarks, how to use these to identify learners who are falling behind, and how to support these learners (Ardington et al. 2020). The final module deals with planning a programme of reading and writing instruction. It includes issues such as time-on-task, pacing, time management, developing a weekly timetable and lesson plans, using assessment results to plan forward, planning for differentiated learning, and ensuring programme coherence.

There is an additional 12-credit module at NQF Level 5 on computer literacy for students who are not computer literate, as this skill is required by the *Minimum requirements for teacher education qualifications* (DHET 2015) for an Advanced Certificate.

The course is a blend of face-to-face teaching, online tuition and self-study, using the Reading for Meaning online, self-study course together with booklet versions of the online modules, PowerPoint lectures with audio feedback on questions, quizzes, and prescribed readings. The teaching materials are built around video clips filmed in no-fee schools in the Eastern and Western Cape where isiXhosa is the language of learning and teaching (at the Foundation Phase) with English sub-titles to make them accessible to a wider audience.[5] Technically, the videos are of high quality, and they provide students with opportunities to see what good teaching looks like in contexts they can recognise, as well as the moment-to-moment decisions that teachers make in

5. Funda Wande is currently developing videos in Afrikaans and Sepedi.

reading and writing lessons.[6] The videos make it possible to discuss literacy teaching in practice. The PowerPoint lectures contain questions to prime teachers for watching the videos and also audio-recorded feedback for independent study.

A guiding principle for the production and selection of reading material in the online course, booklets, PowerPoint lectures and prescribed readings is that text should be concise, relevant to students' needs, accessible, and illustrated by photographs, diagrams and other visual images. At the outset of course development, the intention was that written text should be available in both isiXhosa and English. However, in practice, this has proved challenging in terms of both sourcing texts produced in isiXhosa and translating those developed in English. Apart from some instructional booklets, for example, on Baseline assessment (Uvavanyo olusisiseko), Group Guided reading (Ukufunda ngamaquela), and Handwriting (Ukubhala ngesandla), written text is almost exclusively in English. The enrolment in the programme of Afrikaans Home Language subject advisors in 2020, and in 2022 educators from Limpopo teaching in Sepedi, Tshivenda and Xitsonga has added to the challenge, and work is in progress on videos filmed in Sepedi. The isiXhosa, Sepedi, Tshivenda and Xitsonga versions of the National Framework for the Teaching of Reading in African Languages (DBE 2020) are currently being introduced as resources for teaching and learning. However, more effort is required to improve this aspect of the course.

Students write an assignment, a teaching portfolio task and an online test as the assessment for each module, all of which are externally moderated. The assignments are generally practical in nature, providing an opportunity for students to apply what they have learned. For example, in 2021, in Module 2: Emergent literacy, students were asked to identify the three most important things they thought teachers should do to develop learners' emergent literacy in Grade R, to justify their choice with reference to their own experience and what they had learned in the module, and then to demonstrate how to include these in the Daily Programme for Grade R (DBE 2011a, 22). In Module 9: Creating a culture of reading, students were asked to choose a suitable book (fiction or non-fiction) to read aloud to children in their home language or EFAL, to review the book and justify their choice, to explain how the book could support teaching and learning across the curriculum in the Foundation Phase, and to discuss how they would prepare to read the book aloud (how they would introduce it; what questions they would ask before, during and after reading, etc.). Where assignments (or practical aspects of assignments) were written in the student's language of teaching and learning (Afrikaans, English, isiXhosa, Sepedi), they were assessed by speakers of that language.

The portfolio tasks, on the other hand, encourage students to reflect critically on their own practice and more broadly on related educational issues. For example, in Module 2: Emergent literacy, students were asked to read a short newspaper article reporting on how the introduction of Grade R had, contrary to the DBE's intentions, increased the inequality gap between fee-paying and no-fee schools. Students were then asked to reflect on how well they thought teachers had been prepared to develop children's emergent literacy in Grade R, how well principals and their deputies understood the Grade R curriculum, and whether or not they (together with subject advisors) were supporting Grade R teachers and holding them accountable for learners' achievement. Students were also asked to

6. The videos (amongst others) can be accessed on YouTube: https://www.youtube.com/c/fundawande

reflect on what they would do, if they were the Minister of Basic Education, to improve the quality of teaching in Grade R. If students were themselves Grade R teachers, they were asked to reflect on their own practice. In Module 9: Creating a culture of reading, students were asked to reflect on their own personal reading histories, whether or not they enjoyed reading, and how this has influenced their teaching of reading. They were also asked to reflect on the role of the family in children's literacy development. They were then asked to reflect on how they could model enjoyment of reading to learners, and how they could involve families in their children's reading development. Finally, they were asked to identify one thing they could do practically to promote a culture of reading in their classroom, school or workplace.

In 2019, the first six modules of the course were piloted as fully aligned Short Courses with a group of 46 Foundation Phase HODs, lead teachers and literacy coaches who were part of Funda Wande's literacy intervention in the Eastern Cape, and 21 Foundation Phase subject advisors from the Eastern Cape Department of Education. This mix of participants made it possible to build the content knowledge of potential literacy leaders across the system. Contact sessions were taught primarily in isiXhosa.[7]

In July 2020, the course was fully accredited and registered on the National Qualifications Framework (NQF) as a part-time, 120-credit, Advanced Certificate in Foundation Phase Literacy Teaching at NQF Level 6. In the accreditation process, the DHET designated the course as a specialist course for teachers already in possession of a qualification in Foundation Phase Teaching such as a Bachelor of Education (BEd), Postgraduate Certificate in Education (PGCE) or National Professional Diploma in Education (NPDE) in Foundation Phase Teaching, or a Diploma in Junior Primary Education from one of the former Colleges of Education. The aligned Short Courses were therefore retained for those students who wished to continue with the programme but did not meet the entrance requirements for the Advanced Certificate. This enabled all students who commenced in 2019 to proceed to the second year of the programme. The Short Courses are endorsed by the South African Council for Educators, making it possible for students to get professional development points on successful completing a course. The new intake of students for 2020–2022 (i.e. cohorts 2, 3 and 4) is summarised in Table 2 below.

Table 2 Student intake 2020–2022

Year	Advanced Certificate	Short Courses	Comments
2020	13	5	A mix of departmental officials, literacy coaches or mentors, and teachers from the Eastern Cape, Western Cape and Limpopo
		11	Students, mainly literacy educators from NGOs, provided with bursaries to do three short courses
2021	26	6	A group of 19 Western Cape subject advisors together with curriculum specialists, subject advisors, coaches, teachers, school principals and an NGO reading specialist, from the Eastern Cape and Limpopo
2022	45	7	50 curriculum specialists, subject advisors, and HODs from Limpopo, and a literacy coach and teacher from the Eastern Cape

7. A video of one of the 2019 contact sessions is available: https://www.youtube.com/watch?v=W9wTXPP5svo

In 2020, 2021 and 2022, owing to Covid-19, the course has been run fully online using the Rhodes learning management system (RUconnected), and online contact sessions using Zoom. Initially, this was challenging for both staff and students; internet connections were problematic for many students, especially those in rural areas, as was adjusting to writing tests online, uploading assignments onto RUconnected, and downloading assessment feedback. Fortunately, the university, and, in some cases, funders, provided students with data, otherwise the cost would have been prohibitive for students. Over time, and with the support of the Computer Literacy lecturer and the Rhodes Educational Technology team, staff and students adjusted to working online. By the time the course was evaluated at the beginning of 2021, the majority of students reported that they had found the RUconnected platform easy to use. However, the contact sessions were not as interactive and engaging as they had been when conducted face-to-face. Furthermore, with the influx of students from provinces other than the Eastern Cape, it was no longer possible to use isiXhosa in the contact sessions. However, the intention is to return to face-to-face contact sessions in 2023. It will then be possible to make these sessions multilingual, and to use translanguaging to enable students to watch videos, and read, write, construct and discuss texts written in different languages, in order to share understandings and experiences about teaching reading and writing (Makalele 2015; Yafele 2021).

In 2021, 46 students from the first cohort graduated with an Advanced Certificate in Foundation Phase Literacy Teaching; 35 of these were Foundation Phase HODs, lead teachers and literacy coaches funded by Funda Wande, while 11 were subject advisors funded by the Eastern Cape Department of Education. Of the 13 students registered for Short Courses, 11 passed all 12 courses. In 2022, 13 students from the second cohort graduated with an Advanced Certificate and five successfully completed all 12 Short Courses.

3 Analysis and findings

3.1 The evaluation

An external evaluation of the Advanced Certificate in Foundation Phase Literacy Teaching was commissioned by the Centre for Social Development at Rhodes in 2021. The study distinguished between the intended, attained and implemented curriculum. It examined the curriculum and materials, and interviewed course designers, external examiners, other literacy specialists, and students to evaluate to what extent the curriculum was achieved (Taylor 2021; Nkomo 2021). The results of student assessments (tests, assignments, and portfolio tasks) were analysed to evaluate the attained curriculum.

The study also drew on results from a previous desk-top study conducted by academics at Harvard Graduate School of Education (Mason & Snow 2020), which focused on the first six modules of the course. The evaluators noted that the modules covered the most important research-based aspects of early literacy instruction, in alignment with the United States National Reading Panel findings (2000). The videos, filmed in Eastern and Western Cape classrooms where the language of learning

and teaching was isiXhosa, were found to be engaging, modelled best instructional practices, and connected directly to the teaching techniques being recommended. The online Reading for Meaning course was found to be robust and well-conceived to support professional learning.

Some suggestions were made for improvement. It was suggested that more attention could be given to the authentic assessment of learners, to the importance of the home–school connection, to the value of wide reading in building automaticity, fluency, vocabulary and general knowledge, and the consequent need for more reading materials for young readers. It was also proposed that the research base could be broadened to give more attention to the particular morphological and orthographic structures of African languages, and their implications for the teaching of decoding. Subsequently, these points have been addressed to the best of the ability of those involved in the design and content of both the online course and the Advanced Certificate. In the second year of the Advanced Certificate, and in the latter part of the online course, Module 9 was introduced, dealing with creating a culture of reading; it focuses on the value of wide reading, the involvement of family and community, and access to children's literature written in African languages. There is also Module 11, dealing comprehensively with assessment, including different assessment types. Where appropriate, explanations are included throughout the course of the differences between the phonology, morphology, syntax and orthography of isiXhosa and English, and their implications for the teaching of reading. The recent intake of students from Limpopo is challenging course designers and lecturers to consider the same issues in relation to Sepedi, Tshivenda, and Xitsonga, languages with disjunctive orthographies as opposed to isiXhosa's conjunctive orthography. This remains work in progress.

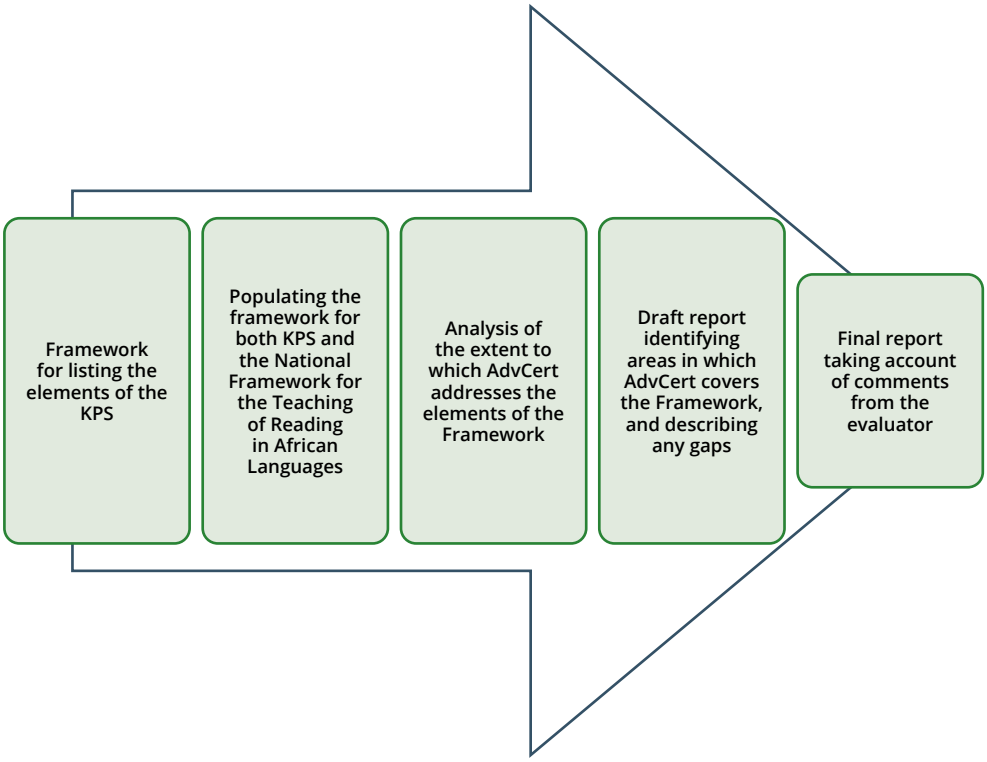
Suggestions were also made by Mason and Snow (2020) for the improvement of technical aspects of the online course: a more predictable structure was recommended, and proposals were made for improving the user experience. Efforts were made to respond to these suggestions in modules 7–12 of the online course, though work still remains to be done in this regard. However, Funda Wande's latest online learning resource, The Reading Academy,[8] which draws on many of the same materials as the Reading for Meaning course, has a more predictable structure, and the user experience has been improved, for example, by limiting large blocks of text.

A second desk-top study, undertaken as part of the 2021 evaluation, assessed the extent to which the Advanced Certificate is aligned with the recommendations of the National Framework for Reading in African Languages (DBE 2020) and the PrimTEd Knowledge and Practice Standards (PrimTEd 2020). As outlined in Section 2.1, the National Framework provides teachers and curriculum specialists with the content-knowledge and methodologies required to teach reading in African languages in the early grades. Although the Knowledge and Practice Standards describe what a competent graduate teacher should know and be able to do on completion of a BEd degree or a PGCE, they are applicable to the evaluation of an in-service teacher education programme designed to upgrade teachers' knowledge and skill in teaching literacy in both Home Language and EFAL. These two documents were used to develop a framework for evaluating the curriculum and course materials designed for the

8. The Reading Academy can be accessed at this link: fundawande.org/learning-resources

Advanced Certificate in Foundation Phase Literacy Teaching. Figure 1 provides an overview of the desktop evaluation process.

Figure 1 Overview of the desktop evaluation process



With regard to the intended and attained curriculum, the evaluation concluded that the Advanced Certificate comfortably met both sets of standards, and that, at the end of the course, students would have knowledge of the theory, skills, strategies, and processes required to teach literacy effectively. However, a limitation was that pre- and post-tests of students' knowledge were not conducted (these were not possible because of financial and time constraints). Insights into the implemented curriculum were provided primarily by students, who, with very few exceptions, gave high ratings to the accessibility, clarity and usefulness of the modules. The only trend visible in the data was that the most frequent class of responses to questions of both lecture material and assessment tasks was 'no change needed'. The majority of students experienced no significant difficulties with the distance component (as explained above, there were no face-to-face sessions during the Covid-19 lockdown in 2020) and found the RUconnected platform easy to use.

The study concluded that all the data pointed to the Advanced Certificate being an excellent programme. The evaluators therefore recommended that the CSD continued to offer the programme, either as the full certificate or in short-course mode for part-time students who do not hold a professional Foundation Phase teaching qualification. In addition, the evaluation recommended that a new focus for the Advanced Certificate

should be to advocate for the inclusion of the course, either as a whole or in parts, into BEd programmes for full-time student teachers intending to teach in primary schools.

On 9 September 2021, the evaluators gave a public presentation of their findings at a webinar[9] hosted jointly by the CSD and Funda Wande. Two individuals were invited to respond to the presentation. Both respondents expressed concerns regarding whether or not students had implemented what they had learned in the course. As one respondent put it, "Only when we can point to enhanced practice can we really claim that our programmes are successful." However, he also made the point that the programme had the right mix of actors from the outset: the Eastern Cape Department of Education, which had the capacity to support implementation and provide critique; Funda Wande, which provided support through their Eastern Cape intervention in terms of resources and coaching; and a university that could provide conceptual depth drawing from standards and frameworks developed by communities of practice.

The course writers and coordinators have responded to the suggestions for improvement made by the evaluators and the respondents. Work is currently ongoing to repurpose the curriculum and materials for the isiXhosa Home Language and EFAL Method courses in the part-time BEd in Foundation Phase Teaching at Rhodes. When this is completed, it will provide a model for integration into full-time BEd programmes. The Advanced Certificate team is also working with colleagues in the Department of Primary and Early Childhood Education at Rhodes in the development of two 30-credit courses for the PGCEs Foundation and Intermediate Phases in English for Teaching, and isiXhosa for Teaching. These courses are designed to develop the subject content-knowledge necessary for teaching language and literacy. Plans are also in place for an evaluation at the end of 2022, which will focus on implementation of the knowledge and skills taught in the Advanced Certificate.

4 Conclusion

This chapter has described the genesis of a new, specialist course in early literacy teaching, which has the potential to improve the quality of reading and writing instruction in the Foundation Phase. It is acknowledged that improved subject content-knowledge is a necessary but not sufficient factor in improving literacy achievement in the Foundation Phase, especially in disadvantaged, resource-scarce contexts, and also that increasing content knowledge does not guarantee its implementation. The strengths of the programme are the fact that the curriculum covers the most important research-based aspects of early literacy instruction; that the reading and writing pedagogy is aligned to that advocated in the National Framework for Reading in African Languages and the PrimTEd Knowledge and Practice Standards; that the videos are engaging, contextually and linguistically appropriate, model best instructional practices, and are aligned to the pedagogy; and the course has involved collaboration between the university, Funda Wande and provincial Departments of Education. Taken

9. A recording of the webinar can be viewed: https://us02web.zoom.us/rec/share/u6gKPOksyjfZb6IQqix8La0K5Px-UNrg5OF_jLXZUbsynE--T4_pJiRwLEsCOhhL.9i7RfOifngkfJHLo

together, the alignment of these strengths makes it more likely that the knowledge and skills acquired will be implemented. However, the onus is on the Centre for Social Development to ensure that implementation does happen, and for this purpose, ways should be found to assess whether or not students are putting into practice what they have learned. It is also important for the CSD to continue building relationships with provincial Departments of Education, to make implementation more likely and to build a critical community of practice that includes all stakeholders.

References

Acha, J., Laka, I. & Perea, M. (2010). Reading development in agglutinative languages: Evidence from beginning, intermediate and adult Basque readers. *Journal of Experimental Child Psychology* 105, 359–375.

Allais, S., Cooper, A. & Shalem, Y. (2019). Rupturing or reinforcing inequality? The role of education in South Africa today. *Transformation: Critical Perspectives in Southern Africa* 101, 105–126.

Ardington, C., Wills, G., Pretorius, E., Deghaye, N., Mohohlwane, N., Menendez, A., Mtsatse, N. & Van der Berg, S. (2020). Summary Report: Benchmarking Early Grade Reading Skills in Nguni Languages. Stellenbosch: ReSEP, Stellenbosch University. Cape Town: SALDRU, University of Cape Town. Chicago, ILL: NORC at the University of Chicago. Pretoria: DBE.

Baxen, J. & Botha, L. J. (2016). Establishing a research agenda for Foundation Phase initial teacher education: A systematic review (1994–2014). *South African Journal of Education* 36(3).

Chetty, M., Moloi, M. Q., Poliah, R. R. & Tshikororo, J. (2017). The SACMEQ IV Project in South Africa: A Study of the Conditions and the Quality of Education: Short Report. Pretoria: DBE.

Centre for Educational Assessments (CEA). (2019). The National Benchmark Tests. National Report: 2019 Intake Cycle. Cape Town: CEA, University of Cape Town.

Department of Basic Education (DBE). (2011a). Curriculum and Assessment Policy Statement Grades R–3: English Home Language. Pretoria: DBE.

Department of Basic Education (DBE). (2011b). Inkcazelo yepolisi yekharityhulam nokuhlola yebanga R–3: IsiXhosa uLwimi lwaseKhaya. Pretoria: DBE.

Department of Basic Education (DBE). (2014). Ministerial Task Team Report on the National Senior Certificate (NSC). Pretoria: DBE.

Department of Basic Education (DBE). (2020). National Framework for the Teaching of Reading in African languages in the Foundation Phase. Pretoria: DBE.

Department of Higher Education and Training (DHET). (2015). Minimum Requirements for Teacher Education Qualifications. *Government Gazette* 38487, 19 February.

Duke, N. K. & Pearson, P. (2002). Effective practices for developing reading comprehension. In Farstrup, A. E. & Samuels, S. J. (Eds), *What Research Has to Say About Reading Instruction (3rd edition)*, 205–242. Newark, DE: International Reading Association.

Fleisch, B. & Dixon, K. (2019). Identifying mechanisms of change in the Early Grade Reading Study in South Africa. *South African Journal of Education* 39(3).

Gustafsson, M. (2020). A Revised PIRLS 2011 to 2016 Trend for South Africa and the Importance of Analysing the Underlying Microdata. Stellenbosch Economic Working Paper Series, WP02/2020. Stellenbosch: ReSEP, Stellenbosch University.

Hoadley, U. (2010). What Do We Know About Teaching and Learning in Primary Schools in South Africa? A Review of the Classroom-based Research Literature. A Report for the Grade 3 Improvement Project of the University of Stellenbosch, supported by the WCED and the Western Cape Provincial Treasury, July 2010.

Hoadley, U. (2012). What do we know about teaching and learning in South African primary schools? *Education as Change* 16(2), 187–202.

Hoadley, U. (2017). Learning to fly: Pedagogy in the Foundation Phase in the context of the CAPS reform. *Journal of Education*, 67. From: joe.ukzn.ac.za Accessed 2022-09-14.

Hoadley, U. (2018). *Pedagogy in Poverty: Lessons from Twenty Years of Curriculum Reform in South Africa*. London: Routledge.

Hoadley, U. (2022). Reading Instruction in Early Grade Classrooms. Advisory Note: 2030 Reading Panel. From: www.readingpanel.co.za/resources Accessed 2022-09-14.

Hofmeyr, H. (2020). Revised Results Confirm Large Improvements in South Africa's Reading Outcomes, Albeit from a Low Base. ReSEP Policy Brief. Stellenbosch: ReSEP, Stellenbosch University.

Howie, S., Combrinck, C., Roux, K., Tsele, M., Mokoena, G. & Palane, N. M. (2017). Progress in International Reading Literacy Study 2016: South African Children's Reading Literacy Achievement. Pretoria: CEA, University of Pretoria.

Katz, C. J. & Rees, S. (n.d.). Comparing Literacy Elements of African Languages and English. Johannesburg: Molteno Institute for Language and Literacy.

Makalele, L. (2015). Translanguaging as a vehicle for epistemic access: Cases for reading comprehension and multilingual interactions. *Per Linguam* 31(1), 15–29.

Mason, P. & Snow, C. (2020). An Evaluation of the Reading for Meaning Course. Cape Town: Funda Wande & Harvard Graduate School of Education.

National Reading Panel. (2000). Teaching Children to Read: An Evidence-based Assessment of the Scientific Research Literature on Reading and its Implications for Reading Instruction. Rockville, MD: NICHD.

Nelson Mandela Institute for Education and Rural Development. (n.d.). *Isandi zesiXhosa*. Alice: Fort Hare University.

Nkomo, S. A. (2021). Rhodes University Advanced Certificate Course Evaluation Report 2021: Alignment of the AdvCert with the PrimTEd Knowledge and Practice Standards and the National Framework for Teaching Reading in African Languages. Unpublished.

Plüddemann, P., Nomlomo, V. & Jabe, N. (2010). Using African languages for teacher education. *Alternation* 17(1), 72–91.

Pretorius, E. J. (2022). Factors Shown by Research to Support and Enhance Reading Comprehension. Advisory Note: 2030 Reading Panel. From: www.readingpanel.co.za/resources Accessed 2022-09-14.

Pretorius, E. J., Jackson, M.-J., McKay, V., Murray, S. & Spaull, N. (2016). Teaching Reading (and Writing) in the Foundation Phase: A Concept Note. Stellenbosch: ReSEP, Stellenbosch University & Zenex Foundation.

PrimTEd. (2020). Knowledge and Practice Standards for Primary Teacher Education Graduates: Language and Literacy. Johannesburg: JET Education Services.

Probert, T. N. (2019). A comparison of the early reading strategies of isiXhosa and Setswana first language learners. *South African Journal of Childhood Education* 9(1), a643.

Ramadiro, B. & Porteus, K. (2017). Foundation Phase Matters: Language and Learning in South African Rural Classrooms. East London: Magic Classroom Collective Press.

Reed, Y. (2019). Foundation and Intermediate Phase BEd programmes: Language and Literacies Components. Johannesburg: JET Education Services.

Rees, S. A. (2016). Morphological awareness in readers of isiXhosa. (Unpublished master's dissertation). Rhodes University, Makhanda.

Reeves, C. & Muller, J. (2005). Picking up the pace: Variation in the structure and organization of learning school mathematics. *Journal of Education* 37(1), 103–130.

RMC Research. (2007). Developing Effective Reading Leadership. Sustainability Series 2, September 2007. Arlington, VA: RMC Research.

Sesotho and isiZulu Reading Project (SIRP). (2019). Report on Teaching Reading in Sesotho and isiZulu at HEIs. Johannesburg: JET Education Services.

Shulman, L. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher* 15(2), 4–14.

Smith, M. C. (2011). Which in- and out-of-school factors explain variations in learning across different socio-economic groups? Findings from South Africa. *Comparative Education* 47(1), 79–102.

Snow, C. E. & Juel, C. (2005). Teaching children to read: What do we know about how to do it? In Snowling, M. J. & Hulme, C. (Eds), *The Science of Reading: A Handbook*, 501–520. Oxford: Blackwell.

Spaull, N. (2013). Poverty & privilege: Primary school inequality in South Africa. *International Journal of Educational Development* 33(2013), 436–447.

Spaull. N. (2022). Background Report: 2030 Reading Panel. www.readingpanel.co.za/resources Accessed 2022-09-14.

Spaull, N., Van der Berg, S., Wills, G., Gustafsson, N. & Kotzé, J. (2016). Laying Firm Foundations: Getting Reading Right. Stellenbosch: ReSEP, Stellenbosch University & Zenex Foundation.

Taylor, N. (2016). Thinking, language and learning in initial teacher education. *Perspectives in Education* 34(1), 10–26.

Taylor, N. (2021). Evaluation of the Advanced Certificate in Foundation Phase Literacy Teaching. Makhanda: Rhodes University. Cape Town: Funda Wande.

Taylor, N. & Moyane, J. (2005). Khanyisa Education Support Programme: Baseline Study Part 1: Communities, Schools and Classrooms. Johannesburg: JET Education Services.

Taylor, N. & Taylor, S. (2013). Learner performance. In Taylor, N., Van der Berg, S. & Mabogoane, T. (Eds), *What Makes Schools Effective? Report of South Africa's National School Effectiveness Study*. Cape Town: Pearson.

Taylor, N., Wills, G. & Hoadley, U. (2019). Addressing the 'leadership conundrum' through a mixed methods study of school leadership for literacy. *Research in Comparative and International Education* 14(1), 30–53.

Van der Berg, S., Spaull, N., Wills, G., Gustafsson, N. & Kotzé, J. (2016). Identifying Binding Constraints in Education: Synthesis Report of the Programme to Support Pro-poor Policy Development (PSPPD). Stellenbosch: ReSEP, Stellenbosch University.

Yafele, S. (2021). Translanguaging for academic reading at a South African university. *Southern African Linguistics and Applied Language Studies*, 39(4), 404–424.

Whitehurst, G. J. & Lonigan, C. J. (1998). Child development and emergent literacy. *Child Development* 69(3), 848–872.

12

Developing South Africa's jurisprudence to include a right to read and write

CAMERON MCCONNACHIE & SIPUMELELE LUCWABA

ABSTRACT

South Africa has two decades of policies, plans, curriculum statements and state-funded interventions behind it that attempt to deal with the literacy crisis. Despite the right to basic education being an immediately realisable constitutional right, these efforts have not resulted in the large-scale, system-level improvements required to ensure widespread literacy. There is no silver bullet to fix the problem, but we argue in this chapter that a clearer legal framework, in the form of binding reading regulations that clarify minimum inputs, roles, responsibilities, a universal measurement framework, and timelines, would be a useful development, with the potential to accelerate improvements in literacy rates.

In this chapter we outline the legal framework within which we contend a right to read and write already exists in South Africa. We further propose the key focus areas for binding literacy regulations, and review the plausibility of the implementation of such regulations by the Department of Basic Education, and their use by the courts in the case of a breach. Finally, we review some of the unintended consequences that may result from the development of such regulations.

KEYWORDS
right to basic education,
children's rights,
constitutional law,
literacy,
reading,
right to read and write

1 Do we need a right to read and write?

According to the 2016 iteration of the Progress in International Reading Literacy Study[1] (PIRLS 2016), 78% of South African Grade 4 learners cannot read for meaning in any language. While the South African education system has seen some improvements in learner results since PIRLS 2006, recent trajectories still posit that it will take 80 years before 95% of Grade 4 learners are able to read for meaning (Spaull 2022), and those are pre-Covid-19 trajectories.[2]

The right to basic education enjoys a special place in the Constitution of the Republic of South Africa, 1996 as it is "immediately realisable" and not subject to the caveats of "progressive realization" or "within its available resources"[3] (Governing Body of the Juma Musjid Primary School & Others v Essay N. O. & Others (2011), para 37). The right to education also benefits from a rich jurisprudence that has seen the development of the right to include certain core components, such as infrastructure, textbooks, transport, nutrition, and, to some extent, teachers.[4] There is also a plethora of legislation and policy covering inputs, teacher training and certification, and the curriculum required to bring the right to fruition.

While there have been important developments of the core components of the right to basic education, we contend that part of this development must include the question of learner outcomes. An analysis based purely on inputs is insufficient if the 'education' itself does not fulfil its purpose and instead leaves the majority of learners behind. As Justice Nkabinde states, in *Juma Musjid* (2011), education should provide a foundation for "lifelong learning and work opportunities" (para 43). In this chapter, we contend that literacy is an integral part of what enables lifelong learning, and therefore the ability to read and write with understanding is an essential component of the right to basic education, and inextricably linked to the fulfilment of the right.

The inability of the majority of our learners to read and write for meaning is not only an indicator of a system failing to provide all of the inputs necessary to give children a reasonable opportunity to learn to read for meaning, but is the infringement of an existing right, the right to basic education. This distinction is key, as a finding of its infringement can only be remedied by addressing a group of interrelated and complex inputs and processes, rather than one solitary input, for example, making textbooks available to all learners.

Whether there should be a stand-alone 'right to read' that grants learners the right to a specific outcome, or, on the other hand, that the right to basic education should be interpreted in a way that being unable to read for meaning constitutes an infringement

1. The most recent data (PIRLS 2021) were not available when we were developing this chapter.
2. South Africa's poor performance is also unique in that it performs significantly worse than other countries with a similar GDP per capita, both when compared to countries on the African continent and abroad. We now understand that the impact of Covid-19 has resulted in learners losing about 1.3 years of learning, due to rotational timetabling and school closures (Spaull 2022).
3. The only other provision in the Bill of Rights with this status is s28(1)(c), which provides that a child has a right to "basic nutrition, shelter, basic health care services and social services".
4. See *Equal Education & Another v Minister of Basic Education & Others* (2018); *Equal Education & Others v Minister of Basic Education & Others* (2020); *Centre for Child Law & Others v Minister of Basic Education & Others* (2012)

of the right, may be legally significant but we believe it is of little practical importance. We submit that remedying a breach of either right would call for similar, if not the same, remedies.

We argue that the development of literacy regulations based on widely accepted core elements of literacy instruction would be a useful development, with the potential to accelerate improvements in literacy rates and give children the best chance possible to realise their right to read, or their right to basic education. We rely on existing policy, legislation and jurisprudence to assert that regulations would be appropriate, and, in the case of a breach of those regulations, that the courts would willingly direct the government to comply with them. Finally, we review some of the unintended consequences that may result from the development of such regulations.

2 The role of law and the courts in ensuring improved learner outcomes

2.1 South African law

South African legislation and court judgments already set out aspirational outcomes for the right to basic education. The preamble to the South African Schools Act 84 of 1996 states that our schools must "redress past injustices in educational provision" and provide an education that will "lay a strong foundation for the development of all of our people's talents and capabilities … (and) contribute to the eradication of poverty and the economic wellbeing of society".

Our Constitutional Court addressed the purpose of the right to a basic education in *Juma Musjid* (2011), where Justice Nkabinde said that "(B)asic education is an important socio-economic right directed, among other things, at promoting and developing a child's personality, talents and mental and physical abilities to his or her fullest potential". Justice Nkabinde goes on to state that basic education also "provides a foundation for a child's lifetime learning and work opportunities" (para 43).

This was pressed home by Deputy Chief Justice Moseneke when he stated that "in an unconcealed design, the Constitution ardently demands that … social unevenness be addressed by a radical transformation of society as a whole and of public education in particular" (*Head of Department, Mpumalanga Department of Education & Another v Hoërskool Ermelo & Another* (2009), para 47).

The wording of our Constitution, the South African Schools Act, and numerous findings by our courts all support the proposition that "the right to read and write is an integral, justiciable, component of our right to basic education" (SAHRC 2021, 11). We contend that, if the purpose of education is to develop a learner's *'fullest potential'* (*Juma Musjid* (2011), para 43, emphasis added) and to act as the *'primary driver of transformation'* (*Minister of Basic Education v Basic Education for All* (2015), para 40, emphasis added), it is not possible to fulfil this purpose if a learner cannot read and write with understanding. Without these abilities, the right to education cannot be enjoyed or upheld, as defined by our courts and legislation.

2.2 Reading policies, frameworks and strategies

South Africa is not short on policies, frameworks and strategies that have been developed in the last 20 years to address the reading crisis in the Foundation Phase. None of them, however, are legally binding, and some have not even progressed past 'draft' stages. Arguably the most important of these is the South African curriculum statement (the Curriculum and Assessment Policy Statement, or CAPS). CAPS is the governing document for the South African basic education curriculum, Grades R to 12. The document specifies the minimum standards of knowledge and skills to be achieved at each grade. In the Foundation Phase, the document stipulates the following learning outcomes for learners in Grade 3.

> *Reading and Viewing: Monitors themselves when reading, both in the area of word recognition and comprehension … Reads independently simple fiction and non-fiction books, poetry cards, comics.* (emphasis added)
>
> *Writing: Writes a selection of short texts for different purposes, e.g. writes recounts, dialogues.*

The Department of Basic Education (DBE), through its CAPS document, clearly expects learners to be able to read and write with understanding by the end of Grade 3, or around the age of 10.

Two other notable policies and strategies are the Foundations for Learning Campaign (FFL campaign) and the draft national policy on learning and teaching support material (LTSM). The FFL campaign was implemented by the DBE between 2008 and 2011. The purpose of the FFL campaign was to ensure that learners could demonstrate appropriate levels of literacy and numeracy. It was expected that learner outcomes would increase by no less than 50% and the following were non-negotiable elements of the campaign: (i) appropriate resources for effective teaching need to be provided; (ii) teachers should plan and teach effectively; (iii) district teacher forums should be established in all districts; and (iv) teachers should assess learner performance regularly (DOE 2008a). For our purposes, it is worth noting that many of these necessary elements *should* happen, but there was no accountability mechanism to ensure that they did. Importantly, and in tandem with the campaign, the minister gazetted 'recommended' resources for literacy. For the Foundation Phase these included: "workbooks, graded readers, wall charts, number and phonic friezes, writing materials, suitable apparatus for teaching concepts" (DOE 2008a, 4–7). The content of the FFL campaign served as the framework for the development of CAPS (Mohohlwane et al., this volume).

In 2014, the DBE tabled the draft national policy for LTSM. Acknowledging the severe resource problems plaguing many schools, the draft policy (DBE 2014, 7) stated that:

> *The LTSM policy has been introduced to ensure that all the injustices and inequalities of the past, with regards to learner support, are addressed. The policy ensures production and selection of quality LTSM, and makes such available to all learners in public schools. Every learner and teacher must have access to the minimum set of core material required to implement the National Curriculum Statement Grades R-12.*

> *Core LTSM – refers to the category of LTSM that is central to teaching the entire curriculum of a subject for a Grade … For the Foundation and Intermediate Phases, this includes graded readers.*

While never successfully implemented, the draft LTSM policy and the FFL campaign demonstrate the DBE's understanding regarding what inputs are necessary in classrooms, and the need for a framework for their provision. Even if the draft policy had been finalised, and the campaign formalised in a policy document, these documents could never be used to hold the government accountable as they were not binding in law. But the campaign did contain many of the elements we believe are needed in detailed regulations, including, amongst other things, rigorous credible assessments (annual, external, universal standardised assessments per phase), core materials, and sufficient teaching time.

2.3 Foreign law

While foreign law is not binding on our courts, when courts interpret provisions in our Bill of Rights, such as the right to basic education, foreign law may be considered. We believe foreign law gives further support and guidance for the development of the right to basic education to include literacy inputs, and potentially a stand-alone right to read and write.

A jurisdiction actively developing law on the right to basic education is the American court system (see Veriava & Skelton 2019). The US approach is three pronged: "(1) identifying an ever-evolving concept of the value and function of an education; (2) defining an adequate education capable of achieving the objectives in (1) above; and (3) specifying the requisite inputs for achieving an adequate education" (Veriava & Skelton 2019). Two US cases are noteworthy in their attempt to develop the right. *Fiscal Equity v. State* (1995, 314) concerned the constitutionality of New York State's public school financing system with the applicants arguing that it "failed to provide school children attending public schools in the City of New York an opportunity to obtain a sound basic education, in violation of the Education Article under the State Constitution". The Court found that a sound basic education "consist(s) of the *basic literacy*, calculating, and verbal skills necessary to enable children to eventually function productively as civic participants capable of voting and serving a jury" (emphasis added). The court stated the following regarding the Education Article:

> *(It) imposes an unambiguous acknowledgement of a constitutional floor with respect to educational adequacy … (W)e conclude that a duty exists and that we are responsible for adjudicating that duty … Children are also entitled to minimally adequate teaching of reasonably up-to-date basic curricula such as reading, writing, mathematics, science, and social studies, by sufficient personnel adequately trained to teach those subject areas.*

The Court, therefore, held that the plaintiffs' claim was a viable cause of action, and remanded the case for trial. The trial court found that the state had "over the course of many years consistently violated" the education guarantee by failing to provide New

York City public school children with a sound basic education (*Campaign for Fiscal Equity v. State of New York* (2001)). Ultimately, the Court of Appeals ordered the state to: "(1) ascertain the actual cost of providing a sound basic education in New York City; (2) reform the funding system so that every school in New York has the resources to provide the opportunity for a sound basic education; and (3) establish a system of accountability to measure whether the reforms actually provide the opportunity for a sound basic education" (*Campaign for Fiscal Equity v. State of New York* (2003)). The court also stipulated timelines within which these measures had to be achieved.

This case is important because, firstly, it recognised outcomes – literacy, calculating, and verbal skills – as essential components of measuring access to the right to basic education, rather than solely in terms of inputs. Secondly, the courts recognised the link between *adequate* inputs in the enablement of the attainment of basic skills – recognising a Constitutional floor with respect to educational adequacy. Finally, the case provides a nuanced lever for effective government accountability for learner outcomes. Whilst the trial court engaged in an extensive exercise to determine the inputs that constituted a sound basic education, the main focus of the Court of Appeals was whether there existed a causal link between the funding system and "any proven failure to provide a sound basic education" (*Campaign for Fiscal Equity v. State of New York* (2003), 919). The court relied on inequitable funding of education inputs, which limited equitable access to essential inputs as per policy and legislation, and therefore resulted in the failure to attain basic skills. As a remedy, the court ordered reform of the education funding system, seeking to address the greater literacy problem, rather than a single input.

The case of *Gary B. v. Whitmer* (2020, 2) concerned learners from a number of under-resourced schools in Detroit, Michigan. The learners claimed that – due to poor conditions within their classrooms, including missing or unqualified teachers, physically dangerous facilities, and inadequate books and materials – they were being deprived of a basic minimum right to education. Specifically, these conditions deprived them of a "chance at foundational literacy". The court held that a basic minimum education is one that plausibly provides access to literacy and is "implicit in the concept of ordered liberty". Importantly, the court held that literacy was essential to meaningful access to an individual's rights and participation in the social and political process (2020, 57).

> *(T)he requirement to provide a basic minimum education means the state must ensure that students are afforded at least a rudimentary educational infrastructure, such that it is plausible to attain literacy within that system.*

This decision was overturned, and the appeal court directed that the matter be heard again. A change in political leadership in Michigan, however, facilitated a settlement being reached between the parties, and numerous changes to the system implemented. While the law was not developed, we believe the case could still be an important indicator of how educational outcomes may be utilised to determine whether the right to basic education has been infringed.

3 What would be the content of the right to read?

If Section 29 of South Africa's Constitution was developed through legislation to specifically include the right to read, what standard of reading would need to be met, and by what age, to say that the "right to read" was being realised? And, once a standard or benchmark had been agreed upon, how could the state be held accountable to ensure that learners have the best possible chance of realising their right to read? This section puts forward some proposals on how these two questions could be answered.

3.1 Setting a standard

Reliable assessments and standards are necessary to guide administrators, teachers, and parents to take the necessary decisions to ensure that children can read for meaning. The absence of compulsory, standardised testing of all children for reading ability has meant that the scale and location of the problem has not been well understood at a school-level, and decision-making by authorities on how best to improve literacy learning outcomes is often ill-informed. PIRLS and Systemic Evaluations (as in 2004 and 2007) are nationally representative, but they cannot provide estimates of literacy achievement below the provincial or district level – the levels that are critical to inform the targeting of both additional support and accountability (Nuga Deliwe & Van der Berg 2022).

During 2020 and 2021, the South African Human Rights Commission (SAHRC) formed a committee of academics and literacy practitioners, amongst others, to develop a "shared understanding of the content of the right to a basic education with respect to outcomes, and to do so by providing a clearly articulated, defensible, measurable, and research-informed definition of what it means to read and write at a basic level" (SAHRC 2021, 3) The paper produced by this committee supports the development of the right to basic education to include a binding 'right to read and write' in a home language and in English. The paper also suggests that standards or 'benchmarks' should be developed in order to measure and assess reading, and that these should be based on reading benchmarks developed by PIRLS. While no assessment instrument is perfect, many believe that PIRLS[5] is "the best available instrument locally or internationally to measure reading comprehension reliably and rigorously" (SAHRC 2021, 16). This metric has already been endorsed by the Minister of Basic Education in her opening address at the SAHRC's launch of the Right to Read and Write campaign: "We agree on the need for a shared framework for understanding reading comprehension and how it can be measured. So the proposed shared framework supports the proposal that the conceptual framework used for reading comprehension should be based on the PIRLS Reading Literacy Framework" (Motshekga 2021). While it is not feasible to

5. In PIRLS, four thresholds indicate the benchmark achieved (or not) by a learner, i.e. 400 (low), 475 (intermediate), 550 (high), and 625 (advanced). In 2016, 22% of those tested reached the low international benchmark, meaning that 78% of learners could not "read for meaning or retrieve basic information from the text to answer simplistic questions" (Howie et al. 2017, 5).

conduct PIRLS annually or bi-annually, it would be possible to use the PIRLS framework to inform a South African reading assessment that could be implemented more frequently than PIRLS, and with representivity at the school level.

The SAHRC has proposed 10 as the age by which the right to read at a basic level must be achieved for scientific, legal, and curricular reasons. They point out that there is broad consensus in the scientific literature that, after three years of formal, full-time schooling, children should at least be able to read and write at a basic level in their home language. South African law stipulates that children must begin Grade 1 at the beginning of the year in which they turn seven (National Education Policy Act 27 of 1996), meaning that all children should have completed at least three full years of schooling by the time they are 10 years old. South Africa's curriculum statement also expects children to be able to read a variety of texts independently by the end of Grade 2. Setting 10 as the age by when children should have realised their right to read and write is therefore not unrealistic or overly ambitious – if anything it may be too old.

Of critical importance is that the DBE has already endorsed PIRLS and cites it in the Action Plan to 2024 (DBE 2020) as a formal benchmarking assessment indicator. While commentators have cautioned against oversimplifying PIRLS results into binary indicators of "clear-cut evidence of improvement over time", and stress "the importance of secondary analysis and the analysis of micro-data to provide meaning to overall results and findings", the DBE's willingness to adopt benchmarking is significant (see Van Staden & Gustafsson, this volume, 22–23). Whether PIRLS or a different – possibly cheaper but similarly rigorous – benchmark is adopted, or if PIRLS in conjunction with other assessment frameworks is used, it is vitally important for teachers and administrators to know which learners can and cannot read for meaning. There may well be a need for multiple benchmarks at the earlier grade levels, serving as early warning signs that specific children are not on course to realise the right to read. South Africa has its own research on this and benchmarks for oral reading fluency in the early grades in Nguni languages have been developed (Ardington et al. 2021; Mohohlwane et al. this volume).

If it is accepted that a right to read forms part of the right to basic education, and the State sets a benchmark (or benchmarks) to assess whether learners are accessing or enjoying the right, what happens next? As alluded to in Section 1, we submit that a set of inputs, processes and measurements become obligatory for the State to provide in order to give children the best chance of achieving the benchmarks. We believe those inputs, processes and measurements should be contained in binding regulations. We are not literacy experts, and the task of developing effective, realistic regulations would require input from a range of stakeholders, including, amongst others, administrators, academics, literacy activists, and teachers.

3.2 What should our reading regulations contain?

Twenty years ago, six essential attributes or elements of effective primary school literacy instruction were identified by Richard Allington (2002). These were expressed in a useful pneumonic device: the 'six Ts' – time, teaching, texts, testing, tasks, and talk. Not all have been extensively researched but, at the macro level, consensus seems to have emerged as to what, broadly speaking, are the most necessary strategic interventions to

improve literacy.

South African literacy academics have analysed these aspects with a South African lens and their findings help us understand what most affects reading outcomes in our classrooms (Hoadley & Boyd, this volume). We argue that at least the first four of the 'Ts' (i.e. time, teaching, texts, testing), from the South African perspective, must be adequately addressed by the state in the proposed regulations, as part of the content of the right to read. The remaining 'Ts' (tasks and talk) could arguably be canvassed in the regulations dealing with teaching, and we suggest that they would not be appropriate as standalone elements in the proposed regulations.

3.2.1 Time

There is broad consensus that acquiring proficient literacy skills takes *time*, particularly for low-achieving students. Successful teachers of reading "routinely had children actually reading and writing for as much as half of the school day" and were able to limit the time spent on other "activities" that takes up time in less effective classrooms (Allington 2002, 742). Effective teachers of reading engage in "more guided reading, more independent reading, more social studies and science reading than students in less effective classrooms" (Allington 2002, 742).

Table 1 **Instructional time in the Foundation Phase according to CAPS**

Subject	Grade R (hours)	Grades 1–2 (hours)	Grade 3 (hours)
Home Language	10	7–8	7–8
First Additional Language		2–3	3–4
Mathematics	7	7	7
Life Skills	**6**	**6**	**7**
Beginning Knowledge	(1)	(1)	(2)
Creative Arts	(2)	(2)	(2)
Physical Education	(2)	(2)	(2)
Personal and Social Wellbeing	(1)	(1)	(1)
Total	**23**	**23**	**25**

Note *From DBE (2011), 11.*

CAPS for the Foundation Phase sets out the *recommended* time allocations for each subject in Grades 1 to 3, suggesting that they spend seven out of a week's 23 or 25 tuition hours on Home Language, as in Table 1). If you add the recommended three hours for First Additional Language from Grade 2 onwards, and assume that it is all spent on literacy, the total still only amounts to 43% of time at school being spent on literacy (about 10 hours out of 23, at Grade 2). Even if the recommended guidelines are followed, it appears that not enough focus is being placed on literacy in our curriculum at the Foundation Phase. This is exacerbated by "slow pacing" and the persistent practice of teachers marking "all learner activities in the course of the lesson while learners sit without activity" (Hoadley & Boyd, this volume, 120). When coupled with the numerous

distractions that keep teachers out of the classroom (DPME 2017), it is not surprising that literacy levels are so low. We submit the CAPS document should be reviewed and ways found to ensure that sufficient time is both allocated to and *actually* spent on literacy activities, as these can have a significant impact (Machin & McNally 2004).

We recommend that the proposed reading regulations reference the curriculum in relation to literacy. It must be crystal clear what is required of teachers during the time they must spend on literacy activities. We acknowledge that monitoring and enforcing this aspect of the regulations would require novel interventions and buy-in from unions; yet clarifying what is legally required would be an important first step.

3.2.2 Teaching

Arguably, the most important element of successfully teaching children to read is the skill set of the teacher. Several commentators in South Africa believe that teacher knowledge and skills in reading pedagogy must improve for literacy rates to improve. Ensuring that university teaching programmes are fully accredited (not always the case) and that university-based teacher educators are in tune with what teachers need to know is critical. As Taylor and Mawoyo point out (this volume), "... the overall quality of the L&L [languages and literacy] components of many BEd curricula remains far below where it needs to be if newly qualified teachers are to be effective in teaching children to read proficiently" (165). Furthermore, many programmes are tailored to learning to read in English, despite more than 70% of learners in South Africa learning to read in an African language (Spaull & Pretorius 2019). Taylor and Mawoyo also highlight the need for the Department of Higher Education and Training and the Council on Higher Education to look beyond the "intended curricula, submitted for accreditation ... [to] the implemented and attained curricula ..." (this volume, 176).

Reading regulations that prescribe quality, accredited literacy training for Foundation and Intermediate Phase student teachers should ensure that all teachers entering the system are well-equipped to assist children reach the benchmark by the age of 10. But what about the teachers already in the system? We suggest that the reading regulations also prescribe in-service training of a particular quality that is assessed. Teachers should be given a reasonable amount of time to *successfully* complete the course (see Murray et al., this volume).

3.2.3 Text

The availability of large quantities of books and resources of appropriate complexity has also been identified as a critical element for successfully learning to read for meaning. Many believe that nascent readers need enormous quantities of 'high-success reading' rather than difficult reading, and therefore need texts appropriate to their ability. "It is the high-accuracy, fluent, and easily comprehended reading that provides the opportunities to integrate complex skills and strategies into an automatic, independent reading process" (Allington 2002, 743).

As far back as 2008, the DBE gazetted "guidelines" for recommended reading materials, setting out what could be described as the minimum package required. Despite this, 15 years later, severe shortages of quality, appropriate reading materials at multiple levels to cater for the range of abilities in classrooms persist. Guidelines of

this sort should encourage provincial education departments, which procure a large proportion of LTSM, to motivate for appropriate allocations in provincial budgets, and should play a role in seeing more classrooms provided with the range of materials necessary, beyond the DBE Workbooks. No intervention in isolation, however, is likely to resolve the literacy crisis and we acknowledge that supplying texts without supporting teachers on how to use them will not result in the desired changes (Hoadley & Boyd, this volume).

We believe that the DBE's "guidelines" need to be updated and then upgraded to binding standards that require sufficient texts to be available. Policies are too easily ignored. Our courts have repeatedly confirmed that textbooks form part of the right to basic education, and the DBE and provincial education departments consistently acknowledge that they are required to deliver them. But the same level of legal and administrative enthusiasm for textbooks has not always made its way to Foundation Phase reading materials. Legally binding norms for literacy texts may also assist the State and civil society to co-ordinate efforts to ensure civil society's initiatives are as strategic and effective as possible.

We also know that there is precedent for the cost-effective, province-wide roll-out of quality text. In 2019–2020, the Eastern Cape education department rolled out Vula Bula anthologies to all learners in the Foundation Phase in the Eastern Cape at a cost of just R15 per learner, only 4% of the cost of comparable anthologies listed on the DBE catalogue (Ardington & Spaull 2022).

3.2.4 Testing

Mohohlwane et al. (this volume, 84) helpfully explain what reading benchmarks are and why they are needed:

> *[Benchmarks] articulat[e] a standard against which teachers can track the development of learners' reading sub-skills. [They] also support the* early *identification of learners who are at risk of not learning to read for meaning by age ten, otherwise increasingly referred to as 'learning poverty'. This, in turn, supports remediation at an earlier age.*

To know if benchmarks are being reached and children are on track to realise their right to read, there must be assessments. While there are criticisms of a slavish reliance on testing, there is also a growing acknowledgment that without regular standardised testing in some form, we are unable to get even a basic understanding of the scope, location, and nature of the literacy problem in South Africa. Without widespread universal testing, we also have little sense of whether interventions are making any difference.

Our education system, particularly Quintile 1–3 schools, has an uneasy relationship with assessments and standardised testing. Standardised, national literacy testing at the Grade 3 level made a short-lived two-year appearance in 2013 and 2014 before teacher unions jettisoned them, along with all Annual National Assessments (ANAs). The chief complaints seemed to be that they were overly onerous to administer, and the results were used to 'name and shame' teachers, rather than for remedial purposes (Nicolson 2015). However valid the criticisms of ANAs may have

been, the upshot was that teachers, administrators, parents, and the public very quickly (again) lost track of which children, in which schools, were not learning to read.

Importantly, because the ANAs were universal assessments, they allowed for accountability at the level of the individual learner, classroom and school (Nuga Deliwe & Van der Berg 2022). Whilst sample-based assessments like PIRLS are important in measuring overall system performance, they do not allow for accountability or the tracking of learner improvements at an individual school or learner level.

> *The ideal national assessment system is diverse – comprising a combination of sample-based (useful for reporting and accountability pressure at system level, with high stakes for policymakers and low stakes for individual schools) and universal assessments (useful for school-level accountability pressure and communication and also for mobilizing improvement …* (Nuga Deliwe & Van der Berg 2022)

According to the Implementation Evaluation of the National Curriculum Statement (DPME 2017, 12),

> *(t)he evidence is strong that the majority of school-level heads of department (HODs) are not exercising adequate instructional leadership regarding assessment in terms of checking teachers' assessment records, moderating test and exam papers, analysing test scores and discussing the implication for pedagogy. Clearly, there is little coherence within most schools concerning the use of assessment to improve teaching and learning …*

It is debatable how effective ANAs were at shedding light on the true state of literacy levels in Foundation Phase classrooms taught in African languages. Mohohlwane et al. (this volume, 84) point out that

> *one cannot transfer reading benchmarks from English to the Nguni or Sesotho-Setswana languages due to differences in the phonological, morphological, and orthographical features of African languages. At the most basic level, simple comparisons of fluency across languages are not possible due to vastly different word lengths. Therefore, benchmarking processes need to take account of the linguistic features of the language for which the benchmarks are being developed.*[6]

But their work highlights the important strides being made in developing key benchmarks in Nguni and Sesotho-Setswana languages, as well as EFAL. Introducing benchmarks in all official South African languages appears to be a far more realistic proposition now than seven or eight years ago.

4 Do we need reading regulations?

There is no shortage of reading campaigns and policies in South Africa: Drop Everything and Read, Read to Lead, the Early Grade Reading Studies, the 2008 National Reading

6. Citing Maake 1993; Louwrens & Poulus 2006.

Strategy, the Eastern Cape's Reading Plan 2019–2023, the Western Cape Reading Strategy 2020–2025, to name but a few. But these are not laws. They represent what national and provincial governments hope to achieve – their good intentions and aspirations – with some principles and methods that the State hopes will be used to achieve them. As excellent as many of these policies may be, they are not binding. They do not set standards or procedures that must be followed. Budgets are sometimes made available to fund the implementation of the campaigns and policies, at least for a period, but these are discretionary, and the state can move funds away from them as they please. Many policies are not well understood by those that need to implement them, and in some cases, they may not even be aware of them. There is also a real threat of policy overlap and contradiction, with multiple role-players pushing different policies and interventions.

We submit that binding regulations, drawn up by the DBE and provincial education department's own experts on literacy, with input from the public (including teachers, academics, and civil society) would provide the much-needed, binding blueprint for improving literacy levels as quickly as possible.

Legislating for literacy achievement is not novel. Numerous US states have adopted legislation that requires schools to adopt particular approaches to reading instruction (Pondiscio 2021) and in North Carolina, the law now requires that teacher licensing includes "three continuing education credits directly related to literacy and based upon the science of reading method" (Moore 2021, 1). South Africa needs to craft its own reading laws in order to overcome, at the very least, the four areas of focus – time, teaching, text and testing – that need to be addressed in order for learning and learning outcomes to improve. The regulations are also needed to overcome the State's uneven and ad hoc responses to the literacy crisis that have resulted in a smorgasbord of policies. Finally, regulations are needed to provide clarity to the state on its obligations in terms of delivery and budgeting.[7] Significant improvements to literacy levels could be made if reading regulations are well-crafted, using a broad, participatory process. But they are not touted as a panacea to the literacy crises: regulations can come with their own pitfalls.

4.1 Will the DBE agree to adopt binding reading regulations, and what happens if they will not?

We submit that there should be nothing contentious about the four 'Ts' discussed above nor the need for their inclusion as a foundation for reading regulations. In fact, many of them appeared almost 15 years ago in the then Department of Education's 2008 National Reading Strategy (DOE 2008b, 14), which stressed the need for:

(i) Sufficient numbers of hours dedicated to teaching reading with effective teaching practices and methodologies.

7. In 2022, the delivery of LTSM (including graded readers and other Foundation Phase resources) to schools in the Eastern Cape was delayed by months due to what the department described as "unprecedented budget shortfalls". See *Khula Community Development Project v The Head of Department of Eastern Cape Department of Basic Education & Others*, Eastern Cape High Court, Makhanda, case no 611/2022 (unreported).

(ii) The provision of ongoing teacher training on the best teaching strategies and practices, with ongoing support from district curriculum officials.
(iii) Sufficient, available, quality reading resources in schools for teaching reading.
(iv) Continuous monitoring and assessment of learners' reading levels to assist teachers and national and provincial education departments to identify shortcomings and provide the necessary support.

The reforms suggested in this chapter are really nothing more than a call to make it obligatory for the DBE to implement its own strategy. The DBE's 2008 strategy (DOE 2008b, 14) also calls for:

(v) The effective prioritisation of the management of literacy teaching, particularly by the principal, and
(vi) The need for ongoing research, partnerships, and advocacy.

It may also be advisable for the State to find ways to include these elements in reading regulations, though at first glance they may not lend themselves to a regulatory framework. Other issues that warrant serious consideration for inclusion are infrastructure requirements that are conducive to teaching literacy.[8] Lastly, the regulations would certainly need to spell out what remedial literacy education should be provided when learners are unable to read and write for meaning by the age of 10.

Section 61 of the Schools Act (1996) provides that the Minister may make regulations for a number of reasons including … "(e) to prescribe a national process for the assessment, monitoring and evaluation of education in public and independent schools; …" and "(i) on any matter which may be necessary or expedient to prescribe in order to achieve the objects of this Act".

We submit that regulations, at least including each of the aspects discussed in Section 3, are necessary to achieve the objectives of the Schools Act and fall squarely within both s61(e) and (i). Furthermore, whilst the right to read and write has not yet been recognised as a core component of the right to basic education, the focal point for the regulations are the inputs required to realise the right. To a large extent, such inputs can already be found in DBE policy and strategy documents, and if a case is presented carefully and cogently, a court may be willing to compel the minister to develop binding regulations to realise the right. Developing binding regulations through engagement, and, hopefully, consensus, should be strenuously pursued.

5 What might be the unintended consequences of regulations?

Laws have been known to result in unintended consequences, and the drafters of the reading regulations should be alive to this possibility. Potential pitfalls include

8. Reading regulations should cross-reference the regulations on Minimum Uniform Norms and Standards for Public School Infrastructure (DBE 2013) that limit class sizes in the Foundation Phase to 40 learners per class, or as a start, at least eliminate extreme class sizes of more than 50 (see Spaull et al. 2022).

the possibility that any minimum standards that appear in the regulations could be interpreted by the State as *all* that needs to be provided, in practice using them as the *maximum* standard for determining the provision of resources or services. We would advocate for language in the regulations that encourages ongoing revision of the regulations as circumstances change.

Next, many questions remain as to what the best practices for teaching literacy are, particularly for African languages, and the 'science of reading' itself is constantly developing. Viewing regulations as the finalisation of literacy pedagogy would be a tragic error. The regulations need to be clear on what actions must be taken immediately based on the best evidence available, but flexible enough to take on board new research, and reflect changing best practice.

Finally, some provisions will require sizeable budgets for successful implementation, others will require teacher and union buy-in, and another group will require both. There is a need to balance aspirations and realism. We do not want to create dead-letter law that is unimplementable, and could end by undermining the rule of law. Though the literacy crisis requires the State to move with extreme urgency, it may be prudent to stagger the timeframes for implementation of different elements of the regulations.

6 Conclusion

In this chapter, we present a case for the right to read and write to be expressly acknowledged either as a component of the right to basic education, or as a stand-alone right. We support the expansion of the right to include a specific outcome, even if all that means, legally, is that the State is required to provide a set of inputs that give learners the best possible opportunity to learn to read and write with understanding by the age of 10. We outline that the purpose of the right to basic education has been clearly articulated both in statute, and by our courts, as "an indispensable tool with transformational objectives" (*Section 27 v Minister of Education* (2013), para 5) and "a foundation for a child's lifetime learning and work opportunities" (*Juma Musjid* (2011), para 37). We contend that it is not possible for this purpose to be realised if the majority of our learners cannot read and write with understanding by that age.

In order to effectively realise this right, we propose a set of reading regulations that address time, teaching, text, and testing – widely agreed core components of developing foundational literacy. We suggest that there would be nothing contentious in the development of such regulations, as the proposed content of the regulations is contained in an array of DBE policies and strategies over the last 20 years. We submit that a clear legal framework in the form of binding reading regulations that clarify minimum inputs, roles, responsibilities, and timelines would be an important development, with the potential to accelerate improvements in literacy rates.

References

Allington, R. L. (2002). What I've learned about effective reading instruction – from a decade of studying exemplary elementary classroom teachers. *Phi Delta Kappan* 83(10), 740–747.

Ardington, C. & Spaull, N. (2022). Sequenced for success: Evaluating the impact of openly licensed Vula Bula anthologies of graded readers on early grade reading outcomes in South Africa. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Ardington, C., Wills, G., Pretorius, E. J., Mohohlwane, N. & Menendez, A. (2021) Benchmarking oral reading fluency in the early grades in Nguni languages. *International Journal of Educational Development* 84, 102433

Campaign for Fiscal Equity v. State of New York 719 N.Y.S.2d 475 (2001).

Campaign for Fiscal Equity v. State of New York 100 N.Y.2d 893 (2003).

Centre for Child Law & Others v Minister of Basic Education & Others (2012) (4) All SA 35 (ECG).

Department of Basic Education (DBE). (2011). Curriculum and Assessment Policy Statement Grades R–3. Pretoria: DBE

Department of Basic Education (DBE). (2013). South African Schools Act No. 84 of 1996: Regulations relating to Minimum Uniform Norms and Standards for Public School Infrastructure. (R920). *Government Gazette*. 37081, 29 November.

Department of Basic Education (DBE). (2014). Draft National Policy for the Provision and Management of Learning and Teaching Support Material (LTSM). Pretoria: DBE.

Department of Basic Education (DBE). (2020). Action Plan to 2024: Towards the Realisation of Schooling 2030. Pretoria: DBE.

Department of Education (DOE). (2008a). Foundations For Learning. *Government Gazette* 30880, 14 March.

Department of Education (DOE). (2008b). National Reading Strategy. Pretoria: DOE.

Department of Planning Monitoring and Evaluation (DPME). (2017). Implementation evaluation of the National Curriculum Statement Grade R to 12 focusing on the Curriculum and Assessment Policy Statements (CAPS). Pretoria: DPME.

Equal Education & Another v Minister of Basic Education & Others (2018) ZAECBHC 6.

Equal Education & Others v Minister of Basic Education & Others (2020) ZAGPPHC 306.

Fiscal Equity v State 86 N.Y.2d 307 (1995).

Gary B. v Gretchen Whitmer No. 18–1855 (6th Cir. 2020).

Governing Body of the Juma Musjid Primary School & Others v Essay N. O. & Others (2011) ZACC 13.

Head of Department, Mpumalanga Department of Education & Another v Hoërskool Ermelo & Another (2009) (2) SA 415 (CC).

Howie, S., Roux, K., Tshele, M., Mokoena, G. & McLeod Palane, N. (2017). PIRLS Literacy 2016: South African Highlights Report Grade 4. Pretoria: CEA, University of Pretoria.

Khula Community Development Project v The Head of Department of Eastern Cape Department of Basic Education & Others, Eastern Cape High Court, Makhanda, case no 611/2022 (unreported).

Louwrens, L. J. & Poulus, G. (2006). The status of the word in selected conventional writing systems: The case of disjunctive writing. *Southern African Linguistics and Applied Language Studies* 24(3), 389–401

Maake, N. P. (1993) C. M. Doke and the development of Bantu literature. *African Studies* 52(2), 77–88

Machin, S. & McNally, S. (2004). The Literacy Hour. London: Centre for the Economics of Education. From: eprints.lse.ac.uk/3657/1/theliteracyhour.pdf Accessed 2022-05-14.

Minister of Basic Education v Basic Education for All (2015) (ZASCA).

Moore, J. (2021). Excellent Public Schools Act, 'Science of Reading' literacy reforms take effect July 1. *The Carolina Journal* 1 July 2021. From: www.carolinajournal.com/excellent-public-schools-act-science-of-reading-literacy-reforms-take-effect-july-1/ Accessed 2022-03-29.

Motshekga, A. (2021). Recorded Message by the Minister of Basic Education Angie Motshekga at the South African Human Rights Commission's Right to Read and Write Launch. From: www.youtube.com/watch?v=3IYPNGlMasg Accessed 2022-03-29.

Nicolson, G. (2015) 'Annual National Assessments: A challenging test', *Daily Maverick*, 23 September 2015. From: www.dailymaverick.co.za/article/2015-09-23-annual-national-assessments-a-challenging-test/ Accessed 2022-05-15.

Nuga Deliwe, C. & Van der Berg, S. (2022). The role of assessment in Foundation Phase improvement: The Annual National Assessments and beyond. In Venkat, H. & Roberts, N. (Eds), *Early Grade Mathematics in South Africa*. Cape Town: Oxford University Press.

Pondiscio, R. (2021). Can teaching be improved by law? *Thomas B. Fordham Institute*. From: fordhaminstitute.org/national/commentary/can-teaching-be-improved-law Accessed 29 March 2022.

Republic of South Africa. (1996). National Education Policy Act No. 27 of 1996. Pretoria.

Section 27 v Minister of Education 2013 (2) SA 40 (GNP).

South African Human Rights Commission (SAHRC). (2021). The Right to Read and Write. Cape Town: SAHRC.

Spaull, N. (2022). 2022 Background Report: 2030 Reading Panel. From: www.readingpanel.co.za/resources Accessed 2022-09-14.

Spaull, N. & Pretorius, E. (2019). Still falling at the first hurdle: Examining early grade reading in South Africa. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 147–168. Cham: Springer.

Spaull, N., Courtney, P. & Qvist, J. (2022). Mathematical stunting in South Africa: An analysis of Grade 5 mathematics outcomes in TIMSS 2015 and 2019. In Venkat, H. & Roberts, N. (Eds), *Early Grade Mathematics in South Africa*. Cape Town: Oxford University Press.

Veriava, F. & Skelton, A. (2019). The right to basic education: A comparative study of the United States, India and Brazil. *South African Journal on Human Rights* 35(1), 1–24.

13

Coming or going? The prioritisation of early grade reading in South Africa

NIC SPAULL & ELIZABETH PRETORIUS

Abstract

In this chapter, we document three relatively distinct phases of prioritisation of early grade reading in South Africa from 2010 to 2020. The decade began with sweeping reforms to the curriculum, combined with the introduction of a new, national, primary-school assessment (the ANAs) and a universal learner workbook programme. In the middle of the decade (2014–2018), this focus faded as everything became a 'priority' for the Department of Basic Education, with Grade 3 'language competencies' now one of 27 goals. The third and final phase, of 're-prioritisation', was from 2019 onwards, following the presidential State of the Nation Address, which announced the goal of "ensuring that all children learn to read for meaning by age 10" (Ramaphosa 2019, 1). At least on paper, this was (and is) now a national priority, reflected in the key five-year planning documents of the presidency (Medium Term Strategic Framework 2019–2024) and the Department of Basic Education (Action Plan to 2024). We show how key research reports fed into and influenced this process of prioritisation, and argue that 'stated' priorities and goals must now be accompanied by the resources and political will needed to reach them – something that has to date been lacking. Finally, we use the 6Ts framework (Teaching, Training, Tongue, Texts, Tests, and Time) to summarise the contributions of

KEYWORDS
early grade reading, government policy, prioritisation, South African policy, 6Ts framework

the chapters in this volume, as well as the current state of play in each of these areas. We close with a reflection on the coming decade (2022–2030) and the imminent wave of teacher retirements, and what this could mean for the quality of teaching in South Africa.

1 Introduction

The primary purpose of the current book has been to document some of the important changes in South African reading research over the last 10 years. Seen together with the companion volume three on early grade interventions (Spaull & Taylor 2022), it is possible to chart the course of where we have come from, where we are now, and where we are headed. In this chapter, we provide a synoptic view of the policy priorities of the South African government over the last decade, showing the prioritisation of primary school learning generally (2010–2013), an in-between phase where everything became a 'priority' – leading to the de facto deprioritisation of reading (2014–2018), and finally one where 'reading for meaning by the age of 10' became an over-arching, stated priority of government (2019–2022). We also show how a parallel stream of research reflected on and influenced those policies as they were developed.

In the final section of the chapter, we use the 6Ts framework (Teaching, Training, Tongue, Texts, Tests, and Time), adapted from RTI (Bulat et al. 2017), to summarise the contributions of the chapters in this volume, as well as the current state of play in each of these areas, before turning to our closing remarks looking to the decade ahead.

2 Three phases of policy prioritisation in South Africa

Prior to 2010, the South African education landscape was primed for change on several fronts. The then education minister, Naledi Pandor, had gazetted the comprehensive Foundations for Learning Campaign in 2008, paving the way for what would ultimately become the Department of Basic Education (DBE) Workbooks in all 11 languages, introduced in 2011. The ministerial task team appointed to review the national curriculum gave their wide-ranging report and recommendations to the minister in October 2009 – an influential document that foreshadowed the new Curriculum Assessment Policy Statement (CAPS) in 2011. The review also recommended that "There should be regular, external, systemic and national assessment of Mathematics and Home Language and the testing … extended to First Additional Language (English) for all learners in grades 3 and 6" (DBE 2009, 37). This captured the zeitgeist at the time that some form of standardised assessment was needed before the school-leaving exam in Grade 12, particularly at the primary level. This came to pass in 2011 in the form of the Annual National Assessments (ANAs).

2.1 Prioritisation of 'Learning in Grades 1–7' (2010–2013)

Given the above, South Africa began the decade in 2010 with a national focus on education. The incoming president, Jacob Zuma, used his inaugural 2010 State of the Nation Address to introduce the three sweeping reforms discussed above: on curriculum, assessment and materials in the form of the CAPS curriculum (Pretorius et al., this volume); the ANAs (Nuga Deliwe & Van der Berg 2022); and the DBE Workbooks (McKay & Spaull 2022). All three reforms came into effect in 2011 (Workbooks and ANAs) or 2012 (CAPS[1]), with subsequent iterations of the Workbooks to align them to the latter.

Soon after the new administration took office, emerging evidence from international assessments continually reiterated the need for a stronger focus on primary schools. In 2010, the international SACMEQ III results showed that very few South African Grade 6 learners could read at grade level in English or Afrikaans, performing significantly worse than their neighbours in Botswana, Swaziland and Zimbabwe, as well as those in Kenya and Tanzania (Hungi et al. 2010, 13). This was despite spending more per child than all of these countries except Botswana (UIS 2009, 174; Spaull 2011, 6). Two years later, in 2012, the results of the Progress in International Reading Literacy Study (prePIRLS) were released, showing that less than half of Grade 4 learners could read in any language; unlike SACMEQ, PIRLS assessed all 11 official languages (Howie et al. 2012).

In Figure 1, summarising the three phases of government emphasis on reading, we refer to this initial phase from 2010–2013 as the 'Prioritisation of Learning in Grades 1–7'. Although the focus was still on primary school (rather than the Foundation Phase specifically) the programmes implemented in this period (CAPS, ANAs, Workbooks) arguably contributed to improvements in reading outcomes from 2011 until at least 2016 (see Van Staden & Gustafsson, this volume, also Van der Berg & Gustafsson 2019; McKay & Spaull 2022; Taylor & Spaull 2022).

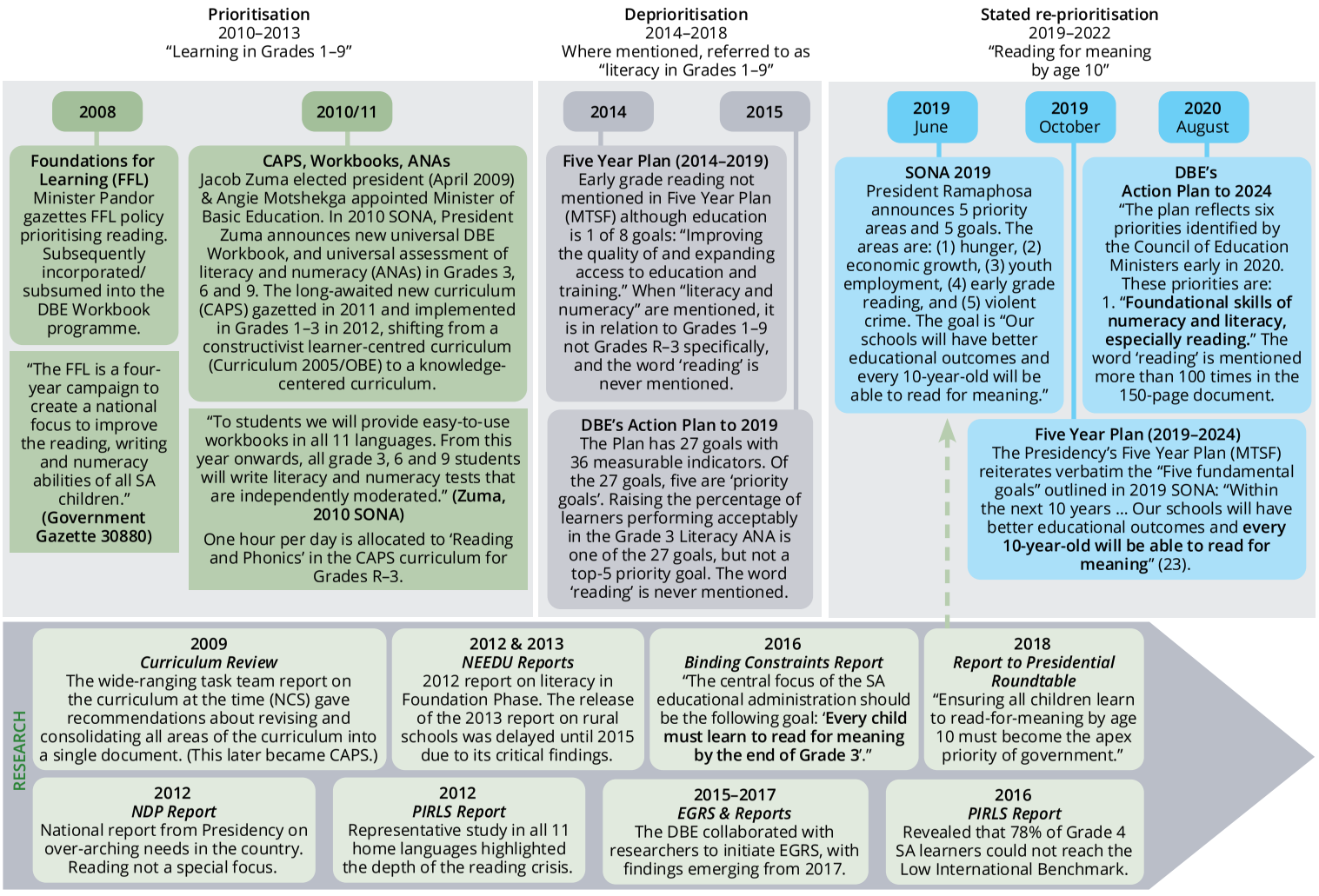
2.2 De facto deprioritisation of 'reading' with shift to 'literacy in Grades 1–9' (2014–2018)

The second period, 2014–2018, marks a turn in the narrative, with the de facto deprioritisation of reading in key policy documents, and the repeal of certain key reforms. Following teacher union opposition, the ANAs were discontinued from 2015 onwards (Nuga Deliwe & Van der Berg 2022), removing the only[2] standardised, common, primary-school test, prior to the Grade 12 school-leaving exam.

In terms of policy priorities, for 2014–2019, the key five-year plan of the South African presidency, the Medium Term Strategic Framework (MTSF), identifies eight

1. The implementation of CAPS began in 2012 but was done incrementally: Grades R to 3 and Grade 10 in 2012, Grades 4 to 9 and Grade 11 in 2013, and Grade 12 in 2014.
2. The only exception is the Western Cape Education Department, which implements its own province-wide Systemic Assessments at the Grade 3, 6 and 9 levels.

Figure 1 Three phases of government emphasis on reading



goals, one of which is "Improving the quality of and expanding access to education and training" (DPME 2014). The word 'reading' does not appear in the document, although 'literacy' appears twice, always in relation to Grades 1 to 9 rather than the Foundation Phase (Grades R to 3) specifically.

Following from the MTSF, the DBE's Action Plan to 2019 was released in 2015, and included 27 goals, 5 priority goals and 36 indicators. "Increase the number of learners in Grade 3 who, by the end of the year, have mastered the minimum language and numeracy competencies for Grade 3" (DBE 2015, 3) is one of the 27 goals, but not one of the five priority goals. The word 'reading' does not appear in the document. A hallmark of this period was the DBE's unwillingness to deprioritise any one area in favour of another (i.e. to prioritise). It is for that reason that there are 27 'priorities' ranging from infrastructure, management practices, teacher recruitment, textbooks, to inclusive education, grade promotion, early childhood development, and school governance.

It should be noted that these 27 priorities also appeared in the previous iteration of the DBE's plan (Action Plan to 2014), however, the ANAs there provided a focus on learning outcomes in Grades 1 to 9, specifically on literacy and numeracy. Significant budget was also allocated to the ANAs. In 2013, the annual budget was approximately R203-million (in 2022 rands) (National Treasury 2013, 333). With the demise of the ANAs and the focus that they brought, the DBE fell back on their own default setting of '27 priorities'.

During the deprioritisation phase (2015–2018), several highly cited studies were released that drew attention to early grade reading specifically, and the need to prioritise reading above other (also) important issues. The first of these was the 2012 report by the National Education Evaluation and Development Unit (NEEDU) titled 'The State of Literacy Teaching and Learning in the Foundation Phase' followed by their 2013 report on 'Teaching and Learning in Rural Primary Schools'. The latter was particularly controversial,[3] and its release was delayed until 2015, when it was leaked. The following year (2016), a consortium of researchers published a report for the Department of Planning, Monitoring and Evaluation (DPME) in the presidency titled 'Identifying Binding Constraints in Education' (Van der Berg et al. 2016), which aimed to identify the key structural constraints to improving learning outcomes in the education system. The authors concluded that, at a system level, the four factors were: (i) a lack of institutional capacity, (ii) undue union influence, (iii) weak teacher content knowledge, and (iv) wasted teaching time (2016, 5). But, at the level of the child, the binding constraint to improvements in future learning was that most children (70%+) did not learn to read by the end of Grade 3. For that reason, they advised that the following goal be adopted by the DBE: "Every child must learn to read for meaning by the end of Grade 3" (2016, 6).

3. The report was controversial because it pointed to corruption in the hiring of teachers, especially in relation to teacher unions. This was subsequently confirmed by the 2016 Volmink Report.

2.3 Re-prioritisation of 'reading for meaning by age 10' (2019–2022)

The end of this second period marked a period of intense political contestation, resulting in the recall of the then president (Jacob Zuma) and the appointment of his deputy Cyril Ramaphosa as president in 2018; following the 2019 elections, the latter continued to hold office as president. Prior to those elections, Ramaphosa hosted a Presidential Roundtable in November 2018. At this, one of the current editors (Spaull) gave a presentation, in which, building on the research from the Binding Constraints project, he argued that:

> *Ensuring all children learn to read-for-meaning and calculate-with-confidence by age 10 must become the apex priority of government. There is no route to a more equitable and prosperous South Africa that does not first chart the path of a radically improved primary education system. (Spaull 2018, 1)*

In a subsequent report requested by then Finance Minister Tito Mboweni, the same argument was made (Spaull 2019a), with further details on a minimum package of educational resources; graded readers; the need to recruit, train and employ Foundation Phase reading coaches; and other aligned reforms (see also Spaull & Taylor 2022 for a full discussion). A key argument in both reports was that 'reading for meaning' was foundational to all future learning; it was an educationally judicious goal, easy for the public and policy-makers to understand, would support other goals, and was easy to measure. This term is in stark contrast to more general but rather nebulous terms like 'literacy' or 'language competencies' in circulation at the time. (The term 'literacy' in this chapter is used in the narrower sense of the use of secondary written language as opposed to primary spoken language.)

Less than a year later in June 2019, President Ramaphosa delivered his State of the Nation Address and announced 'five fundamental goals for the next 10 years', addressing five pressing topics: (i) hunger, (ii) economic growth, (iii) youth employment, (iv) early grade reading, and (v) violent crime. The goal for early grade reading was: "Our schools will have better educational outcomes and every 10-year-old will be able to read for meaning" (Ramaphosa 2019). This marked the beginning of the third phase of 're-prioritising reading', since the goals included in this speech were subsequently codified verbatim into the Presidency's new five-year plan (MTSF 2019–2024) as the five goals for the next 10 years (DPME 2019, 23). Given the centrality of the MTSF to other government department priorities, in 2020 when the DBE published its Action Plan to 2024, it stated that "The plan reflects six priorities identified by the Council of Education Ministers early in 2020. These priorities are: 1. Foundational skills of numeracy and literacy, especially reading" (DBE 2020a, 2). Encouragingly, the word 'reading' is mentioned more than 100 times in the 150-page document.

The point of highlighting the above trajectory through the three phases, together with the key research reports feeding into that process, is not to suggest that there is a simple or linear relationship between research and policy change. Furthermore, the selected research reports highlighted here (Ministerial Review, PIRLS, NEEDU, EGRS, Identifying Binding Constraints, Presidential Roundtable) do not of course comprise an

exhaustive list of the research that fed into the complex process of policy formulation, or of what contributed to the changing winds of political priorities. Rather, the point is to highlight that it is possible to draw a plausible narrative arc showing how the South African policy-making establishment moved from an initial focus on primary schooling generally, through a phase where that focus faded (deprioritisation), and, at the end of the decade, to a phase of re-prioritisation, of early grade reading specifically. It should also be noted that there was a global trend towards the prioritisation of reading, for example in the UN's Sustainable Development Goal 4.1.1, and that this global move towards improving reading and mathematics was emphasised by international civil society organisations such as UNICEF.

Yet even in this latter more promising phase of re-prioritisation, the re-emphasis is primarily reflected in policy documents and speeches, rather than on the ground or in increased budget allocations. This contrasts starkly with the ANAs, which were not only a stated policy priority but also budgeted for and implemented. It remains to be seen whether the new rhetorical commitment to 'ensuring that all children learn to read for meaning by age 10' will become manifest in the Medium Term Expenditure Framework or in provincial allocations of education budgets. To date this has not transpired. As Spaull (2022, 3) has argued:

> *Although it has become commonplace for officials to say that "reading is an apex priority of government", there is no evidence that these statements have translated into meaningful resources for reading. Most policies related to reading are more symbolic than anything else, with slogans such as "Read to Lead" and "Drop All and Read" but no allocation of books or other resources to all schools. The word 'reading' does not appear in any of the 2021 budgets … The largest current reading project (PSRIP) working in thousands of schools has a budget of R37-million leading to a light-touch train-the-trainer approach that is unlikely to improve reading. This is less than 1% of 1% of the total budget for Basic Education (R255-billion in 2021).*

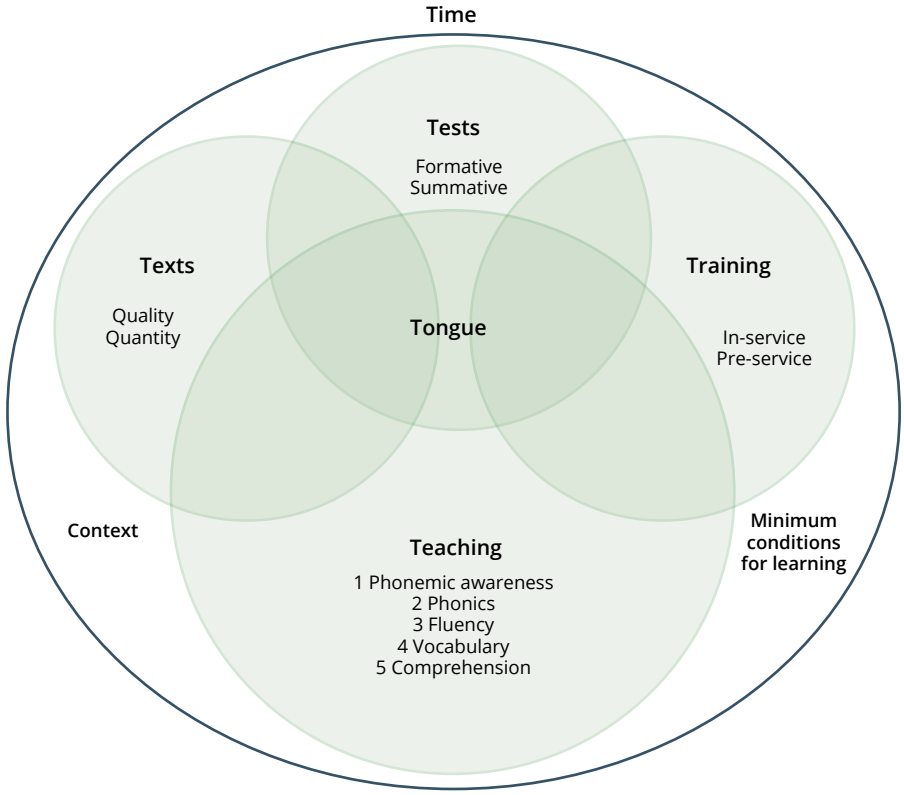
3 Looking back and looking forward: Using the 6Ts framework

In this section, we synthesise research findings and key developments in early grade reading over the last decade, while also integrating and positioning the chapters in the present volume into that overall synthesis. To do so, we use the 6Ts framework, adapted from RTI International (Bulat et al. 2017), to discuss areas of needed research and areas of likely policy evolution in the coming decade.

There are countless frameworks for thinking about teaching and learning. Typical framings of 'curriculum, pedagogy and assessment', or the 'intended, enacted and assessed' curriculum (Mullis & Martin 2015) provide a helpful lens on the topic, but are not themselves specific enough to early grade reading. We have therefore extended the 5Ts framework (Bulat et al. 2017) to include an additional T – time – and also visualised the 5Ts in a similar fashion to some of our previous work (Spaull 2019b) – as in Figure 2. The six Ts are therefore Teaching, Training, Tongue, Texts, Tests, and Time. The central role of language of learning and teaching (Tongue) links the four other Ts, with Time

encompassing all other Ts, since the time spent on teaching or training is a key factor, repeatedly emphasised in the South African literature.

Figure 2 The 6Ts of early grade reading



3.1 Teaching

The largest T circle is Teaching, since the primary site where children learn to read is the classroom. The Big 5 – phonemic awareness, phonics, fluency, vocabulary, and Comprehension – are listed here since they are the key components in teaching children to read (National Reading Panel 2000; Castles et al. 2018). As mentioned in Pretorius and Spaull (this volume), the science of how children learn to read in alphabetic languages, especially in the early stages, is well understood and well documented, revealing a hierarchy of skills that builds from oral proficiency to auditory discrimination (phonemic awareness) and letter-sound recognition. Once learners can segment individual letter-sounds in words, and blend letters to form words, increasing accuracy and fluency then aid comprehension.

In the present volume, Hoadley & Boyd show that there have indeed been some shifts in instructional practice over the last decade, primarily due to the new more explicit curriculum, and the provision of learner-level workbooks. Yet they also highlight that a lack of feedback and individualisation still dominate South African classrooms. This agrees with previous researchers who have argued that reading is still

seen as a group-based performance, primarily oral and communal rather than textual and individual (Hoadley 2018; Rule & Land 2017). The teaching that is happening in typical no-fee schools is clearly ineffective and unproductive.

Two seminal chapters in the present volume provide compelling evidence of the outcomes of these systemic practices. Wills et al. (this volume) show that more than half of Grade 1 learners do not know the letters of the alphabet after a full year of schooling. Mohohlwane et al. (this volume) further show that only 30% of Grade 3s reach the Grade 3 fluency benchmark (the point at which learners in the very large datasets started reading for meaning on their own), and that, even three years later, only 35–46% of *Grade 6* learners could meet these Grade 3 benchmarks.

When half our learners enter Grade 2 unable to sound out all the letters of the alphabet, despite 200 days of teaching and learning in Grade 1, it is clear that the pedagogical practices of their Grade 1 teachers are ineffective. As Grade 2–4 learners then struggle to reach even elementary levels of fluency, it remains tragically predictable that they will fail comprehension tests, as Wills et al. (this volume) show using longitudinal data, and as Van Staden and Gustafsson (this volume) show using PIRLS cross-sectional data.

3.2 Training and support

With half of South African teachers currently aged 50 years or older (National Treasury 2021, 63), it follows that about half of our teachers were trained under apartheid, where the opportunities to learn the content and skills for effective teaching were not provided. The nationally representative tests of Grade 6 teacher content knowledge (part of SACMEQ) show that older teachers have lower levels of content knowledge compared to their younger colleagues in South Africa (Armstrong 2015). The same tests show that only 37% of Grade 6 reading teachers reached 'mastery' levels, compared to higher percentages in countries such as Botswana (47%) and Zimbabwe (62%) (Awich 2021, 62). Although not the focus of the present volume, the situation is even worse among mathematics teachers (see Venkat & Spaull 2015; Bowie et al. 2019).

Cognizant of the above findings, the DBE's Action Plan to 2024 states presciently that "In basic education, the most enduring apartheid legacy is probably the unequal system of teacher training. Addressing this will continue to require effective in-service training" (DBE 2020a, 4). Unfortunately, existing programmes of in-service teacher training are either ineffective (e.g. when subject advisors are used), or may reach a low-ceiling even in intensive in-service training programmes. In the companion volume, Spaull and Taylor (2022) show how the 'trickle-down train-the-trainer' model is flawed in both conceptualisation and implementation. Firstly, subject advisors themselves lack the content knowledge needed to train teachers. Chetty et al. (2022) show that an entire cohort of subject advisors scored only 50% on tests of primary school content-knowledge and curriculum specifications. Secondly, the ratio of subject advisors to schools and teachers is so excessively large as to make any form of meaningful support impossible. By triangulating provincial data on learner-educator ratios, enrolments, and subject advisor posts, Spaull and Taylor (2022) show that, in five out of nine provinces, the average Foundation Phase subject advisor is responsible for training more than 500 teachers – in KwaZulu-Natal, the figure is 1,547 Foundation

Phase teachers per subject advisor. By contrast, interventions using coaches (such as in EGRS) have a ratio of approximately 1 coach to 30 teachers. Even in these successful programmes with considerable additional materials (Mtsatse, this volume), gains are relatively modest. In both the EGRS and Funda Wande interventions, the percentage of learners reaching the fluency benchmarks outlined in Mohohlwane et al. (this volume) is only about ten percentage points more than in the control groups. For example, after three years of the EGRS coaching intervention, 44% of Grade 4s could reach the Grade 3 benchmark, compared to 37% in control schools (Spaull & Taylor 2022).

In the current volume, Taylor and Mawoyo reflect not only on the historical challenges of teacher education and in-service teacher training, but the ongoing difficulties with reforming initial teacher education at universities in South Africa. They conclude that:

> *Research conducted over more than a decade indicates that, with few exceptions, education faculties only pay lip service to policy set by government regarding the initial education of primary school teachers, that they neglect the poor language and mathematics skills of their students, and give scant attention to research on reading pedagogy. (164)*

3.3 Tongue

It has long been argued that mother-tongue education is best, an axiom with strong theoretical and empirical substantiation (Cummins 2000). This is now a widely accepted maxim in South Africa, representing a new and helpful consensus. This signals a shift from a decade ago when there were still arguments on pragmatic grounds for 'straight for English'. These pragmatic reasons included that teaching resources did not exist in all home languages, that many urban environments were extremely multilingual making mother-tongue instruction logistically difficult (e.g. in Gauteng), and that most parents wanted their children to learn in English. The new consensus for mother tongue was strengthened by arguments that it is easier for children to learn to read in a familiar language, local evidence of the benefits of mother-tongue instruction (Taylor & Von Fintel 2016), and the increase in African language texts (see Section 3.4).

In addition to a marked increase in African language materials, there have also been recent policy advancements to guide the teaching of reading in African languages. These include the National Framework for the Teaching of Reading in African Languages in the Foundation Phase (DBE 2020b), as well as the establishment of language-specific reading benchmarks (Mohohlwane et al., this volume). In the middle of the decade (2016), the Department of Higher Education and Training also established the Primary Teacher Education Project (PrimTEd) with the intention to improve the quality of initial teacher education for primary school teachers (Southern Hemisphere 2021). There have also been at least two new accredited higher-education courses aimed at teaching reading in African languages: the Advanced Certificate in Foundation Phase Literacy Teaching at Rhodes University (see Murray et al., this volume), and the Sesotho and isiZulu Reading Project at the University of Johannesburg (SIRP 2019).

Although there is widespread agreement that learners should be taught in their home language in the Foundation Phase, there is now also a move towards extending mother-tongue instruction to higher grades, such as Grade 6. For example, in a small

pilot study in the Eastern Cape, an Additive Bilingual Education project (ABLE) in isiXhosa and English was implemented up to Grade 6. However, the outcomes were mixed (Jackson 2013). Teacher practices did not change much and although the Grade 6 learners' isiXhosa proficiency was much stronger than their English proficiency, reading comprehension in both isiXhosa and English was still extremely low (means of 32% and 31% respectively). Despite six years of mother-tongue instruction, *reading* levels had not improved (Jackson 2013). In 2012, the Eastern Cape Department of Education introduced the Mother-Tongue-Based Bilingual Education project (MTBBE), extending mother-tongue instruction for mathematics, natural science, and technology, up to and including Grade 6. The pilot was initially implemented in 120 schools, and then extended to more than 1,000 schools. Recently, the Minister of Basic Education hailed the project as a success (Motshekga 2022): "The results of the Cofimvaba pilot for 2019 June common Exams demonstrated empirically that the MTBBE strategy policy is sound ... In Mathematics, the MTBBE group achieved 53%, while the English-only group achieved 40% averages." However, this is drawn from a doctoral thesis by Mbude (2019), a study that was not designed to (and cannot plausibly claim to) measure any impacts of the programme. Mbude compares 100 MTBBE learners from 18 intervention schools to 100 non-MTBBE learners from 18 schools "in the same area of Cofimvaba who are not participating in the MTBBE project" (Mbude 2019, 231) and claims that "the results of the MTbBE shows beyond reasonable doubt that ... teaching learners in their mother tongue gives the learner an advantage ... The findings proved that learners understand more when their home languages is used as medium of instruction" (Mbude 2019, 230). There is no information on how schools were selected, how learners were selected within those schools, and no documentation on the administration or marking procedures of the exams, differential attrition etc. Furthermore, one cannot evaluate a programme reaching more than 1,000 *schools* by testing 100 non-randomly selected *learners* from 18 non-randomly selected schools, and comparing them to 100 learners from 18 non-randomly selected comparison schools. More rigorous research is clearly needed to monitor and evaluate such projects.

Notwithstanding the mixed results of the ABLE project and the contestable findings by Mbude, there are legitimate questions as to whether and how mother-tongue instruction should be extended beyond Grade 3. On the one hand, if children have not learned to read in their home language by Grade 3, switching to English as the language of learning and teaching in Grade 4 will likely exacerbate the problem, since if they have not learned to read in their home language, they will certainly struggle to read in an additional language. There are both practical and political questions that remain unanswered. The practical questions relate to the absence of African language textbooks and materials for content subjects in Grades 4 to 6. These generally do not exist and would need to be developed (as they were for the MTBBE) prior to any change in policy. Intermediate Phase teachers (Grades 4 to 6) would also need to be trained in mother-tongue instruction, and in home-language vocabulary for content subjects (Mathematics, Natural Science etc.). Perhaps the largest obstacle to extending mother tongue instruction is simply that most parents and school governing bodies seem resistant to such a move. Using the Human Sciences Research Council's South African Social Attitudes Survey, Gordon and Harvey (2018, 8) show that more than 80% of South Africans preferred English as the language of learning and teaching in

Grades 4 to 9. Even in Grades 1 to 3, 60% supported English as MOI. They also show that the trend over the last 10 years is towards English rather than away from it. Given that it is currently school governing bodies that decide on language policy in a school, and that these bodies are largely made up of parents, extending mother-tongue instruction beyond Grade 3 would be politically challenging.

Over and above the concerns listed above, there is an important proviso underlying the fundamental truth about mother-tongue education: education in the 21st century is not simply about using a familiar language in the classroom, it is about access to knowledge and information in the written modality. Literacy, specifically reading literacy (and numeracy) has high intellectual and cultural capital in modern mass education, and effective education systems in the 21st century are ones that produce literate and numerate learners. Extending mother-tongue instruction beyond Grade 3 will require extensive provisioning of textbooks in the different content subjects across all nine African languages, for it is textbooks that provide the basis for 'reading to learn' after the Foundation Phase. Whether one textbook per subject per language will suffice for 'reading to learn' is a moot point. All this is potentially doable, but it requires political will, fiscal commitment, dedication by materials developers, and standardised terminology banks across subject domains for the different languages.

3.4 Texts

In the area of texts for the teaching of reading, South Africa has made considerable progress over the last decade, notably in the development of new instructional materials in African languages. The largest and most well-known initiative is the roll-out of the DBE Workbooks, which take the form of two Home Language (and two English First Additional Language), full-colour workbooks per child per grade. Because they are distributed to every school in the country, these workbooks have raised the 'minimum floor' of text resources in the school, arguably changing the grammar of schooling to some extent (McKay & Spaull 2022). In addition to these country-wide initiatives are the creation of the Vula Bula graded reader series by the Molteno Institute of Language and Literacy (Katz & Rees 2022), a resource that has been used in every successful intervention from GPLMS to EGRS to Funda Wande. Their reformulation into anthologies (one per grade) was also instrumental in reaching scale, being rolled out by the Eastern Cape Department of Education for two years, to some success (Ardington & Spaull 2022). Several NGOs have also developed lesson plans and workbooks that have informed the wider sector, as well as other NGOs, in terms of 'what works' – see Mtsatse (this volume) and Dornbrack and Kazungu (this volume) for descriptions of the Funda Wande and Room to Read workbooks, respectively. It is worth noting how these materials are often edited, revived and incorporated into new interventions. For example, the GPLMS lesson plans from 2010 were revised by Class Act and incorporated into the EGRS intervention in 2015, then further revised for use by the National Education Collaboration Trust from 2017 onwards (Chetty et al. 2022). Over the years, NGOs like Nal'ibali have produced a large range of children's texts in African languages to stimulate reading for pleasure. The African Storybook Initiative by SAIDE has also provided an open-source digital platform for the creation of (mainly narrative) texts in

more than 100 African languages, thereby increasing the availability of texts that are culturally and linguistically appropriate for children across the continent. Many more texts in African languages are now available for children than was the case a decade ago. Although some of the texts have been edited by language specific specialists, issues of sustainability and quality control of the majority of the texts remain a challenge (Gultig 2017).

Despite these very real advances, questions still remain about the minimum package of print resources needed not only to launch children on successful reading trajectories, but also to push their trajectories to higher levels, and provide a wide range of information texts to expand learning and knowledge. Education in todays' world exists within the context of high literacy demands and text saturation. Children initially need decodable texts when learning to read, but beyond this they also need a range of narrative and information texts to sustain interest and promote reading for pleasure. The Vula Bula series provides about 20 carefully curated texts per grade, of increasing difficulty, across all nine African languages. This is indeed a massive achievement. Yet this is only one reader for every two weeks of the school year. In fee-charging schools, most children would read 20 graded readers within one *term*.

Looking to the decade ahead, it is clear that when children are learning to read, they need decodable texts that are interesting and engaging. Providing these to all learners in the form of an anthology of sequenced and graded stories seems both logical and strongly supported by the South African evidence. Given the perpetual budgetary and resource constraints of establishing and maintaining school libraries, priority should be given to equipping all classrooms with a minimum library of 100 storybooks that are grade-appropriate and in the learners' home language, in addition to anthologies of graded readers. Given the cost and scale implications, it makes sense to use or develop open-access books for this purpose, and/or to publish these stories in collections or volumes (see Ardington & Spaull 2022).

3.5 Tests

At the level of research and interventions, there has been considerable progress in the realm of assessment of early grade reading over the last 10 years. Wills et al. (this volume) document the large and growing body of early grade reading assessment (EGRA) data now available in South Africa. Although collected as part of randomised control trials to legitimately evaluate the impact of interventions, those same data have also been used to generate language-specific benchmarks (Mohohlwane et al., this volume). Likewise, EGRA in South Africa has been refined to assess salient orthographic elements for these specific languages (e.g. testing syllable as well as letter recognition), in addition to assessing and comparing the acquisition of simple and more complex letter-sound sequences, such as digraphs, trigraphs and consonant blends.

However, South Africa still lacks a national assessment at primary school. Following union opposition to the previous standardised primary school tests (the ANAs), they were discontinued in 2015 (Nuga Deliwe & Van der Berg 2022). Although there were psychometric problems with the ANAs, and the expansion to cover every grade from Grades 1 to 9 was unwise and over-ambitious, the assessments

did serve the purpose of setting grade-level expectations, and collecting data on learner outcomes for all primary schools. Their replacement (the National Systemic Evaluation), implemented in 2022, is sample-based, not universal, and will thus serve only part of their predecessor's function. As argued by Pretorius et al. (this volume), South Africa is in dire need of an early warning system that can identify reading problems in the early stages of schooling (Grades 1 and 2), give direct feedback to schools, provide them with practical guidelines to remediate struggling readers before they fall far behind, and flag schools that are not achieving minimal benchmarks to establish what further support their Foundation Phase teachers need. Given the need to also monitor mathematics outcomes, an early warning system could combine EGRA with Early Grade *Mathematics* Assessment. Existing initiatives to 'give EGRA to schools' amount to little more than providing teachers with the assessment instrument – an instrument that they do not know how to administer, use or incorporate into their current assessment practices. Similarly, parents have no way of gauging their children's (in)ability to read at grade level, since there are no standardised assessment results reported to parents at primary school.

3.6 Time

Children need time and practice to learn to read. Teaching letter-sounds and how to blend them is only one of several aspects of the early reading curriculum that needs to be taught in Grade 1. In successful education systems, this foundational skill is taught early and quickly (e.g. Aro 2017), so that pedagogic attention can focus on reading for meaning. Yet a consistent finding from large-scale studies in South Africa – that most Grade 1s hardly know any letter-sounds after a year of schooling – indicates that teaching even this constrained set of skills is a challenge. Pretorius et al. (this volume) call for faster pacing in phonics. Ineffective teaching is strongly linked to ineffective use of time in the classroom, a well-documented phenomenon in classroom studies (e.g. Schollar 2018; Hoadley 2018), with implications for both pre-service and in-service teacher training. Differences between schools in time (allocated time, teaching time, and actual learning time) and learner performance have been well researched, where ineffective use of classroom time manifests in a cluster of features such as inadequate lesson preparation, slow pacing, little or no constructive feedback, no clear lesson focus, poor time-on-task, no or inappropriate follow-up activities, and poor curriculum coverage in general (DeStefano 2012; Carnoy et al. 2012). All these features are associated with poor teacher content knowledge and pedagogic content knowledge (Taylor 2019); although class size can negatively impact the use of instructional time, ineffective time use occurs even when teachers have manageable classes. 'Triple cocktail'[4] interventions that use scripted lesson plans (together with reading resources and coaching support for teachers) have been shown to improve time-on-task generally by broadening teacher repertoires and routines, improving lesson focus, and making better use of instructional time (Fleisch & Alsofrom 2022). By showing teachers what

4. 'Triple cocktail' originally referred to the successful antiretroviral treatment of HIV, which, by analogy, was then used to mean the three successful elements included in most structured pedagogy programmes (see Fleisch 2018).

to do and how to do it, scripted lesson plans can improve teacher pedagogic content knowledge and thereby their use of instructional time. To what extent scripted lesson plans can also change teacher content knowledge is an issue that needs further investigation (Shalem 2017).

In the decade ahead, it is clear that more attention needs to be given to effective use of instructional time for foundational reading skills, in both pre-service and in-service teacher development. A reduction in very large classes (50+ learners), and the role that Foundation Phase HODs and classroom assistants can play in helping teachers use classroom time more effectively are also factors to be considered.

3.7 Minimum conditions for learning: Class sizes

Over and above the 6Ts, teachers and learners face constraints related to their home and schooling environments. While the DBE has little control over home-based factors like poverty, unemployment, and parental education, there are important factors within its control, such as class size. Teachers with 50–60 learners in their class will find it difficult to implement any new pedagogical practices or to use new resources or new methods of assessment. Previous research has shown that, partly due to a demographic birth surge in 2004 (Gustafsson 2018) alongside above-inflation teacher wage increases, there has been a decline in real per-learner spending over the last decade (Spaull et al. 2020). One hypothesised prediction from those studies is that class sizes are likely to rise. New TIMSS research from 2015 to 2019 shows that the percentage of Grade 5 children in very large class sizes (50+) has risen from 16% (2015) to 34% (2019) – a significant deterioration in this area (Spaull et al. 2022). Class sizes are determined not only by the total number of learners and teachers, but also factors like classroom utilisation and timetabling (DBE 2020b, 105).

In addition to the necessary reforms in text and training discussed in Sections 3.2 and 3.4, the DBE needs to establish class size limits that cannot be exceeded. Rather than trying to reduce overall class sizes across the country – which would be exceedingly costly – the DBE should take an equity-focus, and first eliminate all class sizes in excess of 60, then all class sizes in excess of 50, and so on.

4 Conclusion

Drawing together the conclusions of this chapter and the volume as a whole, it is clear that South Africa still has a long way to go before it reaches its stated goal of all children reading for meaning by age 10. While high-level political and policy commitments to early grade reading are necessary for improvement, they will not change teacher practices. There is now strong evidence that most South African learners are in classrooms where they do not learn the letters of the alphabet in Grade 1 or how to read words quickly enough to understand sentences in Grades 2 and 3 (Wills et al., this volume). This culminates in 78% of Grade 4 learners being unable to read for meaning on the PIRLS comprehension test. A large and systemic programme

to reform what prospective teachers are taught at university is needed, together with an intensive programme of support, and accountability for reading outcomes in Grades 1 to 3. Teachers need meaningful, high-intensity support, together with high-quality, structured learning materials. But there is also a dire need to monitor learning outcomes, and hold teachers and schools accountable. As the editors of this volume, we found ourselves repeatedly asking the question: *What are teachers doing in the classroom if more than 50% of children do not know all of the letters of the alphabet after 200 days of instruction in Grade 1?*

It is difficult to conceive how children can read for meaning and achieve high levels of literacy when they have not yet mastered the alphabetic principle, or are unable to decode words quickly enough to understand what they mean (i.e. to read accurately and fluently). The chapters in this volume make explicit both the current state of reading outcomes in South Africa (Wills et al.; Mohohlwane et al.), as well as the pedagogical regularities that lead to those outcomes (Hoadley & Boyd). This is notwithstanding the positive developments over the last decade in the fields of materials development, reading interventions, and gains in reading outcomes seen in PIRLS (Van Staden & Gustafsson, this volume). Unfortunately, however, a strong warning should be issued to reflect that at least a decade of progress may have been wiped out by the pandemic and related school closures (Ardington et al. 2021; Van der Berg et al. 2022b). In that context, new legal innovations such as the 'Right to Read and Write' (McConnachie & Lucwaba, this volume) may yet help to elevate the status of reading in the national discourse, and illustrate that it is at the heart of a fundamental denial of children's right to a basic education.

Although it has not been the focus of either this chapter or any others included in this volume, the imminent retirement of up to 45% of South African public-school teachers over the next 10 years (Van der Berg et al. 2022a) is an unprecedented demographic opportunity. It is imperative that we ensure that these new incoming teachers are, firstly, selected on merit (not nepotism), secondly, trained on the science of how to teach reading (especially in African languages), and, finally, equipped and supported with the materials needed to teach reading and the tests needed to assess it.

The true extent of the problem in early grade reading is now well understood by South African researchers and most policy-makers. The challenge is to transform that knowledge into policy reforms, with the budget allocations and political will needed for their success. Meaningful and intensive teacher support is needed, together with legitimate and defensible measures of accountability for what actually happens in the classroom. As a wave of teachers retire and an entirely new cohort of teachers fill South African schools, there is an unprecedented opportunity to reform how teachers teach reading, and, in so doing, move much closer to the goal of all children reading for meaning by age 10.

References

Ardington, A. & Spaull, N. (2022). Sequenced for success: Evaluating the impact of openly licensed Vula Bula anthologies of graded readers on early grade reading outcomes in South Africa. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Ardington, C., Wills, G. & Kotzé, J. (2021). COVID-19 learning losses: Early grade reading in South Africa. *International Journal of Educational Development* 86(C).

Armstrong, P. L. (2015). Teachers in the South African education system: An economic perspective. (Unpublished doctoral thesis). Stellenbosch University, Stellenbosch.

Aro, M. (2017). Learning to read Finnish. In Verhoeven, L. & Perfetti, C. (Eds), *Learning to Read Across Languages and Writing Systems*. 416–435. Cambridge: Cambridge University Press.

Awich, M. (2021). SACMEQ IV International Report. Southern and Eastern Africa Consortium for Monitoring Education Quality (SACMEQ). From: www.sacmeq.org/sites/default/files/sacmeq/reports/sacmeq-iv/international-reports/sacmeq_iv_international_report.pdf Accessed 2022-03-29.

Bowie, L., Venkat, H. & Askew, M. (2019). Pre-service primary teachers' mathematical content knowledge: An exploratory study. *African Journal of Research in Mathematics, Science and Technology Education* 23(3), 286–297.

Bulat, J., Dubeck, M., Green, P., Harden, K., Henny, C., Mattos, M., Pflepsen, A., Robledo, A. & Sitabkhan, Y. (2017). What We Have Learned in the Past Decade: RTI's Approach to Early Grade Literacy Instruction. From: eric.ed.gov/?id=ED582383 Accessed 2022-09-15.

Carnoy, M., Chisholm, L. & Chilisa, B. (2012). The Low Achievement Trap: Comparing Schooling in Botswana and South Africa. Pretoria: HSRC Press.

Castles, A., Rastle, K. & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest* 19(1), 5–51.

Chetty, D., Groome, P., Alsofrom, K. & Thurlow, J. (2022). Professional development to strengthen early grade reading: Lessons from the Primary School Reading Improvement Programme (PSRIP). In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Cummins, J. 2000. *Language, Power and Pedagogy: Bilingual Children in the Crossfire*. Clevedon: Multilingual Matters.

Department of Basic Education (DBE). (2009). Report of the Ministerial Task Team for the Review of the Implementation of the National Curriculum Statement. Pretoria: DBE.

Department of Basic Education (DBE). (2015) Action Plan to 2019: Towards the Realisation of Schooling 2030. Pretoria: DBE.

Department of Basic Education (DBE). (2020a). Action Plan to 2024: Towards the Realisation of Schooling 2030. Pretoria: DBE.

Department of Basic Education (DBE). (2020b). National Framework for the Teaching of Reading in African Languages in the Foundation Phase. Pretoria: DBE.

Department of Planning, Monitoring and Evaluation (DPME). (2014). 2014 Medium Term Strategic Framework (MTSF) 2014–2019. Pretoria: DPME.

Department of Planning, Monitoring and Evaluation (DPME). (2019). 2019 Medium Term Strategic Framework (MTSF) 2019–2024. Pretoria: DPME.

DeStefano, J. (2012). Opportunity to Learn: A Guide to Education Project Design Based on a Comprehensive Literature and Project Review. EQUIP2 State-of-the-Art Knowledge Series. Washington, DC: USAID.

Fleisch, B. (2018). *The Education Triple Cocktail: System-wide Instructional Reform in South Africa*. Cape Town: UCT Press.

Fleisch, B. & Alsofrom, K. (2022). Coaching research in the Early Grade Reading Studies in South Africa. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Gordon, S. & Harvey, J. (2018). Choice of language in education: Do we know what South Africans want? *Language and Education* 33(3), 226–243.

Gultig, J. (2017). African Storybook Initiative: External 'Accountability' Evaluation: 2013–2016. South African Institute for Distance Education (SAIDE). Johannesburg: SAIDE.

Gustafsson, M. (2018). Understanding the Sharp Primary Level Enrolment Increases Beginning in 2011. Stellenbosch Economic Working Paper Series, WP08/2018. Stellenbosch: Stellenbosch University.

Hoadley, U. (2017). *Pedagogy in Poverty: Lessons from Twenty Years of Curriculum Reform in South Africa*. London: Routledge.

Howie, S. J., Van Staden, S., Tshele, M., Dowse, C. & Zimmerman, L. (2012). PIRLS 2011: South African Children's Reading Literacy Achievement Report. Pretoria: CEA, University of Pretoria.

Hungi, N., Makuwa, D., Ross, K., Saito, M., Dolata, S., van Capelle, F., Pavior, L. & Vellien, J. (2010). SACMEQ III Project Results: Pupil Achievement Levels in Reading and Mathematics. Southern and Eastern Africa Consortium for Monitoring Education Quality (SACMEQ). From: www.sacmeq.org/sites/default/files/sacmeq/reports/sacmeq-iii/working-documents/wd01_sacmeq_iii_results_pupil_achievement.pdf Accessed 2022-09-15.

Jackson, M.-J. 2013. Explaining linguistic thresholds and reading comprehension skills-transfer in a Grade 6, isiXhosa-English additive bilingual context. (Unpublished master's dissertation). Makhanda: Rhodes University.

Katz, J. & Rees, S. (2022). Molteno's Vula Bula: Conceptualisation, development, and implementation. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Mbude, N. N. (2019). isiXhosa as the language of teaching and learning mathematics in grade six: Investigating the mother tongue based bilingual education mathematics pilot in the Eastern Cape Province, South Africa. (Unpublished doctoral thesis). Rhodes University, Makhanda.

McKay, V. & Spaull, N. (2022). Changing the 'grammar of schooling' in South Africa: The case of the DBE Workbooks. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Motshekga, A. (2022). Minister Angie Motshekga: Seminar on the Eastern Cape Mother Language Education Programme. South African Government. 22 February 2022. From: www.gov.za/speeches/minister%C2%A0angie%C2%A0motshekga-seminar-eastern-cape-mother-language-education-programme-22-feb Accessed: 2022-09-15.

Mullis, I. & Martin. M. (Eds), (2015). TIMSS 2015 Assessment Framework. Boston, MA: TIMSS & PIRLS International Study Centre.

National Education Evaluation and Development Unit (NEEDU). 2013. National Report 2012: The State of Teaching and Learning in the Foundation Phase. Pretoria: NEEDU.

National Education Evaluation and Development Unit (NEEDU). 2014. National Report 2013: Teaching and Learning in Rural Primary Schools. Pretoria: NEEDU.

National Reading Panel (2000). Teaching Children to Read: An Evidence-based Assessment of

the Scientific Research Literature on Reading and its Implications for Reading Instruction. Rockville, MD: NICHD.

National Treasury. 2013. Estimates of National Expenditure 2013 (Abridged version). Pretoria: National Treasury.

National Treasury. 2021. Medium Term Budget Policy Statement 2021. Pretoria: National Treasury.

Nuga Deliwe, C. & Van der Berg, S. (2022). The role of assessment in Foundation Phase improvement: The Annual National Assessments and beyond. In Venkat, H. & Roberts, N. (Eds), *Early Grade Mathematics in South Africa*. Cape Town: Oxford University Press.

Ramaphosa, C. (2019). President Cyril Ramaphosa: State of the Nation Address 2019. South African Government. 20 June 2019. www.gov.za/speeches/2SONA2019 Transcript.

Rule, P. & Land, S. (2017). Finding the plot in South African reading education. *Reading & Writing* 8(1), a121.

Schollar, E. (2018). Curriculum management, improving learner performance and the rise of multi-grade classes: A tangled web of challenges to the design, operation and evaluation of educational development programmes in South Africa. In Christie, P. & Monyokolo, M. (Eds), *Learning About Sustainable Change in Education in South Africa: The Jika iMfundo Campaign 2015–2017*. 99–124. Saide: Johannesburg.

Sesotho and isiZulu Reading Project (SIRP). (2019). Report on Teaching Reading in Sesotho and isiZulu at HEIs. Johannesburg: JET Education Services.

Shalem, Y. (2017). Chapter 12 Scripted Lesson Plans: What is visible and invisible in visible pedagogy? In Barrett, B., Hoadley, U. & Morgan J. (Eds), *Knowledge, Curriculum and Equity*. 183–199. London: Routledge.

Southern Hemisphere. (2021). Evaluation of the Primary Teacher Education (PrimTEd) Project: Outcomes. Cape Town: Southern Hemisphere.

Spaull, N. (2011). Primary School Performance in Botswana, Mozambique, Namibia, and South Africa. SACMEQ. Working Paper. From: www.sacmeq.org/sites/default/files/sacmeq/publications/08_comparison_final_18oct2011.pdf Accessed 2022-09-15.

Spaull, N. (2018). Strategies for Long-term Prosperity: What Would It Take to Place SA on a Higher-growth Trajectory? Input Note to the Presidential Roundtable on 22 November 2018. From: nicspaull.files.wordpress.com/2022/06/nic-spaull-ramaphosa-roundtable-input-28-nov-2018.pdf Accessed 2022-06-30.

Spaull, N. (2019a). Priorities for Education Reform in South Africa. Input paper for the Economic Colloquium hosted by the Minister of Finance, Tito Mboweni. 19 Jan. South African Reserve Bank. Pretoria. From: nicspaull.files.wordpress.com/2019/01/v2-spaull-priorities-for-educ-reform-treasury-19-jan-2019.pdf Accessed 2022-06-30.

Spaull, N. (2019b) Learning to Read and Write for Meaning and Pleasure. In Spaull, N. & Comings, J. (Eds), *Improving Early Literacy Outcomes*. Boston, MA: Brill Sense.

Spaull. N. (2022). Background Report: 2030 Reading Panel. www.readingpanel.co.za/resources Accessed 2022-09-14.

Spaull, N. & Taylor, S. (2022). Impact or scale? The trade-offs of early grade reading and mathematics interventions in South Africa. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Spaull, N., Lilenstein, A. & Carel, D. (2020). The Race between Teacher Wages and the Budget: The Case of South Africa 2008–2018. Stellenbosch: ReSEP, Stellenbosch University.

Spaull, N., Courtney, P. & Qvist, J. (2022). Mathematical stunting in South Africa: An analysis of Grade 5 mathematics outcomes in TIMSS 2015 and 2019. In Venkat, H. & Roberts, N. (Eds), *Early Grade Mathematics in South Africa*. Cape Town: Oxford University Press.

Taylor, N. (2019). Inequalities in teacher knowledge in South Africa. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. 263–282. Cham: Springer.

Taylor, S. & Spaull, N. (2022). What works and what scales? Returning to a tradition of evidence-based system-wide programmes. In Spaull, N. & Taylor, S. (Eds), *Early Grade Reading and Mathematics Interventions in South Africa*. Cape Town: Oxford University Press.

Taylor, S. & Von Fintel, M. (2016). Estimating the impact of language of instruction in South African primary schools: A fixed effects approach. *Economics of Education Review* 50, 75–89.

UNESCO Institute for Statistics (UIS). (2009). Global Education Digest 2009: Comparing Education Statistics Across the World. Montreal: UIS.

Van der Berg, S. & Gustafsson, M. (2019). Educational outcomes in post-apartheid South Africa: Signs of progress despite great inequality. In Spaull, N. & Jansen, J. D. (Eds), *South African Schooling: The Enigma of Inequality*. Cham: Springer.

Van der Berg, S., Spaull, N., Wills, G., Gustafsson, M. & Kotzé, J. (2016). Identifying Binding Constraints in Education: Synthesis Report of the Programme to Support Pro-poor Policy Development (PSPPD). Stellenbosch: ReSEP, Stellenbosch University.

Van der Berg, S., Gustafsson, M. & Burger, C. (2022a). School Teacher Supply and Demand in South Africa in 2019 and Beyond. Pretoria: DHET.

Van der Berg, S., Hoadley, U., Galant, J., Van Wyk, C. & Böhmer, B. (2022b). Learning losses from COVID-19 in the Western Cape: Evidence from Systematic Tests. Stellenbosch: ReSEP, Stellenbosch University.

Venkat, H. & Spaull, N. (2015). What do we know about primary teachers' mathematical content knowledge in South Africa? An analysis of SACMEQ 2007. *International Journal of Educational Development* 41, 121–130.

Index

Page numbers in italics indicate figures or tables.

F

G

H

I

Q

R

S

EARLY GRADE READING IN SOUTH AFRICA

READING

By the end of Grade 3, four in five South African children have not learned to read in any language.

This volume brings together 21 South African researchers from eight universities, prominent NGOs, and government to take stock of why this is the case, and what is now known about early grade reading in the country. The years since 2010 have been especially fruitful in terms of both data collection and analysis, with insights from large-scale longitudinal assessments of reading in African languages, and in-depth classroom observations of pedagogy and practice. Drawing on data from more than 40,000 learners in no-fee schools, authors report language-specific reading regularities and propose evidence-based reading benchmarks for Grades 1, 2 and 3.

In addition to reviews of learner outcomes and the curriculum, the chapters also document developments in pre-service and in-service teacher education, pre-school language development, and access to appropriate texts, as well as details of the development of a new generation of learner workbooks, teacher guides, and decodable stories. The volume closes with an assessment of how the 'right to read and write' might be interpreted by the executive, the legislature, and the judiciary in South Africa.

The volume will interest researchers and policy-makers engaged with understanding why children cannot read, what can be done about it, and where to focus policy attention.

"Until recently, much of education policy and planning with respect to early grade reading was based on a mix of tradition, guesswork, and sentiment. Now, for the first time, we have in our hands the most comprehensive empirical research yet on the (lamentable) state of reading in South Africa, and how to fix the problem. Skilfully edited and highly accessible, this book holds significant value for parents, teachers, researchers, and the general public concerned about reading and the foundations of education in South Africa – and, critically, what to do about it."

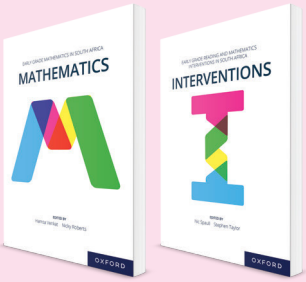
Jonathan Jansen
Distinguished Professor,
Stellenbosch University

EDITORS

Nic Spaull is an associate professor in the Research on Socioeconomic Policy (ReSEP) group within the Economics Department at Stellenbosch University.

Elizabeth (Lilli) Pretorius is an emerita professor and research fellow in the Department of Linguistics and Modern Languages at the University of South Africa.

Also available:



OXFORD UNIVERSITY PRESS

www.oxford.co.za

A Proud Shareholder
THE MANDELA RHODES FOUNDATION

ISBN 978 0 19 075171 5

SOUTH AFRICA