Sesotho and isiZulu Reading Project Study Materials

Module 1:
Description of linguistic concepts underlying teaching reading

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Different individuals were involved in the writing of various modules. There were also language specialists who were involved in editing and versioning the modules into the various languages, and reading specialists involved in quality assurance. All names of individuals involved in these modules in some way or another are listed below:

Aitchison, JJW. University of KwaZulu-Natal

Cassiem, A. University of Johannesburg

Cele, RG. University of KwaZulu-Natal

Dawber, AEM. Literacy consultant

Hadebe, M. University of Johannesburg

Khasu, N. University of Johannesburg

Khohliso, X. University of Pretoria

Land, S. Durban University of Technology

Lyster, E. Literacy consultant

Magwaza, S. University of the Witwatersrand

Marais, LM. North-West University

Mthembu-Ngema, W. University of Zululand

Murray, S. Rhodes University

Nel, C. North-West University

Ntsala, S. University of the Free State

Phindane, PA. Central University of Technology

Posthumus, L. University of Johannesburg

Pretorius, EJ. University of South Africa

Ramabenyane, M. University of the Free State

Sibiya, D. University of Johannesburg

Simelane, FW. University of Johannesburg

Taylor, N. Jet Education Services

Theletsane, TT. University of the Free State

Thusi-Sefatsa, Z. Durban University of Technology

Vaz, M. University of Johannesburg

Xulu, SC. University of Zululand

INTRODUCTION TO THE MODULES

Did you know that as a future Foundation Phase teacher, you have the potential to save children's lives? Did you also know that you play an important role in the economy and social development of your country?

The ability to read well is the most important learning achievement on which all other school learning depends. The quality of reading instruction in the Foundation Phase is vitally important for two reasons: (i) for the future well-being of each learner, and (ii) for the economy and social development of a country.

In today's world, reading ability, as reflected in school outcomes and qualifications, has an impact on the potential wage earnings of individuals and, at the broader level, on the economy of a country. In the 21st century, a country cannot flourish economically if its citizens have low literacy levels. Launching all learners on strong reading trajectories is thus one of the most important endeavours that a Foundation Phase teacher undertakes in helping children set forth on their life journeys.

If learners leave this phase with poor reading skills, they are likely to stay poor readers for the rest of their school years. Schools can have either a positive or negative influence on the future career possibilities of their learners and the economy, since their learners' reading levels will have a direct effect on their access to knowledge, their skill levels, career opportunities and potential wage earnings when they leave school.

Given the important role that you, as a future reading teacher, will play in the well-being of your learners and the economy of your country, **what** you do in the classroom, **how** you do it, and **how well** you do it is very important.

The information provided in the seven modules will help you to do this.

Module 1: Description of linguistic concepts underlying teaching reading

Module 2: Oral language proficiency development, vocabulary building and motivation for reading

Module 3: Decoding: Phonological awareness, alphabetic knowledge, phonics, oral reading fluency, morphological awareness and reading stages

Module 4: Reading comprehension

Module 5: Children's literature and teaching reading

Module 6: Integrating the reading components in the classroom

Module 7: An overview of approaches to teaching reading: The role of research evidence

Contents

The purpose of this module

Reading involves language in its written form. There can be no reading without language. To be a good reading teacher thus requires knowledge of how language works and how written language works. The purpose of this module is to acquaint student teachers with linguistic (language) concepts that underlie the teaching of reading and writing.

Outcomes

After studying this module student teachers should be able to:

- distinguish between the basic units of language, namely phonemes, morphemes, words, word groups and sentences
- explain the unique characteristics of the African languages and their relevance for teaching reading and writing
- utilise the unique language characteristics and principles of the African languages to teach reading systematically and appropriately
- differentiate between the levels of language study (phonology, morphology, syntax and semantics) and understand their role in terms of reading
- identify words and divide them into their constituent syllables and phonemes and manipulate these components
- use linguistic knowledge to inform their teaching of reading.

What literacy teacher standards are covered?

This module covers six of the standards (or portions of them). These knowledge and practice standards relate to the knowledge of literacy teaching and decoding that graduate teachers need to have to teach learners to read and write.

1. Demonstrate basic knowledge of the key components of language.

1.1 Explanation 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.

3. **Implement multimodal forms of instruction and evaluate instructional practice in each of the key components of reading and writing.**

3.1 Implement in a structured, integrated and phase appropriate way, and evaluate instructional practice in the following key areas:

- phonological and phonemic awareness
- phonics (sound-letter correspondence)
- word recognition
- fluency.

3.2 Appropriate and varied instructional approaches are used, including those that develop decoding.

3.3 Lessons are logically sequenced and conducted at an appropriate pace to keep learners engaged and focused on tasks.

3.4 Learner strengths and weaknesses are diagnosed in order to develop and adapt teaching strategies.

3.5 Scaffolding to support the process of learning to read and write (prompting, demonstrating, modelling, praising, describing strategies, offering feedback, or using particular instructional frameworks, etc.) is used.

3.6 Focused tasks matched to the abilities of learners are provided.

3.7 The systematic and continuous monitoring and assessment of learners' progress is undertaken.

9. Shows understanding of the need to teach all the components of reading and writing in a purposeful, systematic, structured, and integrated way.

9.1 An outline of a systematic, structured and integrated approach to learning to read and write teaching programme can be described.

9.2 Awareness of the need to make explicit to learners the purpose and functions of what is being taught is exhibited.

9.3 Awareness that a purposeful, systematic and structured approach also incorporates pleasure, play and fun in learning is shown.

9.4 How literacy activities at the word, sentence and whole text levels contribute to meaningful reading and writing can be described.

9.5 Ways of creating a classroom environment that emphasises reading and writing as meaning making processes are outlined.

10. Demonstrates phonological awareness including phonemic awareness.

10.1 A basic awareness of the sounds of languages is displayed.

10.2 Definitions, explanations and demonstrations of phonological awareness

(syllabification, onset and rime (onset and rime are important in English but not in agglutinating languages), and phonemic awareness) are given.

10.3 The use of activities such as phoneme isolation, identification, categorisation, addition, deletion, substitution, and segmentation are demonstrated.

10.4 An understanding of the developmental continuum of phonological awareness and an ability to use this knowledge in reading instruction appropriate to each grade and learner is demonstrated.

11. Demonstrates basic knowledge of phonics, e.g., knowing letter shapes, knowing that written words are built up from letters and letter groups with sound values.

11.1 Phonics is defined.

11.2 The use of phonics and decoding strategies appropriate to the particular language and grade are identified.

11.3 Awareness of the similarities and differences in phonics strategies in analytic/isolating and agglutinating languages is shown.

11.4 The importance of syllables and word morphology in the African languages is recognised.

11.5 Explanations of the principles underpinning particular phonics approaches are given.

11.6 Knowledge of resources available to support particular approaches or programmes is demonstrated.

14. Demonstrates knowledge of how to develop fluency in reading through a flexible use of strategies.

14.1 An understanding of the role of fluency in relationship to vocabulary, syntax, semantics, pragmatics, comprehension and text difficulty can be demonstrated.

14.2 Taking into account the relationship of fluency to the other components of literacy and the variety of texts used, flexible fluency benchmarks for the particular grade and language are stated.

14.3 Strategies which will help learners to develop fluency in reading in a variety of genres are described.

14.4 Appropriate texts are chosen so that learners can independently comprehend them as tasks become more complex and the text demands increase.

Unit 1: Introducing key concepts related to reading

Introduction

Converting oral, spoken language to a written form is a fairly recent invention in human history, occurring around 5,000 years ago. Learning to read written language is regarded as the most difficult task the human brain can master. Moreover, unlike listening and speaking, reading and writing are not skills that children acquire naturally and automatically. Reading and writing need to be taught overtly and systematically. Scarborough (2001) compares achieving the level of a skilled reader with weaving two main strands (each with a number of sub-strands) into a tightly knit reading rope. The two main strands involve **language comprehension** (also referred to generally as language proficiency) and **word recognition (or decoding)**. Several sub-strands in each of the main strands involve linguistic concepts such as the alphabetic principle, semantics, syntax, phonological awareness, syllables, phonemes, etc.

In order to teach reading effectively, a teacher must have a clear understanding of the fundamental concepts that underlie the teaching of reading. Teaching reading is similar to teaching any other subject such as maths, science or history. As a teacher you need to have a superior knowledge of the subject content and its domain. The domain of content knowledge relating to reading is quite broad. It includes, inter alia, both **knowledge of language** and **knowledge of reading** (concepts related to understanding written language, including inter alia writing systems such as alphabetic writing, orthography, phonological awareness, alphabetic knowledge, phonics and reading comprehension). The linguistic knowledge and skills needed to become a good reading teacher include phonology (the sound system of the particular language), morphology (the study of meaningful parts of words), syntax (the study of how words and phrases are joined together to form sentences) and semantics (the study of meaning).

There are many factors that influence the process of learning to read and reading teachers need to know about them. The figure below highlights the most salient factors that have an impact on learning to read. This figure may look overwhelming at first, but by the end of this module you will become familiar with the many components and factors involved in reading and you will find it easy to make sense of the diagram. Note that decoding, linguistic knowledge and background knowledge are the major cognitive-linguistic factors influencing reading. A basic understanding of the language structure (the underlying rules of the grammar) of the target language is imperative for learning to read. Understanding the language structures and being able to decode words effortlessly are prerequisites for reading comprehension which is the ultimate goal of reading. Home, community and schooling factors can impact on the cognitive-linguistic development of learners, which in turn affect their reading. Decoding in reading refers to the ability to match the letters in written words with their sounds in spoken language and apply this knowledge of letter-sound relationships and letter patterns to correctly sound-out and pronounce written words.

Fundamental language study concepts have been grouped and explained in this module. The major concepts associated with language study and their relevance for preparing for and teaching reading and writing will be discussed and highlighted. These concepts include: language and the four language skills, units of language, rapid automatised naming (RAN), decoding, alphabetic knowledge, letters of the alphabet (vowels and consonants), graphemes, phones and phonemes, prosody/suprasegmental phoneme qualities, phonological/phonemic awareness, syllables, phonemes, orthography, sight words and frequently used words, oral reading fluency, automatised reading, phonics, morphological awareness, vocabulary building, syntactic awareness and semantics. Don't be overwhelmed by all these technical terms – by the end of this module you will have a much better understanding of all these concepts in your journey to becoming an expert reading teacher!

At pre-school level learners are mostly exposed to oral stories (also referred to as oral narratives). To make sense of these stories and comprehend them children need good listening comprehension skills, but vocabulary development is also important, even at this young age. The more words children learn, the better they understand spoken language, which in turn helps them understand written language when they learn to read and write in school. At preschool level learners acquire basic language, listening and speaking skills and they develop a sense of how narratives work (it tells a story, people or animals are involved, events happen, there's a beginning, middle and end). They start to become aware of sounds in language such as rhythm, rhyme, words and syllables and they might even learn some letters of the alphabet and realise that letters stand for sounds in words (this is called phonemic awareness) and learn to write their name. All the time they are also developing vocabulary and learning new words in various fields (names of everyday things and events, body parts, household goods, animals, plants, places, vehicles, weather, etc).

In Foundation Phase, learners are still mostly exposed to narrative texts. More complex language acquisition occurs during this phase and alphabetic knowledge and word recognition become an important aspect of reading development. Accuracy and fluency in reading become important cornerstones as learners are exposed to decodable or grade relevant texts. Incremental exposure to reading and writing is important. Mastering more complex grammar is the foundation of proficiency in a language. Through formal teaching of grammar and exposure to written texts the learners' knowledge of the underlying system of the language grows and their language comprehension is improved through employing phonemic awareness, phonics, word attack strategies and comprehension strategies. The learners' knowledge and skills in phonology, morphology, semantics, syntax, pragmatics and discourse (how to use language appropriately in different contexts and in conversation) become essential tools to develop their literacy and cognitive abilities.

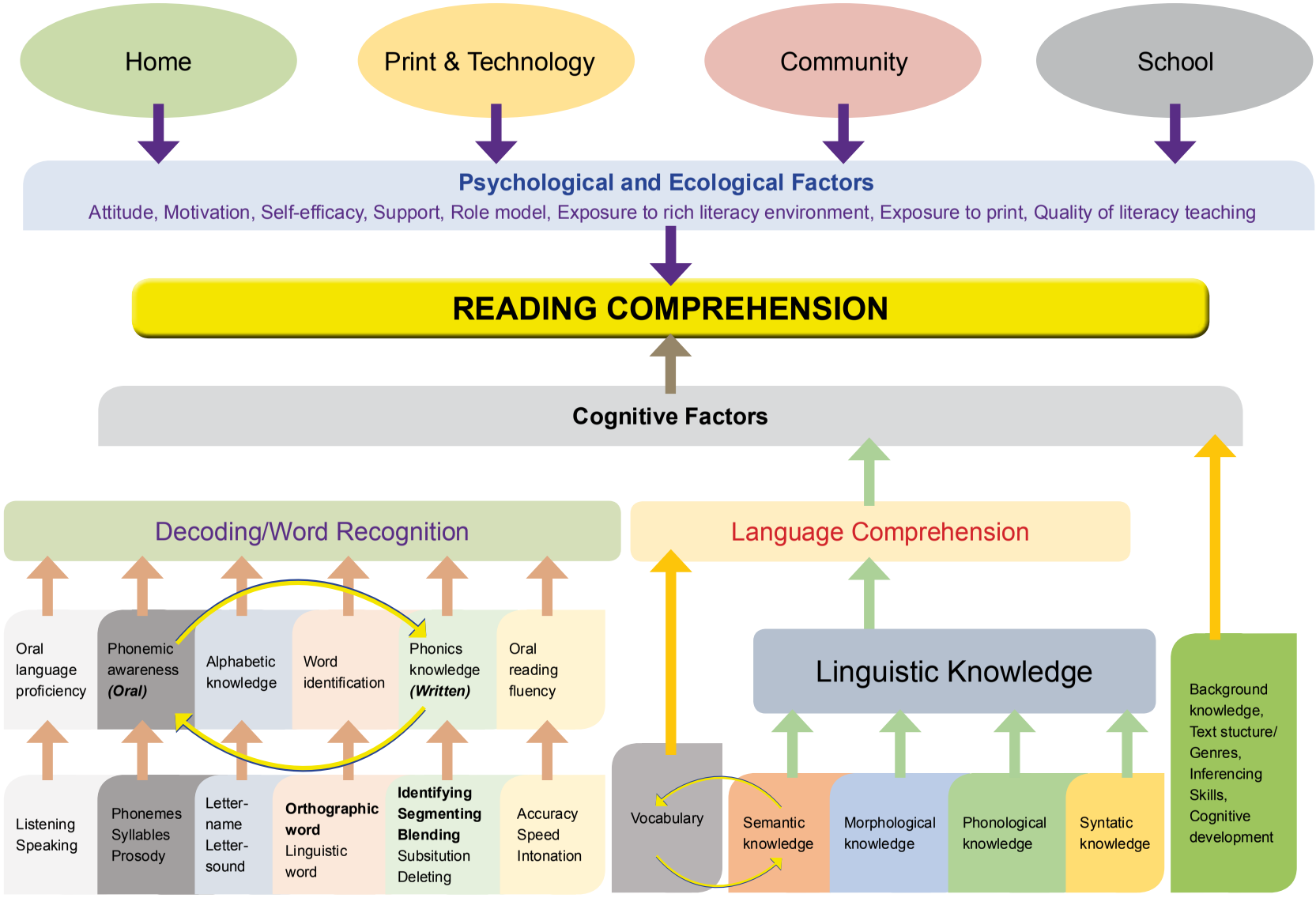


Figure 1: Factors that have an impact on learning to read

Language and the four language skills

Language is a communication system. Our ability to use language is what distinguishes us from the other primates. We use language employing four language skills, namely speaking, listening, reading and writing. These language skills can be classified as oral or written, and as productive or receptive. The oral language skills are listening and speaking. Listening is a receptive skill while speaking is a productive skill. Written language on the other hand comprises reading and writing. Whereas reading is a receptive skill, writing is a productive skill. (Note that listening and reading are not entirely receptive skills. When you listen or read, you co-create the text in your mind. The terms 'productive' and 'receptive' should thus not be interpreted as absolute discrete concepts.) Figure 2 below shows how the four language skills are categorised in terms of the binary categories oral and written, and productive and receptive.

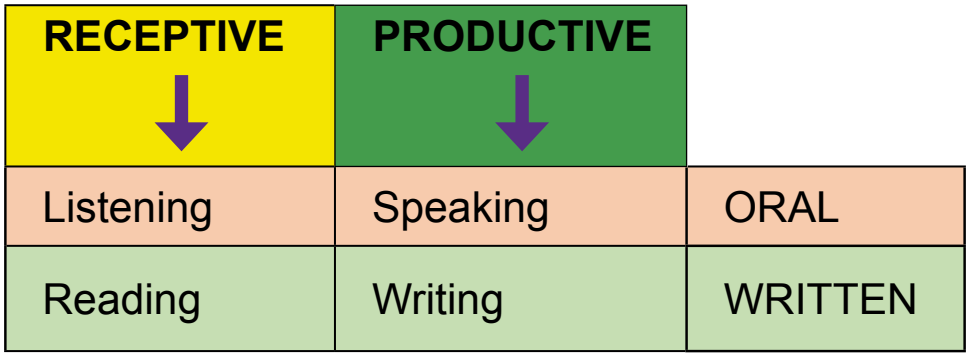


Figure 2: Categorisation of the four language skills

When you write, you **encode** language. The reason for writing is to preserve ideas expressed in language so that we or other people can read them at any time after the writing process. Encoding is thus the process of transforming oral language into written language as depicted in Figure 3 below.

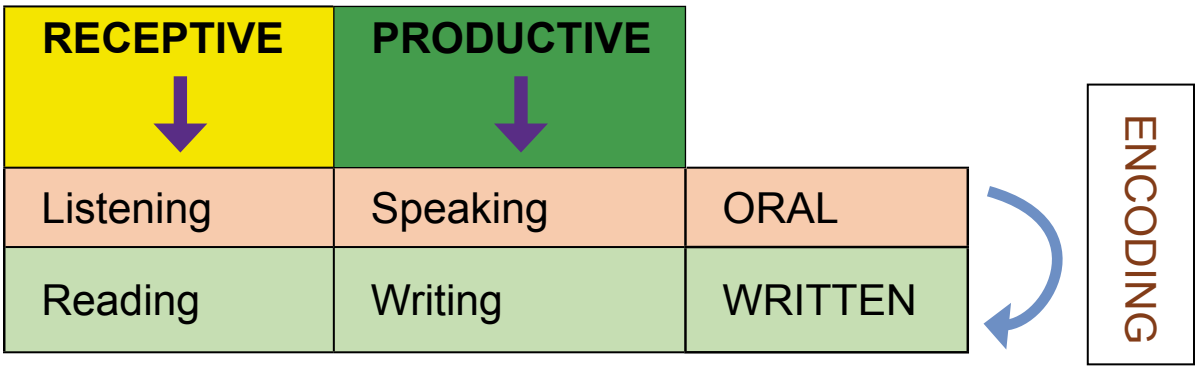


Figure 3: Encoding - the process of converting/transforming oral language into written language (writing)

Decoding is the opposite of encoding. In order to understand the message embedded in the coded language form (written language) we have to read it. Reading entails decoding the written language by transforming the written form into spoken language so that we can gain access to the message contained therein. Right now, while reading this text, you are decoding the written text we wrote some time ago. The process of decoding is depicted in Figure 4 below.

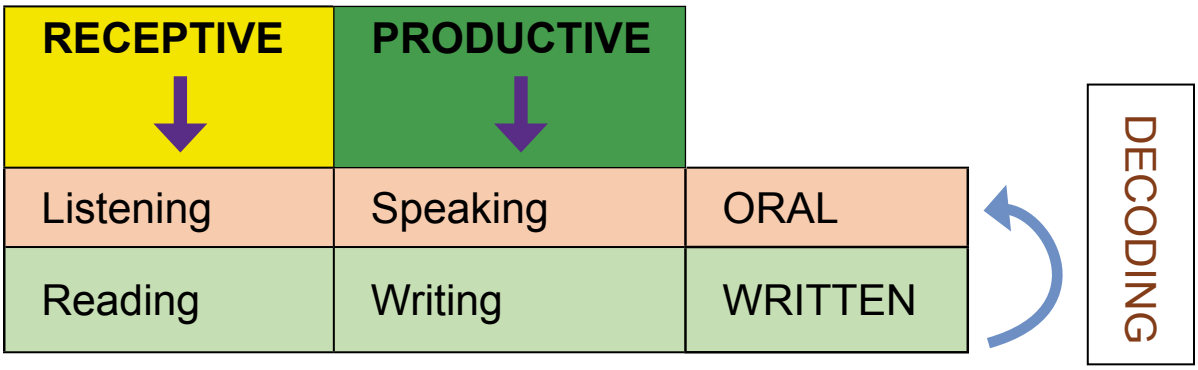


Figure 4: Decoding - the process of converting/transforming written language into oral language when reading

It is important for children to develop both their oral and written language skills. While oral language skills develop mostly by mere exposure to the language, written language skills need to be taught. Inadequate oral language development leads to reading problems. This is due to the fact that written language is based on spoken language, as is evident from the explanation of encoding and decoding in the discussion above. It is important for parents, caregivers and teachers to develop children's oral language skills in the preschool phase and in Grade R before they are formally taught to read and write in Grade 1. This can be done by providing exposure to rich language through oral stories or reading stories to them, engaging them in conversations about things happening in daily life, and teaching them new words for things in the world around them. However, oral language development should not stop there, it must be further honed during the Foundation Phase and beyond. (Developing oral language proficiency in the Foundation Phase classroom is discussed in Module 2.)

Reading is a complex activity that is influenced by a myriad of factors such as the reader's own motivation to read, attitude towards books and reading, background knowledge, socio-economic background, exposure to text in print or digital form and the reader's cognitive and language abilities, the teacher and community's attitude and practices towards reading, the availability of books, external motivation to read and the effectiveness of the teaching process (see also Pretorius & Murray 2019).

Language units

Language can be broken down into units of different magnitude. We distinguish between sentences, clauses (or word groups) and words as units of speech with independent meaning. The divisions between these units are easier to discern in written than in spoken language because spoken language is transient and momentary, while the written code is more permanent, and the different letters, punctuation and spaces between words signal the linguistic units explicitly in written language and we can see them clearly.

While a sentence may comprise one word only, it may also consist of many words. Consider for instance the answer to the question *Ufuke nini na?* 'When did you arrive?' *Izolo*. 'Yesterday.' or the command *Gijima!* 'Run!'. Compare these one-word sentences to the longer sentence *Laba bafana babone amadada amane ebhukuda edanyini eliseduze komuzi wakwaNtuli* 'These boys saw five ducks swimming in the dam which is close to the Ntuli homestead'. The latter sentence can be broken down into different word groups which can in turn be divided into words. Suffice it to point out in the example above that the word *laba* specifies the word *abafana* and these two words thus form a word group. Similarly, the word *amane* qualifies *amadada* and those two words also form a word group.

Words are seemingly easy to identify in written text because the convention in alphabetic languages is to separate them by leaving spaces between them. However, if we compare a simple Sesotho sentence with the same isiZulu equivalent sentence then we may conclude that the words in these languages are very different. Consider the example below that illustrates the differences between word division practices in the orthographies of Sesotho and isiZulu. The Sesotho sentence comprises six words while the isiZulu equivalent sentence comprises two words. Sesotho is said to have a disjunctive orthography while isiZulu has a conjunctive one (discussed further in Unit 4).

Sesotho:	*O na le dimelo tse kae?*
IsiZulu:	*Uneminyaka emingakhi?*
English:	'You are with how many years? / How old are you?'

Language units and learning to read

As seen from the isiZulu and Sesotho examples above, although language units such as words and sentences exist across languages, their 'size' can differ across languages, depending on the orthographic conventions of the particular language. This means that languages differ in the average length of words (i.e. the average number of distinct sounds or letters in a word). The fact that the orthographies of the Sotho and Nguni languages differ will have an impact on the way in which reading fluency develops in these languages and how quickly children read words in them. As a reading teacher, you need to be aware of the typical similarities as well as the differences in reading development across different languages. Thus, although children develop reading skills in fairly typical ways across alphabetic writing systems, they also differ in predictable ways

due to linguistic or orthographic differences between languages. These issues will be discussed again later in this module (and in Unit 5) when we discuss reading benchmarks in isiZulu and Sesotho that Foundation Phase teachers need to know about.

Rapid automatised naming

Children all over the world, irrespective of their language, culture or environment, have similar brains that process language and written alphabetic script in similar ways. In the past few decades new technology such as PET scans, fMRI machines and eye tracking machines enable researchers to see what is happening in the brain when we talk, listen, read or write, and to determine which parts of the brain are used and how fast neural 'messages' travel when we use language. This new brain knowledge has enabled us to have a much better understanding of how children learn to read and why some children find reading so much more difficult than their peers. To understand how the brain processes oral language and written language, a reading teacher in the 21st century needs to know some basic information about the human brain.

The brain has four different areas or lobes that perform different functions. Things we see with our eyes are processed in the visual part of the brain (called the occipital lobe, shown in red in Figure 5), while language is processed mainly in the temporal and frontal lobes (the blue and green lobes in Figure 5). Although there are four lobes each with their specialised functions, the brain is richly interconnected via neural pathways. Neural pathways in our brains receive information through our senses (e.g. listening or seeing) and send these messages to different parts of our brain for processing. Neural messages travel extremely quickly through the brain and can be measured in terms of milliseconds. When we see different objects with our eyes (things, people, letters, numbers, etc.) the visual message goes from the occipital lobe to the language parts of the brain so that we can name the objects we see. Naming an object requires us to say the sounds that form the name of the object. This is called **phonological processing**. The speed with which we can process this information is associated with ease or difficulty in learning to read. Figure 5 shows the four language lobes.

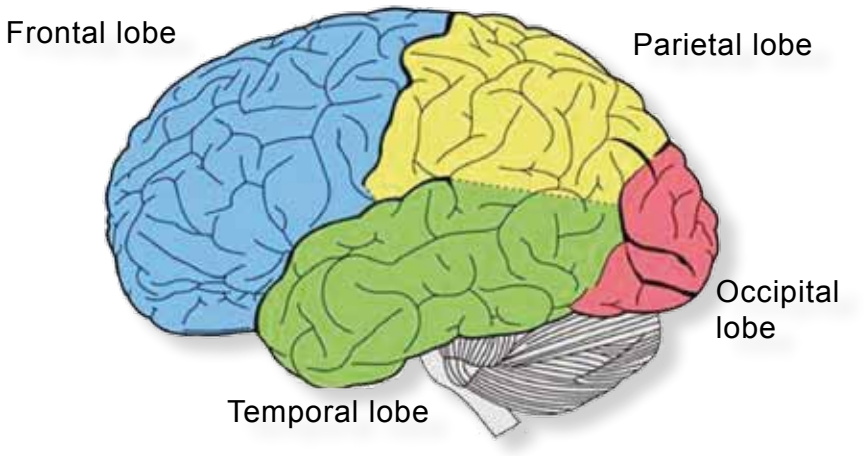


Figure 5: The four lobes of the brain

Rapid automatised naming (RAN) refers to the ability to quickly process information about things we see (in the red occipital lobe) and link it, via neural pathways, to phonological information in the language brain (the green and blue lobes) that names or labels the object. RAN is about being able to recognise objects quickly, retrieving their names from memory and verbalising them using phonological information of the speech sounds of the language concerned. Research has found that this brain function is closely associated with reading.

RAN can be measured by showing a child a series of familiar objects arranged in random sequence in a table, page or poster, and asking the child to name them quickly in succession from left to right. These objects may be real-life objects (three dimensional) or pictures and figures on a piece of paper (two dimensional). Figure 6 shows an example of an object naming RAN, where the child is first shown a series of six objects (e.g. sun, dog, table, chair, pig, book) and asked to name each object aloud (to make sure that the objects and their names are known to the child). Thereafter the child is shown a chart on which these 6 objects are mixed in random order and the child is asked to name them as quickly as possible in succession. The task is timed (e.g. for a minute or 30 seconds) and the child's responses in that time are measured to see how many objects are named correctly in that time. This gives an indication of how fast phonological processing is happening. Children who name the objects more slowly and do not finish the task have a lower RAN score than children who name the objects quickly and complete the task in the allotted time.

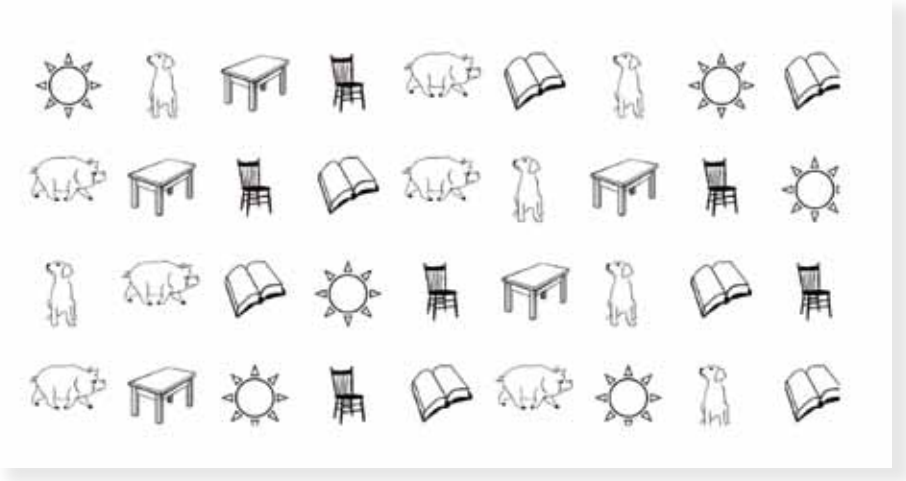


Figure 6: A RAN task involving naming of familiar objects (EGRS II Report, Department of Basic Education, 2018)

Research shows that children who experience problems with RAN often experience problems with reading as well. Problems with RAN may also point to a shortcoming in working memory or executive functions – flexible thinking and self-control, which happen in the frontal lobe (blue) which, in turn, have a bearing on attention span, planning and organising, staying focused, keeping track of tasks and managing emotions.

Note that not all reading problems are related to RAN. There are many reasons why children struggle to read – poor quality of teaching in the classroom is a common factor for children's low reading performance! However, in some cases, children who *really* struggle to learn to read may have a phonological processing problem. Estimates differ (ranging between 5-15%), but they point to a small minority of children who may have such learning challenges. Often these are children who are diagnosed as having dyslexia (people who struggle to read, despite having normal or high intelligence) (Wolf 2008). Research is mixed with regard to whether children with poor RAN can improve their phonological processing. Some studies have shown positive results while others have reported no significant improvement. Children with RAN problems may show some improvement but not to the point where they perform at the same level as their peers. However, research shows that early intervention and explicit phonics instruction can help them learn to read, despite challenges with phonological processing.

If a teacher feels that a child in the class is struggling to learn to read despite remediation, then they should refer the child for further assessment by a well-trained special needs teacher or education psychologist. A RAN assessment can be used as a diagnostic tool to identify children who may be at risk of learning to read.

If there are children who find it difficult to sit still and focus then RAN-type activities may help them develop executive functions and improve their attention span and working memory, which in turn improves learning to read. These can be fun activities done in Grade R or early in Grade 1 and involve different objects such as random objects, colour or shapes, as shown in Figure 7 below.

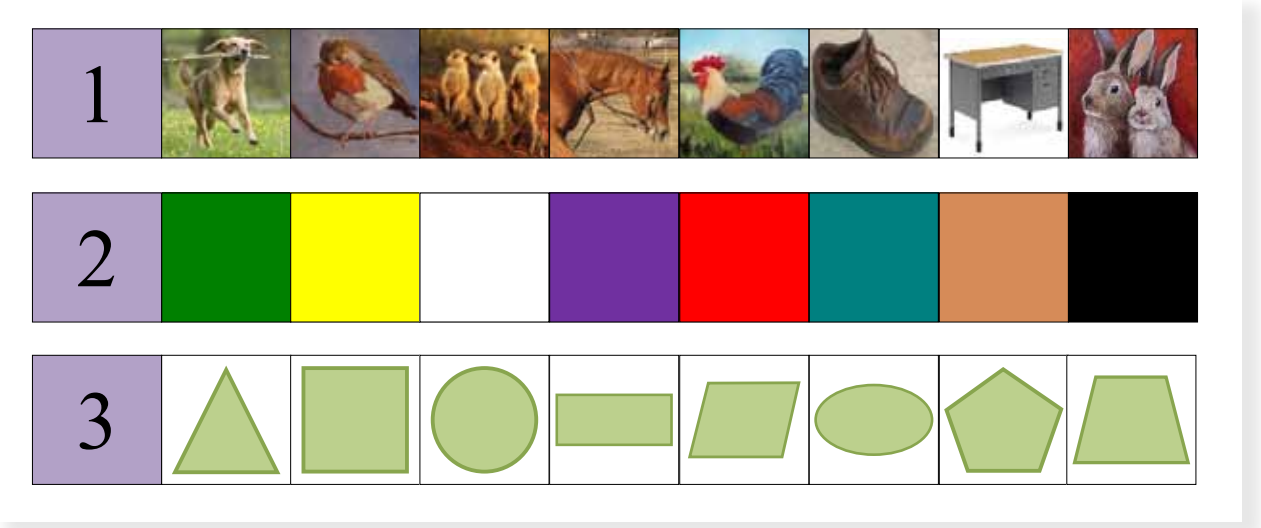


Figure 7: Different RAN activities

The teacher can show the child the objects and ask him/her to name them in succession two or three times, using a finger to point and name quickly. Alternatively, the teacher can show the

child several objects laid out on a tray (e.g. Figure 8), ask them to note what's there, and then cover the objects with a cloth and ask the child to recall all the objects now hidden.

Figure 8: Recalling objects from memory

Note that these are not RAN tests. They are activities that borrow ideas from RAN tests to help children focus their attention and improve recall in fun ways. They can also help familiarise a child to read from left to right (as is the custom in many alphabetic writing systems) and can help with vocabulary building if the teacher also includes less-known objects in the recall exercise.

Conclusion

This unit introduced you to many new terms related to language, literacy and reading, which reflect content knowledge that teachers need in order to teach reading effectively. The four different language skills of listening, speaking, reading and writing were discussed and categorised into receptive/productive skills or oral/written language skills, and the terms encoding and decoding clarified. The different skills involved in learning to read and the different factors in a child's external environment that can impact on reading ability were also identified. The unit ends with a brief discussion of RAN and the importance of phonological processing in learning to read.

Self-assessment activities

These are 'quickie' assessment activities to check how well you have understood key concepts discussed in this unit and whether you are able to perceive the pedagogical implications of such concepts in the teaching of reading.

Note: The key to these self-assessment activities is given in the Appendix at the end of this module. If you score less than 6/8 (75%) for these questions you are advised to re-read the unit again to strengthen your content and pedagogic knowledge.

1. In each of the statements below provide **the appropriate missing word (or words). (6)**

   a) According to the SVR approach to reading the two major components are ……..... and …… (2)

   b) The major difference between phonological awareness and phonics is that phonological awareness focuses on …….. while phonics focuses on …….. language. (2)

   c) According to the benchmarking standard Grade 2 isiZulu/Sesotho learners should be able to read ……. words correctly per minute while Grade 3 isiZulu/Sesotho learners should be able to read ……. words correctly per minute. (2)

2. Indicate which one of the following statements is **false**. **(1)**

   a) Encoding is the process of making sense of written text.

   b) Oral reading fluency at Grade 3 level is measured by determining the number of words read correctly per minute.

   c) Sesotho and isiZulu have a transparent orthography.

   d) Sesotho uses a disjunctive orthography while isiZulu uses a conjunctive orthography.

3. Indicate which of the following statements is **the correct one**. **(1)**

   a) The ability to read is an innate skill in humans.

   b) Children fail to read for meaning because not enough attention is given to the meaning of words in the initial stages of learning to read.

   c) Automatized reading develops when learners are taught to read fast from the beginning.

   d) Reading is a receptive skill based on the written form of language.

Unit 2: Decoding and phonology

(This topic is covered in detail in Module 3 Decoding: Phonological awareness, alphabetic knowledge, phonics, oral reading fluency, morphological awareness and reading stages.)

Introduction

We turn now to a foundational component of reading, namely decoding, which we referred to in Unit 1. In this module, and all other modules, we use the term decoding to refer to the process of converting written text to spoken language. (Remember that writing is the process of converting spoken language into written form, thus encoding, while reading is the reverse process, namely converting the written form of language into the spoken form, hence decoding.) Decoding relies on several skills derived from different sources such as oral language proficiency, phonological and phonemic awareness, alphabetic knowledge, phonics and (oral) reading fluency. It is these various aspects of decoding that form the focus of this unit.

Knowledge and skills involved in reading

Reading and writing involve both generic and language specific knowledge and skills. The knowledge and skills needed for reading with understanding include, inter alia, language related knowledge (oral language proficiency, which includes phonological, morphological and syntactic awareness, vocabulary, language comprehension), knowledge about the writing system (alphabetic knowledge) and the skill to quickly process the letter symbols into spoken words, referred to as decoding or word reading. The ability to read words quickly and fluently in the context of sentences is referred to as (oral) reading fluency. The ability to understand what we read relies on all these skill sets as well as on general cognitive knowledge and skills (e.g. background knowledge, inferencing, working memory). Figure 9 below shows the various knowledge and skills involved in decoding. While background knowledge, alphabetic knowledge and oral language proficiency are, to a large extent, generic requirements for learning to read in any language, the actual linguistic details related to decoding and to phonological, morphological and syntactic awareness and vocabulary are specific to a particular language and its orthography (the writing system). This implies that while some of the knowledge and skills necessary to learn to read in a particular language are transferable to another language, someone learning to read in a particular language needs to have some basic knowledge and skills relating to the phonological, morphological and syntactic structure, orthography and vocabulary of that particular language.

Written language is a code that uses symbols to represent spoken language. In alphabetic orthographies, the symbols are letters that represent speech sounds in a language. Decoding is thus about learning the code (all the letters) and how it works (how letters combine to form words). Decoding is impossible without initial letter-sound knowledge and how letters blend to

form words (Adams 1994; Share 2008). The ability to decode words quickly and accurately is equally essential for becoming a skilled reader. Successful reading and comprehension depend on the ability to decode text quickly and accurately and it is therefore essential to develop fluency in reading. Eventually learners need to recognise recurring letter patterns in their language based on orthographic, phonological, morphological, syntactic and semantic information relating to smaller and larger segments of words (Castles et al. 2018; Ehri 2005; Share 2008). When beginner readers encounter words frequently, these words become familiar and known, and they recognise word chunks (e.g. in the words *sifunda, asifundi, bafundile* and *zisazofunda* learners eventually realise that the common letter sounds or graphemic form[1] is *-fund-*) and develop word-specific knowledge that speeds up and automatises the reading process when words contain this -fund- pattern, which in turn frees up more working memory or reading comprehension rather than focusing on letter-by-letter word decoding.

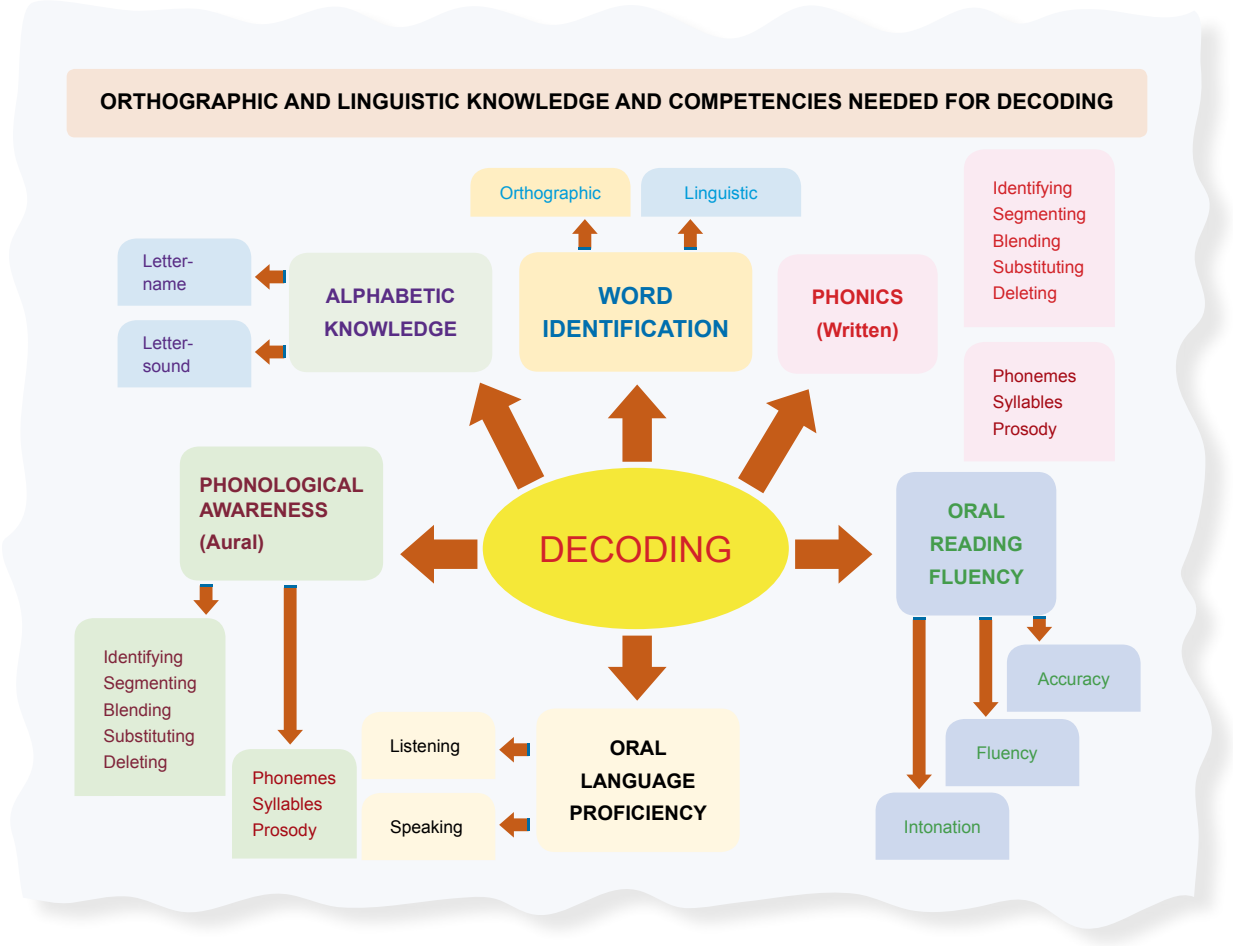


Figure 9: Knowledge and skills involved in decoding

[1] Note that in this case the graphemic pattern -fund- overlaps with the root of these words, but at this early stage Grade 1s do not need to be taught this, they only need to recognise the letter patterns to develop more fluent decoding.

The role of decoding in reading comprehension

Different theories or models of reading have arisen over the years, some more plausible than others and supported by robust research evidence. One such model is the Simple View of Reading, first proposed by Gough and Tunmer in 1986 and still one of the most supported models of reading. According to the Simple View of Reading, reading comprehension (RC) is the product of decoding (D) and linguistic comprehension (LC), thus: D x LC = RC, as shown in Figure 10 below.

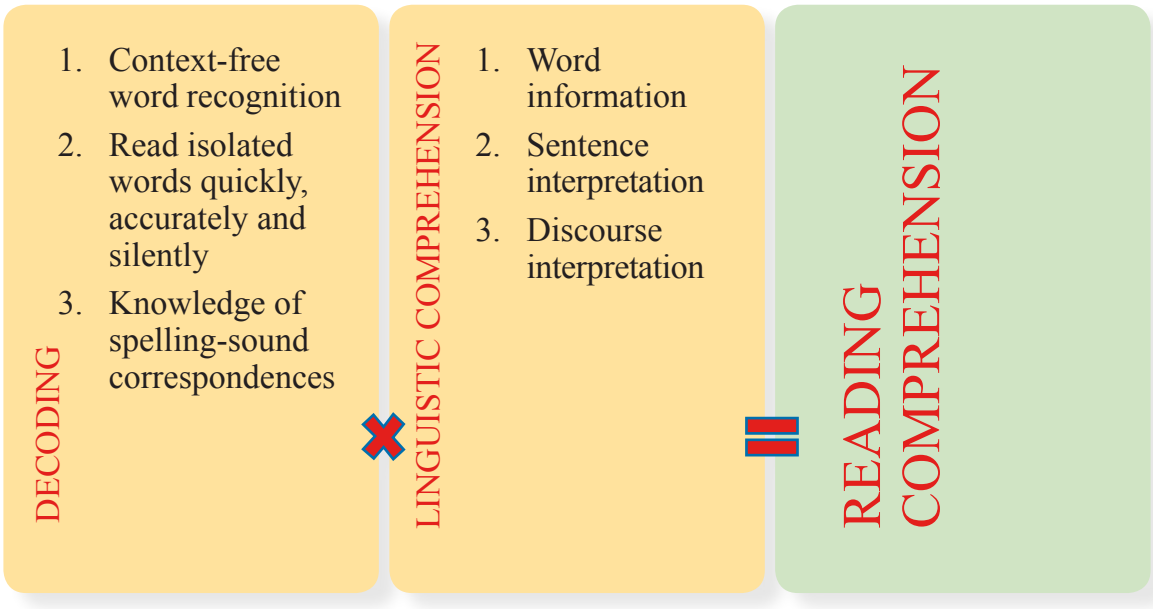


Figure 10: The Simple View of Reading

Reading comprehension is said to be the product of D and LC rather than the sum of these two elements because if either one of the elements is zero, then reading comprehension is also zero. In other words, both decoding and linguistic comprehension (also referred to as language proficiency) are necessary for reading comprehension. If learners have good understanding of the language but cannot decode the text well, then they will have problems with reading comprehension. On the other hand, if learners can decode the text (they know what sounds the letters represent) but they have poor understanding of the language and poor vocabulary knowledge, they will have problems with reading comprehension. Reading comprehension can only be achieved if learners have adequate language proficiency AND they can decode the words of the target language. Gough and Tunmer (1986) explain that once a word has been decoded it is subjected to linguistic comprehension which entails a process of interpreting the word information in the context of sentence and text information. In the early stages of learning to read, learners who struggle to decode written language will have problems understanding what they read, even if they have good language skills.

In science, models or theories that are not consistently supported by evidence tend to get dropped or become irrelevant because their claims are not supported by data. Various research studies in different languages around the world provide evidence that supports the SVR model. If children have difficulty with decoding, then they will not be able to become proper readers as their comprehension will be compromised by their decoding difficulties.

Phonology and its relationship to decoding

We now examine more closely some of the phonological aspects of language that form an important basis in reading and in decoding in particular. To understand phonology properly we need to draw on linguistic knowledge and terminology in this field, as this forms an important part of the content knowledge that reading teachers need.

Phonemes and phones

There is a close connection between linguistics, the principles of writing systems (orthography) and the science of reading. This is because alphabetic writing systems represent language phonologically, at the level of phonemes. It is therefore not surprising that linguistic terms such as *words, syllables* and *phonemes* are important for understanding and describing different orthographies and for teaching reading.

Let us start with the smallest sound units. The term phoneme refers to the smallest unit of sound that distinguishes one word from another. The minimal pair test is one method applied to determine the phonemes of a language. This test entails comparing two words with the same number of sounds where only one of the constituting sounds in the one word differs from the sound in the same position in the other word. If this difference in sound leads to a difference in meaning or one of the words is meaningless due to this difference in sound, it means that the two sounds that differ minimally bring about a difference in meaning and therefore constitute separate phonemes. Consider for instance the stems ***-bala*** 'count' and ***-sala*** 'remain behind' in isiZulu. Because these two words are identical in form except for the sounds /b/ and /s/ and if replacing one with the other in the word changes the meaning, then the sounds constitute two separate phonemes, which are indicated by slashes /b/ and /s/. Each language has its own set of phonemes that when combined in certain ways form words. For example, English has 44 phonemes, Sesotho has 37 phonemes and isiZulu has 48 phonemes. (See Appendices B and C in Module 3 for a list of the phonemes in isiZulu and Sesotho.) The phoneme is the basis for alphabetic writing systems and it therefore plays an important role in learning to read. We will revisit the relationship between phonemes and letters of the alphabet in the next unit.

The term **phone** is used in the study of phonetics. A phone represents a phoneme in its spoken form. In an articulatory phonetic description, a phone is viewed as a speech sound as it is produced in the mouth and accounts for the slightest deviation from any other speech sound. All speech sounds are indicated by using a symbol from a set of symbols known as the International

Phonetic Alphabet (IPA)[2]. For example, the sound represented by the letters sh in the word *i**sh**oba* is written as [ʃ] in phonetic script while the sound for the ny letters in *inyoka* is represented in phonetic script as [iɲɔk'a]. The same IPA phonetic symbols are used for both phonemes and phones, with the differences signalled by slashes / / or square brackets [ ]. The phonetic symbols listed in the IPA are used to represent the slightest differences between sounds.

Unlike the physical attribute of phones, a phoneme is a mental construct that reflects the distinctive sounds in a language at a more abstract level – away from all the small pronunciation details. It involves the way language users perceive a sound as being distinctive from other sounds in that language in as far as that sound distinguishes a particular word from other words in the language. Phonemes are easily determined by the minimal pair test. It requires a trained linguist to discern some of the small differences in the pronunciation of sounds and to determine which are phonemes and which are simply variations of the way a sound is pronounced in different word context. Often, even mother tongue speakers are unaware of these phonetic differences even though they speak the language every day. For example, the isiZulu word *mina* can have two different meanings depending on the pronunciation of the m sound. This is because they are actually two different phones, even though the letter m does not signal this. If this word is pronounced as [mina] it is the pronoun of the first-person singular with the meaning 'I'. If it is pronounced as [mɦina] it is a dedicated imperative verb, meaning 'here, take it'. The phones [m] and [mɦ] therefore constitute separate phones (they are pronounced differently) and because they also bring about a change in word meaning, they represent separate phonemes /m/ and /mɦ/ in isiZulu. Consider also the pronunciation of the two underlined sounds in the words *ukh**e**zo* 'spoon' and *imf**e**zi* 'Mozambique spitting cobra'. The e sound in *ukh**e**zo* is pronounced as [ɛ] while the e sound in *imf**e**zi* is pronounced as [e] and is referred to as the raised vowel e. The slight change in pronunciation between these two e sounds is brought about by the high vowel [i] following the e in the word *imfezi*. These two e sounds differ slightly and moreover the use of one rather than the other in a particular word will not lead to a change in word meaning or make the word incomprehensible. These two sounds are thus two different phones [e] and [ɛ] but they constitute a single phoneme, namely /ɛ/.

Phones that differ slightly in terms of their pronunciation sometimes occur (for example as dialectal variants) even though they do not constitute different phonemes. Consider in this regard the letter k in the infinitive prefix which realises phonetically as the phones [k'] or [ġ]. However, because the pronunciation of the one form rather than the other thus [uk'ufunda] or [uġufunda] does not lead to a difference in meaning these two phones constitute one phoneme, namely /k'/.

[2] In articulatory phonetics the speech sounds are described according to criteria such as the place of articulation, the manner of articulation and the air stream movement when pronouncing the sound.

Vowels and consonants

Speech sounds are divided into two main groups, namely vowels and consonants. Vowels are sounds pronounced without any obstruction in the air flow in the mouth when pronouncing them. The letters that represent the five basic vowels of isiZulu and the seven basic vowels of Sesotho are a, e, i, o, and u. All other sounds are consonants. The consonants represented by the letters y and w are sometimes called semi-vowels because they have some characteristics similar to vowels.

For teaching reading the focus is much more on phonology than on phonics.

Syllables

We move now to a slightly larger phonological unit in language, the syllable. A syllable is larger than a phoneme. A syllable is a natural break within a word where the speaker will insert a short pause when pronouncing that word slowly. The African languages have an open syllable structure which means that the end of a syllable is generally marked by a vowel and are therefore referred to as syllabic languages. This syllabic structure is evident in the following examples:

Sesotho: /ba/ /a/ tsa/ma/ya/ /ba/ /a/ /qo/qa/ /le/di/mo/ /ma/bu/tsha/bu/tsha/

isiZulu: /u/wi/le/ /si/ya/se/be/nza/ /i/zu/lu/ /a/ma/nto/ngo/ma/ne/.

A syllable may comprise a vowel only, thus /V/, for example the vowel /u/ in /u/wi/le/ or the vowel /i/ in /i/zu/lu/ or the vowel /o/ in /o/Vu/si/.

A syllable may have the structure /CV/ which means that it can be any consonant phoneme followed by a vowel. Examples of single consonant phonemes followed by a vowel are: /bo/ in /bo/na/ or /qa/ in /qa/la/ or /su/ in /i/si/su/ or /ti/ in /i/ka/ti/.

As explained above, remember that digraphs and trigraphs represent one consonant sound /C/. Phonemes represented by two letters (i.e. digraphs) are thus phonemically /C/ for example the /t^h/ in the syllable /thi/ in the word /thi/na/ or the phoneme /dl/ in the syllable /dla/ in the word /si/dla/. The consonant phonemes /dl/ and /t^h/ are each represented by two letters and comprise digraphs representing a single consonant sound.

The consonant sound [tʃ] in the word *itshe* ‘rock/stone’ has three letters, namely t, s, and h. However, these three letters constitute one phoneme /tʃ/ and is called a trigraph. It represents a single consonant sound in a syllable /Ce/: /tʃe/.

A syllable may also comprise the structure /CCV/. Examples of syllables comprising two consonant phonemes followed by a vowel are the phonemes /n/s/i/ in the syllable /nsi/ in the word /i/nsi/mbi/ or the phonemes /n/t/o/ in the syllable /nto/ in the word /i/nto/mbi/ or the phonemes /m/b/i/ in the syllable /mbi/ in the word /i/nto/mbi/ or the phonemes /n/dl/e/ in the syllable /ndle/ in the word /i/ndle/la/.

A syllable may have the structure /CCCV/ involving a sequence of consonants, also referred to

as consonant blends. Examples of such structures are the following:

/n/t/w/a/ in the syllable /ntwa/ in the word /i/ntwa/yi/ntwa/yi/.

A syllable may comprise the bilabial consonant /m/ only. This /m/ is the only isiZulu consonant that may be syllabic (thus constituting a syllable on its own) in certain contexts, as in /u/m/ntwa/na/ and /ngi/ya/m/tha/nda/. It is only the shortened prefix um- instead of umu- of class 1 and 3 and the object morpheme of classes 1 and 1a -m- instead of -mu- that result in the /m/ being syllabic. Compare the syllable structure of the nouns from classes 1 and 3: class 1, /u/mu/ntu/ but /u/m/fa/na/; class 3, /u/mu/zi/ but /u/m/si/la/.

There is always a syllable break after a vowel in isiZulu and Sesotho. The African languages thus have an open syllabic structure. The metre (i.e. the rhythmic quality of a line or lines in poetry) of the African languages is determined by the syllabic structure and the length on the vowels in words. Moreover, there is generally length on the penultimate (i.e. second last) syllable of the word and long length on the penultimate syllable of the last word in the sentence. These characteristics contribute to a strong metre in these languages. (In phonetic script we indicate length by the use of a colon, thus : after the particular vowel.) The word *Siyafu:nda* 'We learn' has length on the vowel of the *penultimate* syllable. If this word is extended, the length is moved to the vowel of the penultimate syllable, thus *Siyafundi:sa* 'We let learn/We teach'. The length has now shifted from the [u] to the [i]. In the word *Siyafundisa:na* 'We let each other learn/We teach each other' the length has shifted to the second last [a] (of the reciprocal morpheme -an-).

Some of the older sources regarded the n that appears before certain consonants as all forming a single phoneme with the adjacent consonant (or consonants), but that view has been replaced. Now the n is seen to remain a separate phoneme in words such as *into* (< /i/n/t/o/), *indlala* (< /i/n/dl/a/l/a/) *intshe* (/i/n/tsh/e/). It is only in the case of words with the sound sequence n+g and n+y where the letter n and the following consonant signal a single phoneme, /ŋ/ and /ɲ/ respectively. Consider examples such as *ingubo* where the n+g form one phoneme, namely /ŋ/, thus *ingubo* (< /i/ng/u/b/o/). The same is true of the ny sequence in words such as *inyama.* The n+y forms one phoneme, namely /ɲ/, *inyama* (< /i/ny/a/m/a/).

If the nasal /n/ appears before the consonants /g/, /k/ and /y/ the nasal becomes homorganic (meaning that it is pronounced in the same part of the mouth as the following consonant). The /n/ is then sometimes written as /N/ to indicate that and co-articulates with the following consonant. The nasal /n/ becomes phonetically [ŋ] when followed by a /k/ or /g/ as in the words *inkomo* (> /i/N/k/o/m/o/) and *ingubo* (> /i/N/g/u/b/o/). The /n/ becomes phonetically [ɲ] when followed by a /y/ in a word such as *inyama*, phonologically thus /i/Ny/a/m/a/. The /n/ also becomes a [ŋ] phonetically before the click sounds. Again, the nasal becomes homorganic, but in these instances, it does not form one phoneme with the click. Consider the examples *iyancela* (> /i/y/a/N/c/e/l/a/), *nxa* (> /N/x/a/) and *inqola* (> /i/N/q/o/l/a/).

The semi-vowel w often appears after certain consonants in Sesotho and isiZulu, e.g. tsh+w. In this case the /w/ does not combine with the preceding consonant to form a single phoneme but

remains a separate phoneme. The semi-vowel /w/ thus retains its status as a separate phoneme when it is preceded by other consonants, even though it has a phonetic influence on the preceding consonant resulting in lip rounding in some of these consonants. Despite the phonetic influence the semi-vowel /w/ exerts on the preceding consonant it remains a separate phoneme. The word *utshwala* therefore comprises the phonemes /u/tsh/w/a/l/a/.

Prosody/suprasegmental qualities of phonemes

Other phonological units that occur are those that occur in prosody. Prosody is concerned with those elements of speech that are superimposed on phonemes, words or sentences. Prosody, or the suprasegmental qualities (in English the prefix *supra* means above), involve tone, length, pitch, intonation rhythm and stress. Stress, however, does not feature prominently in the African languages as all syllables in a word tend to be stressed equally. Languages in which syllables are equally stressed are called syllabic languages. Most languages in the world are syllabic. In contrast, English is a stress-timed language, where one syllable in a word is given more stress than others, e.g. in *committee,* the primary stress is on the middle syllable com**mi**ttee.

- **Sentence tone**

In spoken language tone may be the only characteristic to distinguish between a statement and a question sentence in the African languages. Consider the rising tone at the end of the question sentence in the examples below. In spoken language the question is distinguished from the statement only by the rising tone at the end of the sentence.

Nizobhala isivivinyo.	*Nizobhala isivivinyo?*
'You will write a test.'	'Will you write a test?'

- **Vowel length**

Vowels can sometimes be lengthened in a word to signal a grammatical function. Note how the difference in length in the pronunciation of the two /a/ vowels (in bold type) in the sentences below lead to a difference in the meaning of the verb. The bold typed vowel /a/ in the first sentence is short while the bold typed vowel /a/ in the second sentence is pronounced with long length. This difference in length marks the first verb as a present tense form and the second verb as a remote past tense form.

Present tense:
Abantwana bakhwela intaba manje.
'The children are climbing the mountain now.'

Remote past tense:
Abantwana bakhwela intaba ngesonto eledlule.
'The children climbed the mountain last week.'

These suprasegmental qualities of tone and length realise on vowels. Vowels may have a high, low or rising-falling tone and they may also be short, pronounced with length or pronounced with long length.

- **Word tone**

Word tone can be used to signal differences in meaning. In phonetics falling or rising diacritics ` ´ can be used to signal low/falling tone or high/rising tone in words. Consider for example the question *Usebenza lapha* If the subject morpheme u- is pronounced with low tone, thus *Ùsebenza lapha*? the meaning is 'Do you work here?' If the subject morpheme u- is pronounced with high tone, thus *Úsebenza lapha*? the meaning is 'Does he/she work here?'

The penultimate (second last) vowel in a word is normally pronounced with length, thus *sisathe.nga* 'we are buying' (with length on the vowel e). The penultimate vowel in a sentence is normally characterised by long length thus, *Sisathe.nga isi.nkwa ma:nje* 'We are still buying bread now'. Note that while the penultimate vowel of each word is pronounced with long length (marked with . after the vowel) the penultimate vowel of the last word in the sentence (marked with : after the vowel) is pronounced with long length in the example above.

In the following unit we will consider how the alphabet is used to represent these various phonological units in written language. The prosody or suprasegmental aspects of languages can often create challenges in orthography, as will be discussed in Unit 3.

The relationship between phonology and learning to read

As pointed out earlier, the stream of speech in language can be broken down into different units such as sentences, phrases, words, syllables and individual speech sounds or phonemes. Alphabetic writing systems use different symbols (letters) to represent spoken language at the level of phonemes or speech sounds. The letters of the alphabet thus represent specific phonemes which, when combined, make up a word.

In order to learn to read in an alphabetic writing system, it is important for children to become aware of the sound 'chunks' in spoken language as this awareness will later help them understand how the alphabetic code words. This awareness of language sounds is referred to as **phonological** and **phonemic awareness.**

Phonological and phonemic awareness

Phonological awareness is an umbrella term that refers to the identification and manipulation of units of speech in oral language. It includes awareness of words, syllables, rhymes, alliteration and individual speech sounds in spoken language. When you listen to spoken language it sounds like an uninterrupted sequence of sounds, however, in written language this flow or continuum of sound is divided up by letters that represent the individual sounds or phonemes that make up words. It stands to reason, then, that in order to read, the child has to learn what these letters

stand for in order to make sense of the writing. It becomes much easier for children to learn the writing system if they can already 'chunk up' the continuum of sound in speech. This may seem a fairly simple thing to do but research has found that illiterate adults and preliterate children can find this task quite challenging.

Phonological awareness has to do with knowledge and skills related to the understanding that spoken language comprises different units of sound and the ability to manipulate these sound units. Phonological awareness entails both syllable awareness and phonemic awareness, (as well as an awareness of rhyme which is relevant for English). Acquiring this kind of awareness helps beginner readers develop decoding skills more easily on their early reading journey.

> *Listen to the short discussion of phonemic awareness by Deslea Konza at the following address: https://www.youtube.com/watch?v=Q2YbNTrZ9EI*

Rhyme (especially end rhyme) is used in many languages as a poetic technique to sensitise the learners to the sound patterns of the language and as an organising device to remember poems. It is also useful to sensitise learners to sound patters and thus improve their phonological awareness. Consider the rhyming words (*impahla isihlahla* and *impaka isaka*). However, due to the phonological and morphological structure of the African languages, rhyme is far less effectively used as a language ordering device compared to languages such as English and Afrikaans. In the African languages repetition, linking and reduplication are used as ordering or poetic devices instead. Repetition is the process of repeating the same words, phrases or sentences in different parts of the text. Linking has to do with the repetition of words or phrases in different positions in successive sentences or lines. Reduplication is the process of repeating parts of words or morphemes (for example *uyahlekahleka* < *uyahleka* or *amazambazambane* < *amazambane*). Reduplication has a somewhat restricted use because it alters the meaning of the word. In these languages linking, repetition and reduplication are used rather than segmental rhyme as an ordering device or a memo-technique. (Refer to Module 3 for more information.)

Phonemic awareness refers more specifically to the ability to hear (identify or recognise) separate speech sounds/phonemes *within* words and to manipulate these speech sounds. For example, hearing the separate sounds in *usana* as /u/s/a/n/a and being aware that if we replace one sound with another the meaning can change, e.g. the /s/ sound with the sound /tʃ/ we get a new word *utshana.*

The five basic phonological operations that apply to both phonological awareness and phonics are the following:

1. identifying and matching (identifying or recognising similar and different syllables or letter sounds in words)
2. blending (putting together or combining different syllables or letter sounds to form words)

3. segmenting (breaking up or separating different syllables or letter sounds in words)
4. deleting (taking away a syllable or letter sound)
5. substituting (replacing a syllable or letter sound with another one).

The role of phonological and phonemic awareness in learning to read

Phonological awareness and phonemic awareness have been found to be important skills underlying the development of decoding. To understand why this is so, reading teachers need knowledge about the phonology of the language (its sound system) in which they teach reading, how alphabetic writing systems work, and what research has revealed about how children develop reading skills.

It is important to note that children tend to develop awareness of larger chunks of speech sounds such as words, rhyming words and syllables before they become aware of individual sounds. Thus a learner may readily identify three syllables in *usana* by clapping them while saying the word /u/sa/na/. They typically acquire syllable awareness before they become attuned to the smaller sound units (phonemes) within syllables. Thus, if asked what sounds are in the syllable /sa/ they may simply say /sa/, which indicates that they have not yet realised that the syllable /sa/ can be broken down into two smaller sound units /s/ + /a/. In other words, they have some phonological awareness but have not yet developed phonemic awareness.

As discussed earlier, in African languages, syllables typically comprise a vowel (V) or a consonant plus a vowel (CV). This CVCV pattern creates a salient rhythm in the language as each syllable is given the same stress. Phonological awareness of syllables can help children to decode words when they are learning to read in African languages, particularly when the words are long. However, although phonological awareness of syllables is important in learning to read, this is not the key that unlocks reading. Instead, phonemic awareness is the key to reading. Research across various alphabetic languages consistently shows that phonemic awareness is a strong predictor of learning to read and children who do not develop it struggle with decoding. This is not surprising because this is the way alphabetic writing systems work – letters represent individual sounds in written language, not syllables. This is a topic that is examined in the following unit.

Figure 11 provides a schematic summary of the components of phonological awareness, with specific reference to the African languages.

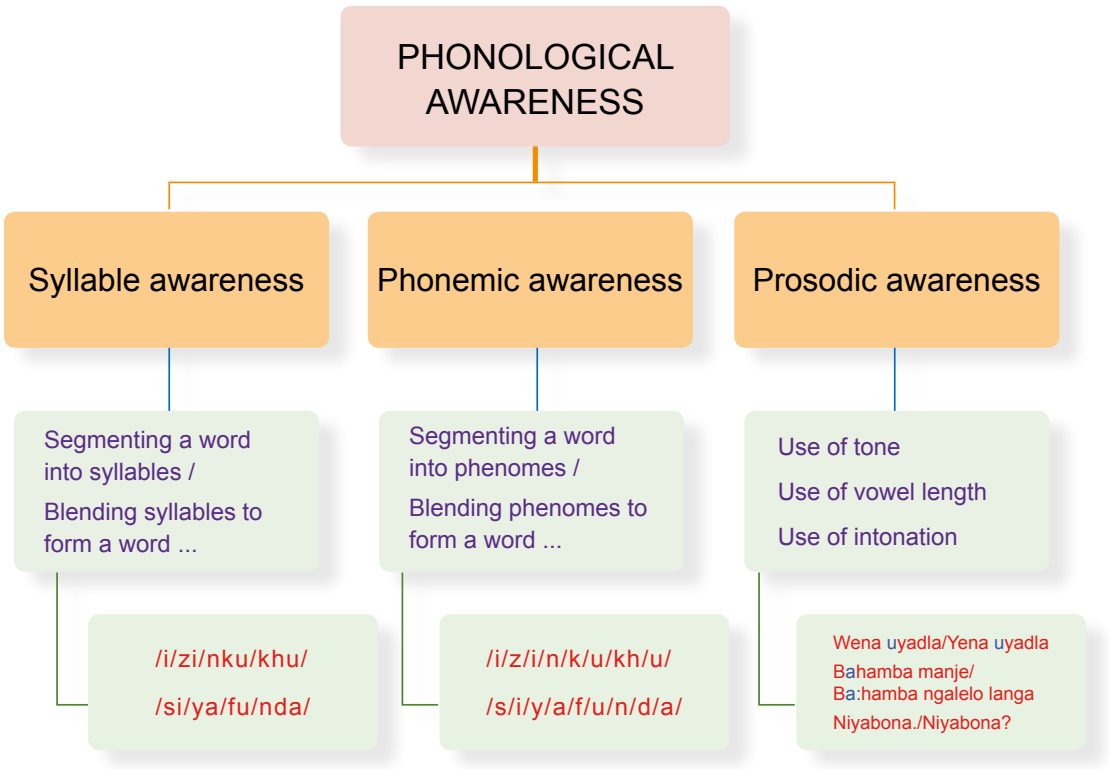


Figure 11: Summary of phonological awareness

Conclusion

This unit describes decoding and explains what role it plays in reading, with reference to the Simple View of Reading, a model that is well supported by research evidence across various alphabetic orthographies. In alphabetic languages, the sound system of a language (its phonology) is closely related to the knowledge and skills involved in decoding and so the unit also explains the various phonological units that can be distinguished in language. The unit concludes with a description of phonological and phonemic awareness and why these are important concepts in the very early stages of learning to read.

Self-assessment activities

These are 'quickie' assessment activities to check how well you have understood key concepts discussed in this unit and whether you are able to perceive the pedagogical implications of such concepts in the teaching of reading.

Note: The key to these self-assessment activities is given in the Appendix at the end of this module. If you score less than 6/8 (75%) for these questions you are advised to re-read the unit again to strengthen your content and pedagogic knowledge.

1. In each of the statements below provide **the appropriate missing word (or words). (6)**

   a) ……. and ……. are generic requirements for learning to read in any language. (2)

   b) Alphabetic knowledge entails knowledge of ……. and …… (2)

   c) According to the SVR reading comprehension is the outcome of …… and …… . (2)

2. Indicate which one of the following statements is **false**. (1)

   a) The smallest unit of sound that distinguishes one word from another is called a phoneme.

   b) The phone is the basis for alphabetic writing systems.

   c) Sesotho/isiZulu has an open syllabic structure.

   d) With regard to tone, a sentence in Sesotho/isiZulu is marked by long length on the second last syllable of the last word in the sentence.

3. Indicate which of the following statements is **the correct one**. (1)

   a) The syllable structure of the word *imbuzi* is /im/bu/zi/.

   b) The prosodic qualities of length and tone occur on semi-vowels and consonants.

   c) Phonics should be taught before children have acquired phonological awareness.

   d) Segmenting and blending are the two most important phonological operations for teaching reading.

Unit 3: The alphabet, phonics and decoding

Introduction

It is important to be able to identify words when reading a passage. But in order to so children need to pay attention to the letters that make up words and to understand how they map onto the sounds in their language. This unit focuses on the alphabet and how it maps sounds onto letters. This mapping relationship is an important part of learning to decode in alphabetic writing systems.

Alphabetic knowledge

In order to read, learners must acquire alphabetic knowledge because the alphabet is the code for written language. There are various terms used to refer to different aspects of alphabetic knowledge.

Letters of the alphabet

In South Africa, all our languages use the Roman (or Latin) alphabet in their writing, which contains 26 characters. The term '**letters**' or '**letters of the alphabet'** refers to one of the 26 characters that make up the Roman alphabet. In the early teaching of reading and writing, the focus is on teaching children how letters represent sounds or phonemes in written language - those distinctive speech sounds that distinguish one word from another - and how they are represented in writing by letters/graphemes.

The problem is that most languages have more phonemes than the 26 letters of the alphabet. For example, English has 44 phonemes, Sesotho has 37 phonemes and isiZulu 46 phonemes. Two main strategies are used to address this problem: some letters are combined to represent sounds, or diacritics are used to signal the specific phoneme. Consider the explanation below.

A particular sound (phoneme) can be represented by a single letter e.g. m, e, by two letters (also called **digraphs**) e.g. th, sh, qh, or by three letters (also called **trigraphs**) e.g. tsh. In addition, a diacritic can be used with a letter to represent a specific phoneme, e.g. š in Sesotho sa Leboa, in words such as *mpša* for 'dog'. In Tshivenda the circumflex is used below the characters ḓ and ṱ to distinguish these dental sounds from their alveolar counterparts d and t.

Languages can use different letters to represent sounds that are similar across languages. Consider for instance the sound /ʧ/ that occurs in many languages. In English it is written with the digraph **ch** as in *mu**ch*** or as the trigraph **tch** in the word *wa**tch***. This sound is represented by the trigraph **tsh** in the isiZulu word *siya**tsh**ala* 'we are planting' and the Sesotho word ***tsh**oho* 'fear/be scared'.

Graphemes

The term **grapheme** is similar in some respects to the word letter but it functions as an umbrella term used to denote the different representations of a phoneme in writing. In other words, it refers to single letters, digraphs and trigraphs. The grapheme t of Sesotho and isiZulu represents the sound /t/ in words such as the Sesotho word *se**t**ebele* 'isiNdebele' and the isiZulu word *ika**t**i* 'cat'. On the other hand, the grapheme th represents the sound /t^h/ in the Sesotho word *le**th**o* 'nothing' and in the isiZulu word *u**th**uli* 'dust'. The sounds /t/ and /t^h/ are thus represented by two separate graphemes in Sesotho and isiZulu, namely t and th respectively. Similarly, the phoneme /ɬ/ of isiZulu and Sesotho is represented by the grapheme hl in the written form. Consider the words *ihlathi* and *mahlo* respectively. (Refer to Module 3 for more detail.) In English the -ough letters form a grapheme that represent the vowel sound in the English word *through*).

The relationship between speech sounds and letters

The relationship between speech sounds and the letters that represent them can be referred to as letter-sound relationships or, to use the more appropriate term, grapheme-phoneme relationships.

The method of teaching decoding which explicitly teaches children the relationship between the sounds (phonemes) and the letters that represent them is called phonics. Note that phonics does not refer to teaching reading in general, it is specifically about teaching decoding, which is only one aspect of reading. Because languages differ in their phonology and thus in the way the letters of the alphabet map onto speech sounds in a language, the scope and sequence of phonics programmes will naturally differ according to the specific grapheme-phoneme mappings in each language.

One of the factors that makes learning to read challenging is the fact that most languages have far more speech sounds (phonemes) than the 26 letters of the Roman alphabet that are available to represent them. For example, isiZulu has 46 phonemes and Sesotho has 37 phonemes – far more phonemes than the 26 letters of the Roman alphabet. This is why these languages also use digraphs and trigraphs in their orthography. Even though there are instances of one letter representing one sound, there is no absolute one-to-one relation between the phonemes and the graphemes that represent them in writing. The application of the writing system (with this inherent shortcoming) leads to the following:

- one letter may represent one sound
- one letter may represent different sounds
- a combination of letters may represent a single sound (e.g. digraphs or trigraphs), or
- different letters may represent the same sound. (Refer to Module 3 for further explanation and examples.)

A further challenge that can make learning to decode challenging is that the prosodic or suprasegmental aspects of phonology are not always signalled in written language. Diacritics

are used in some orthographies to mark the suprasegmental qualities that operate on the word and sentence level. However, Sesotho and isiZulu do not use diacritics in the orthography, and this can pose challenges for learners learning to read. As discussed in Unit 2, vowel length or the use of high or low tone is often the only quality that marks the difference in meaning between two words or sentences in spoken language but in written language this needs to be inferred from the context. For example, in written form the question *Usebenza lapha?* is ambiguous. If the subject morpheme u- is pronounced with low tone, thus *Ùsebenza lapha*? the meaning is 'Do you work here?' If the subject morpheme u- is pronounced with high tone, thus *Úsebenza lapha*? the meaning is 'Does he/she work here?'. The applicable tone needs to be inferred from the context. In spoken language the difference is clear though.

Because diacritics are not used in the orthography of Sesotho and isiZulu to signal these suprasegmental qualities, these unmarked crucial differences pose a challenge to the beginner reader. The reader must decide on the appropriate intonation pattern in order to decode the relevant meaning of the text in such instances and the cues may be in the neighbouring text and this obviously complicates the reading process. Teachers need to be aware of these challenges and assist the beginner reader to understand the suprasegmental qualities of speech and how to identify and use them correctly in speech. They must also guide beginner readers to search for clues in the preceding (or sometimes subsequent) text to disambiguate the meaning of text.

Letter names and letter sounds

Alphabetic knowledge entails two things, namely letter-name knowledge and letter-sound knowledge. **Letter-name knowledge** is the knowledge relating to the name allocated to each letter of the alphabet in the target language. It entails knowing the names of the letters of the alphabet, identifying the shape of the letters in both capital and lower case and associating that letter shape with its name. This means that a learner learning English, for example, must know that the letter shape a is called "ay", the letter g is called "gee". Sometimes, the letter name is different from the sounds it represents, e.g. in English the letter w is called 'double-u'. The sound this letter represents has nothing to do with its name. Letter-name knowledge is less complex than letter-sound knowledge, simply because there are 26 letters in the Roman alphabet and each letter has a unique name, while with letter sounds, there are more letter sound mappings that need to be learned.

However, being able to say the name of the letters does not contribute directly to learning to read. Children need to understand which sounds each letter or letter set/grapheme represents. This is referred to as **letter-sound** knowledge (or more appropriately, grapheme-phoneme knowledge). It concerns knowledge of the written letter and the speech sound that it represents. Letter sound knowledge relies on phonemic awareness. Being able to read words depends on knowing the letters that make up words and knowing the sounds that they represent. Acquiring mastery in letter-sound knowledge gives children the boost needed to start a successful reading journey. Explicitly teaching children letter sounds, how to blend them to form words and giving them

practice in recognising and writing the letters and sounding them out are important features of a good phonics programme. (The features of a good phonics programme are discussed in detail in Module 3.)

Research around the world has repeatedly shown that in alphabetic writing systems, children who are able to read words are children who know their letter sounds (Dehaene 2009; Castles et al. 2018). South African research conducted between 2020-2023 found that only learners who could correctly sound out 40 or more letter sounds per minute were able to read words. Learners who knew less than that struggled to read even simple words or short easy sentences – and they continued to struggle, even in Intermediate Phase. This research was commissioned by the Department of Basic Education and involved longitudinal data from over 60,000 learners (the largest data set in Africa!) from Grade 1 to Grade 7 across all official languages (Ardington et al. 2020; Wills et al. 2022). This is why the Department of Basic Education has introduced an alphabetic benchmark of 40 letter-sounds per minute by the end of Grade 1 for all languages. What is interesting about this alphabetic benchmark is that it applies equally across all our alphabetic languages. Knowing letter sounds is thus necessary building blocks for reading words.

Phonics

As indicated, phonics refers to the method of teaching the letter-sound relationships in early reading instruction in an explicit way. Phonics concerns an understanding of the writing system – the orthography of the language – and the process of mapping speech sounds onto the graphemes that represent them in written form. It is thus the method used to teach learners how the code works and how to decode written text when reading or encoding spoken language when writing.

Bear in mind that decoding is the process of converting the letters on paper into speech sounds and then joining these sounds together to form words and derive meaning. The learner will initially sound out the word slowly and consciously, often making mistakes, but with much practice word recognition occurs more accurately and rapidly and in the case of competent readers the process eventually becomes automatised (without conscious attention). Reading accuracy is important and is a prerequisite for increased reading speed. Research has found that it is only when accuracy has reached levels of approximately 95% that learners can increase their reading speed to levels appropriate to their grade or reading age.

Sometimes teachers do not understand the differences between phonological awareness and phonics. Although they are related, an easy way to understand this difference is to bear in mind that phonological and phonemic awareness is related to spoken language, whereas phonics concerns written language and the way that speech sounds map onto letters of the alphabet.

The differences between phonological awareness and phonics are summarised in Figure 12 below.

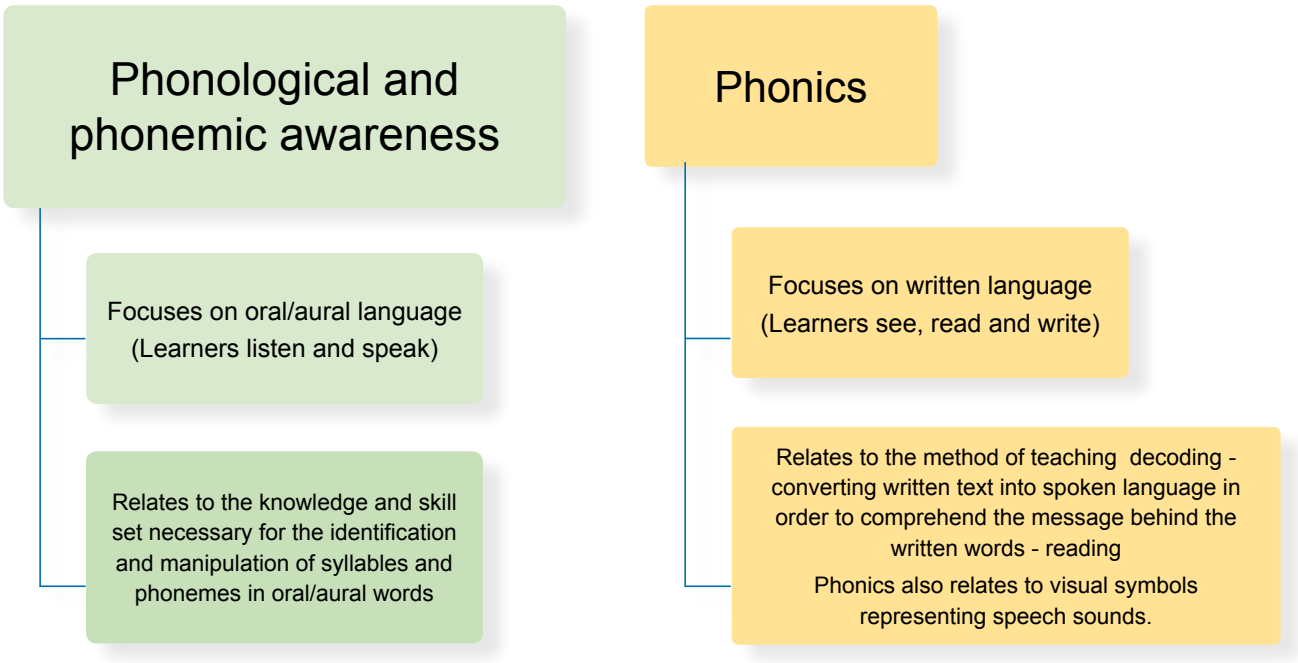


Figure 12: The differences between phonological awareness and phonics

While phonological awareness and phonics knowledge are not the only important considerations for the initial teaching of reading, they are foundational. Without the ability to decode words, a learner will not be able to decipher a text to understand it. Decoding demands of the reader an understanding of the orthography (or writing system) and how it relates to the sound system (or phonology) and the smallest meaningful parts (morphemes) of the language concerned. It is therefore important that these components form an integral part of early reading (and writing) instruction.

Conclusion

This unit considers the alphabetic aspect of decoding and describes how letters of the alphabet map onto speech sounds in written language. It also indicates how some prosodic or suprasegmental aspects of language which are not represented in written language can pose challenges for beginner readers. The difference between letter name and letter sound knowledge is explained and their roles in learning to read discussed. The unit concludes with a description of phonics and the main differences between phonological awareness and phonics.

Self-assessment activities

These are 'quickie' assessment activities to check how well you have understood key concepts discussed in this unit and whether you are able to perceive the pedagogical implications of such concepts in the teaching of reading.

Note: The key to these self-assessment activities is given in the Appendix at the end of this module. If you score less than 6/8 (75%) for these questions you are advised to re-read the unit again to strengthen your content and pedagogic knowledge.

1. In each of the statements below provide **the appropriate missing word (or words). (6)**

   a) The writing system used by languages such as isiZulu, Sesotho, English and Afrikaans is called an …….. writing system. (1)

   b) The term …….. is used to refer to a letter, a letter with a diacritic or a group of letters that denote a single speech sound. (1)

   c) Decoding is the process of mapping …… onto …… . (2)

   d) According to the benchmark for learners in Grade 1 they should be able to sound out …….. or more letters per minute at the end of the grade. (1)

   e) Learners need to reach a reading accuracy level of about ……..% before their reading fluency can properly increase to enable comprehension. (1)

2. Indicate which one of the following statements is **false**. (1)

   a) The alphabet used by isiZulu and Sesotho is called the Roman or Latin alphabet.

   b) IsiZulu has 46 phonemes and Sesotho has 37 phonemes.

   c) Languages do not differ in the way they use a particular grapheme to represent a specific phoneme.

   d) The hl in in the word *isihlalo* (Z) and *mahlo* (S) is called a digraph.

3. Indicate which of the following statements is **the correct one**. (1)

   a) The forms /th/ and /t/ do not constitute different phonemes in isiZulu/Sesotho.

   b) The terms ‘letter-sound relationship’ and ‘grapheme-phoneme relationship’ refer to the same foundational principle underlying learning to read.

   c) Knowledge of English letter names is important for reading in isiZulu/Sesotho.

   d) Letting young learners chant the *ma, me, mi, mo, mu* over and over shows them how letters map onto individual sounds in language.

Unit 4: Orthography

Introduction

The term orthography refers to the 'writing rules' of a language. It entails the way that the speech sounds of the language are represented by graphemes, and the way that word division is applied in the language and spelling rules. There are two main types of orthography in alphabetic languages, transparent and opaque. The changes in a language over time (particularly its sound changes) can affect the way in which its orthography developed. This unit focuses on orthography, its effect on early reading and examines similarities and differences in the orthographies of isiZulu and Sesotho.

Transparent and opaque orthographies

(Refer to Module 3 for more information on this topic.)

Languages differ in terms of how transparent (or shallow) or opaque (deep) their orthographies are. When a written language is characterised by a high incidence of one-to-one grapheme-phoneme correspondences, it is said to have a transparent (or shallow) orthography but if there are many instances of many-to-one or one-to-many mappings between the phonemes and graphemes, such a language is said to have an opaque (or deep) orthography. An entirely transparent orthography would be a writing system where there is an absolute one-to-one relationship between the speech sounds and the graphemes that represent them. An orthography that tends to be closer to such an ideal system is called a transparent orthography. Languages that are classified as having transparent orthographies are Spanish, Finnish, Italian, Turkish, Welsh, German, Afrikaans, Sesotho and isiZulu (and the African languages in general).

An orthography where a single speech sound is represented using different graphemes, or different speech sound are represented by the same grapheme is called an opaque orthography. English and French are examples of languages with an opaque orthography. For example, in English the /f/ sound can be represented by the graphemes f, ph or -gh, as in the words *for, phone* and *rough*. In Sesotho and isiZulu, the /f/ sound is always represented by the grapheme f.

Research has shown that, leaving aside other characteristics of languages, it is easier to master decoding in a language that has a transparent orthography as opposed to a language with an opaque orthography such as English. The results of the differences between mastering a transparent or an opaque orthography in the early years are discussed in greater detail in the cross-language studies done by Aro and Wimmer (2003) and Seymour, Aro and Erskine (2003) for readers who are interested to know more.

The development of different orthographies in isiZulu and Sesotho based on word division

Even though Sesotho and isiZulu both have transparent orthographies and are cognate languages (i.e. they belong to the same language family known as the Bantu languages), their orthographies differ, in particular in terms of word division. Words in their written form tend to be shorter in Sesotho compared to the same words in isiZulu. The writing system used by Sesotho is called a **disjunctive orthography** (the prefix *dis* in the English word *disjunctive* means apart) while that used by isiZulu is called a **conjunctive orthography** (the prefix *con* in the English word *conjunctive* means together). The difference between these two systems lies in the word divisions applied in them which in turn has to do with the history of the development of the writing systems in these two languages.

One of the decisive factors that led to the use of a conjunctive orthography for the Nguni languages is the vowel changes that take place when two vowels are juxtaposed (appear next to each other) in a word. Vowel juxtaposing in isiZulu can lead to vowel elision (one vowel is simply omitted), semi-vowel insertion (/w/ or /j/ is inserted between the two vowels), replacement of a vowel with a semi-vowel (/w/ or /j/) or vowel coalescence (the two vowels coalesce to form a new vowel /a/ + /i/ > /e/ or /a/ + /u/ > /ɔ/). Consider the examples below:

- **Vowel elision** *is the process of omitting one vowel in cases where two vowels are juxtaposed in a word, as shown in the examples below.*

  Isela lebe (< l**i**-**e**b-e) *imali*.

  'The thief stole (the) money.'

- **Semi-vowel insertion** *is the process whereby a semi-vowel* **y** *or* **w** *is inserted between two vowels that are juxtaposed in an orthographic word. The semi-vowel* **y** *is inserted before the front vowels, thus [i] and [e] while the semi-vowel* **w** *is inserted before the back vowels, thus [o] and [u]. Consider the examples below.*

  Le nja a***y***ikhonkothi (< ***a+i***-khonkoth-i) ebusuku.

  'This dog does not bark at night.'

- **Replacement of a vowel with a semi-vowel** *can occur in cases where two vowels are juxtaposed in a word. This process takes place if the first vowel is a higher vowel than the second vowel on the vowel chart.* **y** *is used as semi-vowel to replace the front vowels, thus [i] and [e] while* **w** *is used as semivowel with the back vowels, thus [o] and [u]. Consider the examples below.*

  Imfene ***y***ehla (< **i+e**hl-a) esihlahleni.

  'The monkey is climbing down the tree.'

UNdingi ***w****osa* (< **u**+**os**-a) *inyama.*

'Ndingi is roasting meat.'

- **Vowel coalescence** *is the process whereby the two juxtaposed vowels coalesce to form a new vowel. The vowels* **a** + **i** *coalesce to form the vowel* **e** *while the vowels* **a** + **u** *coalesce to form the vowel* **o**. *Consider the examples below.*

  *UThembi un****e****mali* (< u-n**a+i**mali).

  'Thembi is with money/Thembi has money.'

  *Umalume un****o****gandaganda* (< u-n**a+u**gandaganda).

  'Uncle is with a tractor/Uncle has a tractor.'

The inadmissibility of the phonological structure /VV/ in isiZulu poses a problem for word division. If we were to write *nogogo* as two words (which would be linguistically correct) should we write it as *no gogo* or *n ogogo* or *na ugogo*? The first two options would be incorrect because the particle word is *na* and the noun is *ugogo*. The only feasible option would be to write it as *na-ugogo*, however, this too would be unsatisfactory because the written language would then deviate from the spoken language and complicate reading. Word division difficulties such as these influenced the developers of the orthography to opt for the conjunctive way of writing, resulting in such language forms being written as one word, thus as *nogogo*. The application of this conjunctive writing system resulted in long words which in turn make early reading challenging in isiZulu (and the other Nguni languages). Consider the example below that illustrates the differences between word division practices in the orthographies of Sesotho and isiZulu. The Sesotho sentence comprises six words while the isiZulu sentence comprises two words.

Sesotho:	*O na le dimelo tse kae?*
IsiZulu:	*Uneminyaka emingakhi?*
English:	'You are with how many years? / How old are you?'

Comparing the orthographies of Sesotho and isiZulu

In Sesotho (and the Sotho languages in general) words are generally shorter compared to words in isiZulu (and the Nguni languages). As already explained, this is because of the disjunctive orthography used in the Sotho languages as opposed to the conjunctive orthography used in isiZulu. Even language forms that are clearly morphemes (thus not words but parts of words) are written disjunctively (thus as words) in Sesotho. This does not mean that the Sotho orthography is wrong, and the Nguni orthography is right or vice versa, or that the one orthography is better than the other. In both Sesotho and isiZulu there are some anomalies. The discrepancies between what is written orthographically as a word and what is linguistically a word have led to a distinction

between 'orthographic' and 'linguistic' words. We therefore need to be aware that in Sesotho there are language forms that are written as words that are not linguistically words (in particular the morphemes that appear in pre-root position in the verb), for example the negative morphemes *ha-* and *-sa-* and subject and object morphemes, the present tense morpheme *-a-*, the potential morpheme *-ka-* and the progressive aspectual morpheme *-sa-*.

The Sesotho sentence *Sello o sa e hlapa (koloi)* 'Sello he is still washing it (the car)' is written as comprising five orthographic words, however the parts o, sa and e are (grammatical) morphemes while hlapa is also not linguistically a word, but rather a verb stem comprising the morphemes -hlap-a. These four parts written separately in the Sesotho orthography, together form one linguistic word, namely the verb *o-sa-e-hlapa*.

On the other hand, there are forms in isiZulu that are written as one word that are linguistically two or more separate words, for example the associative na, in *na-abantwana*, the instrumental nga in *Ngiska nga-ummese* > *ngommese*, the copulative yi in *y(i)-indoda* > *yindoda*, the comparative njenga in *njeng(a)-imfene* > *njengemfene*, and the identificative copulative ngi in *ng(i)-umuntu* > *ngumuntu*. Consider the Sesotho and isiZulu examples below.

The isiZulu sentence *UThemba ugawula ngembazo* 'Themba is chopping with an axe' comprises three orthographic words. However, the orthographic word *ngembazo* consists of the two linguistic words *ng(a)* and *(i)mbazo*. It is primarily due to the vowel coalescence that takes place between the a of ng(a) and the i of (i)mbazo that the coalesced form *ngembazo* is written as one word even though *nga* and *imbazo* are linguistically two separate words.

While it would be ideal to correct the orthographies of these languages in as far as the word division is incorrect, the use of these orthographic conventions over many years has made it extremely challenging to change the orthographic conventions at this stage. Bearing in mind that inconsistencies in orthographies occur in all languages, we need to accept the inconsistencies that exist in both orthographic systems. Sesotho and isiZulu are thus not unique in this regard.

The linguistic correctness of word division as reflected in the orthography is also a factor that has an impact on the difficulty level of mastering a particular orthography. Sesotho and isiZulu pose some challenges in this regard since the orthographic words do not always correlate with linguistic words in these languages.

In reading and writing the focus is on the words in the text. However, for the sake of teaching reading the word may be subdivided into smaller components in three ways, namely: (i) syllables, (ii) phonemes and (iii) morphemes, as illustrated in the examples below:

Sesotho:

	Verb	Noun
(i) Syllables:	*/ke/sa/re/ki/sa/*	*/le/sha/no/*
(ii) Phonemes:	*/k/e/s/a/r/e/k/i/s/a/*	*/l/e/sh/a/n/o/*
(iii) Morphemes:	*ke-sa-rek-is-a*	*le-shano*

isiZulu:

	Verb	Noun
(i) Syllables:	*/ngi/sa/the/ngi/sa/*	*/u/lu/pho/ndo/*
(ii) Phonemes:	*/ng/i/s/a/th/e/ng/i/s/a/*	*/u/l/u/ph/o/n/d/o/*
(iii) Morphemes:	*ngi-sa-theng-is-a*	*u-lu-phondo*

Dividing words into syllables and phonemes and being able to manipulate these entities are aspects of phonological awareness and phonics and are fundamental aspects of teaching reading.

Morphology, on the other hand, is related to morphological awareness and is also an important aspect of teaching reading, especially in agglutinating languages with their productive morphology (such as Sesotho and isiZulu). In agglutinating languages words tend to be long and morphologically complex. The meaning of words can be modified or extended by affixation (addition of morphemes) to words. The Nguni languages (isiZulu in particular) have long words in written language because of the conjunctive orthography. Morphology is known to have a profound impact on vocabulary building and meaning making in a text.

While syllables and phonemes on their own carry no meaning, morphemes convey an aspect of meaning. Note however that morphemes do not have independent meaning, only grammatical meaning. Only word roots and stems have (lexical) meaning.

The disjunctive/conjunctive orthographies of Sesotho and isiZulu have implications for the development of oral reading fluency (ORF) in these languages. As explained in Unit 6, reading rates or speed in terms of words read correctly per minute (wcpm) are different in the two languages, as reflected in the different ORF benchmarks for Grades 2 and 3. For example, by the end of Grade 2, the minimum ORF benchmark in Sesotho is 40 wcpm while in isiZulu it is 20 wcpm. While it appears, at face value, that isiZulu Grade 2s are reading more slowly than their Sesotho peers, in fact they are processing more letters per word because words in isiZulu are on average longer than Sesotho words.

Conclusion

This unit focuses on alphabetic writing systems (also referred to as orthographies) and the differences between how the 26 letters of the Roman alphabet are mapped onto the phonemes in different languages. The differences between the disjunctive and conjunctive orthographies of Sesotho and isiZulu are also discussed, based on word divisions.

Self-assessment activities

These are 'quickie' assessment activities to check how well you have understood key concepts discussed in this unit and whether you are able to perceive the pedagogical implications of such concepts in the teaching of reading.

Note: The key to these self-assessment activities is given in the Appendix at the end of this module. If you score less than 6/8 (75%) for these questions you are advised to re-read the unit again to strengthen your content and pedagogic knowledge.

1. In each of the statements below provide **the appropriate missing word (or words). (6)**

   a) Orthographies are classified as …… and ……..…….. based on the correlation between the phonemes and the graphemes that represent those phonemes in writing. (2)

   b) The term …….. refers to the writing rules of a particular language. (1)

   c) Based on the differences in terms of word division in isiZulu and Sesotho the orthographies of these two languages are called ……. and …..…… respectively. (2)

   d) Reading …….. is a prerequisite for developing reading speed. (1)

2. Indicate which one of the following statements is **false**. (1)

   a) One of the major reasons for the Nguni languages using a conjunctive orthography is the vowel changes that take place when vowels are juxtaposed.

   b) An entirely transparent orthography would be an instance where the phoneme-grapheme correspondence in the language is 100%.

   c) The reason why spelling is difficult in English is because it has an opaque orthography.

   d) By the end of Grade 2 Sesotho learners read more words than isiZulu Grade 2 learners because they read faster.

3. Indicate which of the following statements is **the correct one**. (1)

   a) The isiZulu verb *ngithengisa* comprises the morphemes ngi-, -theng-, -is- and -a./The Sesotho words *ke rekisa* comprise the morphemes ke-, -rek-, -is- and -a.

   b) Knowledge of morphology is less important than syntactic knowledge for vocabulary building.

   c) Phonemes have meaning.

   d) It is easier to learn to read in a language with a conjunctive orthography because there are fewer words to decode.

Unit 5: Decoding words and oral reading fluency

Introduction

(See Module 3 for more detailed information on oral reading fluency in decoding.)

This unit first looks at the decoding of words in early reading and then moves on to the enhancement of decoding referred to as oral reading fluency. It describes the components of fluency and explains the relationship between oral reading fluency and reading comprehension. It concludes with a discussion of the benchmarks in reading and why they are important for monitoring children's reading development.

Learning to read words

When children learn letter sounds, they can use that knowledge to blend letters to form words. With each new letter sound they learn they can learn to read more and more words, thus increasing and expanding their decoding skills. Through practice, they learn to recognise words more quickly and start recognising letter patterns within words (e.g. from s and a they see sa, from ng, x, w they recognise ngxw, or from n, tl, w they recognise ntlw), which enables them to process letters and longer chunks of letters into syllables and words, which speeds up their word reading.

The term '**sight words**' is often used in reading to refer to words that children learn to read at a glance/on sight, but this term can be used in two ways. It is generally used with reference to languages with opaque orthographies to refer to those words that cannot readily be decoded according to the orthographic rules of the language. These words are also sometimes called irregular words, e.g. the English words *eye, through, Wednesday* and *island*. A beginner learning to read English will struggle to pronounce these words as they are exceptions to the normal orthographic rules of English. Children learn them as 'sight words' and learn to associate their written form with the way they are pronounced. The African languages do not really have sight words because their orthographies are transparent - 'what you see is what you sound out'.

The second way in which the term 'sight words' is used is associated with the frequency with which words occur and are learned. In this case, sight words refer to the learning process of recognising the letters in a commonly used word and how they are pronounced and being able to read the word quickly without individually sounding out the syllables or phonemes. These are usually high frequency words, words that are used very commonly in the particular language. Through practice, children start to identify these words quickly without first sounding them out letter by letter because they now start recognising their letters patterns, in a process referred to as as **orthographic mapping**.

It is important to distinguish between 'sight words' and 'high frequency words.' In the case

of the African languages there are no real sight words (due to the transparent orthographies of these languages) but frequently used words may be memorised to speed up the reading process.

Reading experts often advise teachers to help beginner readers to learn the form of frequently occurring words as this will speed up the reading tempo, free up more working memory and thus also contribute to better reading comprehension. Learners are generally advised to learn short, high frequency words first. It may be beneficial for the beginner readers to learn a number of high frequency Sesotho words such as *ha, jwale, na?, nna, wena, rona, lona,* and isiZulu words such as *uma, nxa, na?, mina, wena, thina, nina, la, le, lo*. However, it is important for learners to know the letter sounds associated with these words otherwise learners learn them much like logos or 'pictographs' without understanding the alphabetic principle underlying them.

(Oral) Reading Fluency

Oral reading fluency (ORF) is the ability to read accurately, quickly and with appropriate expression or prosody (Rasinski, 2003), using pitch, tone and intonation in ways that resemble spoken language.

In order to understand what they read, learners must be able to read accurately, fluently and at a grade-appropriate pace. The pace (or speed) of reading depends on the age or reading level of the child as well as the specific language and its orthography. (It is in ORF where differences arise between opaque or transparent and disjunctive/conjunctive orthographies.) Initially learners read slowly and with effort, making mistakes along the way and often reading in a jerky way. With practice they start recognising letter shapes and can blend them to form words, their accuracy improves (they make fewer mistakes), they read more smoothly and their pace increases.

Attaining grade appropriate reading fluency in both oral and silent reading is important. In this discussion the focus is on oral reading fluency rather than silent reading fluency because it is much easier to monitor and assess oral reading fluency. Moreover, the transition to silent reading usually only starts in Grade 3. Since reading fluency is critical for reading comprehension, it is imperative to attend to this aspect of reading. The more a learner struggles to read, the more the working memory is occupied with the task of decoding rather than being available for reading comprehension. Therefore, it is important that learners should be able to read with grade appropriate fluency at all levels.

Automatised reading

When readers encounter words frequently, these words become familiar and known to them and they recognise word chunks (such as *sivukile, sibonile, sifikile*) and develop accurate word-specific knowledge that speeds up and automatises the reading process which in turn frees up the working memory for comprehension rather than focusing on letter-by-letter word decoding.

In the initial stage of reading accuracy develops before speed. Once readers start reading words with increased accuracy (research from different alphabetic languages show this to be around

95%) then reading speed starts increasing. Practice is import in reading — the more children read, the more accurate and automatised their reading becomes. Dehaene (2009:204) refers to this process as parallel decoding. He maintains that the reader develops a skill whereby the neural connections happen simultaneously between the different regions of the brain where meaning and where pronunciation take place. This process becomes so fast that people mistakenly think that it is a matter of immediate recognition of the word whereas in fact it is very fast processing. Regardless of exactly how automatised reading development occurs, what is important is to understand that it develops through regular and frequent reading and it is essential for freeing up working memory so that the focus can be more on reading comprehension rather than on decoding.

Proponents of the Whole Language approach to reading often state that reading is like 'a guessing game' but research consistently shows this to be untrue. Reading is actually a very precise and accurate brain function and images from fMRI technology and eye tracking machines show this clearly – skilled readers tend to scan all the letters in a word, although they do this extremely rapidly, in milliseconds. It is only weak readers who guess words while reading because they don't have adequate letter sound knowledge and decoding skills that enable them to 'decode' the word.

Research consistently shows a strong relationship between ORF scores and reading comprehension. Children who comprehend what they read are children who read fluently. Children who read inaccurately and slowly are children who struggle with reading comprehension.

This does not mean that teachers should make learners read fast. Increased reading speed happens through regular practice. The more learners read they fewer mistakes they make and the better they become at reading words, which enables them to read faster. Teachers should therefore ensure that learners are getting plenty of practice reading words and little stories or pieces of text aloud in pairs or alone. In this way, teachers support learners in becoming more skilled decoders. Giving Grade 1 and 2 learners reading homework every day where they read aloud to a caregiver or older sibling is also very important for practising and developing decoding skills outside the classroom. If the teacher does not have many little books in isiZulu/Sesotho in the classroom to serve as homework resources, then the teacher can be creative and make lists of 10 or so high frequency words containing letter sounds already taught or short little texts comprising 3-4 sentences in a paragraph and printed as flashcards that have been laminated.

Research has shown that learners who struggle with decoding fall behind in terms of basic reading development at Foundation Phase level, and a gap develops between them and their peers who acquire good decoding skills. This phenomenon develops into what has become known as the Matthew effect. The term 'Matthew effect'[3] was introduced by Keith Stanovich (1986) to refer to the accumulative effect of learners' reading performance. Young readers who read well

[3] The term comes from the gospel of Matthew in the New Testament: "For to everyone who has, more will be given and he will have abundance; but from him who does not have, even that will be taken away." (Matthew 25:29),

tend to read more and become even better readers while the weaker readers read less and fall further and further behind their well-performing peers. These less-skilled readers' poor decoding skills impact on all other related areas of learning, such as vocabulary building and reading comprehension, which ultimately impacts their self-esteem and motivation to read. Many learners who do not become skilled readers in their Foundation Phase years continue to struggle with their reading and many don't complete school. Poor reading instruction has far-reaching consequences for the motivational, cognitive and behavioural levels of reading and learning, so it is important for reading teachers to monitor their learners' reading development, identify reading problems early and help children overcome them.

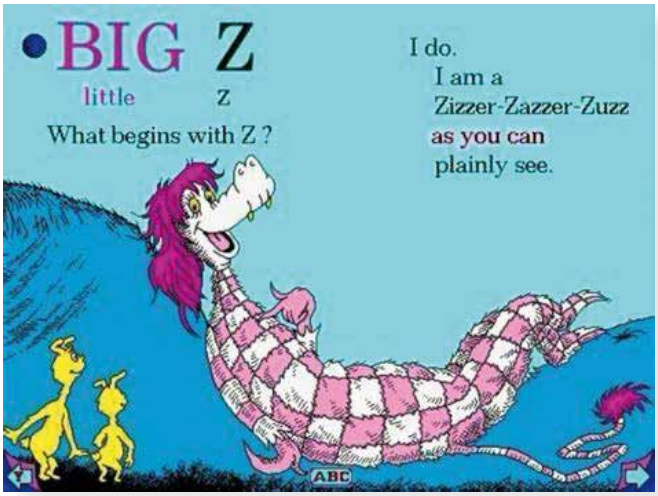
Assessment of early reading

Decoding can be assessed at the letter or grapheme level and at the word level. As discussed in Unit 3, by the end of Grade 1 learners are expected to be able to sound out at least 40 letters correctly in a minute.

Learners can also be assessed at the word level in Grade 1 and 2 by giving them lists of 40 or so words to read from left to right on a chart. Such a list will start with fairly easy, common and shorter words, but the words become longer later in the chart. The task can be timed, giving learners 1 minute in which to read words to see how well they can read words. The stronger their decoding skills, the more words they will read accurately in the given time.

When assessing learners at the word level it is also beneficial to include what are called silly words (*amagama abhedayo*). A silly word (also referred to as a nonsense or pseudo word) comprises sounds that follow one another in an admissible order and even the morphological structure seems legitimate in terms of their form and position, but it is a silly word or pseudo word because it has no meaning. Silly words could exist, but they don't. For example, in English *google* was a silly word before the advent of the world wide web, but since 1998 when it was coined, it has become a high frequency word in English! Examples of silly words in isiZulu would be *intuko, amabethe, bayahlihla, sicufile, isiphalo*. These words all conform to the sound and morpheme structure of isiZulu, however, because they have no meaning, they are called silly words. Silly words reliably indicate which readers have good decoding skills and which ones do not, as by using them you truly test the learners' ability to decode the word phonologically.

Silly words can be used in a playful manner to hone or to assess the learners' development and progress in reading. Poets may sometimes include silly words in their writing to good effect. These silly words create a playful or humorous atmosphere. The popular English writer of children's books, the Dr Seuss books, contain many nonsense words that contribute to a humorous effect, such as *There's a wocket in my pocket* or the *Zizzer-Zazzer-Zuss,* a strange creature in the forest in his alphabet book *The Big Z* .



ORF is usually measured from Grade 2 onwards, once learners have developed basic decoding skills in their language. The most common way to measure reading fluency is to give learners a passage appropriate to their grade level and ask them to read it aloud for 1 minute. All errors made during reading are noted on a copy of the passage by the teacher. When the 1 minute is over, the teacher asks the learner to stop reading, thanks them and lets them return to their desk. Thereafter the total number of words reading in a minute is noted, the total number of errors is subtracted from this score, and the remaining number of words read *correctly* per minute (wcpm) indicates the child's ORF score.

ORF scores are always calculated from orthographic words (words as they are written in the orthography) and not linguistic words.

Oral reading fluency scores are language-specific because orthographic complexity, word length and morphological complexity vary between languages and these characteristics have an impact on reading fluency of the beginner reader. While the highly transparent orthographies of the African languages facilitate decoding and reading fluency in some respects, the long words and polymorphemic word structures of these languages pose challenges to the beginner reader. English, on the other hand, has relatively short words and a less complex morphology, which makes it easier to read, but its orthography is strongly opaque, which creates different reading difficulties for the beginner reader. However, even within transparent languages, ORF scores will differ. Thus, as a teacher you must be aware that the benchmarking scores for ORF are remarkably different in isiZulu and Sesotho.

Benchmarking for reading in isiZulu and Sesotho in Foundation and Intermediate Phases

Benchmarks are values or scores that are used to measure children's progress in a particular field such as reading. Research data on how children differ in their accuracy, reading rates and reading comprehension across grades can help to determine benchmarks. The greater the number

of learners tested, the more reliable will be the benchmarks derived from the data. Research data like this enables those involved in teaching to see the bigger picture as analysis of the data can show who can comprehend texts or not, and what their associated alphabetic knowledge or ORF scores are.

The benefits of having benchmarks in an education system is summarised in the *Benchmarks Report: Sesotho-Setswana Early Grade Reading* (Wills et al. 2022) as follows:

> *The Benchmarks and thresholds can inform a* **shared vision** *of what successful reading looks like at specific grades. They provide a* **standard** *against which teachers can measure learners' reading subskills and identify early on learners who are at risk of not learning to ready for meaning by age 10. This, in turn,* **supports remediation** *at an earlier age. They serve as a form of quality control within an education system so that large numbers of learners do not fall through the cracks.*

Oral reading fluency is fundamental in developing reading comprehension and it is thus important to assess the ORF of Foundation Phase learners regularly to ensure the desired developmental trajectory. The benchmarks for ORF for the Nguni languages can be seen in the *Summary Report: Benchmarking early reading skills in Nguni languages* by Ardington et al. (2020), while those for Sotho related languages are available in the benchmarking report entitled *Benchmarks Report: Sesotho-Setswana Early Grade Reading* by Wills et al. (2022). These Benchmarking reports can be accessed at the web address below:

https://www.education.gov.za/Resources/Reports.aspx

As stated, the benchmark for letter sounds by the end of Grade 1 is the same for all South African languages, namely 40 lcpm. This is because they all use the same Roman alphabet. However, the minimum ORF thresholds and benchmarks for Grades 2 and 3 differ between the Nguni and Sotho language groups. A comparison between the number of words for identical isiZulu and Sesotho texts reveals that Sesotho texts have approximately 55% more orthographical words than isiZulu. For this reason, the ORF for Sesotho learners is higher than that for isiZulu.

Table 1 summarises the benchmarks for both languages. These are the minimum threshold levels that learners must reach at the end of the different grades, which means that if a learner fails to reach these levels, s/he may make very little progress going forward.

Table 1: Reading benchmarks for isiZulu and Sesotho readers

FOUNDATION PHASE GRADE 1		
Letter sounds	**IsiZulu**	**Sesotho**
Letters read correctly within a minute by the end of Grade 1 (lcpm)	40	40
GRADE 2		
ORF:	**IsiZulu**	**Sesotho**
Words in a passage read correctly within one minute by the end of Grade 2 (wcpm)	20 wcpm	40 wcpm
GRADE 3		
ORF:	**IsiZulu**	**Sesotho**
Words in a passage read correctly in one minute at the end of Grade 3 (wcpm)	35 wcpm	60 wcpm

Conclusion

This unit looked at the development of decoding as it progresses from alphabetic knowledge and blending letter sounds to learning to read words in and out of context. It describes oral reading fluency and its important association with reading comprehension and explains how ORF can be measured. It stresses the importance of regular assessments to monitor decoding development in the foundational stages of learning to read so that learners who struggle to read can be identified early and be given remediation to help them overcome their difficulties. The unit concludes with a discussion of the recent reading benchmarks established for isiZulu and Sesotho readers.

Self-assessment activities

These are 'quickie' assessment activities to check how well you have understood key concepts discussed in this unit and whether you are able to perceive the pedagogical implications of such concepts in the teaching of reading.

Note: The key to these self-assessment activities is given in the Appendix at the end of this module. If you score less than 6/8 (75%) for these questions you are advised to re-read the unit again to strengthen your content and pedagogic knowledge.

1. In each of the statements below provide **the appropriate missing word (or words). (6)**

   a) The three components of reading fluency are …….. , …….. and …….. . (3)

   b) The term …….. is used to refer to a word that cannot be entirely decoded following the grapheme-phoneme rules of the language. (1)

   c) Readers reach a level of ……. ……. after encountering the same words frequently, where those words have become familiar to them and they recognise them quickly. (1)

   a) Supporters of the …….. approach to reading often regard reading as a guessing game although research evidence does not support this view. (1)

2. Indicate which one of the following statements is **false**. (1)

   a) A beginner reader reading silly words correctly, reliably reveals to the teacher that that learner has good decoding skills.

   b) Oral reading fluency is measured as the number of linguistic words read correctly in one minute.

   c) Oral reading fluency benchmarks and threshold levels differ from language to language.

   d) Reading benchmarks and thresholds provide a standard against which teachers can measure learners' reading skills and subskills.

3. Indicate which of the following statements is **the correct one**. (1)

   a) It is better to teach learners to read whole words from the outset instead of teaching them letter-sound relationships first.

   b) The sound sequence m+w in isiZulu/Sesotho is called a phoneme.

   c) Oral reading fluency is fundamental in developing reading comprehension.

   d) Reading to children regularly develops their decoding skills.

Unit 6: Morphology, syntax, semantics and vocabulary

Introduction

Because alphabetic writing systems represent spoken language at the phonemic level (i.e. individual sounds within words), much of the research on early reading development has focused on phonological processing and the role of phonemic awareness in learning to read. However, once children have mastered basic decoding skills then other aspects of linguistic knowledge and language units larger than sounds also become important in becoming a skilled reader. This unit focuses briefly on morphemes, syntax, semantics and vocabulary (knowledge of words and their meanings), and the role they play in reading.

Morphology

(Refer to Module 3 for more detailed explanations and examples of morphology.)

Morphology is a branch of linguistics that studies smaller units of meaning within words. These smaller units are called morphemes. Morphemes are the smallest units of words that carry meaning or have grammatical function. Unlike sentences and words, morphemes do not have independent meaning. The meaning of a morpheme is context dependent since it is only when it appears in a particular position in a particular word that the contribution of the meaning of the morpheme to that of the word as a whole becomes clear.

Morphological awareness refers to the knowledge and skills associated with breaking words down into smaller units of meaning such as stems, roots, and morphemes. Morphology has emerged as an important contributor to word reading, language comprehension, reading comprehension and vocabulary building. Berninger et al. (2002) propose that morphological knowledge is critical to the development of word reading fluency.

Although morphemes do not have independent meaning, they contribute to the meaning of the word as a whole. This also implies that morphemes can only be analysed within the context of a word. For instance, it is difficult to answer the question *What morpheme is ba-?* because there are a number of morphemes with the form ba-/-ba-, as shown in the examples below.

- Ba- may be the **subject morpheme** of a verb as in the example *Abantwana bayadla* 'The children they are eating'. This morpheme ba- appears as the first morpheme in the verb and it is called the subject morpheme because it marks the subject in the verb, telling us who is/are playing.
- Ba- may be the **object morpheme** as in the sentence *Siyababona abantwana* 'We are seeing them the children'. In this sentence the subject morpheme is si- and the subject is thus *thina* 'we'. The morpheme -ba- marks *abantwana* as the object of this sentence, thus as the people/thing being seen.

- Ba- may also be the **true prefix of a noun** as in the example *abazali* 'parents'. In this case the morpheme ba- signifies a particular grammatical function, namely, to mark the noun as belonging to class 2 and that it denotes plural.
- The morpheme -ba may be the **copulative verb stem** denoting a process, for example *UThembi uba muhle* 'Thembi is becoming beautiful'.

With reference to the first two examples above, we can conclude that the subject morpheme is the first morpheme in the verb (in the positive polarity) while the object morpheme appears directly before the verb root.[4] Note that it is clear from the examples above that morphemes have a fixed position in the word structure.

Children learning to read in the African languages (which are agglutinating languages) need to pay attention to these small morpheme units in words and sentences as they can change the meaning of what is being read. Reading teachers need to have good knowledge of the morphology of the language in which they are teaching children to read as this knowledge informs their teaching.

Syntax

Syntax is the study of how words combine in a sentence and the order in which they occur to portray meaning. (It was often referred to as 'grammar' in the olden days, which covered all aspects of language rules. It also included reference to aspects such as how tense is signalled in language (past, present, future) or whether sentences are statements or reflect probability or hypothetical conditions, so syntax was closely linked to morphology.) However, the term syntax is now used in linguistics to refer to the arrangement of words and phrases to create well-formed sentences. Syntactic awareness is defined as the ability to reflect on the syntactic characteristics of language and to deliberately control its application (Gombert, 1992).

Languages differ in terms of their word order and an acceptable word order in one language may not necessarily be acceptable in another language. In terms of Greenberg's (1963) classification, the African languages are SVO languages, which means that the basic word order in these languages is subject, verb and object, as reflected in the basic sentence *Abantwana baphuza amanzi* 'The children are drinking water'. This does not mean that this word order is absolutely fixed, it simply means that the common or default word order is SVO.

The sentence initial position is the position of focus and a speaker or writer may change the word order if they want to emphasise something. If the word order in the above sentence is changed

[4] No morpheme can appear between the object morpheme and the verb root.

to *Baphuza amanzi abantwana* 'They drink water, the children', the word *baphuza* is in focus and if the sentence starts with the object, thus *Amanzi, bayawaphuza abantwana*, then the object *(water)* is in focus. Note that in the last sentence above the object has moved from its default position, which is immediately after the verb to the pre-verb position. If the object is moved from its default position, then the use of the object morpheme -wa- in the verb becomes compulsory, hence *bayawaphuza* above.

To understand syntax, it is necessary to know the different word categories. When teaching learners at Foundation Phase and Intermediate Phase levels the focus can initially be on nouns, pronouns and verbs because these are the word categories with a very high frequency of usage, and they are also mentioned in CAPS.

Semantics

Semantics is the study of meaning and the ways in which words have different meaning relationships. For example, words can have literal or metaphorical meanings, they can have connotations (positive or negative meanings), they can be part of something bigger (a leaf is part of a plant and is a subordinate word (hyponym) where plant is the superordinate term or the hypernym), they can have similar (synonyms) or opposite (antonyms) meanings, or they can indicate a quality (such as smallness or bigness – *inja/injana*). Semantics is an integral part of vocabulary.

Children should know the meanings of high frequency words that occur commonly in spoken language and that they hear in conversations. They should also be taught the meanings of words that are contained in their study materials and in books that they read and which occur more commonly in formal written language, in content subjects or in the world of science but not in daily conversations. They should be made aware of word families, that is, words that are partly different but semantically related such as *ubuntu, umuntu, abantu, isintu* or *ukufunda, umfundi, umfundisi, isifundo*. Children should be taught synonyms (words with the same or similar meanings), antonyms (words with opposite meanings) and hypernyms (words with a broad meaning constituting a superordinate category (the whole) into which words with more specific meanings (parts) fall). The word *inyamazane* 'antelope' is a superordinate term for animals such as *inyala* 'nyala', *impunzi* 'duiker', *impofu* 'eland'. The word *inyamazane* is thus a hypernym. Similarly, the word *occupation* is a superordinate term (hypernym), with words such as *teacher, mechanic, lawyer, manager, translator*, etc. being its hyponyms. The word *colour* is the superordinate term, with the words *red, blue, green* and *yellow* as hyponyms. There are always more subordinate words or hyponyms in a language than superordinate words and children learn the subordinate words first, e.g. *spoon, knife, fork; car, truck, bus.* As their vocabulary increases, they learn these part-whole relationships as part of their vocabulary development, e.g. that *spoon* and *knife* are 'parts' of *cutlery,* that *car, truck* and *bus* are 'parts' of *vehicles.*

Learners also need to take cognisance of figures of speech such as metaphors (implied resemblances or a comparison between two unlike ideas or things such as *le ndoda iyimpisi* 'this

man is a hyena'), simile (a comparison of two things using the link "like" as in the example *lo mfana ukhuluma njengentomazane* 'this boy speaks like a girl') and euphemism (a vague term as a substitute for an offensive or vulgar term as in *ngisaya endlini yangasese* 'I am going to the house at the back (toilet)').

Vocabulary building

(Refer to Modules 2 and 6 for more information on vocabulary.)

Vocabulary building refers to the process of acquiring new words. Learners must know both the forms, e.g. *ingubo* and the meanings of words, e.g. *ingubo ozimboza ngayo uma uyolala* 'a blanket with which you cover yourself when you go to sleep'/ *ingubo ayigqokayo umama* 'the dress mother wears', so semantics is integral to vocabulary. Without an adequate vocabulary appropriate to his/her age or grade, a child will not be able to read with comprehension. Vocabulary development is incremental and new words must be acquired each year; this means that with each grade children should know more and more words in their Home Language. In fact, vocabulary building is a process that continues throughout our lives.

Vocabulary building is extremely important for reading comprehension. Once children have learned to decode words quickly and fluently in Grade 1 and early Grade 2, knowledge of vocabulary then becomes the strongest predictor of reading comprehension. This means that children who know more words in their Home Language will be better at reading comprehension than their peers who have smaller vocabularies in the Home Language.

Learning new words

There are two ways in which learners learn words. They learn words **incidentally** (in passing, while doing something else, e.g. watching a TV programme) or they learn words **explicitly** (someone deliberately teaches a word and explains its meaning to them). Explicit vocabulary learning/teaching is not only important for learning words in a second and third language, but also equally important for the development of Home Language proficiency. Vocabulary must be taught systematically and continuously. New words in the Home Language must be learned every week. The learner must have the necessary breadth (size) and depth of vocabulary (how well they know word meanings); in other words, they must know many words and be able to use those words in different contexts, activating different aspects of their meaning. Without a proper vocabulary, leaners cannot understand what they hear or speak about particular topics or understand what they read, nor can they express their ideas in writing. Vocabulary is thus essential for successful communication both in oral and written form.

As said earlier, morphology is important for vocabulary building. If the learner understands the morphological structure of the language and has knowledge of the aspects of meaning expressed by individual morphemes this knowledge greatly facilitates vocabulary building. It means that a learner can often work out the meaning of a word that he/she has never heard or seen before

by simply applying his/her knowledge of morphology instead of learning the different related word forms as 'separate words'. Consider for instance the word pairs, *inja* 'dog' – *injana* 'small dog' and *inkabi* 'ox' – *inkatshana* 'small ox'; *umlilo* 'a fire' – *emlilweni* 'to/in/at… the fire' – *isikhumulo (sezindiza)* 'airport' *esikhumulweni (sezindiza)* 'to/in/at the airport'.

Vocabulary assessment should be done regularly and should be assessed orally and in writing. There are many interesting assessment techniques that a teacher can use to assess vocabulary.

(Vocabulary learning and assessment is discussed in more detail in Module 2.)

In sum, grammar (which includes phonology, morphology, syntax and semantics) is often mistakenly perceived to be knowledge that the learners will acquire automatically and on their own or that it is a collection of arbitrary rules about language structures. Grammar teaching is also sometimes erroneously regarded as an abstract and boring process. If taught in context and innovatively, it will not only be interesting, but it will also be beneficial to the learners for becoming accomplished readers and writers.

Conclusion to the module: Seeing the bigger picture

The units in this module introduced you to fundamental concepts in language and reading that form an important component of content knowledge that every reading teacher needs to know.

Reading and language are intimately related because reading is language in written form. In alphabetic writing systems, the written symbols represent the speech sounds or phonemes of a language, so there is a close relationship between phonology and orthography in alphabetic writing systems. It stands to reason therefore that reading teachers must have a deep knowledge of language, its phonology and its orthography. Although the technology to 'capture' spoken language in a more permanent written form started 5,000 years ago and represents an amazing breakthrough in human history, a fundamental universal constraint is that written language is represented by a symbol system (orthography) that is in some respects inadequate in representing all aspects of the spoken language. This fact, in turn, highlights the importance of developing a thorough understanding of the orthography of the target language to enable you to decode the writing system of that particular language. The symbol system that we use is an alphabetic system that basically entails using single letters and/or letter combinations and/or letters with diacritics to represent the speech sounds (phonemes) of the language. To learn to read and write learners need a clear understanding of the orthography of the target language, which includes knowledge of how the letters, or rather graphemes, are matched to the distinctive speech sounds of that language to form words. It is therefore important for teachers to have a thorough understanding of phonology and orthography as they are the ones who impart this knowledge to learners when initially teaching them to read. But reading teachers also need knowledge of all aspects of language, as advanced reading skills draw heavily on all aspects of language.

In the Intermediate Phase and beyond, the focus shifts from learning to read, to reading to learn. The content of the various subjects, such as language and literacy, mathematics, life skills,

history and science, becomes the main focus. Learners now need to learn from the text instead of learning to decode the text as they did in Foundation Phase. They are increasingly exposed to a wider range of genres. There is even more emphasis on language comprehension while the vocabulary the learner has to acquire, is more specialised and subject specific. Word recognition, accuracy and fluency in reading and a large vocabulary become indispensable.

Two well-established theories of reading, the *Simple View of Reading* and the *Reading Rope Model,* both assert that reading demands both the knowledge and skills to apply **language comprehension** and **decoding** (word recognition) skills. The Foundation Phase and Intermediate Phase teacher should therefore have a sound knowledge of both the grammar and the orthography of the target language to teach reading and should be well-versed in teaching decoding in the target language. Having an appropriate vocabulary in the target language is essential for reading comprehension. Reading teachers should therefore not only teach the learners new words, but they must also extend their own vocabulary knowledge on an ongoing basis. The ultimate goal of reading is reading with comprehension. The various components of reading should contribute to this ultimate goal. Reading is not a passive activity. The reader engages with the text in order to make sense of it and in doing so the reader's oral language competency, background knowledge, exposure to reading culture at home and in the community, mentoring and role modelling of caretakers, peers and teachers, all play an important role in developing reading.

Reading teachers also need to know what reading success looks like, as indicated by the reading benchmarks, and how and when to assess their learners' reading ability at various stages of the reading journey. Proper and regular assessment of the learners' progress in learning to read and keeping a record of every learner's reading development trajectory is essential. Without regular assessments, teachers will not know how successful the teaching and learning of reading is. Moreover, they will not know which learners are lagging behind and what interventions are needed to assist those learners who are not progressing satisfactorily. This in turn implies that the teacher must have a clear understanding of the required benchmarking at the various grade levels and strive to get the learners to obtain the benchmark levels set for their level.

The knowledge about language and reading, attitudes to reading and ability to teach reading of Foundation Phase and Intermediate Phase teachers play a pivotal role in the young learner's development trajectory of becoming an established reader. Reading teachers should be a role model, inspiration and a mentor to every child. Reading teachers have the power to make a critical difference in every child's future. The key to that is for reading teachers to keep abreast of new developments in the science of reading, improving their own knowledge and skills and to do detailed preparation at all levels – the year, the month, the week, the day and every single class.

Self-assessment activities

These are 'quickie' assessment activities to check how well you have understood key concepts discussed in this unit and whether you are able to perceive the pedagogical implications of such concepts in the teaching of reading.

Note: The key to these self-assessment activities is given in the Appendix at the end of this module. If you score less than 6/8 (75%) for these questions you are advised to re-read the unit again to strengthen your content and pedagogic knowledge.

1. In each of the statements below provide **the appropriate missing word (or words).** (6)

   a) …… is the study of how words are made up of smaller meaningful parts, while ……. is the study of how words combine to form a sentence. (2)

   b) A ……. is that part of a word that carries the lexical meaning and that cannot be broken down into smaller meaningful parts. (1)

   c) The ……. is that morpheme in a noun that indicates that it is singular or plural and that denotes its class adherence. (1)

   d) The default word order in isiZulu/Sesotho is …….. . (1)

   e) ……. are words with the same or similar meanings. (1)

2. Indicate which one of the following statements is **false**. (1)

   a) Morphemes have a fixed position in the word.

   b) The sentence initial position is the position of focus in the African languages.

   c) The words *umuntu, abantu, ubuntu/motho, batho, botho* form a word family.

   a) Vocabulary learning is important for learning to read in an additional language but not so important for reading in a home language.

3. Indicate which of the following statements is **the correct one**. (1)

   a) Alphabetic writing systems represents spoken language at the syllable level.

   b) Like words, morphemes have independent meaning.

   c) Roots, stems, and grammatical morphemes are different types of morphemes.

   d) Children who read a lot and thus learn vocabulary incidentally do not need to be taught vocabulary formally.

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Appendix

Key to self-assessment activities

The correct responses to the self-assessment exercises are indicated below.

NB: If you score less than 6/8 (75%) for these questions you are advised to re-read the unit again to strengthen your content and pedagogic knowledge.

Key for Unit 1

1a	**decoding** and **language comprehension**/understanding	(2)
1b	**spoken language** … **written language**	(2)
1c	Grade 2 isiZulu **20 wcpm** Grade 3 isiZulu **35wcpm** Grade 2 Sesotho **40 wcpm** Grade 3 Sesotho **60 wcpm**	(2)
2a	is **false**.	(1)
3d	is **the correct one**.	(1)

Key for Unit 2

1a	**Background knowledge** OR **alphabetic knowledge** OR **oral language proficiency**. (Any two.)	(2)
1b	**letter name** and **letter/sound** OR **grapheme-phoneme**	(2)
1c	**decoding** and **language comprehension**	(2)
2b	is **false**.	(1)
3d	is **the correct one**.	(1)

Key for Unit 3

1a	**alphabetic**	(1)
1b	**grapheme**	(1)
1c	**phonemes** OR **sounds** … **graphemes** OR **letters**	(2)
1d	**40**	(1)
1e	**95** %	(1)
2c	is **false**.	(1)
3b	is **the correct one**.	(1)

Key for Unit 4

1a	**transparent** … **opaque**	(2)
1b	**orthography**	(1)
1c	**conjunctive** … **disjunctive** (Note the order.)	(2)
1d	**accuracy**	(1)
2d	is **false**.	(1)
3a	is **the correct one**.	(1)

Key for Unit 5

1a	**accuracy** … **speed** … **prosody**	(3)
1b	**sight word**	(1)
1c	**automaticity**	(1)
1d	**Whole Word**	(1)
2b	is **false**.	(1)
3c	is **the correct one**.	(1)

Key for Unit 6

1a	**morphology** … **syntax**	(2)
1b	**root**	(1)
1c	(noun class) **prefix**	(1)
1d	**SVO**	(1)
1e	**synonyms**	(1)
2d	is **false**.	(1)
3c	is **the correct one**.	(1)

Examples of summative questions requiring longer, more detailed responses

The questions given here serve as *examples* of summative assessment questions that are typically given in formal written assignments or examinations.

These are longer essay type questions that require students to demonstrate their content knowledge of reading and its application to classroom instruction in ways that are **clear** and **systematically** presented.

The mark allocation for questions provides a *rough* guide of how long your answer needs to be in relation to the total marks allocated to the examination paper. A question of 10 marks would require at least 1-1½ pages, while a 20-mark question requires a more detailed and extensive exposition of about 2-3 pages. When in doubt, rather write more than less. Remember, your

response to a question is a display of your knowledge, so short answers suggest superficial and inadequate knowledge.

A rubric has been provided at the end to give you an idea of the different aspects of an essay that are taken into consideration, e.g. planning and logic; content, argumentation and examples; use of sources; language usage; technical finishing.

Note: When questions require examples to be provided, it is important for students to give their own, original examples and not simply copy examples from the module. Examples demonstrate whether students understand the content. Students who copy examples from the module will not be given credit for them; only original examples will be accepted.

Question 1

Answer the questions below based on Module 1. Note the mark allocation for each question because that will give you an idea of how detailed your answer should be.

1. Explain how learning to speak and listen differs from learning to read and write. (2)
2. What are the two major components of reading? (2)
3. Describe four kinds of knowledge and skills is needed to become an accomplished reader. (4)
4. Name three major cognitive factors that impact on reading with comprehension. (3)
5. Name four psychological and ecological factors that have an impact on learning to read with comprehension. (4)
6. What is the major difference between phonological awareness and phonics? (2)
7. Explain what automatised reading is and how it develops. (2)
8. Discuss the classification of the four language skills into oral and written and productive and receptive skills using a schematic representation. (4)
9. Explain how encoding and decoding can be explained in relation to the four language skills. (2)
10. What does oral reading fluency entail? (4)
11. List the three language units with independent meaning. (3)
12. What is the benchmark for reading fluency in Grade 1 for Sesotho/isiZulu

learners? (Sesotho learners answer the question with reference to Sesotho while isiZulu learners answer the question with reference to isiZulu.) (1)

13. Explain how oral reading fluency can be measured in Grade 2 and 3. (5)

14. Explain the benchmark for reading fluency in Grades 2 and 3 for Sesotho/isiZulu learners? (Sesotho learners answer the question with reference to Sesotho while isiZulu learners answer the question with reference to isiZulu.) (2)

15. Explain what Rapid Automised Naming (RAN) is and how it can be used to identify beginning reading. (3)

16. Why is it important to assess and record learners' oral reading fluency regularly? (3)

17. Why does Sesotho have more words than isiZulu in the same text? (2)

18. Explain what kind of orthography African languages have and give your own examples to illustrate this. (2)

TOTAL = 50

Key to longer summative assessment 1

This memorandum serves as a guide to marking summative Question 1.

Question 1

1. Children learn to understand and speak their Home Language by mere exposure to the language. Children are seldom formally taught oral language. Learning to read and write is however not an innate skill humans have. Children must be taught to read and write. (2)

2. Decoding and language comprehension. (2)

3. Knowledge of the phonology, morphology, syntax and semantics of the language. (4)

4. Decoding/word recognition, language comprehension, vocabulary, background knowledge, working memory, the ability to make inferences/see connections between things. (Select any four) (4)

5. Any 4: Exposure to print in the language, motivation, self-efficacy, support, role models, quality of literacy teaching, print rich environment, community's attitude towards literacy, etc. (4)

6. Phonological awareness is related to spoken language. It is thus all about language sounds. Phonics is related to written language and how orthography represents oral language. It also refers to the method of teaching the relationship between phonemes and graphemes. (2)

7. Automatised reading is the process whereby a reader reads a text fluently and effortlessly. It relies on mastery of letter-sound relationships. The reader develops the ability to recognise words immediately without having to sound out each one. Automaticity develops because of sustained reading practice. (2)

8. The student should draw the figure and indicate clearly that a language skill is either in aural or written form, and which ones are productive and receptive. (4)

9. Encoding is the process of converting spoken language into written language. Decoding is the opposite process. It is the conversion of written language to spoken language in order to understand the message behind the written words. (2)

10. It is about accuracy, fluency/speed and prosody/suprasegmental qualities of words. (3)

11. Sentences, word groups/clauses and words. (3)

12. The sounds represented by graphemes per minute. The benchmark for both isiZulu and Sesotho is 40 correct sounds for the graphemes per minute. (1)

13. An appropriate text must be selected suitable for the grade. Learners are assessed individually. The learner sits at a table desk across the teacher and is made comfortable and the process is explained to her. The teacher then gives her the selected text asks her to read aloud. While the learner does so, the teacher marks all words read incorrectly or skipped on a separate copy. The teacher stops the child after one minute and marks the last word read by the learner. She then counts the total number of words read within that one minute, counts the total number of words read incorrectly (i.e. the errors made) and subtracts the total number of errors from all the words read. The number of **words read correctly** is the child's reading fluency score. (5)

14. In Grade 2 for Sesotho it is 40 words read correctly per minute. For isiZulu it is 20 words read correctly per minute. In Grade 3 for Sesotho it is 60 words read correctly per minute. For isiZulu it is 35 words read correctly per minute. (2)

15. Rapid Automised Naming refers to the ability to see common items in random order in print form (in the visual part of the brain) and to name them (linking the visual information with the language part of the brain) in quick succession. They then have to name these objects, one by one, from left to right as quickly as possible. It is used to assess a child's phonological processing abilities. Children who perform poorly on this test are often children who struggle to learn to read. However, not all children who struggle to read have problems with RAN. (3)

16. It is important to know how each child is progressing in reading. It enables the teacher to do an intervention for those children who fall behind. If children fall behind in learning to read and they are not assisted, they will fail to make progress going forward. (3)

17. Sesotho uses a disjunctive orthography while isiZulu uses a conjunctive orthography. In Sesotho some morphemes are written disjunctively (thus as words while they are morphemes. On the other hand, some forms that are written as single words in isiZulu actually comprise more than one word. (2)

18. They have transparent orthographies, where there is a fairly consistent one-to-one relationship between the letter and the sound it represents. (This is unlike opaque orthographies where the same letter can represent different sounds, as in English.) Provide suitable examples. (2)

Total: (50)