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Consolidating research and comparing practice

What funders need to know for meaningful engagement
with literacy in South Africa

Research Brief

Kelly Shiohira

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Acronyms and abbreviations

ABET	adult basic education and training
ARESTA	Agency for Refugee Education, Skills Training & Advocacy
CAPS	Curriculum and Policy Statements
DBE	Department of Basic Education
ECD	early childhood development
EFAL	English First Additional Language
EGRS	Early Grade Reading Study
ELET	Environment and Language Education Trust
FET	further education and training
ICT	information and communications technology
IQ	intelligence quotient
ITE	initial teacher education
JET	JET Education Services
LOLT	language of learning and teaching
NASCEE	National Association for Social Change Entities in Education
NECT	National Education Collaboration Trust
NGO	non-governmental organisation
OECD	Organisation for Economic Co-operation and Development
PILO	Programme to Improve Learning Outcomes
PIRLS	Progress in International Reading and Literacy Study
PISA	Programme for International Student Assessment
PMET	Pearson Marang Education Trust
PrimTED	Primary Teacher Education Project
UNESCO	United Nations Educational, Scientific and Cultural Organization
USA	United States of America
USAID	United States Agency for International Development
YOUPSA	Youth Potential South Africa





Introduction

literate (adjective)

lit·er·ate | \ 'li-tə-rət also li-trət \

definition of literate:

- a. educated, cultured
 - b. able to read and write
- a. versed in literature or creative writing
 - b. lucid, polished
 - c. having knowledge or competence

As the dictionary confirms, the definition of literate and, by extension, literacy, is complex. We speak of digital literacy, workplace literacy, media literacy, transliteracy, cultural literacy, information literacy, visual literacy. We talk to literacy in the contexts of neurological processing, multilingualism, technology, work and lifelong learning. We implicitly recognise that 'illiterate' is easier to define than 'literate' – the latter is highly context-dependent.

And yet, one of the core purposes of the South African curriculum is to ensure literacy across the various terrains in which it is necessary – linguistic, cultural, historical, political, mathematical and scientific. The curriculum most closely linked to literacy, the Language curriculum, plays an important role in enabling more advanced literacies through providing a structured bridge to both the form and application of literacy processes.

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The definition of literate and, by extension, literacy, is complex.

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Conversations about literacy

Literacy is woven in the woof and texture of societies, developed and developing, in all of the institutions of societies sacred and secular - economic, political, social, educational and cultural. (Bhola, 1995, 4–5)

What is literacy and what are the arguments for investing in it?

Gray, in his seminal work, *The Teaching of Reading and Writing*, defined literacy as the ‘ability to read an easy passage and to write one’s name or a simple message’ (Gray, 1969 20), a definition at times taken up by various international organisations including the United Nations Educational, Scientific and Cultural Organization (UNESCO), likely due in large part to its simplicity and ability to be measured. However, Gray himself recognised that this definition covered only the simplest aspect of literacy, the ability to encode and decode, and so developed a further definition of ‘functional literacy’: the ability to ‘engage effectively with all those activities in which literacy is normally assumed in his culture or group’ (1969, 24).

The definition of literacy has continued to evolve over time, and there is no consensus on what being literate means. However, there are a few definitions which are useful to consider in the current literacy context:

- The Progress in International Reading and Literacy Study (PIRLS) 2006 defined reading literacy as ‘the ability to understand and use those written language forms required by society and/or valued by the individual. Young readers can construct meaning from a variety of texts. They read to learn, to participate in communities of readers

in school and everyday life, and for enjoyment’ (Mullis, Kennedy, Martin & Sainsbury, 2006, 3).

- The Programme for International Student Assessment (PISA) defined literacy as ‘understanding, using, reflecting on and engaging with written texts in order to achieve one’s goals, develop one’s knowledge and potential, and participate in society’ (Organisation for Economic Co-operation and Development, 2006, 46, cited in Keefe and Copeland, 2011, 93).

The discrepancy between literacy and functional literacy as described by Gray, as well as the emphasis in modern definitions on participation, engagement and self-development, highlight the two key aspects which need to be considered by any education system: the ability to read and write; and the ability to apply the basic skills of literacy in contextually appropriate and useful ways across various subjects in the curriculum.

Therefore, while literacy acquisition is most commonly linked to Language subjects, the acquisition of literacy, or failure to acquire literacy, has notable consequences for all learning outcomes in all subjects and for the future of individuals.

The arguments for investment in literacy are varied and persuasive. One of the goals of government-sponsored education systems is economic, social and (in a democratic system) political participation by citizens. Literacy is seen as a crucial element of empowerment – ‘the set of feelings, knowledge, and skills that produce the ability to participate in one’s social environment and affect the political system’ (Stromquist, 2009, 2). A second argument is economic – myriad studies in both developed and developing countries (see, for example,

Barro, 1991; Hanushek & Kimko, 2000; Hanushek, Schwedt, Wiederhold & Woessmann, 2015; Odit, Dookhan & Fauzel, 2010) have shown that increased schooling leads to improved individual income and generally positive social returns, for example, reductions in crime and improved health (Hanushek & Woessmann, 2007). However, some caveats are noted in the international literature, notably, that maximal outcomes are dependent on adequate early childhood education which ensures school readiness (García, Heckman, Leaf & Prados, 2016), and that schooling must be structured in such a way as to be considered 'quality' (Hanushek & Woessmann, 2007). Definitions of quality education vary, but a key factor in determining the quality of education could be considered to be whether or not the education received is likely to result in its intended curriculum outcomes.

A number of those curriculum outcomes relate directly or indirectly to literacy. As numerous as the methods of receiving information may be, education systems internationally continue to rely on a combination of spoken and written language to teach and learn, although with the increase in distance, digital and self-paced learning schemes, it is possible the balance is tilting towards reliance on written texts, especially in higher and lifelong education contexts. Therefore, a core enabler of further learning is mastery of the most basic definition of literacy – the ability to read and write. Building on this, more complex definitions of literacy emerge: what forms the foundation for future learning are engagement, participation, reflection and the use of texts for personal, goal-oriented development.

How do children acquire literacy?

The ability to read and write is an unnatural process bolted onto other innate functions in our brains including visual reception, aural reception, language production centres and motor function (Wolf, 2008). The general process of reading involves taking in visual information (written text) which is processed in the occipital lobe at the back of the brain, linked to an auditory processing centre in the temporal lobe near the ear (Wernicke's area). Between these two lies the fusiform gyrus which is believed to play a role in word recognition (also called the letterbox area). Together, these three regions of the brain take in written words and process them into a form we can understand – spoken words, even if we don't say them out loud. In South African languages, we do this through a process of phoneme-grapheme assignment – essentially, connecting letters to the sounds they represent.

Producing written text relies on Broca's area, by the temple, where spoken language is produced. The intended spoken language is connected to letters in the temporal lobe and further linked to gross and fine motor function.

Based on what we know of the physiology and neurology of reading, there are a number of things which have to happen in order for reading and writing to take place. Gross and fine motor skills have to be developed, and the parts of the brain involved in reading need to develop their primary functions – seeing, listening and speaking using language. Learning to read is, on a fundamental level, the process of creating new neural pathways between these parts of the brain in order to achieve a new skill – literacy.

This process follows a general pathway which Wolf (2008) outlined in a series of stages, from beginning to expert reader:

- Emerging pre-reader: In this stage, which takes place largely in the home, children are first exposed to print in the environment and in books, develop print concepts, listen to books read by an adult and answer questions about stories, learn to tell stories and retell stories they have heard, and learn the alphabet and how to write their own names.
- Novice reader: Children learn to connect sounds and letters and to read simple text with high frequency and phonemically regular words.
- Decoding reader: Children achieve automaticity and no longer have to think about the sounds letters make. They read simple stories and passages with increasing fluency and consolidate their skills.
- Fluent comprehending reader: Reading is used to gain new ideas, feelings and perspectives. Reading engages a wide range of texts including books, textbooks, newspapers, articles and reference books which introduce new vocabulary and concepts.
- Expert reader: Reading takes place widely across many disciplines (history, politics, sciences, etc.) from a variety of texts and engages multiple perspectives. The development of reading never ends, and this stage continues for the duration of one's life.

How is literacy taught?

Through research and some degree of trial and error, in the South African curriculum, as specified in the South African Curriculum and Policy Statements (CAPS), the process of learning to read, essentially covering the first three stages of Wolf's developmental pathway, has been refined into a series of component skills which are intensely developed until Grade 3. The most dominant conversations occur around skills listed by the National Reading Panel (2000) report, a large-scale, rigorous evaluation of research into literacy which sought to determine the best reading pedagogies – in large part, to put to rest a decades-long debate about and vacillation between whether schools should use a whole language approach to reading or a phonics approach. The National Reading Panel determined that the skills focus for effective reading instruction should be: phonemic awareness (many researchers and frameworks broaden this to phonological awareness), phonics, fluency, comprehension and vocabulary.¹

Phonological awareness refers to the ability to identify and manipulate language orally (Heilman, 2006), generally on four levels: word, syllable, onset-rime and phoneme. Phonemes are the smallest unit of language, a single sound. Phonological awareness refers to the ability of learners to identify, add, delete or exchange letters, syllables, onsets/rimes and words. Of the four levels, phonemic awareness has been proven by research to be the most important for reading (Alcock, Ngorosho, Deus & Jukes, 2010; Ehri, Nunes, Stahl & Willows, 2001; Pretorius, 2015; Wagner & Torgesen, 1987).

In South African instruction, phonological awareness is often included in oral language development. Oral language has been found to impact vocabulary (Clay, 1998). Vocabulary, together with language exposure, has been shown to impact on academic performance in the early grades (Anderson & Nagy, 1995; Hart & Risley, 2003; Nagy, 1988; Pence & Justice, 2008).

Phonics refers to the concrete ability to connect written letters (graphemes) to spoken sounds (phonemes) and vice-versa. This ability to map graphemes to phonemes is called decoding, a strategy which allows a beginning reader to approach a word through its component parts, one phoneme at a time (Wolf, 2008).

Together with phonics, children often learn print concepts, or the basic knowledge needed to read – where the text begins and ends, the direction of

the text and so forth. While children with a robust home literacy environment may learn these details implicitly through watching and reading with parents (Wolf, 2008), the extent of home literacy activities and the extent to which these activities are relevant to academic life varies significantly (Heath, 1982).

According to Schreiber (1991), fluency refers to the ability of learners to read with automaticity (speed), accuracy and prosody (the ability to appropriately mimic the inflections, pauses and nuances of spoken language while reading) (Kuhn & Stahl, 2003; Schreiber, 1991). Fluency develops through repeated practice with a wide variety of texts (Wolf, 2008).

Coltheart, Rastle, Perry and Langdon (2001) studied patterns of fluent reading using neuroimaging techniques and, based on the output, proposed a dual-route neurophysiological model of literacy. What they found was that when subjects read an unknown or unfamiliar word, it followed the phonemic processing route through the temporal lobe (for phoneme-grapheme assignment) to Broca's area (speech production). If the word was familiar or well-known, it followed a fast track route straight from the occipital lobe (visual processing) to Broca's area without passing through phonemic assignment centres. It is theorised that this dual-route mechanism, referred to as the Dual Route Cascade Model, is what enables high degrees of fluency and comprehension as it frees up the brain's processing power for more complex comprehension and utilisation-focused tasks.

Vocabulary speaks to the number of words which are known by an individual. Vocabulary can be *receptive*, meaning the individual can understand the word if heard or read in context, or *productive*, meaning the individual can say or write the word in the correct contexts in addition to understanding it. Vocabulary can be explicitly taught, or individuals can use strategies to learn vocabulary independently. Wide reading is important for vocabulary building.

Comprehension is a complex set of skills which builds over time and has been shown to correlate with complex factors including socio-economic status, fluency, vocabulary and IQ (see for examples of studies, Baumann, Font, Edwards & Boland, 2005; Jenkins, Antil, Wayne & Vadasy, 2003; Kuhn & Stahl 2003; Perfetti & Marron, 1995). In the context of literacy, there are two prominent tools which teachers use to assist with comprehension: Barrett's taxonomy and Bloom's taxonomy.

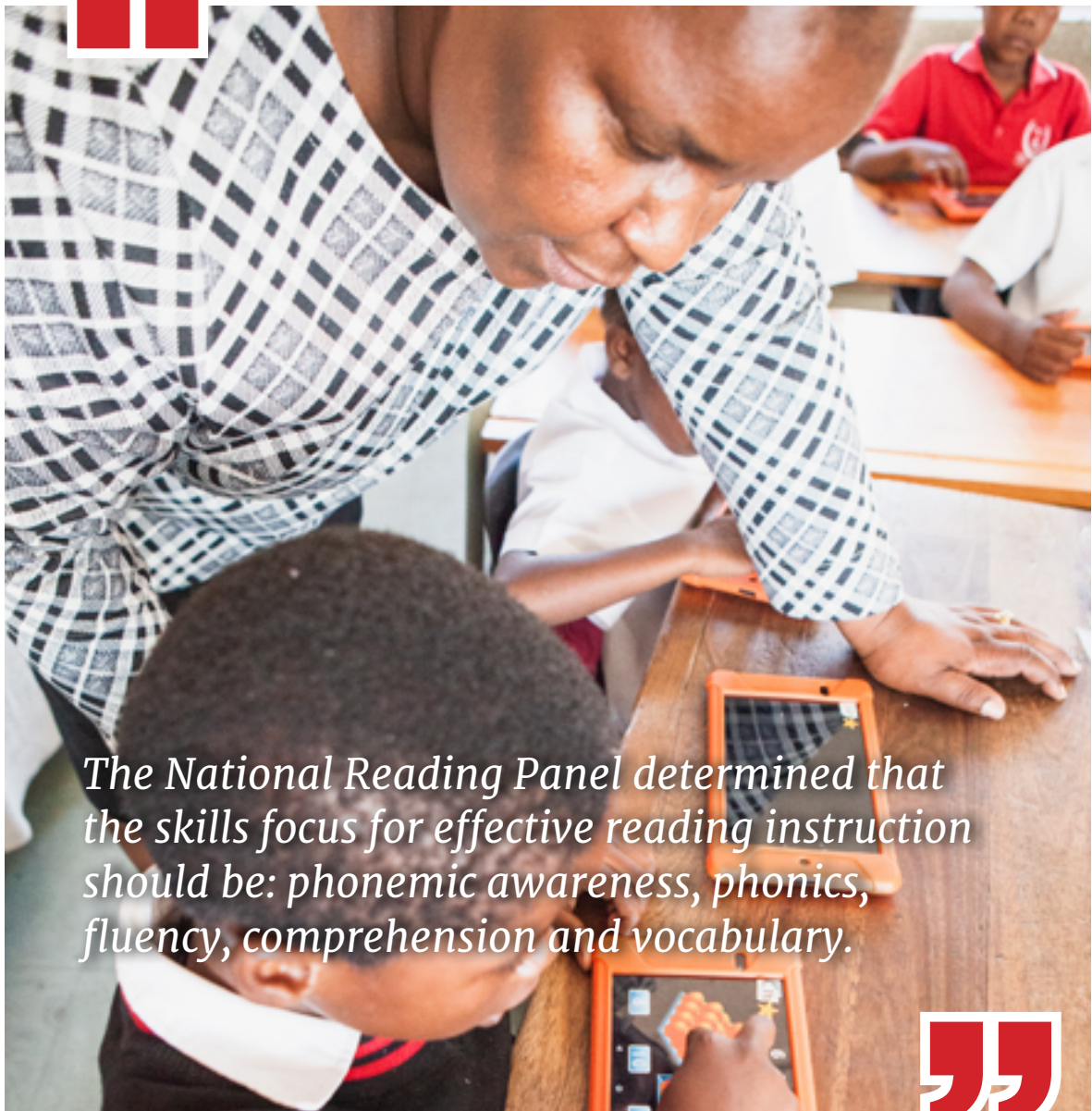
1 Vocabulary was originally included as part of comprehension.

Barrett's taxonomy deals with types of questions on five levels: literal/direct (who/what/when/where/why and story events); reorganisation (classifying, outlining, summarising, synthesising information); inference (prediction, using context, relating to the outside world and other texts); evaluation (why, how, making judgements); and appreciation (feelings, reactions, reflection).

Bloom's taxonomy presents a series of skills linked to literacy which teachers should strive to engage: remembering (who/what/when/where/why and story events); understanding (sequence, illustrate, outline,

summarise), applying (act out, write based on a story, build models of a story, illustrate); analysing (compare/contrast, classify, map characters or events); evaluating (debate, research, present); and creating (write, design, build).

The skills and abilities outlined in Barrett's and Bloom's taxonomies present the foundations necessary for engagement in the second definition of literacy – the ability to gather, reflect and use the knowledge gained from a text together with other sources for advanced purposes such as reflection, self-development and the generation of new knowledge.



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Literacy in English as a First Additional Language

English language teachers and academics alike have long been aware of the difficulties in learning in a second language. Numerous studies have shown that home language speakers persistently outperform English language learners, a result confirmed by Flores, Batalova and Fix (2012) in a longitudinal study which tracked the performance of learners from Grade 3 to 11 in the state of Texas, USA.

Factors which influence how quickly a learner can acquire a second language include age, motivation (both intrinsic and extrinsic), exposure to the language, access to native speakers, quality of curriculum and instruction, and the extent of semantic (vocabulary) and structural (grammar) differences between the learner's first language and the language they want to acquire (Anderson & Nagy, 1995; Lightbrown & Spada, 2013; Macaro, 2010).

A number of techniques are available to support language learners' in-text comprehension. Most techniques focus on activation of prior knowledge, and prominent proven techniques include purpose-setting questions (Royer, Bates & Konold, 1984), concept mapping (Novak & Gowin, 1984), semantic mapping (Johnson, Pittleman & Heimlich, 1986) and pre-teaching vocabulary (Anderson & Freebody, 1981). Of these, vocabulary knowledge is one of the most crucial (Nagy, 1988).

What are the current international conversations in literacy?

Research into literacy and different aspects of literacy is ongoing, and the number of studies conducted is vast. However, there are a few prominent studies which are shaping the direction of literacy efforts internationally and within South Africa. See Table 1 on pages 12 and 13.

One other prominent factor which features in international research on literacy is the importance of home literacy activities (for example, caregivers conversing, reading, drawing and discussing text with children). Home literacy activities have been shown to have a positive effect on student attainment (Organisation for Economic Co-operation and Development, 2012), and the reported number of books in the home has been shown to be a more significant predictor of learner performance than parents' education, occupation and socio-economic status (Clark, 2011; Evans, Kelley, Sikora & Treiman, 2010; McQuillan, 1998).

In addition, there are three prominent theories which shape a large part of current thinking about language and literacy acquisition, particularly in South Africa.

Central Cognitive Processing Hypothesis

The Central Cognitive Processing Hypothesis (Geva & Seigel, 2000) suggests that literacy acquisition depends on the development of common metalinguistic and cognitive processes such as phonological and phonemic awareness, lexical ability, working memory and automaticity. Therefore, the development of these skills in one language will translate to additional languages learnt, allowing for easier acquisition of literacy skills in a second language. In other words, this theory espouses interdependence between literacy skills across languages. This theory has been supported by research across multiple language pairs, including Herero/English (Veii & Everatt, 2005).

This theory is used to support early grade mother-tongue instruction in literacy; the argument being that if learners learn to read well in their mother-tongue, the skills and neural connections they use to do that will allow them to pick up reading in English more easily. In conjunction with the study by Williams (1996) which showed similar English results from Grade 5 learners taught in English and those taught in their home language, learners taught in home language should be able to master at least as much English as their peers taught exclusively in English.²

Script-Dependent Hypothesis

The Script-Dependent Hypothesis (discussed in Liberman, Shankweiler, Fischer & Carter 1974; Lindgren, De Renzi & Richman, 1985) posits that the duration of time necessary to learn literacy in a language is dependent upon how consistently letters represent sounds in that language. For example, English speakers take on average a year longer to acquire literacy than Spanish speakers. English takes longer because it is more opaque, meaning there is not a one-to-one correspondence between letters and

sounds. For example, the same letter ‘a’ in the three words ‘man’, ‘bake’ and ‘car’ is a completely different sound in each word.

Excitingly, African languages are highly transparent, with nearly a one-to-one correspondence between letters and sounds. Theoretically, they should be relatively easy languages to learn to read in.

Psycholinguistic Grain Size Theory

The Psycholinguistic Grain Size Theory (Ziegler & Goswami, 2005) is a theoretical framework to explain cross-language data, including how literacy in one language could affect literacy in another. It can be viewed in some ways as an extension of the script-dependent hypothesis, but taking into account availability, consistency and granularity in explaining differences in literacy acquisition across languages. *Availability* references whether or not a sound exists in both the home language and the target language. For example, for an English speaker learning to read in isiXhosa, one challenge is accurately portraying the ‘xh’ sound because it is not a sound that exists in English and has to be added to the repository of available sounds. *Consistency* speaks to the same factors as those found in the script-dependent hypothesis – how often does each letter make one sound in the language? Finally, *granularity* deals with how much each symbol represents – letters represent sounds, for example, while Chinese characters represent multiple sounds. According to the theory, the larger the ‘grain’, the longer it takes to learn to read that language.

Much of the research conducted into African languages and literacies in the last five years has referenced this theory, and one of the things that seems not to have been done well is mapping English against African languages to determine which sounds need to be added to the existing phonologies of African-speaking learners in order to enable fluent English reading.

² However, it must be noted that in South Africa this theory has not played out to date – PIRLS results show that learners in English and Afrikaans medium schools, even when they are not first language English or Afrikaans speakers, far outperform home language learners. School quality undoubtedly plays a large role in this.

Table 1: Prominent studies which are shaping the direction of literacy efforts

Name and description	Date	Author(s)	Key findings	Implications
<p><i>The early catastrophe: The 30 million word gap by age 3</i></p> <p>Longitudinal research following 42 families of different income levels from the time their children are 7 months old to age 3, conducting one hour of observation every month.</p>	2003	Hart, B; Risley, T.	<p>The number of words addressed to children as well as the variety and length of utterances varied significantly among socio-economic groups. By age 3, children were mimicking the speech patterns of their caregivers. Children from high-income families would experience 30 million more words by age 4 than children from low-income families.</p>	<p>The study is a prominent one which galvanised efforts at improving early language interactions through early childhood development (ECD) initiatives and targeted interventions with low income parents.</p>
<p><i>Double jeopardy: How third-grade reading skills and poverty influence high school graduation</i></p> <p>Longitudinal study following nearly 4 000 American students from Grade 3 to Grade 12 graduation.</p>	2011	Hernandez, D.	<p>Those who don't read proficiently by 3rd grade are four times more likely not to achieve an on-time Grade 12 graduation than proficient readers. Those without even basic literacy skills by Grade 3 were six times more likely not to graduate in the expected year.</p> <p>The effects were exacerbated by conditions of poverty, and 26% of poor readers who spent at least one year in poverty failed to graduate. The rate rose to 31–33% for minority students.</p>	<p>This study has cemented the idea of Grade 3 as a critical pivot point of the education system and incited an urgency to ensure all learners are competent readers by the end of Grade 3.</p>
<p><i>Reading in two languages at year five in African primary schools</i></p> <p>English and home language reading tests were conducted on Grade 5 learners in two countries – Malawi, which used local languages as a medium of instruction through Grade 4, and Zambia, which used English as a medium of instruction from Year 1.</p>	1996	Williams, E.	<p>The results indicated no significant difference in English language reading ability between Grade 5 learners in the two countries. However, learners in Malawi performed much better on local language reading ability tests.</p> <p>In both countries, English reading proficiency of most learners was not at a level indicative of learners being able to learn through the medium of English.</p>	<p>This study was the first in a series of studies with similar results, and was influential in launching campaigns for mother-tongue reading initiatives in many nations, including South Africa, which promotes home language as the language of learning and teaching (LOLT) up to Grade 3, after which many schools switch to English or Afrikaans as the LOLT.</p> <p>The second major finding (of poor English skill) is cited less often.</p>

Name and description	Date	Author(s)	Key findings	Implications
<p><i>How long does it take English learners to attain proficiency?</i></p> <p>An analysis of multiple data sets of English language learners in immersive environments to determine the length of time necessary to attain academic English proficiency.</p>	2000	Hakuta, K; Butler, Y; Witt, D.	The authors found that English language learners take three to five years to develop oral proficiency and between four and seven years to develop academic proficiency, or the ability to use English in academic schooling contexts.	<p>The implications of this study were intended for policy-makers pushing one-year immersion programmes; the study suggested that these programmes were doomed to failure.</p> <p>Further implications for education systems taking up English as a medium of instruction have yet to be fully realised, but further research is starting to support Hakuta et al.'s conclusion.</p>
<p><i>The Early Grade Reading Study</i></p> <p>Three interventions in 50 schools were tracked over three years: a parental support intervention; a centralised training model; and a 'triple cocktail' of lesson plans, resources and coaching.</p>	2016	Taylor, S; Cilliers, J; Prinsloo, C; Fleisch, B.; Reddy, V.	Findings included that all three interventions had positive effects, but that 'the triple cocktail' was more effective than a centralised training model or a parental intervention. In three years of intervention, the triple cocktail method resulted in learners being four to five months ahead of peers in control schools. Effects were concentrated in urban schools and with mid-to-high performing learners. Positive effects were also found in English.	The Early Grade Reading Study (EGRS) provided solid evidence for improvement based on lesson plans, resourcing and teacher coaching, a combination now advocated by the South African Department of Basic Education (DBE) and a feature of DBE-linked, large-scale projects. The results also support international theories about reading skills transfer between languages.

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South African research

Literacy in African languages

The teaching of reading in sub-Saharan Africa is based on western pedagogies (mainly English and French). However, there is a need to consider both the linguistic features and the social context of the languages in which literacy is being learnt (Truddell & Schroeder, 2007). Linguistic features include morphological, phonological and orthographical features, and it has been suggested that the uniqueness of these elements in African languages may render prominent reading theories such as the Dual Route Cascade Model of Coltheart (Coltheart, 1978; Coltheart et al., 2001) and traditional practices for literacy instruction less applicable in African languages than in English or French (Pretorius, 2017; Schroeder, 2013).

Recently, the need for cross-disciplinary research into African languages and literacy acquisition in African languages has come into the forefront of the literacy discourse in South Africa. While research into South African languages, perception of languages and educational performance has a long history in the country, in the last five years, a concentrated focus on understanding the linguistic features of African languages and the role these play in literacy acquisition has emerged.

Some differences in African language reading have been noted, particularly with relation to agglutinative³ languages such as isiZulu and isiXhosa. In one of the more prominent studies, Sandra Land (2015) used

eye-tracking methods to study some of the mechanics of reading among fluent isiZulu adult speakers. Some prominent findings included that isiZulu texts take longer to read and that readers of isiZulu skip very few words. In addition, instant word recognition – linked to the ‘automatic’ pathway of the Dual Route Cascade Model (Coltheart et al, 2001)⁴ – is rarer than in English, and fixations and regressions are more common. Perhaps in a related matter, in 2016, Sian Rees performed one of the first studies on the role of morphology, or changes in word structure related to meaning (such as the shift from ‘read’ to ‘reading’). She found a significant relationship between morphological awareness and decoding ability, suggesting that awareness of morphology and morphological complexity may play a role in fluent reading in African languages. In addition, studies replicating that of Williams (1996) with its focus on home language teaching versus English language teaching have had mixed results, but notably have been generally small in scale (see, for example, Wilsnach, 2013).

In particular, the three main theories outlined above (the Central Cognitive Processing Theory, the Script-Dependent Hypothesis and the Psycholinguistic Grain Size Theory) have been tested by research into African languages, with the result that these theories have largely been upheld. For example, Malda, Nel and Van de Vijver (2014) conducted investigations into the effect of orthographic depth into literacy development using Afrikaans, Setswana and English. They found that although similar pathways to reading

3 ‘Agglutinative’ or ‘conjunctive’ languages are South African languages which break text up at the word level. ‘Disjunctive’ languages such as Sepedi include breaks for certain prefixes. For example, ‘Ke a leboha’ (thank you) is actually one word – ‘ke’ and ‘a’ possess no independent meaning. Agglutinative languages tend to have fewer words but far more letters per word than disjunctive languages.

4 See the section, ‘How literacy is taught/Phonics’ on page 8.

in the three languages were indicated, phonological awareness played a stronger role in more transparent orthographies (Afrikaans and Setswana) while vocabulary and working memory seemed to play a stronger role in English literacy. A study by Veii and Everatt (2005) upheld both the Script-Dependent Hypothesis and the Central Cognitive Processing Hypothesis in Herero/English bilingual literacy acquisition. To date, although differences have been noted, there are no prominent challenges to any of the predominant international theories of reading – except one.

Should we use a phonics approach in African languages?

A number of studies have shown that children learning in African languages (excluding Afrikaans) are stronger in syllable awareness than in phoneme awareness (Alcock et al., 2010; Diemer, Van der Merwe & De Vos, 2015; Pretorius, 2015; Probert & De Vos, 2016). The typical progression for phonological awareness in languages which use an alphabet begins with words, then progresses to syllables, after which children begin to pick up onset-rime awareness and, finally, phonemic awareness (Goswami, 2008). It is also important to note that a reflexive relationship exists between learning to read and phonemic awareness. On the one hand, phonological awareness predicts literacy acquisition; on the other, phonemic awareness improves as reading skills develop (Alcock et al., 2010). In English, syllable and onset-rime awareness typically form around age 4, while phoneme awareness develops between age 6 and 7. It is no coincidence that phonemic awareness typically develops around the same time as a child learns the alphabet; the process of learning the discrete sounds letters make and then to decode and encode cements the child's knowledge of phonemes as units of speech which can be manipulated.

At the 2018 Literacy Association of South Africa conference, some discussion centred on whether the syllable structure is sufficient, as it is proving to be the strongly preferred unit for African language speakers and teachers. For example, one common teaching practice which can be observed in many foundation phase classrooms is the syllable chart approach, in which teachers generally hand-make charts with 'ba be bi bo bu' on the top row, 'da de di do du' on the next row, and so on. There are languages such as Japanese which write using a syllabary and in which discrete sounds that make up syllables are never taught or learnt, so the approach is technically possible.

However, Pretorius (2015) found that syllable identification did not correlate with any literacy subskills in isiZulu (typically word reading, fluency and comprehension are tested as subskills) while phonemic awareness showed strong, significant correlations with both word reading and oral reading fluency. Additionally, the phonemic approach is much more efficient. An analysis by the Molteno Institute showed that the complete syllabary for Setswana consists of 192 different possible syllables while the language consists of only 37 discrete phonemes (Reading Support Project, 2018).

As previously noted, speakers of African languages are not unique in a preference for syllables. Studies in both English and Italian found that completion rates for a syllable task were higher than for a phoneme task for both pre-school children and children engaging in formal reading instruction in schools (Cossu, Gugliotta & Marshall, 1995; Liberman et al., 1974, cited in Ziegler & Goswami, 2005).

Therefore, while syllable awareness seems to be a more natural pre-literacy skill in African language speakers, research suggests there is a need for pedagogy to attempt to shift to a more phonemic-leaning approach. Pedagogical practices such as the syllable charts mentioned above influence the children's understanding of the structure of their languages, and it may be that rather than encouraging deeper phonological awareness through teaching of letter-sound relationships and word-building using phonemes, children in South African schools are spending more time on syllable manipulation, an ultimately inefficient and, at worst, incomplete method of early literacy letter-sound instruction in African home languages. It is this interpretation that led Pretorius (2015) to suggest that one of the primary reasons for poor results in African language speaking schools lies in classroom practices and a lack of emphasis on literacy rather than the language of instruction. Her conclusion is supported by other work: a study by Combrinck, Van Staden and Roux (2014) found delayed introduction of reading skills and strategies in the foundation phase, including reading sentences, reading connected text, locating information within the text and identifying the main idea of a text; and in a study by Spaull (2016), it was found that in a test given to 3 402 Grade 3 learners, the composite effect of home background and school quality was between 1.5 and 3.6 times larger than the effect of the language of the test.

Ironically, in the debate around syllable or phonics-based approaches, we are witnessing an almost exact

replica of the 1980s ‘reading wars’ in the United States, which pitted advocates of whole-language, look-and-say approaches against phonics-based reading. The verdict is in, and has been since the National Reading Panel declared its five subskills in the year 2000. Phonics reigns victorious, at least in terms of learning outcomes. In particular, systematic, synthetic phonics programmes are the most effective – those that build up in a logical way and rely on explicit teaching of letter–sound relationships.

By the way, what is the state of literacy in South Africa?

Disappointingly, outcomes in South Africa for even the most basic form of literacy remain below the international standard despite a robust investment in the education sector. In 2006, South Africa participated for the first time in the PIRLS assessment and found that only 22% of Grade 5 and 13% of Grade 4 learners in the country could achieve the low international benchmark which indicated an ability to identify and retrieve verbatim basic information in a text. This finding galvanised a wide range of interventions and investments in basic literacy.

In 2011, South Africa was one of three countries to participate in the prePIRLS, with Grade 4 learners of all languages participating in an easier version of the test which focused more heavily on literal and direct questions. South Africa was the lowest-performing of the three countries.

In 2016, Grade 4 learners in South Africa participated in the 2016 PIRLS literacy assessment, a version of PIRLS which replaced the prePIRLS. The findings showed an improvement – 22% of Grade 4 learners reached the low international benchmark for literacy in their home language (the same percentage as found for Grade 5 in 2006). However, the situation in this regard remains dire, as 78% of South African children participating in the test could not read for meaning in their home language, much less in an additional language, at the end of Grade 4.

Key findings in 2016 included that:

- Less than 10% of learners achieved above the low benchmark, indicating that learners in South Africa are not engaging in more than basic literacy by the end of Grade 4. In terms of Barrett’s taxonomy, more than 90% of learners at the end of Grade 4 are unable to answer comprehension questions other than literal, direct questions, indicating a very basic understanding and no movement towards more advanced literacy skills such as evaluating, synthesising or analysing the text.
- Girls outperformed boys in every language, and boys showed decreasing attainment between 2011 and 2016.
- There is a wide discrepancy in outcomes based on location, with children in urban and suburban areas far outperforming children in township, rural and small-town environments.
- Quintile 1–3⁵ schools were outperformed by quintile 4 schools, with about a 10% difference in the percentage of learners who did not reach the low international benchmark. In quintile 1–3 schools, the percentage of non-achievers ranged between 85 and 89%, while 76% of learners in quintile 4 schools did not achieve the low benchmark. Quintile 5 schools performed significantly better, with only 35% of learners not achieving the low benchmark and 12% achieving the high benchmark (reached by less than 1% of learners in each of the other quintiles).
- A comparison between the prePIRLS 2011 and PIRLS 2016 literacy assessments shows that results have decreased on average in English and Afrikaans schools but increased in most other African languages.⁶

5 In South Africa, schools are divided into quintiles based on the national poverty ranking of schools, which was determined by provincial education departments based on the surrounding community demographics. Quintile 1–3 schools are designated ‘no fee’ schools, meaning that learners do not pay fees for attendance.

6 Exceptions are isiXhosa, which showed a slight, non-significant decrease of 4 points, and isiZulu and siSwati, which remained the same.

Wide variance was noted in these results, particularly between Afrikaans and English speakers and speakers of African languages. Thirty-seven per cent of Grade 4 Afrikaans learners and 36% of Grade 4 English learners were able to reach the international low benchmark, compared to between 1 and 6% of those learning in other South African languages. Among isiZulu learners, 5% of Grade 4 learners reached the low international benchmark.

Other studies have shown low levels of literacy acquisition in home language and in English at the Grade 3 and intermediate phase levels, leading many researchers to question whether the change from LOLT to English in Grade 4 is indeed the primary cause of poor performance. Evidence overwhelmingly suggests that learners have poor literacy skills in all languages (see, for example, Pretorius & Mampuru, 2007; Spaul, 2016; Van Staden, Bosker & Bergbauer, 2016).

While there are not many recent studies on the topic, an important study by Matjila and Pretorius (2004) found that Grade 8 learners had poor literacy skills in both their home language, Setswana, and English. The authors concluded that a majority of the learners studied were entering high school without having literacy skills in any language.

The role teachers play in this literacy crisis is not surprising. Many in-service teachers rely on what have been termed oratorical reading methods which centre around whole-class recitation, with an emphasis on pronunciation and little, if any, engagement with the meanings and applications of the text (Rule & Land, 2017), an approach unintentionally supported by the lack of an explicit time requirement for paired and independent reading in the CAPS for the foundation phase (DBE, 2011). Further, research by JET Education Services (JET) on initial teacher education (ITE) programmes at universities found some alarming results, including that intermediate phase teachers-in-training were not exposed to children's or adolescents' literature, that ITE students not specialising in English usually did not have opportunities to study English, and that little or no attention was given to reading pedagogies (Taylor, 2014).

An additional factor has to do with access to materials. Publishers are reluctant to publish in African languages due to small populations, low literacy levels and research which shows low levels of engagement with books. Largely as a result, early and advanced literature in African languages is nearly non-existent, the exceptions being textbooks or readers for schools, mostly focused on the early grades. Even in terms of English literature, resources in schools (outside of textbooks) are scarce; in 2011, the DBE published a finding that only 21% of schools had school libraries, and only 7% of those with libraries had books in them.

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Conversations around literacy in South Africa

Given the results of PIRLS 2016, it is clear that South Africa is failing its learners at a very basic level, which is the teaching of learners to read in any language by the end of Grade 3. This was clear in 2006 and galvanised a number of initiatives, including changes to the curriculum and the publication of DBE workbooks to assist with language and literacy as well as mathematics. Investment in ECD and foundation phase initiatives has been fairly robust, with major funders such as the Zenex Foundation and the DG Murray Trust investing in these as priority areas. And while the situation has improved, it hasn't improved very much. There are a few prominent theories as to why:

- **Curriculum coverage remains inadequate.** It seems likely that this is a factor given the differences in urban and rural environments. It is common in rural environments for schools to lose six weeks or more of teaching time each year. Common disruptions are strikes, payday, additional time off teaching taken for test preparation and/or marking, competing responsibilities of teachers (for example, workshop attendance), funeral preparation as well as funerals, roads which are impassable (due to rain, snow, etc.) and preparations for choir competitions. Often, activities which township and urban schools are able to manage after school hours have to be conducted within school time in rural areas as transport times are firmly fixed and the distances children travel are too far to walk should they miss their transport.

In addition, while 'curriculum coverage' is a popular focus of schools, the depth of coverage necessary for understanding is often lacking as a topic is considered 'covered' as long as learners are given

even one exercise addressing that topic. This is an inadequate amount of engagement for most topics.

Various interventions using lesson planners and trackers are intended to address curriculum coverage through providing support with pacing as well as accountability. Even if curriculum coverage is not the primary focus, many interventions address curriculum coverage to some extent. Attention is likewise shifting from 'curriculum coverage' to 'deep curriculum coverage' to attempt to ensure meaningful engagement.

- **Another prominent consideration is phonics.** Teachers are not using phonics to teach African language literacy in the foundation phase, or at least not to a very meaningful extent. The end result is that learners do not reach the decoding stage of literacy in their home languages and do not form the underlying neural connections and cognitive processes they need to leverage in reading English. Therefore, they enter Grade 4 unable to read in any language.

One of the challenging aspects of this problem is that there is not yet common consensus on what the phonics of each language actually are. African language speakers are divided on the issue: is 'ndaa' one phoneme, two, three or four? Linguists will have one interpretation, speakers of the language another (sometimes more than one). Part of the Primary Teacher Education (PrimTED) project is seeking to solve this problem using a sound, linguistics-based approach, and the Molteno Institute has completed its own development of suggested phonics for each language. Once consensus is gained on what

should be taught, effort can be put into developing a systematic, synthetic phonics programme in African languages.

- **The Grade 4 gap is a well-known phenomenon in South Africa:** the performance of learners who perform relatively well in the foundation phase drops dramatically in Grade 4. This is largely attributed to the shift in languages, although the PIRLS results suggest a different story. Given the large percentage of South African children who cannot read in any language in Grade 4, it is likely that the amount of assistance given to foundation phase learners during tests plays a factor. In some districts, teachers are told they can read the passages, questions and answers to learners in the foundation phase – this is not policy, but policy is misinterpreted in some areas of the country. It is not only a *language competency gap*, but an actual *literacy skills gap* that needs addressing.
- In addition, there is a real challenge in the expectations of the curriculum, even assuming everything in the foundation phase went well. Foundation phase learners are expected to pick up 2 000 to 2 500 English words over three years in the foundation phase, an ambitious goal considering the context and the maximum time allocation for English of only three hours per week in Grades 1 and 2, and four hours in Grade 3. Given 40 weeks of instruction per year, this is a total of 400 hours of English language instruction. Compare this to the minimum of four years of immersion Hakuta et al. (2000) found necessary: even just the school

hours would add up to 1 120 hours, assuming a seven-hour school day and 40 weeks of schooling per year. And, even if the desired outcome was achieved, it is questionable whether 2 000 words would be sufficient to understand the complex subjects introduced in Grade 4, especially given that textbooks in other subjects are written for first language speakers.

- This is where language across the curriculum (also known commonly as language integrated learning) comes into play. Kelly (2010, cited in DBE, undated) noted three areas of language that all teachers should be aware of: content-specific language; general academic language; and peripheral language (the language used by the teacher to engage and manage the class and the language learners use amongst themselves). But most teachers are not trained as language teachers and are unable to employ strategies to capacitate learners in any of these areas of classroom language: teachers do not necessarily have the pedagogical skills for effective language teaching and learning (Uys, 2006). One area of need, therefore, is to capacitate subject teachers in language and literacy acquisition. The DBE (2014) published a *Manual for Teaching English Across the Curriculum* as well as a *Strategy for Teaching English Across the Curriculum* (DBE, undated), intended to address these needs. However, it is unclear what the extent of uptake has been in classrooms and what kind of training has been undertaken with regard to these and other materials.

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Mapping literacy interventions in South Africa

NGO programmes: Trends and observations

Scope and types of programmes

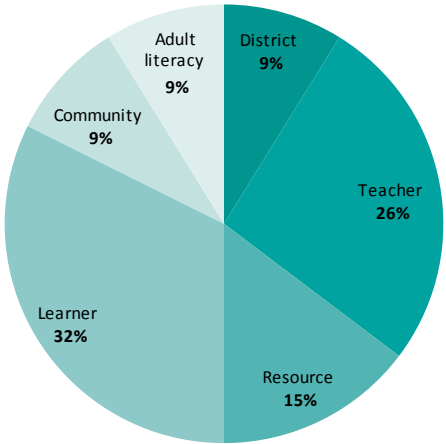
To determine what the literacy landscape in South Africa currently looks like, a desktop review was undertaken using a convenience sample. As an active member of both the education and non-governmental organisation (NGO) sector, JET has a good awareness of major players operating in South Africa in key areas of education, including literacy, and therefore active organisations and projects on literacy which JET is informed of were included. In addition to leveraging that network, Google was consulted. NGOs which were returned on the first three pages of the following search terms were included: 'literacy South Africa', 'English literacy South Africa', 'language across the curriculum South Africa', 'literacy NGO South Africa', 'English language South Africa' and 'home language South Africa'. Organisations without working websites or current, working contact details were omitted from the sample.

The result yielded 34 NGOs. This is by no means an exhaustive list of organisations working in South Africa or which include components of literacy in South Africa, and the use of a convenience sample means that there is no guarantee that this sample is representative. However, the results are useful in identifying the prominent actors in the space and some of the less prominent actors and the trends that emerge among these.

Direct beneficiaries

The literacy interventions surveyed were found to have different primary audiences. While most programmes engage a number of beneficiaries in different ways (for example, they may provide resources and train teachers on the use of those resources), most programmes have a primary focus on one beneficiary type. Figure 1 provides a summary of the percentage of programmes which primarily target each beneficiary type.

Figure 1: Percentage of interventions by beneficiary type



About 8% of the interventions (3 of the 35) focus on district development. These include the National Education Collaboration Trust (NECT), the Pearson Marang Education Trust (PMET) and Programme to Improve Learning Outcomes (PILO). These interventions have a primary focus on delivery through district officials, mainly subject advisors. Two of the three (NECT and PILO) utilise a lesson plan and tracking approach in the foundation phase while PMET focuses more on collaborative learning and development across all grades.

Twenty-six per cent of programmes primarily focus on teacher development. These programmes target teachers directly and provide content, pedagogy and other support deemed necessary for effective classroom delivery. Prominent and emerging actors in this space include: Funda Wandu, an in-service video-and-coaching-based teacher training initiative for foundation phase teachers about to be piloted in the Eastern Cape; the EGRS, based on the triple cocktail of lesson plans, coaching and resources, taking place in English in Mpumalanga and in Setswana in the North West province; the eMpela blended learning⁷ teacher training programme rolling out in four provinces; and the Zenex Literacy Project running in three provinces.

Other organisations (Class Act, Environment and Language Education Trust (ELET), the Molteno Institute for Language and Literacy, and READ Educational Trust) are service providers for these and other projects and also known for publishing materials, training and coaching.

All of the teacher training organisations focus heavily on the foundation phase, though READ and ELET are best known for their literacy/English First Additional Language (EFAL) work in the higher grades, and both have programmes up to the further education and training (FET)⁸ level. The Molteno Institute's Bridge to English programme also covers up to Grade 7. None of these organisations specifically focuses on language across the curriculum, although it may be included in some trainings; their focus is more on ensuring learners achieve English language proficiency, with the onus on the EFAL teacher.

The Zenex Literacy Project is another foundation phase teacher capacitation programme, which was evaluated by the Evaluation Research Agency and found to demonstrate positive results. The programme

consists of three main components: upskilling of service providers by experts; delivery of training; and coaching of foundation phase teachers and training of heads of departments to support the programme as a sustainability measure. Key lessons from the programme include that service providers need additional training and upskilling in emerging literacy research and methodologies. The Zenex Foundation has the literacy and training modules used in this programme available.

Trends in teacher training projects include the use of technology (video, blended learning, remote mentorship), likely in response to the converging factors of the cost and efficiency of coaching; interventions are striving to find ways to make coaching equally more efficient and more effective. The Reading Support Project, funded by the United States Agency for International Development (USAID) in 2017, developed a series of literacy training materials for heads of departments in the foundation phase, delivered through a bilingual, blended learning model. While the programme has concluded, the open-source materials created are still available through the Foundation for Professional Development. The eMpela initiative funded by the MRP Foundation uses a blended learning methodology to deliver teacher training focused on Mathematics and Science in Grades 4 to 11 and Mathematics and EFAL in Grades 1 to 3. The programme is currently being implemented in 100 schools in five districts by JET. Yet another organisation looking into this approach is Uthini, which provides a platform which connects language learners to language teachers using a structured programme underwritten by chatbot technology. Uthini is planning a pilot in 100 schools in the Western Cape to improve the English language skills of foundation phase teachers. Funda Lwande and the EGRS Mpumalanga initiative are likewise focused on using blended methodology to reduce costs and/or ensure consistent delivery.

Fifteen per cent of interventions are primarily resource-focused. Resource-focused interventions are mainly concerned with the creation of books and their use in schools/classrooms (the African Storybook Project, Literacy Boost), the provision of books and/or libraries to schools (Bibliodef, Room to Read) or community libraries (Centre for the Book).

The largest percentage of interventions, 32%, is primarily learner-focused and come in mainly two forms: those which offer learner tutoring and

7 Blended learning refers to training or teaching methodologies which include both in-person and ICT-based components.

8 In South Africa, education for Grades 10–12 is referred to as the further education and training (FET) phase.

those which offer learner programmes through information and communications technology (ICT). Tutoring programmes range from remedial one-on-one tutoring (Help2Read) to remedial training with classes (Phenduka, Spell It! Learn-ready Literacy) to enrichment (the Living Language Foundation, Shine and the Link). The Living Language Foundation offers after-school programmes, while Shine is a multi-faceted reading intervention which includes the installation of 'Shine reading centres' in schools, the provision of storybooks and the use of youth deployed as reading partners. The intervention aims to encourage paired and independent reading in the foundation phase. The Link programme is modelled after Shine.

Learner programmes include literacy development courses and online reading materials (FunDza), self-paced remedial reading courses (LectorLAB, Virtual Reading Gym, Spell It! Learn Ready Literacy) and phonics-based literacy programmes (Reading Eggs). All of these offer some method of remote tracking of learner progress which can be used for monitoring and/or assessment.

Nine per cent of interventions are community focused. Community-focused interventions include Nal'ibali, a reading campaign delivered through newspapers and reading clubs,⁹ Wordworks, which primarily works with caregivers and ECD centres to promote early literacy skills; and Youth Potential South Africa (YOUPSA), a localised intervention in the Eastern Cape that provides a range of youth development initiatives, including community libraries.

Finally, 9% of interventions focus on adult literacy (three of 35). One of these organisations specialises in refugee education (Agency for Refugee Education, Skills Training & Advocacy (ARESTA)), while the other two promote adult basic education and training (ABET) more generally (Family Literacy Project, Project Literacy).

Languages

Of the 34 organisations surveyed, three work exclusively or nearly exclusively in home language (the Family Literacy Project, the African Storybook Project and Literacy Boost); 17 work exclusively or nearly exclusively in EFAL; and 13 provide programmes in both home language and English. One programme, YOUPSA, did not advertise the language of its community-focused literacy efforts.

Programmes that focus on learners exclusively focus on English language learning. Two of the three district-level interventions focus on EFAL, with one addressing both EFAL and home language in the foundation phase. Interventions that primarily focus on resourcing are likely to favour home language or to provide resources in both home language and English, with no resource-focused interventions solely providing English resources. Teacher-focused programmes or organisations are more likely to favour both home language and EFAL or EFAL alone, with only one explicitly focusing only on home language.

Distribution of interventions across provinces

The two provinces with the highest level of organisational investment are Gauteng (20 of 34) and the Western Cape (18 of 34). However, this is partly because these two provinces tend to draw a larger number of smaller-scale projects and programmes. The largest numbers of at-scale programmes are operating in the Eastern Cape (14) and KwaZulu-Natal (16). The provinces with the least investment are the Northern Cape (7 organisations) and the Free State (9). The Northern Cape is a difficult case for many funders, as the distances between schools and settlements drive up the cost of interventions at scale, which, combined with the smaller population, leads to a lower cost-benefit.

The Free State is one of the higher performing provinces, rivalling Gauteng and the Western Cape in national results and claiming the top spot in the matric examinations in 2017, which may be one factor influencing lower levels of support. This could also explain the lower numbers in the North West. By this interpretation, Limpopo is an outlier, as it is one of the provinces with the lowest learning outcomes but also receives somewhat fewer literacy interventions from the surveyed organisations.

The largest share of organisations, 14 of 34, works in only one or two provinces. Of these, four work in the Western Cape, three in Gauteng and two in both the Western Cape and Gauteng (a total of 9 out of 14). The two organisations working in all nine provinces are Nal'ibali and the NECT. The PMET works in seven provinces (excepting the Northern Cape and the Free State).

⁹ Nal'ibali also works through schools, but has a prominent community component in their school-based model as well.

Figure 2: Venn diagram of language focus

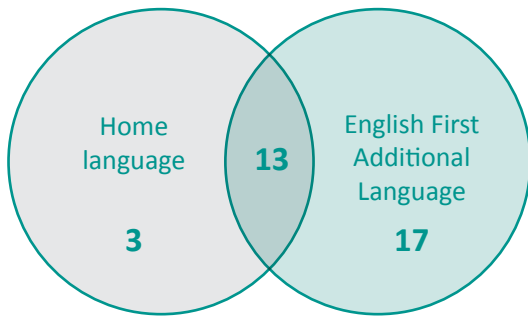
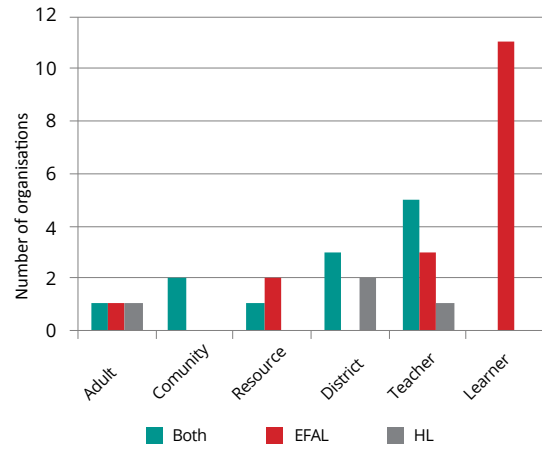


Figure 3: Language focus by target audience



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Teacher-focused programmes or organisations are more likely to favour both home language and EFAL, or EFAL alone.

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Figure 4: Number of organisations active by number of provinces (map)

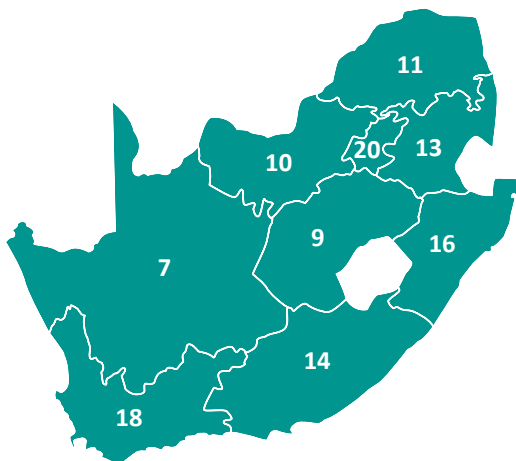
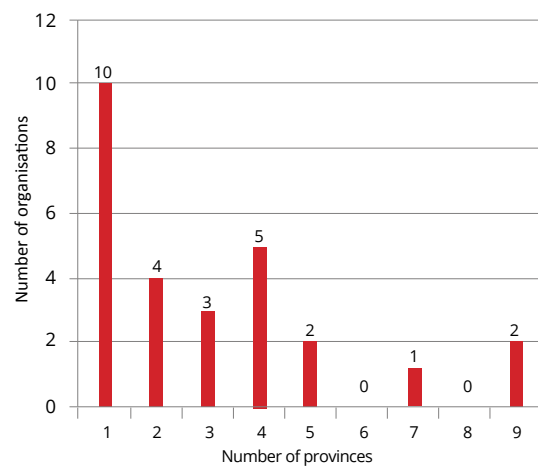


Figure 5: Number of organisations active by number of provinces (graph)



Distribution of interventions across grade levels

A majority of the organisations working in literacy work in the foundation phase (26 of 34). Half work in the intermediate phase,¹⁰ ten work in the senior phase, and nine work in FET. The general trend shows a decreasing investment by organisations in literacy as years of schooling increase.

Organisations working in the foundation phase are most likely to focus on teachers or learners, with nine organisations focused on teachers and seven focused on working directly with learners. Four focus primarily on resourcing, with an emphasis on school or class libraries. The distribution of foundation phase programmes across provinces is shown in Figure 7.

Organisations working with learners are most likely to run programmes in Gauteng and the Western Cape, likely due to these programmes' high reliance on technology. Organisations working with teachers are less likely to work in Gauteng, the Free State and the Northern Cape. Overall, the Northern Cape and the Free State have the lowest investment from organisations working in the foundation phase.

Eighteen of the 35 organisations do some work in Grades 4 to 12. As noted in Figure 6, 17 work in Grades 4 to 7, 10 work in Grades 7 to 9, and 9 work in the FET phase (Grades 10 to 12).

Intermediate, senior and FET phase interventions are all most likely to work with learners, with the highest investment in learners in Grades 4 to 7. The majority of these programmes are remedial, regardless of whether delivery is in person or via ICT. There are no organisations which provide literacy or language resources specifically to schools in the senior or FET phases.

Figure 6: Distribution of organisations across grade levels

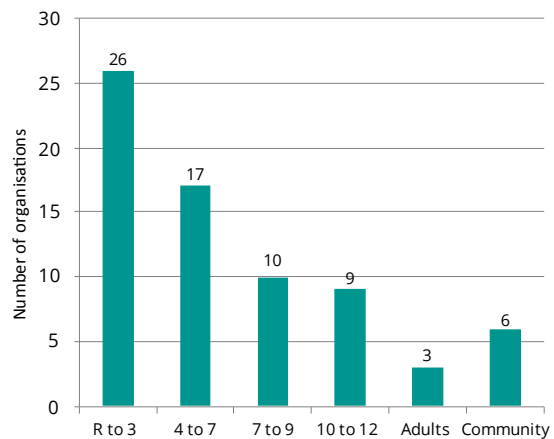


Figure 7: Distribution of foundation phase organisations by province

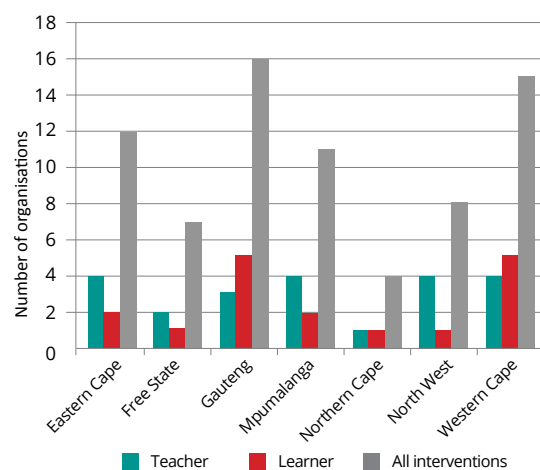
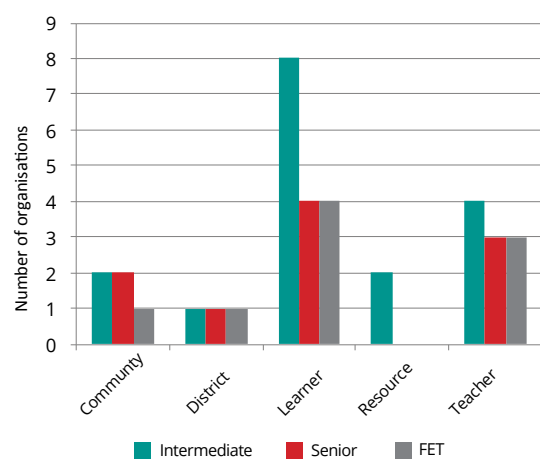


Figure 8: Beneficiaries by phase



10 There is an interesting split in the middle of the senior phase, with Grade 7 in primary schools and Grades 8 and 9 in secondary schools (according to policy; however, some primary schools still do offer up to Grade 9). Therefore, a number of intermediate phase interventions also include Grade 7, while senior phase interventions may not. For the purposes of this research, interventions working in Grades 4–7 in primary schools only are classified as intermediate phase interventions.



Conclusions: Is there a solution?

While it is very clear what needs to happen at different stages of literacy development, it is also clear from the research conducted in South Africa that literacy is one of the primary challenges facing learners at any grade level in the system – and unfortunately that applies to both home language literacy and English literacy in most schools. Key themes which dominate the research include:

1. The importance of literacy skills to success in school as well as to economic participation;
2. The poor literacy skills of South African learners, in any language and across phases;
3. The importance of home literacy and early interventions, particularly for more disadvantaged populations; and
4. Poor teaching strategies for literacy seen in both initial teacher education and among in-service teachers.

At the same time, it is clear that a majority of organisations surveyed, especially those working at scale, are focused on the foundation phase, with significant gaps in support to learners and teachers from the intermediate phase onwards. Given the needs and realities of the South African context, a number of potential focus areas emerge.

Sustainable learning gains from ECD

Although mapping ECD initiatives was not part of this research, it is worth noting that research conclusively supports meaningful engagements in home literacy and school readiness for preschool-aged children as these interventions have the potential to support later scholastic achievement. Notably, the EGRS research study found that parental engagement improved one particular aspect of literacy – phonological awareness. While not sufficient to generate literacy gains, this is an important early step, and re-focusing on interventions with parents, like those used in the EGRS study, has the potential to greatly improve learning outcomes, if correctly targeted to children aged 0 to 5.

However, a caution is that research on the STELLAR Grade R literacy project found that the intervention made a big difference in the learning gains of learners, but that these gains were largely lost by the end of Grade 1. This indicates that without quality continuation, early gains may not be sustained after ECD. This is likely to be the case as learners at this level are not yet at a stage where *independent learning* is a prominent feature of their education – they are not yet able to reliably gather information from texts.

Considerations for foundation phase interventions

In the foundation phase, the job of the teacher in terms of literacy, in most schools, is to teach learners to read in both home language and EFAL. The curriculum begins with instruction in home language as research shows that skills gained during this process, such as phonics and decoding, will be able to transfer to a new language. The expectation is that children will learn to read sentences (at a minimum) in home language in Grade 1; they are expected to reach some level of fluency in passage reading in home language by the middle of the year in Grade 2. In Grade 2, reading of English is added to the curriculum. By the end of Grade 3, learners should be reading for meaning in English with a vocabulary of roughly 2 000 words.

Given the transparent orthography of African languages, the expectations in terms of the home language curriculum are not impossible, and yet few schools are able to achieve these timelines. The English expectations are ambitious, given the international research which finds that *in immersive environments*, oral language proficiency takes three to five years to develop while academic proficiency takes between four and seven years.

Major challenges include:

- Teachers not engaging in phonics teaching in home language, and many relying on syllable-based approaches, therefore, learners not being able to pick up the skills they require for English reading;
- Poor pedagogical approaches to reading seen both among in-service teachers and in initial teacher education programmes;
- Ambitious targets, particularly for lower socio-economic status learners who have not had adequate ECD experiences;
- Poor resourcing of communities, homes and schools.

These issues are being addressed by the concerted efforts of a number of organisations – a majority of all literacy organisations researched work in the foundation phase (76%). Currently, large-scale projects are underway in the foundation phase in all provinces

through the NECT, with PILO adding districts in the Free State and Gauteng to its KwaZulu-Natal portfolio. The EGRS is active in the North West and Mpumalanga. Funda Lwande is also set to roll out in the Eastern Cape, and PMET is working in all the provinces except the Free State and the Northern Cape. The Zenex Literacy Project is working on a smaller scale in the Eastern Cape, Western Cape and KwaZulu-Natal, and eMpela teacher training is rolling out in selected districts in the Western Cape, Gauteng, the Free State and KwaZulu-Natal. Some of these interventions have a fair amount of weight in the education space, and any intervention in the foundation phase must be cognisant of potential overlap as well as intervention burnout. This is a considerable risk, to the extent that it is advisable that if one wishes to work in the foundation phase with teachers and/or districts, the best approach would be to expand or replicate one of these existing programmes.

However, there are some notable discrepancies. In particular, these efforts are not generally based on a systemised, synthetic phonics approach in African languages. The development of such approaches should be a national priority to address the low levels of home language literacy.

The second interesting factor is the prevalence of resource provision in home language, with few organisations focused on providing English language resources to the foundation phase.

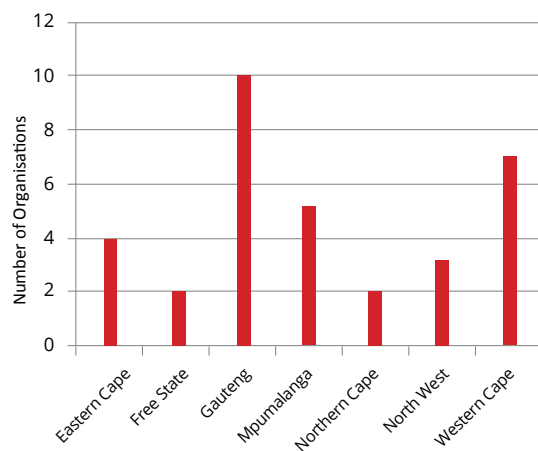
In addition, learner-centred intervention programmes in the foundation phase could add value to the large-scale programmes already underway, particularly if integrated with existing lesson plan initiatives. Learner-centred interventions in the foundation phase are numerous in Gauteng and the Western Cape and under-emphasised in more rural areas of the country. One of the main reasons is the investments in technology in the Western Cape and Gauteng, which enable a number of ICT-based, learner-centred interventions such as Reading Eggs, Bridges to the Future, LectorLAB and the Virtual Reading Gym.¹¹ Two learner-centred programmes which are worth noting are Shine (in four provinces) and the Link (in one province), which provide library resources and opportunities for paired reading in schools. Other learner-centred programmes include small-scale remedial tutoring programmes centred in urban areas, likely due to the convenience of available volunteers and low transportation costs.

11 Reading Eggs is a phonics-based early literacy programme in English, while Bridges to the Future is a USAID-funded home language early literacy programme rolled out in Limpopo in English and local languages. LectorLAB and the Virtual Reading Gym are remedial reading programmes in English.

Considerations for interventions in Grades 4 to 12

For Grades 4 to 12, the highest number of school-based organisations are active in Gauteng (10), followed by the Western Cape (7). Other provinces range from having two active organisations (Free State and Northern Cape) to five active organisations (Mpumalanga). Given the gaps in language and literacy ability of Grade 4 and 5 learners elucidated by the PIRLS, a dedicated focus for literacy interventions and development in higher grades should be a priority for South Africa, as it is inadvisable to allow ten or more years of learners with low literacy skills to progress through the system without intervention. However, this urgent challenge is not reflected in the number, scope or scale of organisations working with and interventions for Grades 4 to 12.

Figure 9: Number of school-based programmes by province in Grades 4 to 12



It is inadvisable to allow ten or more years of learners with low literacy skills to progress through the system without intervention.



Language across the curriculum

Language Across the Curriculum is a popular topic of academic and policy research and is often cited by organisations, but the extent to which this is a primary focus of programmes is questionable, at least from the promotional literature available on websites and in brochures or reports. It does not seem to take centre-stage in a meaningful way. The primary focus of all initiatives from Grades 4 to 12 is on EFAL, primarily working through EFAL teachers. No programmes specifically targeting Mathematics and Science teachers or teachers of other subjects were found in the sample. This suggests that where teachers of other subjects may be upskilled in literacy

and language, this work is not undertaken by literacy specialist organisations.

An example of an organisation which does work in this space is the School Turnaround Foundation, which includes training for its Mathematics teachers based on the book *The Problem with Math is English: A Language-Focused Approach to Helping All Students Develop a Deeper Understanding of Mathematics*, by Concepción Molina.

Additionally, only one organisation, Read to Rise, which works in Grades 2 to 4, explicitly bridges across the foundation and intermediate phases.



Recommendations

Recently, a number of initiatives have emerged to increase collaboration in the literacy space. These include efforts from the Consortium for Quality Education in the Western Cape and the NECT and the formation of a national educational NGO Forum, the National Association for Social Change Entities in Education (NASCEE) as well as workshops hosted by the DBE and the Zenex Foundation. These endeavours need to be fully supported and actions should be centred on reducing duplication of effort, more robust evaluations of programmes and scaling of effective programmes to higher-risk areas. Funders can support these initiatives by ensuring materials are open-source, ensuring interventions have robust evaluation components and sharing findings and materials widely. It is suggested that workshops on open-source materials created for NGOs delivered at conferences or as stand-alone training sessions could form part of future terms of reference to assist with collaboration and reduce duplication in this space.

In addition, efforts should be directed to filling the gaps perceived in this review. Key recommendations are discussed below.

- Development of synthetic phonics approaches for African languages should be undertaken in partnership with existing initiatives such as PrimTEd.
- Research should be done into African language literacy, building upon international literature and, ideally, linking concretely to teaching practice. For example, if morphological awareness is found to be a significant predictor of African language literacy, this research must inform recommendations into teaching practice which are tested and then shared. Mappings between home languages and languages of teaching and learning which can more appropriately direct specifically second language phonics teaching should also be undertaken as a pedagogical tool.
- There should be a focus on ensuring adequate provision of English language resources to schools, in addition to home language resources. While more English language resources are generally available in circulation, the results of investigations into school libraries suggest that not enough of these resources are making their way to schools. A lack of sufficient resources is a fundamental inhibitor to a culture of literacy.
- ECD initiatives should be targeted so that they link with foundation phase interventions to ensure continuity of good practice through the early stages of literacy. ECD initiatives in isolation are unlikely to result in later improved literacy outcomes in schools with poor literacy practice.
- Increased effort should be placed on bridging the transition between Grade 3 and Grade 4 and on advanced literacy practice in higher grades. Building a culture of literacy in South Africa requires more than decoding ability, and meaningful engagement at the levels of advanced analysis and even generation of literature also need to be promoted.
- Learner-centred remedial interventions, whether tutor- or ICT-based, should be expanded to more rural areas of the country. While some are sceptical of the role technology has to play in the education system, it is clear that technological literacy itself

is a desired outcome, and, therefore, learner-focused remedial programmes delivered through ICT have the potential to fulfil dual objectives and start to bridge the 'digital divide'. To be effective, programmes must use best practice, be accessible (meaning investments in infrastructure and hardware as well as software), be contextually relevant and, crucially, be linked to other initiatives such as teacher training and ICT support and co-delivery by project staff. Dropped-in technology will not be utilised and rarely delivers the desired outcomes.

- Literacy specialists and/or specialist organisations should be engaged in the development and delivery of training specifically for non-language teachers and/or in the review of current initiatives in this space undertaken by other organisations. The DBE publications on language across the curriculum offer a guide in this area.
 - Given the extent of the challenges in literacy across grade levels in South Africa, interventions which work with both teachers and directly with learners should be considered to deliver the desired outcomes in the short and medium term. While many interventions target long-term improvement through teacher initiatives,
- the extent of the poor literacy results in South Africa demand the dramatic and immediate improvement which is most likely to be delivered through learner-targeted programmes. It is imperative that the cycle of poor teaching and learning be broken before even one more year passes in which less than a quarter of Grade 4 learners attain basic literacy.
 - Programme results should be measured against curriculum expectations in addition to considering significant gains. While any improvement is positive, cost-benefit and other forms of analysis need to be used to measure absolute as well as relative improvement in order to really examine progress towards achieving meaningful literacy for all South Africans.
 - Research suggests that some shift in either expectations or time allocation will be necessary, particularly for learners who are not routinely exposed to the LOLT their school will employ from Grade 4. While this is not something funders or implementers can directly affect, where possible, efforts which include co-curricular activities that expand the amount of available learning time are recommended to assist with aligning the curriculum expectations and time available.

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Literacy initiatives need to be fully supported and actions should be centred on reducing duplication of effort, more robust evaluations of programmes and scaling of effective programmes to higher-risk areas.

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