

**A collaborative approach to enhance the
teaching of English phonemic awareness in the
Foundation Phase**

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DECLARATION

I, Magda Davey, hereby declare that the entirety of the work contained in this dissertation is my own, original work (unless explicitly stated otherwise). Reproducing and publishing this manuscript will not infringe any third-party rights, and I furthermore declare that this study has not, in its entirety or in part, been submitted for any qualification at this or any other institution.

HMC Davey

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SUMMARY

Learners' reading skills in the Foundation Phase are often poor and South African teachers lack the training, knowledge, and skills to assist learners in this regard. One way to address poor reading skills is to enhance the teaching of phonemic awareness in the Foundation Phase. This study investigated how a collaborative approach can enhance the teaching of English phonemic awareness of Foundation Phase teachers. A group of Foundation Phase teachers formed a professional learning community that engaged in participatory action research.

The simple view of reading and the reading rope model was the theoretical underpinnings of this study. The members of the professional learning community generated data collaboratively by constructing a fishbone diagram, collages and taking part in reflective discussions via WhatsApp to answer the secondary research questions.

Thematic content analysis was utilised to analyse the data and attain results that are trustworthy (i.e., credible, transferable, dependable, and confirmable). The results indicated that Foundation Phase teachers required sufficient knowledge to enhance the teaching of English phonemic awareness as well as effective support and materials to enhance their learners' phonemic awareness in culturally and linguistically diverse classrooms. Furthermore, teachers are required to prepare for classroom activities and collaborate on challenges related to the teaching of phonemic awareness for learners. Phonemic awareness activities that were appropriate for the specific needs of learners in diverse and multilingual classrooms, were identified.

Keywords: *Foundation Phase; learner support; phonemic awareness; reading comprehension; vocabulary.*

DEFINITION OF KEY TERMS

Foundation Phase

The period of learning from Grade R to Grade 3 is known as the FP in the South African curriculum. This phase includes learners from the age of five to nine years. The FP is the first four phases of primary school and consists of the holistic development of the young learner physically, mentally, emotionally, spiritually, morally, and socially (Nigrini, 2016).

Learner support

Learner support is an important aspect of successful learning. It focuses on what a teacher or instructor can or should do to assist learners in ways other than formal subject delivery, content or skill development (Mastorakis, 2022).

Collaborative approach

A collaborative research approach entails a group of individuals who have a common need and work together in finding and sharing knowledge to address this need (Admiraal et al., 2021; Prenger et al., 2019).

Phonemic awareness

Phonemic awareness is a subset of phonological awareness in which listeners are able to hear, identify and manipulate phonemes, the smallest mental units of sound that help to differentiate units of meaning (Tweedie et al., 2015). Phonemic awareness is one of the five essential components of reading (Antunez, 2022; NRP, 2000), the others being comprehension, fluency, vocabulary, and phonics.

Reading comprehension

Reading comprehension is the complex cognitive process readers use to understand what they have read. In this study, reading comprehension is viewed through the lens of Scarborough's (2001) reading rope model. This model suggests that reading entails interaction between the five components of reading, as well as language comprehension (Antunez, 2022; NRP, 2000). The reading rope model (Scarborough, 2001) is a theory that developed from Gough and Tunmer's (1986) simple view of reading which attempts to define the skills that

contribute to early reading comprehension. According to the simple view of reading, an individual's reading comprehension is the product of their decoding skill and language comprehension (Gough & Tunmer, 1986). Thus, reading comprehension is composed of two equally important components. Decoding is the ability to translate text into speech, while language comprehension is the ability to understand spoken language.

Vocabulary

Vocabulary is an important focus of literacy teaching and refers to the knowledge of words, including their structure (morphology), use (grammar), meanings (semantics), and links to other words (word/semantic relationships). Vocabulary supports decoding (phonemic awareness and phonics), comprehension, and fluency (Gough & Tunmer, 1986; Moats, 2020; Scarborough, 2001).

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LIST OF ABBREVIATIONS

CAPS	Curriculum and Assessment Policy Statements
DBE	Department of Basic Education
FP	Foundation Phase
LoLT	Language of Learning and Teaching
NRP	National Reading Panel
OM	Orthographic mapping
NICHD	National Institute of Child Health and Human Development
PA	Phonemic awareness
PAR	Participatory action research
PLC	Professional learning community
SACE	South African Council for Educators
SVR	Simple view of reading

CHAPTER 1 INTRODUCTION

1.1 INTRODUCTION AND BACKGROUND

In South African primary schools, the achievement gap in literacy and specifically reading comprehension in the language of learning and teaching (LoLT) is a continuing and growing concern (Howie et al., 2017; Reed et al., 2020; Vos & Fouché, 2021). Researchers like Noltemeyer et al. (2019) warn that primary school learners and primary school-exiting learners are at risk of not mastering the basic literacy skills they require to progress academically. The Department of Basic Education (DBE, n.d., p. 1) has likewise acknowledged:

Performance in learning outcomes is inextricably linked to proficiency in the language of learning and teaching (LoLT) and utility. A large body of research from various studies and surveys such as ANA, SACMEQ, PIRLS and TIMSS and NSC provide abundant evidence in this regard. English, which is the language of learning and teaching (LoLT) in the majority of schools in South Africa, is cited in many studies as a barrier to learning. Language difficulties do not only impact on English as a subject, but encroach into the content subjects, resulting in dismal results.

In essence, literacy skills are crucial for effective decoding, comprehension, and reading fluency that learners require to progress to higher grades and perform academically.

Literacy skills development begins during the early phases of childhood through exposure to sounds long before children learn to read. According to the International Literacy Association (2018, p. 2), phonics instruction is “an essential component of reading and writing practice and instruction in the primary grades”. A child or learner’s earliest exposure to phonics instruction is phonemic awareness (PA), which is the skill to recognise and manipulate vocalised words as an arrangement of individual sounds (Andorka, 2021; Rokhman et al., 2020). This is extended to the ability to segment and blend individual sounds in a spoken word and hear and identify distinct sounds in words (Kunkel, 2021; Lucker, 2018; Moats, 2020). PA is inextricably linked to text-reading fluency and is a proven predictor of early decoding and word recognition with a long-term impact on learners’ reading abilities (Admiraal et al., 2021; Prenger et al., 2019). PA furthermore aids learners’ capacity to read words in diverse ways (Kosanovich et al., 2020; Kunkel, 2021; Le Roux et al., 2017; Mohammed & Amponsah, 2018;).

Learning to read is not easy, nor does it come naturally to most learners, especially a second or third language, as learners are not exposed to or do not acquire these languages since birth as is the case with a mother tongue, home or first language (Moats, 2019; Seidenberg & MacDonald, 2018). Teaching reading to a learner who does not learn easily or naturally is a complex and challenging professional enterprise. Hence, researchers suggest that PA, as a pillar of literacy, should form a part of explicit instruction informed by deep knowledge (including pedagogical knowledge) of PA and the cognitive and language factors that shape learning in young learners (Eltoum, 2021; Moats, 2020) (cf. 2.3.2, 2.3.6). In many developing countries, learner literacy achievement “is a concern [...] particularly for English second [and understandably, third] language learners with with inadequate language development” (Eslick et al., 2020, p. 2079, emphasis added).

Eslick et al. (2020) emphasise the importance of “investigat[ing] foundational phonological awareness (PA) [...] to guide the development of effective intervention for EL2 [LoLT] learners to facilitate optimal literacy acquisition” (p. 2079). Much like other developing countries, especially in Africa, learners and teachers in the South African school context come from diverse multicultural and multilingual backgrounds where English is often the language of learning and teaching (LoLT), even though in most cases it is not anyone’s first language (Hazeldine & Beighton, 2021; Le Roux et al., 2017; Tönsing & Soto, 2020; Vos & Fouché, 2021). Taylor and Von Fintel (2016) explain that the majority of learners in South Africa who speak other official languages do not speak English as their primary language, yet they are expected to learn in English once placed in an English primary school. Even though learners’ home language frequently differs from the LoLT, teachers must ensure that learning occurs even more so (Phakeng & Lerman, 2016). Learners are often expected to learn in a second or even third language, thus they face reading comprehension difficulties because of the way teachers pronounce words or their lack of knowledge of the basic constructs of the English language (Maharajh et al., 2016; Seidenberg & MacDonald, 2018). In addition to their knowledge of PA, teachers need access to resources such as teaching manuals, workshops, and visual aids for teaching English PA to ensure that all learners succeed in English literacy as

the LoLT. This research aimed to enhance Foundation Phase (FP) teachers' knowledge of teaching English PA to improve their learners' reading fluency and comprehension.

Sufficient professional development programmes and training can provide teachers with the necessary knowledge they must integrate into their teaching and learning practices to enhance FP learners' English PA. Given the importance of phonics instruction, without training on the essential components of PA, teachers may struggle to teach literacy effectively. A further challenge to literacy in schools is that many higher education teacher preparation courses teach only some of the components recommended by major consensus reports like the National Reading Panel (NRP, 2000). The consensus is that teacher preparation programmes have not succeeded in preparing and equipping teachers with the skills that are essential for reading instruction (Seidenberg & MacDonald, 2018). Even the best curriculum will remain ineffective if teachers lack the knowledge, skills and proficiencies to implement it. The success of a programme depends on how well a teacher understands the content and purpose. Collaboration in a mutually supportive environment can facilitate understanding through shared knowledge and co-coaching, which includes PA skills teachers can integrate with their teaching and learning practices.

In this research, English FP teachers collaborated in a professional learning community (PLC) to enhance their skills in teaching PA with the goal of improving learners' reading fluency and comprehension. Learning to work as a PLC improved the sustainability and application of teacher learning (Admiraal et al., 2021; Prenger et al., 2019). Prenger et al. (2019) found that collaboration is better than individual work or standalone workshops because it is conducive of more creative ideas to improve productivity and creativity during English PA instruction in the long run.

1.1.1 The importance of collaboration in teaching

The collaborative approach that was applied in this study aimed to enhance English FP teachers' professional learning as an essential aspect of improving English literacy instruction (Admiraal et al., 2021; Prenger et al., 2019) and foster a positive attitude toward educational change (Brodie, 2021). Collaborative teacher research is significant because it promotes

reflective skills and encourages teachers to have a more open attitude and share daily problems they face when literacy in the language of learning and teaching (Brodie, 2021). Collaboration among teachers in PLCs can support effective professional development activities. Working and learning together can assist teachers in reconsidering their own practice and enhancing their teaching as well as learning in learners (Prenger et al., 2019). With collaboration, not only can teachers learn from one another but also generate changes in practice collaboratively (Admiraal et al., 2021; Prenger et al., 2019). Collaboration and successful learning interactions require a high level of trust (Brodie, 2021) so that teachers can challenge one another's ideas and practices for improvement and growth. Thus, a relationship of trust helps to prevent defensiveness and conflict while fostering change and debate (Brodie, 2021).

1.1.2 Teaching phonemic awareness

Explicit teaching of PA is essential because PA skills allow learners to acquire spoken and written language (Andorka, 2021; Rokhman et al., 2020) (cf. 2.3.2, 2.3.6). To fully develop literacy skills, learners need prior knowledge of the sounds of language to learn phonics, which involves the ability to match spoken English sounds to the letter(s) that represent each sound. Teachers thus need the skills required to teach PA so that learners acquire the essential phonemic skills to become successful decoders.

Phonemes, unlike graphics and morphemes, are not seen but heard, since it concerns the sounds that letters represent (Moats & Tolman, 2019). PA is typically taught in Grade R and Grade 1 as a listening skill without reading print (Kenner et al., 2017). Several scholars have suggested that PA be practised and learned in the absence of letters, thus hearing the sounds to enable learners to start distinguishing between them (Goldstein et al., 2017; Kenner et al., 2017).

On the other hand, the NRP (2000) suggests that letters should be included in PA training, specifically when teaching older learners that struggle with reading comprehension. According to the NRP (2000), including letters in PA instruction is more effective than limiting it to manipulating speech because learners can better manipulate the letters they see and not only hear to enhance their understanding of phonemes. Thus, in Grades 2 and 3, when learners

have been introduced to letter names, orthographic mapping (OM) needs to take place. As indicated in the introduction, PA refers to learners' knowledge of sound structure and is an important component of reading comprehension (Kardaleska & Karovska-Ristovska, 2018; Kenner et al., 2017; Rokhman et al., 2020). It provides learners with a way to approach sounding out and reading new words and as such is critical to reading success. PA is essential because it helps learners to understand the alphabetical principle (the knowledge that the letters in words are a systematic representation of sounds). PA is required for the skill of OM, which, Varga et al. (2020) explain, is the act of storing words for fast recognition that aids in a learner's vocabulary acquisition. To be more precise, phoneme and letter-sound expertise, and the capacity to form links instinctively or deliberately between the oral sound in spoken words and the letters in written words, are all required for OM. The OM process must be mastered to facilitate automatic reading so that learners can read without thinking about it (Clayton et al., 2020; Varga et al., 2020). Evidence from the literature suggests that teachers need support so that they can become more competent in teaching PA to master OM (Don, 2020) and ultimately help readers become efficient decoders and skilled readers.

1.2 PROBLEM STATEMENT AND RATIONALE

In the literature, PA is described as a subset of phonological awareness that is essential for developing early reading skills. It is therefore essential for teachers not only to be knowledgeable of PA but also how to teach English PA in classrooms through explicit, systematic instruction to help enhance FP learner's reading skills (cf. 2.3.2, 2.3.6).

I am a Foundation Phase teacher with experience in all grades. This study was conducted based on my observation that learners in my class experienced difficulties decoding English during reading. This lack of decoding skills influenced their reading comprehension – a confirmed observation by several of my colleagues in their own FP classrooms. This prompted me to investigate the possible causes of these difficulties. In my search, I identified that English PA should be taught to learners in the FP, since it is an important precursor of decoding and language comprehension.

To address this, we formed a PLC with three teachers from the purposively sampled population who indicated that they had limited knowledge and experience to teach English PA. Under my guidance as the group facilitator, we acted as co-researchers to determine the needs of teachers regarding professional development for teaching PA. All of us and our learners come from diverse backgrounds with home languages including Afrikaans, IsiZulu, Sesotho, Dutch, French, and Korean. Despite this, the LoLT at our schools is English. The most prominent common problem in our classes is that our learners are slow decoders, which hampers reading fluency and ultimately causes them to struggle to read English with understanding. We further identified that older learners (in the higher grades of the FP) also struggle with aspects of reading that involve decoding. A factor that must also be recognised in this context is the multilingual context in which varying pronunciation and accents may cause learners to struggle to associate sounds with their orthographic representations. With this study, we were interested in exploring the value of a collaborative approach in enhancing our knowledge of teaching English PA to improve our learners' decoding and reading skills.

1.3 THE RESEARCHER'S ROLE IN THE RESEARCH PROCESS

Zuber-Skerritt (2015, p. 78) suggests that "the researcher should 'lead from behind' instead of following a 'top-down' leadership approach". A top-down leadership is most effective when built on a relationship of trust and partnership with the teachers as the participants and co-researchers in forming the PLC. To achieve this, I encouraged the PLC members to steer the discussion while I facilitated the discussions by working collaboratively with the FP teachers. Such researchers suggest that PAR is most effective when built on a relationship of trust and partnership. To achieve this, I let the other PLC members steer the discussion while I facilitated the discussions in working collaboratively with FP teachers. To promote trust, I let the other PLC members steer the discussion. I ensured the PLC members throughout that they were participating in a safe environment built on an ethical foundation of professionalism, honesty, trust, and confidentiality.

My teaching experience as a FP teacher has shown me the importance and value of PA in a diverse classroom, given my observation that learners in my classroom were often slow

decoders stemming from an insufficient foundation of PA. I had spoken to several colleagues who shared with me similar experiences in their classrooms and expressed that they often lacked the skills to help their learners advance to the next grade with the necessary PA skills. I hoped that through collaboration in a PLC, I would be able to identify the biggest challenges teachers face with regards to teaching English PA. Such a collaborative approach would help me to consider various alternative viewpoints, ideas and recommendations critically and generate creative ideas for the effective teaching of English PA to enhance FP learners' reading comprehension skills. With this process I envisioned to enhance teachers' PA knowledge and skills in teaching PA effectively by integrating new knowledge into the practices in teachers' classrooms. Challenges, knowledge, values, and fears could be shared in the PLC rather than handing the group ready-made truths as solutions to their problems (Neethling, 2015). Thus, from an epistemological point of view, PAR would be able to assist a group of teachers working together toward an improved PA knowledge, understanding and teaching strategies for FP classrooms (Alam, 2020).

1.4 RESEARCH QUESTIONS

1.4.1 Primary research question

Based on the above discussion, the research question that will guide this study is:

How can a collaborative approach enhance the teaching of English PA in the FP?

From the above research question were derived the following secondary research questions:

1.4.2 Secondary research questions

- What are the learning needs of FP teachers with regard to teaching English PA?
- How can FP teachers meet their own learning needs to improve their literacy teaching practices through PA?
- What guidelines for teaching English PA in the FP can be derived from the findings?

1.5 THEORETICAL FRAMEWORK

The simple view of reading theory (SVR) (Gough & Tunmer, 1986) and the reading rope model (Scarborough, 2001) formed this study's theoretical foundation. These theories define the skills that contribute to skilled reading and, as such, informed our (the PLC's) understanding of how teaching English PA can enhance learners' reading comprehension skills in the FP. These theories helped us to construct and identify various perspectives concerning knowledge and teaching practices (Osanloo & Grant, 2016) as they applied to PA in relation to helping learners become skilled readers from a young age. The subsections that follow discuss the theoretical aspects of this study in greater detail.

1.5.1 The simple view of reading

The SVR defined by Gough and Tunmer (1986) is a useful tool in addressing decoding and linguistic comprehension for reading. The SVR is widely used to explain the science of reading to classroom teachers and others involved in reading education and to guide instructional practice (Moats et al., 2018). The SVR is commonly presented to teachers in relation to the science of reading. "The simple view presumes that, once the printed matter is decoded, the reader applies to the text exactly the same mechanisms which he or she would bring to bear on its spoken equivalent" (Moats et al., 2018, p. 9). In the SVR, the term 'reading' means to comprehend written text (Gough & Tunmer, 1986) and not just words. Although the original SVR specified listening comprehension and decoding as the foundational constructs of reading, these terms are frequently broadened in contemporary work to include language (or linguistic) comprehension and word recognition, respectively. In fact, two of the model's originators have recently offered an expansion of the SVR, known as the cognitive foundations framework (Hoover & Tunmer, 2022), which retains the SVR's original structure but uses the broader terms 'language comprehension' and 'word recognition' and unpacks subcomponents under those terms. Gough and Tunmer (1986) viewed the afore-mentioned processes as entirely separate and occurring sequentially – that is, decoding comes first and listening comprehension second. This interpretation may encourage some to think that learners should be taught first to decode and then to comprehend, which is not the case. Nevertheless, the SVR

is a useful tool for indicating the essential requirements of decoding and linguistic comprehension for skilled reading. The next section considers the reading rope model as an extension of the SVR.

1.5.2 The reading rope model

Scarborough (2001) expanded on the SVR concept with the “reading rope”, a simple model showing that reading occurs when word recognition and language comprehension subskills combine. Next to the SVR, the reading rope model (see also Scarborough et al., 2009) is perhaps the model most commonly shared with teachers (Duke & Cartwright, 2021). The reading rope model (cf. Fig. 2-4) unpacks the constructs *recognition* (which includes PA) and *language comprehension*, indicating a great deal of overlap between the two constructs and its components. These constructs’ various components, including language comprehension, background knowledge, vocabulary, language structures, verbal reasoning, literacy knowledge, word recognition, phonological awareness, sight recognition, and decoding, weave together tightly to form *skilled reading*. The rope model benefits teachers because it provides an overview of all the components involved in skilled reading and shows the vital role that PA plays when teaching learners to read with comprehension. In sum, the rope model considers word recognition and language comprehension as coordinated constructs of the SVR.

1.6 RESEARCH DESIGN AND METHODOLOGY

Research methodology describes the path that a researcher would follow to conduct their study (Sileyew, 2019). This study followed a qualitative research approach with the aim of understanding a phenomenon in a natural setting by creating a holistic picture to understand individual perspectives (Kemmis & McTaggart, 1982, 2000). PAR was used as the research design to understand how FP teachers can collaborate to enhance the teaching of English PA. A PLC was formed to generate and analyse data collaboratively with respect to teachers’ needs to enhance their English PA teaching skills in the FP.

This study formed part of a larger study that aims to improve inclusive education and learner support in the socially disadvantaged community in the uMzinyathi district of KwaZulu-Natal. The aim of this study was to form a PLC with Grade 2 and Grade 3 FP teachers so that,

through collaboration, we could identify our teaching needs and reflect on our shared the assets, knowledge, and skills toward achieving improved English PA in the FP.

1.6.1 Research paradigm

A paradigm refers to a set of assumptions and perspectives; a point of view through which researchers view the framework of a study's methods and beliefs (Davies & Fisher, 2018). This research study followed a social constructivist paradigm, which McKinley (2015) defines as a “sociological theory of knowledge according to which human development is socially situated and knowledge is constructed through interaction with others” (Kapur, 2018, p. 13). Paradigms consist of epistemological, ontological, and axiological assumptions that comprise basic assumptions, beliefs, norms, and values about a phenomenon.

Epistemology refers to “what counts as knowledge within the world” and how it is obtained (MacDonald, 2012 as cited in Kivunja & Kuyini, 2017, p. 5).

Ontology is concerned with what constitutes reality; in other words, what is real or makes sense (Kivunja & Kuyini, 2017). The ontological assumption in this study is grounded in the relational ontology and participatory principles (Zuber-Skerritt & Wood, 2019), which align with the principles of collaborative engagement in a PLC.

The axiology assumption addresses the nature of ethical behaviour (Kivunja & Kuyini, 2017), fostering mutual respect. Together these assumptions inform the nature of the inquiry and helps the researcher to identify and select the most appropriate tools for data collection, analysis, interpretation and findings. This study is highly constructivist in nature given that social settings that involve people and their behaviour, which are strong factors in this study, often implicate multiple realities being constructed between people that could coincide or differ fundamentally and finding a single, clear solution or answer is not possible and highly dependent on context. In this study, knowledge creation occurred collaboratively as all the members of this PLC brought authentic, contextualised knowledge to the research facilitated by dialogue and reflection (Zuber-Skerritt & Wood, 2019).

For the best results, a PLC was established for its ability to create a safe space conducive of collaboration, negotiation, meaningful dialogue and experience sharing.

1.6.1.1 Participatory action research as research design

PAR enables researchers to investigate and improve issues through collaboration and cooperation in iterative cycles of action and reflection (Alam, 2020; Kemmis & McTaggart, 2000). I position PAR as a social constructivist paradigm and not just as a methodology because PAR principles are grounded in a collaborative process where knowledge is socially constructed, tested, and validated (Alam, 2020). The figure below provides an overview of the proposed cycles in this study.

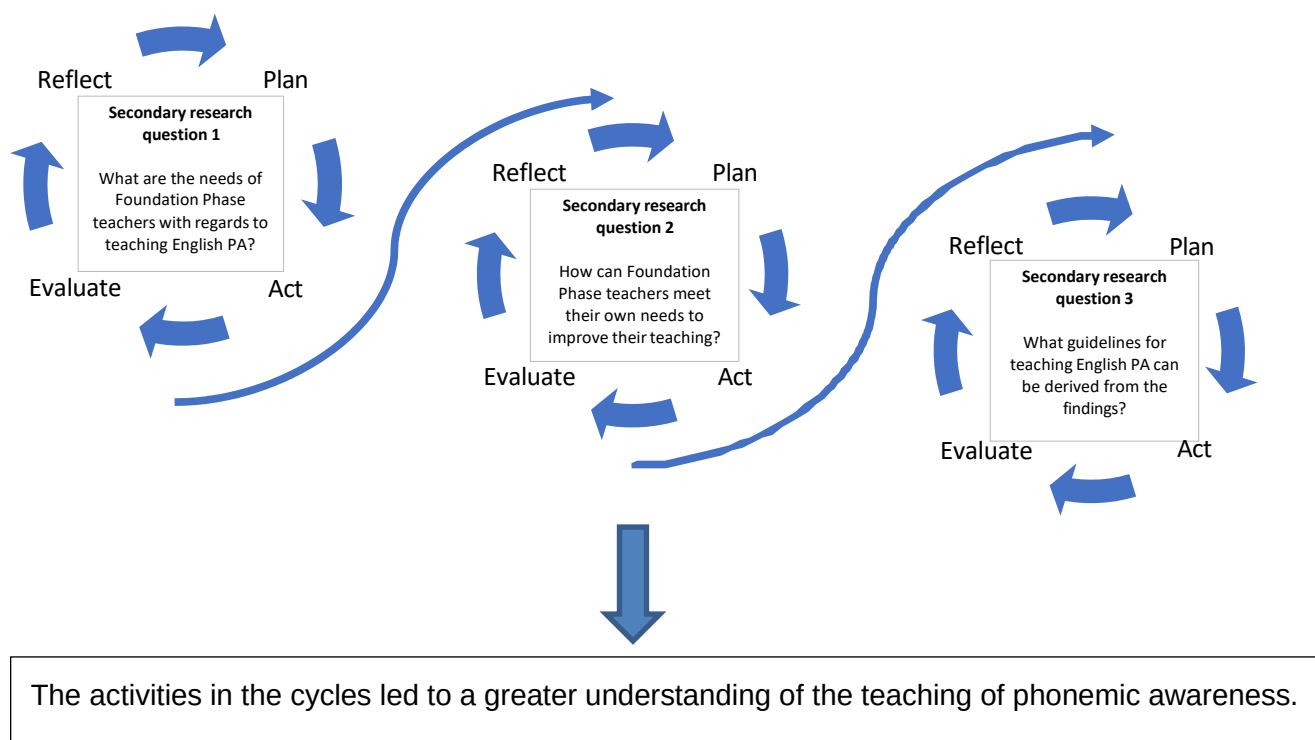


Figure 1-1: Proposed PAR cycles

During the collaborative cycles of planning, acting, evaluating, and reflecting, all the members of the PLC, as co-researchers, identified their respective challenges in teaching PA, reflected on the best way to act on them, evaluated their actions, and then decided on further action according to the needs that emerged (Piggot-Irvine et al., 2021). After each cycle, the reflective discussions and activities were analysed to identify the specific learning that took place. The information that emerged from the PLC in each cycle was used to inform the next cycle.

Since the objectives of PAR are to promote empowerment, participation, access, collaboration, capacity, social justice, and community development (Kemmis & McTaggart, 2000), PAR empowered the members of the PLC to participate in this study as equals.

1.7 RESEARCH METHOD

1.7.1 Participant selection

The study was part of an approved research project (ethics number: NWU-00641-18-A2) in the uMzinyathi district of KwaZulu-Natal (cf. 3.7). As part of the project, an independent gatekeeper was identified and recruited the participants. Convenience sampling was used to identify the participants as they were located in the district of the project and expressed a need to enhance their English PA teaching skills. In line with this study's selection criteria, the participants were FP teachers (Creswell & Creswell, 2018). In total, three FP teachers volunteered to take part in the study. As soon as ethical clearance was attained for this study, the gatekeeper provided the participants with the necessary consent forms. My role was to collaborate with the three FP teachers who teach at the independent school of the District to understand the challenges relating to teaching English PA, form a PLC, and collaborate to answer the primary and secondary research questions (cf. 1.4).

1.7.2 Data generation

The generation of data in qualitative research is an interpretation of observations and discussions aimed at discovering underlying meanings and patterns of relationships (Howitt, 2019). The following data generation methods were used in this study:

1.7.2.1 Fishbone diagram (cycle 1)

In a fishbone diagram, the fish bones represent different themes relating to causes and effects (Guy & Feldman, 2021). A fishbone diagram is a visual tool that can display numerous examples, issues and reasons for the teacher's needs (Brydon-Miller & Coghlan, 2014; Coccia, 2018, 2020). This study made use of fishbone diagrams as recommended by Guy and Feldman (2021) to determine the learning needs of FP teachers for teaching English PA.

1.7.2.2 Collage (cycle 2)

Collages were used to develop community and relationships within the PLC while constructing knowledge. Collage activities have been recognised as a facilitator of effective collaborative partnerships and one that fosters joint learning and growing capacity under FP teachers (Dutton et al., 2019; Mayaba & Wood, 2015). With this purpose in mind, we reflected on and evaluated how we experienced participating in the PLC. The collages ultimately enabled us to share what we had learned about PA and teaching English PA and determine how we as FP teachers could meet our own learning needs to improve our literacy teaching practices through PA.

The following reflective questions were asked to guide the activity:

- How did you experience working collaboratively to improve your teaching of English PA?
- How will this learning influence your future teaching and learning activities with regard to English PA?
- What change took place during this process, not only with regard to your own teaching practices relating to PA but also your view of your role as a teacher?

1.7.2.3 Reflective group discussions through WhatsApp (cycle 3)

The PLC formed a WhatsApp group and used video calls and voice messages firstly as a platform to discuss and reflect on activities and secondly to capture our feelings, observations and perspectives. Thirdly, on this platform we held informal virtual, interactive and collaborative discussions to determine what guidelines for teaching English PA in the FP could be derived from the findings. WhatsApp was used for its convenience and affordability as a tool to communicate from any place and time (Snow et al., 2021). These reflections were a valuable tool for data generation as we were all required to consider our own learning and how it could be transformed to improve everyday teaching of English PA in the classroom. The PLC held face-to-face meetings weekly over a period of six weeks, and all the data from these sources were transcribed verbatim for data analysis and reliability, trustworthiness, and validity. The more we reflected on our reactions, feelings, thoughts and behaviour in our classrooms, the

more these WhatsApp groups served their purpose for effective and rich data generation (Snow et al., 1998).

1.7.3 Data analysis and interpretation

Qualitative content analysis (Creswell & Creswell, 2018) is concerned with describing and making meaning from data through a systematic classification process of coding and identifying themes or patterns. In this study, all data were transcribed verbatim to identify the themes from the dataset.

The verbatim transcripts of the reflections in the WhatsApp group (Zuber-Skerritt, 2015, 2018), as well as the data generated through the fishbone diagram and collages, were used as the data sources of this study. After each cycle, the data were analysed and then discussed with the co-researchers to verify that the data were interpreted correctly before moving on to the next cycle.

According to PAR principles, the data analysis in this study involved a cyclical process of reflection, action, and inquiry for change (Kemmis & McTaggart, 2000). Analysing the data was a continuous process given that the cyclical processes of generating and analysing data were interlinked, and reflections were integrated into every cycle. Accordingly, Cohen et al. (2020) suggest that it is essential that all the co-researchers be actively involved in data generation and analysis to ensure that all the relevant information can be obtained.

The members of the PLC collaborated in analysing the primary data. As the primary researcher of the study, I conducted a secondary analysis in which the data were compared with the theory to determine how the theory confirmed or contradicted the data. The data analysis was shared with the members of the PLC to ensure that my interpretations were in line with the views of my co-researchers.

The data analysis method drew from Creswell and Creswell (2018) and Kemmis and McTaggart (2000) through the following steps, which were followed after each meeting in the cycles:

Step one: Transcribe the recorded discussions verbatim immediately after the discussions take place.

Step two: Prepare the data for analysis, take note of the data, code the data, and create a description. Data preparation in this instance refers to how raw data were obtained and documented (Akinyode & Khan, 2018).

Step three: Code the data. Creswell and Creswell (2018) explain data coding as a process of disintegrating text to form a comprehensive explanation or to form themes from the data.

Step four: Present the data.

1.8 RESEARCH RIGOUR AND TRUSTWORTHINESS

Rigour can be perceived as the scientific worth of a research study and refers to the trustworthiness of the research (Gray, 2017). I drew from Tracy's (2019) guidelines to ensure rigour and trustworthiness.

Rich rigour comprises a variety of "theoretical constructs, data and time in the field, sample(s), context(s), as well as analysis processes and data collection" (Tracy, 2019, p. 841). This study included an in-depth literature review to establish a strong theoretical base and inform discussions during data generation and reflection after data generation. In addition, as suggested by Moats et al. (2018), all the PLC members were involved as co-researchers in the research process while ensuring complete transparency throughout the study.

Sincerity emerged from the practice of "self-reflexivity about subjective values, inclinations and biases of the researcher(s)" (Tracy, 2019, p. 841) as well as "transparency about the challenges and methods" (Tracy, 2019, p. 842) in the research process.

Credibility refers to the trustworthiness and integrity on which the research findings are dependent (Ghafouri & Ofoghi, 2016). In this study, the research results include in-depth illustrations of the challenges involved in teaching English PA in the FP to support learner reading comprehension. Tracy (2019) suggests building good relationships with participants to achieve multivocality, which was key in this study as every cycle began with relationship building activities.

Resonance refers to a researcher's ability to be receptive and open to participants. As suggested by Tracy (2019), resonance was obtained through transferability. Transferability is

the development by which readers find similarities in situations and can then transfer these outcomes to their own situation intuitively.

A significant contribution suggests that the research must bring important or new knowledge to the context. This means in this context that research should contribute strategies to enhance the teaching of English PA in the FP. This study contributed to developing appropriate teacher knowledge of teaching English PA to enhance skilled reading of Grade 2 and 3 learners.

Meaningful coherence involves the research outcome and addresses the question: Did the research achieve what it set out to achieve? Meaningful coherence refers to how well the literature, research findings, questions, and interpretations are all intertwined in the study (Tracy, 2019). In this research, meaningful coherence was achieved through the interactive activities with attention paid to integrating the literature, research questions, findings, and our own interpretations.

1.9 ETHICAL CONSIDERATIONS

Ethical guidelines protect all individuals and communities involved in and affected by research against possible harmful effects (Mertens, 2018). This research study upheld all the ethical guidelines of the Ethics Committee of the North-West University (NWU-00269-22-S2), which include informed consent, transparency, and privacy of the participants. It was made clear in both written and oral agreement that no participant would be forced to take part in the study. The participants could withdraw from the study at any stage, and their information would be treated with confidentiality. The research findings have been reported completely and honestly without misleading others about the nature of the findings.

Voluntary participation: The gatekeeper identified and recruited the participants of this study by means of a recruitment letter that presented them with information about the study and explained that participation was voluntary, and participants could withdraw at any time (Mertens, 2018). The participants were also informed that no incentive or payments would be awarded for participating in the study.

No harm to participants: During the study, I ensured that all measures were in place and that no harm would result from participating in this study. This mainly implied that participants would have to respect one another throughout this study and be aware that no information could be used outside of the PLC. Accordingly I emphasised the use of a positive solution-focused approach during the study and the importance of maintaining respectful relationships (Mertens, 2018).

Confidentiality and anonymity: Anonymisation is a method of maintaining confidentiality that conceals the identity of a study's participants (Saunders et al., 2015). I explained the confidentiality clause in the consent form as well as the difference between confidentiality and anonymity to the participants. Although the teachers in this study were colleagues and knew each other, we took care to respect each other's privacy. Their identities were protected by using codes to refer to their respective contributions during data dissemination (Mertens, 2018).

Deception: I ensured that the members of the PLC had a clear understanding of the nature of the study to prevent them from altering their behaviour to "suit the setting" (Mertens, 2018). The information from the study was used strictly for research purposes and was archived under secure conditions until after a period of five years all forms of it will be destroyed and discarded.

Storing of data: The data from the research study was stored on a password-protected computer. When the study concludes, all the data obtained from this study will remain stored at the North-West University and destroyed after five years (Mertens, 2018).

Feedback: After a feedback session, participants were acknowledged for their contributions (Mertens, 2018).

The next sections discuss the contribution and significance of developing this research.

1.10 CONTRIBUTION OF THE STUDY

The study aimed to contribute theoretically to the existing field of knowledge on teaching English PA by discussing how FP teachers can enhance their PA teaching through collaborative action. The contributions of this study may be valuable in improving the collaborative approach

of teaching English PA to assist learners with their fluency and skilled reading. The study aimed additionally to clarify where there was confusion and point out factors that may have been overlooked or neglected to develop a deepened understanding of English PA in a diverse context.

1.11 CONCLUSION

This study attempted to contribute strategies to enhance the teaching of English PA as a tool for learner support in a linguistically diverse classroom. However, PA should never be taught in isolation. If the acquisition of early literacy skills is compared to baking a cake, PA can be seen as the baking powder. It is a small yet essential component that produces a successful end result, that is, an edible cake. Similarly, PA skills are a vital ingredient in enhancing reading skills because they ensure reading for meaning.

1.12 CHAPTER DIVISION

Chapter 1: The focus of this chapter was the introduction and background of the research followed by a brief overview of the research design and methodology and its ethical considerations.

Chapter 2: This chapter consists of a literature review on reading theories that underpin PA, strategies to teach PA, reading comprehension, and the importance of teaching English PA in the FP classroom.

Chapter 3: This chapter offers a theoretical justification of the research design and methodology.

Chapter 4: This chapter presents and discusses the findings from the study.

Chapter 5: This chapter presents the summary, conclusions, guidelines for teaching PA in the FP and suggestions for further research.

CHAPTER 2 LITERATURE REVIEW

2.1 INTRODUCTION

Phonemes are the smallest units of sound and form the foundation of reading comprehension (Moats, 2020). At its most basic description, phonemic awareness (PA) is the knowledge of phonemes and is an essential literacy component and aspect of teaching reading (NRP, 2000). According to Schuele and Murphy (2014), learners as young as preschool level can begin learning PA, and from this stage PA should be instructed as part of systematic, explicit, and sequential teaching of phonemic awareness (cf. 2.3.2, 2.3.6). PA should be instructed through the following sequence that develops in complexity as the learner's language skills progress: First comes phonological awareness, an umbrella term whereunder PA falls as a component (cf. 2.3.2). In the earliest learning phase (preschool or Grade R), teachers should focus on only a few aspects of phonological awareness (Schuele & Murphy, 2014). Thereafter, the focus shifts to more complex aspects that involve PA as a subskill of phonological awareness. (Schuele & Murphy, 2014) (cf. 2.3.2). To best achieve these, several multimodal teaching techniques can be used. Four main methods of multimodal learning techniques are commonly used, sometimes referred to as the VARK model: visual, auditory, reading and writing, and kinaesthetics (cf. 2.4.2).

This chapter presents a review of the theoretical constructs that informed this study. The first point of focus in this chapter is the theoretical importance of a professional learning community (PLC) collaboration to enhance the teaching of English PA in the FP.

The chapter then moves its focus to the theories that supported this study and guided the PLC interaction. These are the simple view of reading (SVR) theory (Scarborough et al., 2009) and the reading rope model (Gough & Tunmer, 1986). These served as the theoretical underpinnings of this study and the section considers how they facilitated the PLC members to develop their skills and knowledge about teaching English PA in a diverse context. Finally, the importance of orthographic mapping (OM), assessment, small group instruction, time allocation for PA, and teacher knowledge of PA are discussed in more detail as they informed and guided

the study in its aim to construct practical knowledge that will enhance English PA teaching skills of FP teachers. With these theories I emphasise the importance of a cooperative, integrative approach to teach English PA in a unique context to enhance teachers' professional development.

2.2 EVIDENCE FOR THE BENEFITS OF A PROFESSIONAL LEARNING COMMUNITY

A PLC is a group of professionals such as teachers who frequently confer to share knowledge and collaborate to enhance personal and professional practice and learner academic achievement in the teaching profession. Small-group collaboration is often used as a form of professional development in schools and teaching institutions (Voelkel & Chrispeels, 2017). Learning to work in a PLC has been shown to improve the sustainability and application of teacher learning (Admiraal et al., 2021; Prenger et al., 2019) and learning in the FP (Prenger et al., 2019). Professional collaboration is vital within a PLC because then teachers learn from each other and generate ideas together to effect changes in practice, which is a primary aim of PLCs (Admiraal et al., 2021; Prenger et al., 2019). Furthermore, the purpose of collaboration in a PLC is to improve teacher professionalism and learning outcomes. In this study it was my privilege to work, as a teacher, with other FP teachers in a PLC to identify our needs and challenges and establish how we might collaborate to overcome these challenges and thereby provide inclusive classrooms with sufficient learner support in relation to PA.

The PLC in this participatory action research (PAR) study fostered a safe space that was conducive to dialogue and where we felt free to engage openly about our respective views of teaching English PA to generate practical and context-specific knowledge and skills in PA teaching. To this effect, PAR was used to empower the researcher and co-researchers to participate equally in the PLC. The sections that follow discuss the theoretical aspects of this study in greater detail and touch on the underpinning research philosophy that applies to this research, social constructivism.

2.3 THEORETICAL FRAMEWORK

The theories presented in the following sections formed part of this study's theoretical framework, and as such, they are discussed in association with this study's main focus, which is teaching and promoting English PA for teachers in the FP to develop their learners' reading skills. According to Vygotsky's (1978) social constructivist theory, learning is a collaborative activity or, as the name suggests, a socially constructed activity rather than a result of a transference process. In other words, resulting knowledge is a product of interaction with culture and society. McKinley (2015) and Shah & Rashid (2017) elaborate that social constructivism is built on certain assumptions about knowledge, learning, and reality. On this premise, comprehending and using instructional models based on collaborative learning can assist teacher and learner learning from a context-driven and experiential approach.

2.3.1 Placing phonemic awareness in perspective

The importance of PA when learning to read has been acknowledged by multiple researchers (Goldenberg et al., 2014; Heggerty & Van Hekken, 2020; NRP, 2000; Ramanair et al., 2020). According to Admiraal et al. (2021), Johnson (2021), and Prenger et al. (2019), paying attention to how letters represent sounds prepares learners for reading print. Therefore, teachers should prioritise instructing learners how to sound out and read new words. Together with PA, phonological awareness entails using systems of conventional vocal symbols to communicate (Andorka, 2021; Barton-Hulsey et al., 2018; Rokhman et al., 2020).

The terms PA, phonics and phonological awareness are frequently used in the body of literature on primary reading skills although they are often used interchangeably. However, for teachers exploring the fundamentals of enhancing reading skills through PA and phonics instruction, the following sections are dedicated to distinguishing between these constructs and finally highlight the place of PA in literacy education.

2.3.2 The relationship between phonological awareness, phonemic awareness, and phonics

Chard and Dickson (1999) define phonological awareness as "the understanding that oral language can be divided into smaller components and manipulated", and in essence is the

overarching concept that breaks aspects of language into broader “chunks”. The NRP (2000, p. 2) explains that phonological awareness necessitates the recognition of larger spoken components such as “[riming], alliteration, segmenting [phrases] into words, recognising the syllables in a word, and blending and segmenting onset [rimes]”. Phonological awareness develops over time on a continuum consisting of the former skills (Chard & Dickson, 1999). These skills are thus essential to the successful decoding and spelling of printed words (Moats, 2020; Mather & Jaffe, 2021; NRP, 2000). In short, individuals with phonological awareness can detect sounds that make up different words (Gillon, 2017). As such, teachers, psychologists, and speech therapists often use phonological awareness to detect and understand difficulties in sound detection and manipulation within language and literacy (Gibbs & Bodman, 2014).

In the earliest phase of literacy education, teachers should focus on only a few elementary aspects of phonological awareness, i.e., segmenting words into syllables and practising rime and alliteration (Schuele & Murphy, 2014). These tasks entail activities where learners break up words into smaller sound segments (syllables with a focus on the beats they form around vowels and consonants) and note the effects of consonant repetition in words (alliteration). They also learn through listening to how sounds compare and differ when used in different combinations. As the learner masters these skills, the focus shifts to more complex aspects that involve PA, namely onset-rime segmentation, segmenting initial and final sounds, and at its most complex, the ability to fluently segment, blend, delete and manipulate sounds (Schuele & Murphy, 2014).

As a sub-skill of phonological awareness, PA entails the ability to see, visualise, and engage individual sounds (phonemes) in spoken words (NRP, 2000). PA is demonstrated by the ability to manipulate phonemes in blending and segmentation tasks. Phoneme segmentation specifically entails breaking words down into individual sounds, while blending involves combining different sounds into meaningful sequences to form words.

PA is operationalised through the manipulation of phonemes, especially blending and segmenting activities. Byrne and Fielding-Barnsley (1990) add that PA further entails knowledge of phoneme identities, which is the skill to recognise individual phonemes in spoken words. The

authors corroborated the latter when they conducted a double-blind teaching experiment by Murray (1998), where Grade R learners were randomly assigned either to identity programmes, sound manipulation programmes (cf. 2.3.3), or language experience programmes. The learners in the manipulation programme scored higher on tests of blending and segmentation than the learners who completed the other programmes. Meanwhile, learners in the identity programme performed better in a test of phonetic cue reading, a measure of rudimentary decoding ability. The study deduced that teaching recognition of particular phonemes in word contexts can assist learners to grasp the alphabetical principle (cf. 2.4.1) and apply insights from this in word identification at an early stage (Murray, 1998).

PA comprises two complementary skills, that of synthesis and analysis (NRP, 2000). Synthesis is the ability to combine phonemes to produce syllables and words, and analysis is the ability to break words and syllables into smaller segments of speech. The two skills are often considered as two “distinct aspects of PA that are performed by divergent manipulations” because the skills “appear to have different development trajectories and play different roles in the reading acquisition process” (Randazzo et al., 2019, par. 3). Phoneme synthesis, the PA skill that underlies blending, develops before phoneme analysis, as a task that requires segmentation (Hjetland et al., 2019; Ramanair et al., 2020).

As mentioned, PA skills, as components of phonological awareness, develops in complexity from simple to complex. The hierarchy begins with the three simplest PA skills, that of phoneme isolation, then blending, then segmentation. As the learner progresses up the PA hierarchy, they develop sound manipulation skills, namely sound substitution, deletion, and addition. Processes used to engage and develop the afore-mentioned PA skills are referred to respectively as phoneme identity, phoneme isolation, phoneme differentiating, sound blending, full segmentation, and sound substitution and deletion (Heggerty & Van Hekken, 2020; NRP, 2000; Ramanair et al., 2020). These skills develop in a hierarchy and should be instructed from in a sequence that gradually increases in difficulty, as discussed next.

Phoneme identity involves recognising the common sound in multiple words, while phoneme substitution involves the process of converting one word to another by replacing one

phoneme with another. Phoneme differentiating entails identifying the word with the odd sound in a sequence of three or four words, demonstrating the ability to categorise. With phoneme identity, the learner forms sequentially spoken sounds and uses blending to form a recognisable word or pronounce and position a marker for each sound. By this time the learner will have mastered full segmentation, which is to break up spoken words into their respective sounds, and phoneme deletion, the ability to select the correct sound for the word the speaker intends to form. Lastly, phoneme substitution tasks are executed, which are normally completed orally rather than in writing. It involves replacing one sound with another to form a new word. These skills should be a focus during explicit, systematic phonics instruction (cf. 2.3.2, 2.3.6).

Phonics instruction, then, involves all the former-mentioned aspects and is concerned with teaching learners how to decipher or spell words using grapheme-phoneme correspondences. These are referred to as orthographic mapping (OM) skills (NRP, 2000), which bolsters phonological awareness skills and thereby also PA in promoting reading skills. There are select key approaches to phonics instruction, namely analytic phonics, phonics through spelling, phonics in context, and analogy phonics (NRP, 2000). Analytic phonics teaches learners to analyse letter-sound relationships in a word. Phonics-through-spelling programmes show learners to transform sounds into letters so that they can write words. Teachers use phonics in context to show learners how to use sound-letter correspondences (OM) along with clues from the context to identify unfamiliar words. Finally, analogy phonics teaches learners to use parts of written words known to them to identify new words.

Synthetic phonics is emphasised as it is a method of phonics instruction that teaches OM by focusing on teaching learners to pronounce the sounds associated with letters and blend the sounds to produce words (NRP, 2000). Since phonemes are the corresponding phonological units of letters (graphemes), PA must be incorporated explicitly in the teaching of the alphabetical principle and OM (cf. 2.3.2, 2.3.6) (Eunice Kennedy Shriver National Institute of Child Health and Human Development [NIH], 2000).

As a precursor of early literacy, PA skills are crucial to mastering the alphabetical principle during early literacy instruction. PA plays a crucial role in learning the alphabetical

principle is an essential component of early reading skills development and a predictor of effective decoding skills that will develop later on. The alphabetical principle entails learners' ability in the early FP (pre-school, Grade 1) to recognise, name and write letters of the alphabet and bring them in relation to the sounds they represent (Moats, 2020; NRP, 2000). (Moats, 2020; NRP, 2000).

The alphabetical principle dictates that letter patterns and letters represent the sounds of spoken language. It addresses the oral or spoken language component of PA together with letters or graphemes by incorporating what they have already learned about sounds through PA (Moats, 2020; cf. 2.5.1). Through this mechanism the alphabetical principle develops the skill to recognise predictable relationships between spoken sounds and written letters by demonstrating that the sounds we have learned are represented by selecting and combining letters (Moats, 2020). Discovering predictable relationships between sounds and letters enables learners to apply these relationships to both unfamiliar and familiar words, which allows them to begin reading fluently. Phonics instruction is aimed at assisting learners in developing and applying the alphabetical principle and teaching them the relationship between letters in written language and sounds in spoken language.

The following table presents a summary of the distinctions between phonological awareness, PA, and phonics.

**Table 2-1: The difference between phonological awareness, phonemic awareness
phonics**

Phonological awareness	Phonemic awareness	Phonics
Knowledge that spoken words are made up of different sounds. It involves sound and not print. Teaching is verbal and oral. Understanding many ways sounds function in words. • Listening skills: ○ Discrimination – learner must	Is a sub-skill of phonological awareness. The auditory ability to focus on, individual sounds and differentiate between sounds in words called phonemes. Phonemic skills: • Phoneme isolation: Learner must recognise individual sounds in words, e.g., “What is the first sound you hear in the word lolly”	The ability to relate individual sounds in spoken words with unique letters of the alphabet. Involves letter and sound knowledge and relationship. Sounds are converted to print in reading and writing. Learners must have

Phonological awareness	Phonemic awareness	Phonics
recognise when sounds are the same/different - Memory – learner recalls sounds and their patterns - Sequencing – learner can identify the order of the sounds in the word they hear - Sound isolation – learner must distinguish a sound between others (see PA) Syllable tasks: - Syllable segmentation – learner must know how many syllables are in a word - Syllable completion – learners, when given the first syllable of a word, must complete the rest of the word - Syllable identity – (see onset-rime manipulation in PA) - Syllable and structure awareness – Sound segmentation, word completion, sound identity, sound deletion Onset-rime tasks (see PA) - Recognise spoken words - Recognise sound oddities in words – when something ‘doesn’t sound right’ - Ability to rhyme - PA tasks (see PA)	(/l/). - Phoneme identity: learner must recognise the same sound in different words, e.g., “What sounds the same in boy, belly, and broom” (/b/). - Phoneme substitution: learner must turn a word (such as “car”) into another word (such as “far”) by substituting one sound. Phoneme substitution can also be done for the last sound of the word (rat-rap). - Oral segmenting: teacher says a word, for example, “ball,” and learners say the individual sounds, /b/, /ɔ:/, and /l/. - Oral blending: teacher says a sound, for example, “/s/, /l/, /n/” and learners respond with a word containing the sound, like “sun”, “ladder”, “net”. - Sound deletion: teacher says a word and asks learners to repeat it. Then the learner is asked to repeat the word without the first sound. E.g., “say ‘dog’ without the ‘b/’”, then learner must say “og”. - Onset-rime manipulation: requires learner to use: - sound isolation, - identification, - segmentation, - blending, - deletion of onsets (the consonant before and after the vowel), for example, “f-oot”, “st-and”, “gl-ad”.	developed phonological awareness (including PA) before phonics instruction can take place. Learned through singing, tapping syllables, rhyming, and dividing words into individual sounds. Phonics skills must be integrated with the development of phonemic awareness, fluency, and text reading comprehension skills A multimodal teaching approach is recommended Skills: Employs the alphabetical principle and OM Learners must compare words to identify patterns and learn new words (through onset rime and segmenting). Learners must for letter-sound correspondences. Decode orthographic patterns for longer words

(Adapted from Ehri, 1996; Gillon, 2017; Goldenberg et al., 2014; Heggerty & Van Hekken, 2020; Konza, 2014; Moats, 2020; NRP, 2000; Ramanair et al., 2020).

Understanding PA and its place within phonological awareness and within a diverse context can facilitate teachers in developing reading proficiency in learners more effectively and assisting learners with reading comprehension difficulties (Cekiso, 2017; Nel et al., 2016). As the focus of this study is on PA, the next section discusses the relevance of PA as the earliest foundation for developing strong reading skills.

2.3.3 The role of phonemic awareness in reading skills development

Reading comprehension is the complex cognitive process readers use to understand what they have read, which is essential to strong literacy skills. In this study, reading comprehension is approached according to Scarborough's (2001) reading rope model with a focus on the role of PA in this model. Scarborough suggests that skilled reading and thus literacy is encompassed by the interaction between five essential components (Antunez, 2022; NRP, 2000). On a broader level, the reading rope model suggests that an individual's reading proficiency is the product of their decoding skill and language comprehension (Gough & Tunmer, 1986). Decoding can be understood as the ability to translate text into speech (which includes PA) and language comprehension the ability to understand spoken language (Gough & Tunmer, 1986). The reading rope (Scarborough, 2001, Scarborough et al., 2009 (cf. 2.3.5) elaborates on the importance of phonological awareness and PA with regard to decoding. PA is crucial as it necessitates that learners pay attention to how letters represent sounds. It also prepares them for reading in print, because it enables readers to sound out when they read new words.

The feature distinction between strong and weak readers, according to research (Andorka, 2021; Howie et al., 2017; Reed et al., 2020; Rokhman et al., 2020; Scheepers et al., 2021; Vos & Fouché, 2021), is their PA skills, as this is one of the foundations of early literacy development. According to research findings, PA is a precondition as well as a predictor of reading comprehension (NRP, 2000). As such examine the relationship between PA (i.e.,

phoneme blending or synthesis and segmentation or analysis) and reading comprehension may assist teachers in filling these knowledge gaps and become better PA instructors. Given the current evidence in the importance of PA as an early precursor of literacy, especially in a LoLT, explicit focus on PA as a component of phonics instruction may help learners develop stronger literacy skills as they progress to higher grades. Poor reading comprehension is often caused by poor PA skills and, subsequently, decoding skills (Howie et al., 2017; Reed et al., 2020; Vos & Fouché, 2021).

The ability to read with understanding and proficiency ultimately has a significant impact on a learner's academic success. At a fundamental level of literacy skills, PA in the early phases of school has been found to correlate positively with strategic outcomes to develop early reading comprehension (Howie et al., 2017; Moats, 2020; Reed et al., 2020; Vos & Fouché, 2021).

2.3.4 The simple view of reading

The simple view of reading (SVR) was designed by Gough and Tunmer (1986) to define the skills contributing to early reading development and intervention. According to the original SVR, reading comprehension requires both language comprehension and the ability to decode. In the context of SVR, decoding refers to the ability to recognise words in print, while language comprehension refers to the ability to understand words (Hjetland et al., 2019; Lonigan et al., 2018). A learner who cannot decipher words from print is less likely to become a fluent and proficient reader (in the LoLT), regardless of how advanced their level of understanding is in the spoken language domain (Nation, 2019). The SVR suggests that, after decoding written language input, comprehension is achieved through the same cognitive processes used to internalise spoken language.

Decoding, McShane (2005, p. 34) explains, is “related to but different from” PA in that PA “is about speech sounds only [while] decoding makes the connection between letters and the sounds they represent”; furthermore, decoding skills depend to a great extent on PA. Modelling language comprehension and decoding can be regarded as important contributors to the progression of learners' reading comprehension of which explicit but systematic and gradual PA instruction should form a part (cf. 2.3.2, 2.3.6).

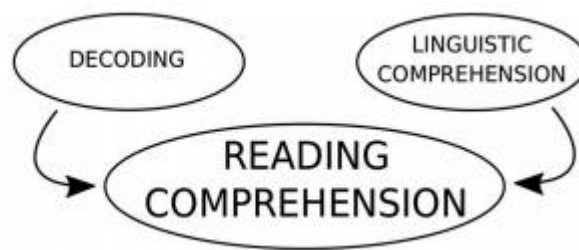


Figure 2-1: The simple view of reading (Nation, 2019, p. 48)

As the figure above suggests, decoding limitations in the early stages of reading can be thought to limit the development of reading comprehension. There is a clear relationship between decoding and linguistic comprehension on the one hand and eventual language comprehension as a component of skilled reading, which is comparable in part to the reading rope'. When reading, a reader's aim is to deconstruct the writer's message for understanding. This task generally seems straightforward as comprehension flows naturally even as we read further. This perception of simplicity is, however, deceptive, as reading comprehension is a complex task, even when reading a text that appears straightforward and simple. A spectrum of linguistic and cognitive operations is at play when we read, from identifying single words to making inferences from text as well as learning new words (Castles et al., 2018). The SVR provides a functional framework for thinking about the complexities of reading comprehension and is a reminder that no amount of oral language skills alone can result in reading success but rather an integrative approach to phonics and orthography that begins with but is not limited to explicit PA instruction.

Consequently, an FP learner who has not yet learned the functioning of writing structure should be taught PA at the onset to develop decoding skills. In addition to decoding skills, learners require processing skills and linguistic comprehension. To account for more probable causes of variation in reading comprehension development, teachers need to look beyond the SVR to other processes that play a role in language literacy development. These processes are semantics, vocabulary and syntax, which should also be introduced explicitly but gradually in reading instruction in the classroom. The figure below offers an expanded view of the SVR that demonstrates how various aspects of spoken and written language and their interaction strengthen overall reading comprehension.

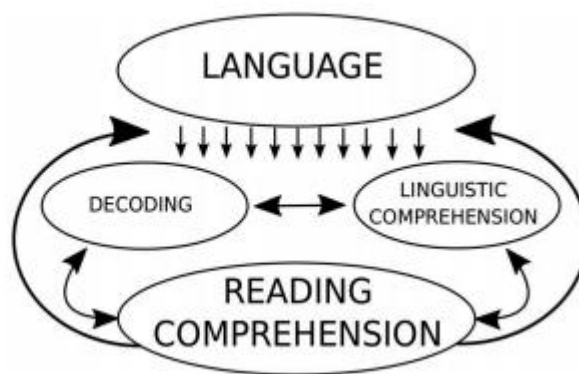


Figure 2-2: Expanded simple view of reading (Nation, 2019, p. 67)

Essentially, the SVR surmises that even if a learner can decode all the words in a text and has mastered phonics, they will eventually have to master semantics, vocabulary, and syntax as the learning content increases in density and complexity to read with full comprehension. Snow and Matthews (2016) agree in explaining that for a learner to read successfully, they require instruction in developing linguistic comprehension but argues that the SVR is perhaps too detailed to give teachers an adequate description of comprehension and decoding in their most basic form (Snow & Matthews, 2016). Teachers require this knowledge in order to present effective PA instruction in the early school phases. With some clarification and simplification, however, the SVR can be used a powerful tool for FP teachers to organise a framework for understanding and thereby assessing reading difficulties, including PA.

The SVR considers that if a learner can read the words in a given passage swiftly and Effortlessly and understand that same passage when it is read to them, they should be able to read with comprehension. Teachers can proceed to use this insight to inform their literacy instruction approaches.

Another model commonly discussed with teachers to enhance their English teaching skills is the reading rope model (Scarborough, 2001, Scarborough et al., 2009). Scarborough (2001) developed the model by expanding on Gough and Tunmer's (1986) SVR to include and describe other abilities contributing to early reading skills development. The reading rope model can be seen as an improvement on the SVR, as it unpacks the concept of recognition and other

language comprehension structures. The reading rope model is discussed in greater detail in the next section.

2.3.5 The reading rope model

The reading rope model, introduced by Scarborough (2001), presents skilled reading on as comprising two primary components, or strands, namely word recognition and language comprehension, similarly to how the SVR model deconstructs reading skills. The strands in turn are made up of various threads that, when interwoven, contribute to skilled reading.

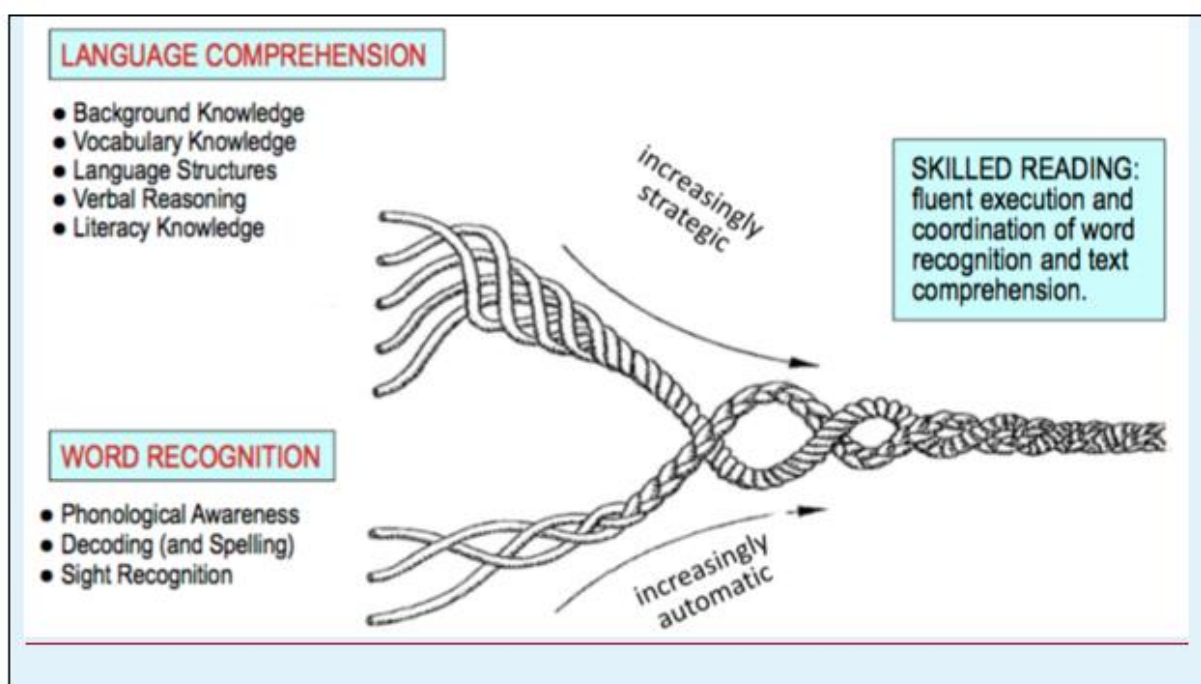


Figure 2-3: Scarborough's reading rope model (Scarborough, 2001, p. 97)

The above photograph presents evidence, theory, and practice for linking early language and literacy to later reading (dis)abilities. The reading rope clearly illustrates how PA as an aspect of phonological awareness is intertwined in the reading process in the link between language comprehension and word recognition (Scarborough et al., 2009). This indicates a great deal of overlap between the reading rope's constituent constructs. Each strand of the two threads in the rope helps teachers understand the individual skills and abilities involved in reading skills. This model serves as a visual reminder for teachers of English literacy about the complex interaction of the constituents of reading and what must be taught to achieve skilled

reading. Of particular interest in this model in relation to PA is decoding, as the teachers in the PLC of this study indicated that many of our learners were poor decoders (cf. 1.2, 2.4).

Decoding applies to a reader's ability to isolate each letter sound correctly to understand the meaning of that sound, bearing in mind that in this model, the subskills involved in language comprehension and word recognition work jointly toward achieving enhanced reading skills. As the readers' reading comprehension skills develop, the respective subskills become tightly intertwined, just like the strands of a rope.

Considering the above, the reading rope model and the SVR can be used to help the reader develop the ability to recognise words "by sight" when reading fluently (Ehri, 1996), and according to Ehri (2014, p.5) is "enabled by phonemic awareness and grapheme-phoneme knowledge". This requires a reader to master phoneme-grapheme mapping (OM), the alphabetical principle, and PA (cf. 2.5.1).

2.3.6 Five essential components of reading and phonics instruction as part of teaching English

In view of the evidence on the development of humans as readers and the question of what needs to be taught to develop learner literacy, the National Reading Panel (NRP, 2000) was convened to review and further scientific research on best reading instruction practices. The NRP's study of 2000 is one of the most compressive reading studies conducted – it conducted a review of all research that had been done on how learners develop reading skills, which included over 100 000 reading studies, with a view to finding the best methods for teaching learners to read (NRP, 2000). Based on these findings, they identified five components of reading that should be taught explicitly to help learners be better readers. These are PA, phonics, fluency, vocabulary, and comprehension (Antunez, 2022; NRP, 2000) (cf. 2.3.2, 2.3.6).

Phonics instruction focuses on helping learners develop letter-sound matching abilities (phoneme-grapheme representations and OM) and given this nature is useful in developing the skills of phonemic segmentation, spelling, and reading (Wegener et al., 2022). As a component of phonological awareness, PA incorporates the broader understanding of sounds, including syllables, words, and rhymes. As learners progress as readers, they must develop the

foundational skills of PA to decode words effectively, and both models can be used to achieve this. For many teachers who do remedial work with older learners that fail to comprehend words, PA instruction is used as part of intervention as PA is frequently a missing component (Heggerty & Van Hekken, 2020) in literacy interventions for these learners. Given this, teachers require an understanding of the SVR and the reading rope. The reading rope model emphasises certain sub-skills of reading be taught together towards the goal of reading which is comprehension. In this the rope represents an understanding of reading as opposed to being a whole language approach. This way teachers can be more intentional about how they teach and assess reading with a view to incorporating English PA instruction along with *fluency, vocabulary, and comprehension* (Scarborough, 2009) (cf. 2.3.4-2.3.5).

2.3.7 How the theories support this study

The reading rope clearly illustrates how PA is intertwined in the reading process in the link between language comprehension and word recognition (Scarborough et al., 2009). Decoding skills and language comprehension abilities are a requirement for reading comprehension. The model offers insight and guidance on how to evaluate learners with reading comprehension scores below grade-level standards and arrive at explicit PA instruction.

The strands of the reading rope (Duke & Cartwright, 2021) can be used to determine which of the constituent parts of skilled reading is underdeveloped so that teachers can identify specific areas of need in the learner's reading skill development and whether or not these needs have a PA basis. Hence, the reading rope also offers a framework to understand reading comprehension and the role of PA within unique teaching contexts.

Hjetland et al. (2019) emphasise that reading fluency as part of skilled reading is a prerequisite for reading comprehension. However, for a reader to acquire fluency, decoding skills are necessary. Decoding involves PA, to comprehend text (Castles et al., 2018; Quinn et al., 2015; cf. 2.3.1-2.3.3). Therefore, as a building block for skilled reading, learners require teaching assistance in PA development that is systematic (i.e. develops hierarchically from easy to more difficult) (Ramanair et al., 2020).

2.4 TEACHING AND EVALUATING FOR PHONEMIC AWARENESS

In my experience as an FP teacher, I observed that learners often struggle with reading comprehension because they were advanced to higher grades (which require more advanced reading skills) without having developed the necessary early reading skills. I deduced, based on my experience as a FP teacher as well as the literature study, that PA is an early contributor to decoding and ultimately reading comprehension. Further, given the fact that the participants in the study came from culturally and linguistically diverse contexts, they are likely to struggle to develop English PA in the FP. I ventured that many teachers, who mostly come from culturally and linguistically diverse contexts, likely struggle to develop PA in the LoLT (English) in their learners due to their own lack of knowledge in PA of the language they teach in.

However, while PA is an essential component of reading comprehension, it cannot be taught in isolation. Research suggests that PA should always form part of a comprehensive reading support programme that integrates the five essential components of reading (cf. 2.3.6) (Antunez, 2022; NRP, 2000; Scarborough et al., 2009). Nevertheless, PA instruction should still be targeted and explicit even though it is just one component of literacy intervention given that it is such a crucial component of reading during the FP. In the earliest learning phase (preschool or Grade R), teachers should focus on only a few aspects of phonological awareness in their simplest form, i.e., segmenting words into syllables and practising rhyme and alliteration (Schuele & Murphy, 2014). Thereafter, the focus shifts to more complex aspects that involve PA as a subskill of phonological awareness. These are onset-rime segmentation, segmenting initial and final sounds, and at the most complex level, the ability to segment, blend, delete and manipulate sounds fluently (Schuele & Murphy, 2014) (cf. 2.3.2, 2.3.6). To best achieve these, multimodal teaching techniques can be used to teach PA such as the VARK model: visual, auditory, reading and writing, and kinaesthetics (cf. 2.4.2).

The VARK model was developed in 1978 by Fleming as a learning tool that accommodates different learning styles (Fleming, 2022). Visual learning aids include maps, charts, and diagrams “that people use to represent what could have been presented in words” (Fleming, 2022). According to Fleming (2022), “learners who have [auditory] as their main

preference [learning mode] report that they learn best from lectures, group discussions, radio, email, using mobile phones, speaking, and talking things through". This mode, together with visual learning aids, lends itself well to OM as part of PA instruction. Learners who prefer learning through reading, learn best through engaging with texts such as manuals, textbooks, essays, and summary notes. As this is their preferred learning style, it presupposes that these learners are well on their way to becoming skilled readers and teachers can apply more advanced PA teaching and other skills by giving more individualised support to learners to meet their different needs. Kinaesthetic learners prefer movement as they learn best from experience and practice. They enjoy activities where they have to do tasks such as puzzles like bingo, scrabble, and flashcards (Fleming, 2022). Kinaesthetic learning is ideal for learning OM and developing PA because it engages young learners the best because they are typically much more physically active than most adults (Fleming, 2022).

Teachers can use multimodal learning to develop several tasks to measure or enhance their PA during instruction when assessing learners in the FP who struggle to decode and read with comprehension, especially given that skilled reading is a difficult task that requires various interacting abilities, such as recognising and comprehending terminology and evaluating comprehension (Moats et al., 2012). There are several factors teachers can take note of to assess their learners PA capabilities.

Learners who lack a strong PA foundation struggle to express their ideas and opinions or connect the goals of reading because there is a lack of reading comprehension, and teachers should be attentive to this when engaging with their learners. Typical indicators that learners have trouble decoding is slow and halted reading, which makes it even more difficult to process meaning. Conversely, if a learner is able to read the printed words successfully and fluently, they are said to have achieved oral reading fluency, which contributes to reading comprehension (Moats et al., 2012). At this point, it becomes simpler to focus on the text's significance and the learner transitions from 'learning to read' to 'reading to learn'. On the other hand, if learners are unable to read words and connect them into sentences effortlessly, they will be unable to comprehend what they are reading.

The SVR can be used as a formula consisting of word recognition (decoding) and language comprehension to determine areas of skills that are lacking in reading comprehension. According to Farrel et al. (2019, par 3), “this formula has been supported and validated by a number of research studies”. According to this test, all reading difficulties fall under three general types:

Poor at language comprehension—Has adequate decoding skills and weak language comprehension skills. The extreme example of this profile is a hyperlexic learner (a learner with severe language comprehension issues and excellent decoding skills).

Poor at decoding—Has adequate language comprehension and weak decoding skills. The extreme example of this profile is a dyslexic learner (a learner with language comprehension abilities that are at least average and severe decoding difficulties).

Weaknesses in both areas—Has weaknesses in both areas; sometimes referred to as the “Garden Variety” poor reader. (Farrel et al., 2019, par 3).

If the teacher uses this model to determine that the area of need is decoding, as we suspected in the PLC of this study, they can use the features of the SVR model to direct their attention at more explicit, systematic PA instruction (cf. 2.3.2, 2.3.6).

OM, which uses the brain’s oral language processing to map or connect the sounds of known words to the letters in a word (spellings) (Moats, 2020; Wegener et al., 2022), is an essential aspect of PA instruction, and as such is addressed in the next section.

2.4.1 Orthographic mapping

Orpi (2022) defines OM as the process by which learners learn to distinguish each letter of the alphabet and the sounds they represent. In essence, it is the process through which words become sight words and is one of the strands of the reading rope. Moats (2020) stands in agreement by describing OM as the development of letter-sound links to memorise the spellings, pronunciations, and meanings of words. OM details the mechanisms by which learners learn to read words by sight, spell words by memory, and learn vocabulary or terminology from print (Ehri, 2014; Mather & Jaffe, 2021; Schaffler et al., 2021; Wegener et al., 2022). The process of the effortless and immediate retrieval of words inherent in skilled reading, as mentioned in Scarborough’s (2001) reading rope (cf. 2.5.1), is also a part of OM.

With OM, connections are formed between pronounced phonemes and the printed words' letter sequence, and the sounds are mapped as a word the reader associates with the sequence of the letters they see on a page. The particular combination of letters that are used becomes known as a unit. The more of these units are formed and committed to memory, the better reading comprehension will be.

Kilpatrick (2019; 2020) states that OM requires advanced PA, letter-sound knowledge, and phonological long-term memory. The interaction between these results in long-term orthographic memory of all the words and their pronunciations (Kilpatrick, 2020). The pronunciation of words committed to the long-term memory is central to producing letters used to represent such pronunciations. Learners hence store words based on the alignment between the letter sequence and the phoneme sequence in their memory (Varga et al., 2020). In relation to OM, a connection is made between the phonemes of spoken words and the letters (graphemes) that represent them, and as such the entire letter sequence is recognised automatically (cf. 2.3.2, 2.3.6) from a previously stored and recognisable sequence.

The OM technique does not assume that letters and sounds are always connected, and letter-sound interactions do not require perfect regularity. When exception words (words that cannot be decoded with knowledge of regular phonics) are learned as sight words, they are secured in our memories by the same connections made for conventionally spelt words. Only the uncommon letter elements are unsecured in the memory (NRP, 2000). An effective way to address this and develop reading proficiency is to ensure that a learner develops strong OM skills, where fluency is regarded as the ability, among others, to access most or all the words on the page almost immediately. Readers who experience difficulty with reading or have poor reading skills often struggle to group sounds into recognisable words, which ultimately hampers reading fluence (Varga et al., 2020).

Kilpatrick (2019, 2020) and Moats et al. (2012) recommend that the first step in supporting older learners with reading comprehension should be to assess their phonological awareness and PA to identify reading needs and inform further instruction based thereon.

Kilpatrick (2019; 2020) suggests that learner support for learners who struggle to read should include detailed instruction on phonics and PA and the opportunity to read associated texts. In light of the former, the advantage of adopting the SVR framework for reading assessment is that it allows teachers to assess the skills that underpin reading and identify what contributes to reading comprehension difficulties. At this point, SVR can help teachers to target the skills that are most likely to be the source of a learner's reading difficulty. Hence, the more teachers understand the workings of PA, the more efficient and successful PA assessment, instruction, and intervention will be (Kenner et al., 2017; Kilpatrick, 2015, 2019, 2020).

Given the oral and auditory nature of PA, assessments are often conducted one-on-one between the teacher and the learner, although this may be time-consuming to administer, and teachers can combine a multimodal teaching approach. Listening to learners' responses during instruction is a quick and effective alternative technique to assess their PA, especially in larger classrooms. For example, when the learners are sitting on the carpet, the teacher can rotate rows and do a focus group discussion with those learners once a week. Once learners have mastered the majority of their letters and sounds, examining their writing will reveal what sounds they hear in words as they map those sounds to print.

Listening to learners sound out or decode words hence is another technique to evaluate their ability to combine sounds into words. However, teachers should keep in mind that learners develop in diverse ways and at different paces, and some learners' needs will therefore necessitate that the teacher uses one-on-one assessment if it is the best way to help the learner. In such instances, the following criteria should be used: phoneme matching, isolation, blending, segmentation, and manipulation, all of which, according to Moats (2020), involve the capacity to modify, change, or move the individual sounds in a word. Moats (2020) further recommends that PA evaluations be performed during the FP to help guide effective instruction and promote reading proficiency. Informal assessments conducted throughout the school year can assist the teacher in determining learners' instructional needs; according to Moats (2020):

- whether instruction is being offered at the appropriate level and pace;
- how to arrange future instruction to fulfil the requirements of learners;

- how learners should be organised for education so that each learner receives instruction at the appropriate level of difficulty; and
- which learners require one-on-one assistance.

2.4.2 Small-group instruction

The NRP (2000) suggests that working in small groups of between two and seven learners is the most effective way to teach PA. This is because developing PA skills demands deep concentration and social motivation or observational learning opportunities, which involve a great deal of social interaction. Learners acquire PA skills best when taught in small groups, which transfers to and boosts their reading and spelling performance (International Literacy Association, 2018; Wegener et al., 2022). Research shows that when older learners receive explicit PA instruction, they are able to progress to the proficiency of native speakers in word identification and spelling (NRP, 2000; Wegener et al., 2022). Early, systematic, explicit PA instruction can therefore successfully bolster FP learners' reading skills. The concept *systematic* entails that teachers must be aware that PA should be taught on a skills continuum that progresses from easy to difficult.

According to the NRP (2000), PA instruction in small groups combined with letter identification instruction (the ability to recognise the sounds that letters represent) tailored to their areas of need aids in the transfer of skills to reading and has been found to boost reading and spelling performance. According to these and similar findings (International Literacy Association, 2018, Moats, 2020), PA training does not need to be extensive in order to have the greatest impact on reading and spelling (NRP, 2000).

2.4.3 Time allocated to instruction

In *Strategy for Teaching English Across the Curriculum*, the DBE (n.d.) has acknowledged that “performance in learning outcomes is inextricably linked to proficiency in the language of learning and teaching (LoLT) and utility” and that the LoLT is “cited by many as a barrier to learning, causing “dismal results” for academic performance” (p. 1). Research has

indicated that 10-30 minutes of PA-focused instruction daily or two to three times per week, can improve PA performance and thereby promote literacy (DBE, 2012; Moats et al., 2018).

Other research has found that PA instruction should occur over the course of three weeks to two years. The current South African school curriculum, the Curriculum and Assessment Policy Statements (CAPS) (DBE, 2012) [hereafter referred to as the curriculum and/or CAPS] prescribes that 20 minutes should be spent on PA activities daily for Grades 1-3. Although the current South African curriculum gives teachers and schools the freedom to “choose their own phonics programme” (Manship, 2022), neither the CAPS nor the DBE offers any specific or clear guidance on how PA should be taught to Grade 1-3 learners. This is problematic in South Africa, especially for teachers who teach in their second or third language. These teachers may find it challenging to equip learners with the PA skills they require, since they often lack the phonological knowledge of the target language, and possibly also the experience (and even confidence) to apply it.

2.4.4 Focusing on certain skills

PA instruction may be most effective for older learners and other learning to manipulate phonemes with letters when training is expressly focused on one or two types of phoneme manipulations rather than several sorts, according to NRP (2000) findings. This is because multiple-skill instruction has been found to have a substantially smaller effect size on reading than, for example, only focusing on blending and segmenting instruction. It is also critical to teach using letters because it allows learners to acquire their PA abilities to read and write.

Teaching recognition of particular phonemes in word contexts may help beginners gain insight into the alphabetical principle and apply their insights in early word identification (Murray, 1998). Teaching older learners to combine phonemes with letters facilitates decoding skills. Teaching learners to manipulate phonemes with letters is more effective than teaching without them. As such, using letters to teach learners phonemic segmentation also aids spelling (which can be part of a multimodal learning approach).

Effective PA instruction must also contain instruction on the link between graphemes and phonemes to help learners with spelling. Given that reading and spelling requires learners

to understand that phonemes are linked to letters, teaching learners to manipulate phonemes with letters is more effective than teaching without letters (Moats & Tolman, 2019). Teachers can start by using manipulatives, or objects or physical tools of teaching (kinaesthetic and visual learning), until learners no longer need them to segment and blend. Something like a bingo chip or cube can be used initially, and later on letter tiles, as learners progress with this skill (Moats & Tolman, 2019). Manipulatives are a popular teaching tool in the FP because they appeal to learners, especially young learners, visually and can be used interactively (Carbonneau, 2013). The next subsection addresses the importance of acquiring teacher knowledge on PA.

2.4.5 Teacher knowledge of phonemic awareness

Pretorius (2014) emphasises the importance of teachers' knowledge of PA for literacy instruction to be effective. Teachers therefore require direct, explicit training on how to teach reading and promote PA development. Given the complexities of language and reading instruction in South African schools, special attention is required for teachers to improve their knowledge of literacy skills instruction with an emphasis on PA, especially for instruction in a language that is not the learner's mother tongue. Even though the learners in our classes' home language frequently differs from the LoLT, as teachers we must ensure learning even more so (Phakeng & Lerman, 2016). Teachers should be knowledgeable about distinct aspects of literacy instruction and assessment (Pretorius, 2014). To ensure learners' success in reading comprehension, decoding activities that are effective need to be provided by teachers (International Reading Association, 2003; Snow & Matthews, 2016; Snow et al., 1998; Talili & Pedroza, 2015; Zhao et al., 2016). Thus, teachers require knowledge of language including phonemic and phonological awareness (Binks-Cantrell et al., 2012) to help learners to decode accurately and fluently, which will make them skilled readers (Bae et al., 2019). Teachers who lack knowledge of PA cannot design activities to support their learners' decoding abilities and reading comprehension.

2.5 CONCLUSION

This chapter offered insight into the theoretical aspects that informed this study as it pertained to PA. It focused in particular on the importance and benefit of forming professional

learning communities (PLCs) for teachers to improve their knowledge and teaching of English PA and enhancing reading comprehension in older learners. The chapter addressed social constructivism, the SVR, and the reading rope as the theoretical underpinnings of this study and how they facilitated the PLC members to develop their PA English teaching knowledge and skills to improve learner reading skills. Finally, it considered the importance of OM, assessment, small group instruction, time allocation for PA, and teacher knowledge of PA and how aspects of the curriculum feature therein.

The following chapter presents the research design and method that were used to achieve the aim of this study.

CHAPTER 3 RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter offers a discussion of the research methodology and design that were followed for this study. Aspects addressed in this chapter include the methodological approach, research setting, data generation tools, specific information on data generation, participant selection, trustworthiness, ethical issues, and data analysis.

This study followed a collaborative approach to enhancing teachers' knowledge of English PA and how to use PA as a tool to enhance learners' reading skills in the FP.

3.2 PURPOSE OF THE RESEARCH

The purpose of the research was to explore how FP teachers could collaborate to enhance the teaching of English PA. I formed a professional learning community (PLC) with three FP teachers to collaborate to enhance the teaching of English PA in an address to improving reading comprehension. Through participatory action research (PAR) we set out to collaborate to enhance the teaching of English PA in the Foundation Phase.

The following sections are dedicated to the respective paradigms that guided the research for this study. The sections thereafter present PAR as the research design that informed this research.

3.3 RESEARCH PARADIGMS

A paradigm is a set of beliefs and practices shared by a community of researchers that regulates inquiry within their discipline (Perera, 2018). As such, paradigms can be described as the lenses through which individuals view the world in which the research takes place (McKinley, 2019). Paradigms vary ontologically, epistemologically, and methodologically in their approaches to research and interpreting data and their contribution to the construction of knowledge (Perera, 2018).

This research followed a qualitative social constructivist paradigm, which recognises that people construct meaning as they encounter daily life and reflect on these encounters (Adom et

al., 2016; McKinley, 2019; Vygotsky, 1978). The qualitative component of this research entailed studying a social phenomenon as it occurred in its natural setting with the view of learning more about it and understanding it better (Creswell, 2014). In the case of this study, the social phenomenon entailed teachers' interaction with knowledge and teaching of English PA. Knowledge was constructed through collaboration and interaction between participants, and the research design – PAR – was built on this paradigm (Kemmis & McTaggart, 1982, 2000). PAR was the most effective and cost-efficient collaborative tool for a PLC seeking to use collective knowledge to identify problems and develop informed, practical solutions to address these problems.

3.3.1 Epistemological paradigm

Crotty (2020, p. 10) among other academics stand in agreement with Maynard (1994) when explaining that epistemology centres on “providing a philosophical grounding for what kinds of knowledge are possible”. This includes ensuring that these “knowledges” are adequate, legitimate, and appropriate for the study field (Al-Ababnech, 2020; Denzin & Lincoln, 2017; Kivunja & Kuyini, 2017; Perera, 2018) and the creation of knowledge.

The PAR design necessitated critical reflection on our experiences as we acquired and created new knowledge collaboratively. Our reflections facilitated the activities in the PLC, but also created an awareness of each participants' knowledge, skills, beliefs and how we could learn from each other. Our practices throughout the PAR were hence epistemologically informed as we reflected critically, creatively, and analytically on how our values, worldviews and paradigms influenced our teaching and learning. This experience was intended to facilitate in the PLC an awareness of both the self and the other members as individuals with their own sets of valuable knowledge, skills, beliefs, experiences, and desires from which others could hope to learn. Dialogue was hence vital to the process of generating information and building knowledge as each member brought authentic, context-related knowledge to the reflective meetings. According to the above measures, we generated, analysed, and evaluated information to achieve the aim of this study: to use collaboration to enhance the teaching of

English PA in the FP. Engaging in the PAR process helped us to discover new aspects about ourselves and each other.

During the PAR, learning occurred through collaboration in a PLC accompanied by reflection on knowledge that was informed not only by the epistemology (the way we create knowledge) but also the ontology (the way we observe our world) as we achieved the practical outcomes to address the problem. In so doing we also transformed our way of thinking and expanded our worldviews. Ontology is hence explored in the following section.

3.3.2 Ontological paradigm

Ontology concerns the subject of existence and refers to the nature of reality or, in simple terms, the way we see and make sense of the world. As such, ontology aims to define life's fundamental categories and interactions (Grossmann, 2019; Kivunja & Kuyini, 2017). Ontological assumptions are concerned with what constitutes reality or 'what is' and is applied in vast areas as a topic. All researchers have ontological assumptions and views that influence how they set out to find answers to research questions (Grossmann, 2019; Rousseau et al., 2018). This study's ontological assumptions were founded on participatory principles and relational ontological principles in particular (Zuber-Skerritt & Wood, 2019), at which point we consider two types of ontology. A relational ontology (as opposed to an individualistic one) recognises the fundamental condition that people, the environment, society, political institutions, friends and family, and the self are interrelated (Grossmann, 2019). Meanwhile, participatory ontological principles entail matters of "inclusion, equal partnership, transparency, sharing power, sharing responsibility, empowerment, and cooperation" (Dennis, 1977, as cited in Eladway et al., 2020).

The above research philosophical constructs informed the PAR and PLC discussions and the practical outcomes of exploring perspectives, experiences, and knowledge relating to PA teaching skills, given that the relational ontological aspect addressed the aspect that sought to acquire collective knowledge from more than one participant while the participatory aspect involved interaction and engagement between various individuals. Examples of such practical

outcomes could include professional development strategies that will be effective for teachers required to teach English PA in the FP.

Research is also informed by axiological consideration, or an aspect in dealing with matters relating to the role of values and value judgement, which should also be considered. Axiology is an especially important consideration in research that involves human participants and research that affects professional practice and other members of a community. The axiological aspects considered for this study are discussed in the next section.

3.3.3 Axiological paradigm

Axiology is concerned with the role of values and ethical behaviour (Khatri, 2020; Kivunja & Kuyini, 2017) and addresses ethical considerations relevant to a study. Axiology can hence be said to direct the process of creating value judgements (Kivunja & Kuyini, 2017).

In this study, all the members of the PLC shared in the collective value that learners should be encouraged to reach their maximum potential, which we used to steer the research process. Ethical integrity and considerations included entailed the beneficence (no-harm) factor, which I referenced during the PLC sessions as we aimed to achieve the research aim.

Each PLC member was assigned equal and shared responsibilities while being encouraged to contribute openly to foster professional relationships and transform the way we thought about PA. I ensured the PLC members throughout that they were participating in a safe environment built on an ethical foundation of professionalism, honesty, trust, and confidentiality. Ultimately these measures were ensured to contribute to unbiased and a richer data-generation process.

This section has established the underlying paradigms of research as they relate to this study. In the next section, consideration is given to the practical aspect of research, or the course researchers take to generate data, results, and conclusions. This process is referred to as the research methodology.

3.4 RESEARCH DESIGN AND METHODOLOGY

This study formed part of an approved research project that involved providing support to teachers concerning inclusive education and learner support in the socially disadvantaged

community of the uMzinyathi District of KwaZulu-Natal (cf. 3.7). My role as researcher in this study was to facilitate research with Grade 2 and Grade 3 FP teachers as part of a PLC to share, reflect and expand on each of our assets, knowledge, and skills in terms of English PA and thereby enhance learner reading skills.

The above required an ongoing process of action and reflection, facilitated by observation and conversation among participants (Kemmis & McTaggart, 1982, 2000). PAR (cf. 3.4.2) was an effective tool and research design for such a process in helping the PLC members to understand and improve their environments within a collaborative and dynamic process (Altrichter et al., 2021). This design informs the research methods used to achieve a study's outcomes.

Sileyew (2019) describes a research methodology as the course a researcher takes when carrying out research within a planned, sequential process designed to generate data, results, and conclusions. This study followed a qualitative approach to understanding the phenomenon of interest in a natural setting and thereby creating a holistic picture to understand the participants' perspectives (Altrichter et al., 2021). The research methodology resulted from engagement in a PAR research design in order to collaboratively identify and address our needs to enhance the teaching of English PA in the FP.

3.4.1 Qualitative research approach

Qualitative research approaches are “naturalistic, participatory modes of inquiry that disclose the lived experiences of individuals in the creation of the social world” (MacDonald, 2012, p. 35). Qualitative research is suitable for documenting and interpreting phenomena in a natural setting from an individual's perspective (Cristancho et al., 2018; Ishtiaq, 2019; Mohajan, 2018). This implies that multiple realities exist which are shaped by circumstances and subjective experiences (Creswell & Creswell, 2018). Qualitative research is used in research to give truthful, detailed, and rich information on issues explored within in their contexts. Creswell and Creswell (2018) and Mohajan (2018) concur when explaining that qualitative research is concerned with the how, what, where, when, and who regarding processes and behaviour. This type of research describes in detail the dynamics of the people involved and their actions and

interactions (Mohajan, 2018) to gain a deeper understanding of their experiences or perspectives. Thus, while generating data in a qualitative approach, my choices and actions produced a research design that was appropriate for the specific research process (Kumatongo & Muzata, 2021).

The concept of 'design' within qualitative research incorporates the whole research process, from the primary phase of a problem's conceptualisation to the writing process. Qualitative research designs such as this study's are unique and flexible and progress throughout the course of the research. For this reason, there are no fixed phases to follow in research and the research design cannot be replicated as the context will vary in each instance (Creswell & Creswell, 2018). The parts that follow present PAR as the design that guided the study.

3.4.2 Participatory action research design

This study adopted a PAR design during which the members of the PLC collaborated as co-researchers who were all involved in data generation. The members shared the same vision, which was to effect positive social change through the enhancement of English PA teaching as a tool to enhance learners' reading skills. The PAR design in this study involved iterative cycles where the participants reflected on practice, took action, reflected again, and then took further action based on new knowledge (Zuber-Skerritt, 2011). This made the research flexible so that each turn of the cycle could build on the understanding and experiences gained from the previous cycle. It is thus important to understand the origin, features, and practical suggestions, as elaborated below.

3.4.2.1 Characteristics of participatory action research

PAR is a qualitative and interpretive method that aligns accomplishment with educational work and societal exploration that has been used since the 1940s (Kemmis & McTaggart, 1982, 2000). Inspired by the work of Freire (1974), who is celebrated widely for his contribution to the development of literacy instruction standards and practice (Campos & Anderso, 2022), it is a shift away from the traditional, positivist science toward distinguishing and addressing complex human and shared problems (Abma et al., 2019). It involves the collaborative, logical

generation, and investigation of data to create practical knowledge that can effect social change (Abma et al., 2019). According to PAR principles, data analysis involves a “cyclical process of reflection, fact-finding, action, leading to further action and inquiry for change” (Minkler, 2000, p.191). Furthermore, PAR serves to “create local autonomy and capacity for collective democratic participation, by providing to working-class participants knowledge and organizing skills” (Burns et al., 2021, p. 374).

PAR is characterised as a systematic, developmental, critical, participatory, and cyclical process (Abma et al., 2019). As a means of clarification, the following definition is deconstructed:

- Firstly, PAR is systematic, robust and has a reflexive aspect. It is systematic in that it evaluates and can help to establish a more robust and relevant research approach (Kemmis & McTaggart, 1982, 2000). The reflexive aspect of PAR involves accountability and responsibility for a researcher’s own “situatedness” and described the effects of social interaction on the nature of research (Dodgson, 2019, p. 221).
- Secondly, PAR is developmental. Methodology that develops and empowers as it promotes capacity development and fosters collaboration among co-researchers (Abma et al., 2019; Clausen & Black, 2020; MacDonald, 2012; Rowe, 2020).
- Thirdly, PAR is critical. Critical reflection during and after each cycle should take place to effect PAR research “in matters of social justice, insertion and empowerment of the alternative and often marginalised communities” (Ntseto, 2019, p. 124).
- Fourthly, PAR is participatory. PAR involves engagement and collaboration between individuals with the aim of achieving an outcome (Clausen & Black, 2020; Rowe, 2020).
- Lastly, PAR involves the iterative cycles of planning, acting, observing, and reflecting, as suggested by Ward and Walter (2021), which makes it a highly flexible research method suitable for many research contexts.

Planning for PAR, as with most research, includes identifying and characterising a given problem, developing an analytical method, and then developing a strategic plan on that premise

to solve the problem. Acting refers to the strategic plan that is carried out during observation, monitoring, and evaluation with proper research tools and processes (Ward & Walter, 2021). Reflection refers to critical, retrospective thinking, not just about the past processes and evaluation outcomes, but the entire action, investigation, and observation (Zuber-Skerritt & Wood, 2019).

PAR was well suited to this study because the guidelines that were produced to enhance the teaching of English PA in the FP were based on collaboration and first-hand encounters of teachers in the profession and their recommendations and suggestions based on their personal learning and experiences. In line with the afore-mentioned objectives of PAR, we had the opportunity to collaborate as members of a PLC and share our respective opinions and daily challenges in teaching English PA while having the opportunity to learn from each other and grow as professionals as we co-created knowledge (Clausen & Black, 2020; Rowe, 2020). We created knowledge as part of a process which MacDonald (2012, p. 34) describes as a “democratic, equitable, liberating and life-enhancing qualitative inquiry”, as these were in the best interest of the study.

PAR was a progressive alternative to developing knowledge as a “collective, self-reflective inquiry for the purpose of improving [a problematic] situation” (Koch et al., 2002, p. 109), in this case, enhancing the teaching of English PA in the FP to enhance reading skills.

Besides the primary means of data generation that were applied throughout the PAR cycles in this study (cf. 3.6, 4.4), the members of the PLC also engaged in reflective group discussions via WhatsApp. These virtual discussions were aimed at improving the members’ PA knowledge through collaboration.

The PAR design for this study consisted of three cycles, each addressing one of the research questions, namely: *What are the learning needs of FP teachers with regard to teaching English PA?*; *How can FP teachers meet their own learning needs to improve their literacy teaching?*; and *What guidelines can be derived from the findings of the teaching of English PA in the FP?* The cyclic nature of PAR dictated the direction of the research in that each phase informed the activities and requirements of the next phase. During the collaborative

cycles of planning, acting, evaluating, and reflecting, all the PLC members identified their respective PA concerns, reflected on the best method to address these, reviewed their activities, and then decided on subsequent steps based on the needs determined (Piggot-Irvine et al., 2021). The three cycles (cf. Fig 1-1) that were used in the PAR are discussed in detail in section 3.6.

The following section presents the methods that were employed as part of the PAR design to generate and analyse data. The section offers insight into the various facets that informed the choice of method.

3.5 RESEARCH METHODS

3.5.1 Literature search

A literature search was conducted with a view of establishing a theoretical premise and justification for the intended study's aim (see Chapter 2). The literature was retrieved from Google, Google Scholar and academic searches on the North-West University's academic research database and repository, which helped to define and refine the research problem. The literature exhibits the crucial role of PA as a precursor of (strong or weak) decoding and reading comprehension abilities and then proceeds to discuss difficulties associated with English PA in multilingual classrooms, particularly with reference to South Africa.

3.5.2 Research population, sample and setting

The members of the PLC were purposively sampled from the FP teacher population of the uMzinyathi District of KwaZulu-Natal, because of the linguistic diversity of both the FP teachers and learners. The school selected for this study is a quantile-1 school located in a low-income neighbourhood of the district, which is one of the poorest districts in the country (Caleb, 2017). This school is but one of the 87% of schools in South Africa classified between quintiles 1-3, which have a no-fee status. Learners in these schools are much more vulnerable than those from higher-status schools, which possess more resources and opportunities for teacher professional development. These conditions are worth noting when seeking feasible and effective

measures of intervention to improve learner performance and address learners' and teachers' needs, in this case where the focus is on English PA (Caleb, 2017).

To identify and recruit participants for the study, a gatekeeper was employed to send potential FP teachers a recruitment letter providing information about the study and inviting them to participate. Three FP teachers agreed to participate in the study. I participated with these teachers as part of a PLC, where I acted as facilitator and co-researcher. Eligible candidates were qualified FP teachers with limited knowledge of English PA and in need of strategies to enhance their knowledge and become competent English PA teachers.

All the teachers in the PLC were registered with the South African Council for Educators (SACE). Teacher 1, at the time of this study, was a 68-year-old female teacher with 47 years' experience in teaching Grade 3 learners. She obtained a Bachelor of Education in 1974. Dutch is her home language, and she has 24 learners in her class. Teacher 2, a 35-year-old female teacher, had 10 years of experience teaching Grade 3 learners, and she obtained a Bachelor of Education in 2018. Her home language is isiZulu, and she had 20 learners in her class. Teacher 3, a 25-year-old female teacher, had been teaching Grade 2 learners for the past five years after she obtained a Diploma in Education in 2018. French is her home language, and she taught 24 learners in her classroom. At the time of this study, I was a 46-year-old female teacher, having taught Grade 2, Grade 3 and Grade R learners for the past 21 years. I obtained a Bachelor of Education in 2003 and I am an Afrikaans home language speaker. I had 18 learners in my class.

Collaboration is crucial to the success of any PLC, (Krueger & Casey, 2015); therefore, to maximise interaction, I arranged face-to-face discussions where the PLC members could become acquainted and engage in meaningful discussion. The PLC collaboration took place over the course of six weeks on a scheduled weekly basis (face-to-face) accompanied by virtual discussions (through WhatsApp exchanges) so that the PLC members had ample time and opportunity to support and learn from each other in their effort to become competent instructors of English PA as part of phonics and literacy instruction.

3.5.3 Professional learning community

Given that the purpose of a PLC is not only to solve problems but also learn from them (cf. 2.2), a PLC should strive to achieve a mutual goal and develop professionally. When engaging in PAR, PLCs require honesty, trust building, mutual respect in terms of respective viewpoints and values, and accountability (Edmonstone et al., 2019).

During all interactions (face-to-face and digital), the PLC members were reminded to recognise each other as co-researchers that would uphold trust and respect, observe each other's privacy, and acknowledge everyone's opinions equally.

Notwithstanding, the researcher's aim is to remain critical and upfront about the nature of the research process from the start and be aware of personal biases or interests (Admiraal et al., 2021; Prenger et al., 2019).

3.5.4 Data generation

Generating data in PAR entails interpreting observations and discussions to uncover underlying meanings and identify patterns and relationships in an ethical manner (Morales, 2016). In this study, data were generated in three cycles. In cycle one, we (the PLC) used a fishbone diagram to determine the needs of FP teachers regarding PA teaching in the classroom. In cycle two, the PLC members made collages to generate data about our respective learning needs for enhanced teaching of English PA. In cycle three, the PLC used the findings from the previous cycles to derive guidelines for enhanced English PA teaching in the FP. Each cycle entailed reflective group discussions both in person and on WhatsApp to generate data. All discussions were transcribed verbatim to provide data for analysis.

3.5.4.1 Fishbone diagram

The fishbone diagram, or *Ishikawa diagram*, is a visual tool used to brainstorm and identify potential problems. It aids in the process of categorising ideas into useful groups. A fishbone diagram is a helpful research tool with which to visualise cause and effect (Guy & Feldman, 2021). In cycle one, the PLC used fishbone diagrams (cf. Figure 4.2) during a face-to-face meeting to identify the needs of the PLC members regarding English PA teaching and derive guidelines to enhance our English PA teaching in the FP. The data generated by the

fishbone diagram served as the study's baseline data and informed the activities of the following two cycles. All PLC members participated in the verification of the baseline data's validity and accuracy in the consolidated fishbone to ensure that their conversations and the various fishbone diagrams had been interpreted accurately. This involvement was critical in developing ownership of the research project and building trust between the PLC members.

The PLC concluded by pointing out the many solutions depicted in the fishbone diagram. As a result, we had a clear vision for the research journey as we devised a strategy for the remainder of the research study. We agreed to collaborate as members of the PLC.

As a result of this cycle, we were able to define the study's emphasis and proceed with confidence in our research.

3.5.4.2 Collages

In cycle two, the PLC constructed collages, an arts-based method to generate data through images, natural objects, words, sounds, phrases, artefacts, textiles, and stories (Dutton et al., 2019; Mayaba & Wood, 2015). The collages were constructed during a face-to-face interactive PLC meeting in order to generate data from which to identify ways to meet their learning needs to enhance their teaching of English PA.

The PLC member's task in this project was to collect clippings from magazines or newspapers and adhere them to a piece of paper in the form of a collage in reference to strategies to enhance their and their learners' English PA knowledge. On the reverse of the collage, the PLC members were asked to indicate potential strategies, based on the clippings, to meet their own personal learning needs (see Addendum E). After the collages were constructed, small group discussions took place where each collage was discussed and analysed to identify recurring themes based on first-hand experiences.

3.5.4.3 Reflective group discussions through WhatsApp

Cycle three was intended for critical reflection with a view to determining guidelines for English PA instruction in the FP.

WhatsApp was used as a communication platform and data generation tool so that members of the PLC could share ideas from any time and place outside of the PLC face-to-face meetings.

Specific explorative questions (Dania & Griffin, 2019) guided the informal, reflective virtual discussions:

1. What guidelines can be made based on the findings for teaching English PA in the FP?
2. In the FP, what guidelines are provided for teaching English PA?
3. What were some of your most interesting discoveries about teaching English PA, about yourself, and about others?
4. What were some of your most challenging moments, and what made them so?
5. What were some of your most powerful learning moments, and what made them so?
6. What is the most important personal lesson I learned?

These discussions helped us to determine our learning needs for teaching English PA in the FP and thereby enhance our teaching practices. The more we used WhatsApp to reflect on our reactions, feelings, thoughts, and behaviour in our classrooms, the better the WhatsApp group discussions served their purpose of determining how PA in the classroom influence learners' reading skills (Dania & Griffin, 2019; Zuber-Skerritt, 2015; Zuber-Skerritt & Wood, 2019).

3.6 OVERVIEW OF THE CYCLES IN THIS STUDY

This study consisted of three cycles as part of a PAR inquiry. After each cycle, the data were generated, analysed, and discussed with the PLC members as co-researchers to verify that the data had been interpreted correctly. The PLC determined each successive step in the research collaboratively.

The following table provides a summary of the cycles and how each cycle related to the research questions.

Table 3-1: The three cycles of the PAR inquiry

Cycle	Research questions	Data generation
One	What are the learning needs of FP teachers with regard to teaching English PA?	Fishbone
Two	How can FP teachers meet their own learning needs to improve their literacy teaching practices through PA?	Collages
Three	What guidelines for teaching English PA can be derived from the findings?	Reflective virtual group discussions via WhatsApp

An outline of the structure of each cycle is given next, and in the section that follows, the data analysis is presented according to how the data emerged from each of the cycles.

3.6.1 Cycle one: Fishbone diagram

This cycle began with relationship-building activities, followed by a fishbone diagram activity to generate the baseline data and facilitate reflective discussions in addressing the study's research questions. I reminded the PLC members about what the study entailed before presenting the first research sub-question:

Question 1: What are the learning needs of FP teachers with regard to teaching English PA?

The PLC collaborated in constructing a fishbone diagram to identify specific learning needs relating to the question and the difficulties they faced around teaching English PA in the FP. The data generated from this activity was used as baseline data to inform cycle 2.

The PLC concluded with a reflection on the cycle's activities before moving on to the collage activity to answer the second research sub-question in cycle two.

3.6.2 Cycle two: Collages

This cycle commenced with relationship-building activities and reflection on the activities completed in cycle one to determine FP teachers' specific learning needs for teaching English PA to FP learners. The PLC used the reflection to establish whether their initial expectations had been met and used the information they generated to construct collages in cycle two in order to answer the second sub-question:

How can FP teachers meet their own learning needs to improve their literacy teaching practices through PA?

Since the FP teachers' specific learning needs had been identified in cycle one, we proceeded with the meeting and created individual collages to determine ways for FP teachers to meet their own learning needs and improve their classroom teaching, specifically regarding PA. The activity assisted the members of the PLC as FP teachers in forming collaborative partnerships and provided data on how FP teachers could equip themselves to meet their individual learning needs and thereby enhance their teaching of English PA. Upon cycle two's completion, the PLC, now equipped with knowledge that they had co-created, could move on to the third cycle of the research.

3.6.3 Cycle three: Discussion

In this cycle, the PLC, after beginning with another relationship-building activity, identified, and discussed requirements to enhance the teaching of English PA in the FP. In this discussion, the discipline's terminology was clarified, followed by an inspection of the use of orthographic mapping (OM) to supplement PA. The PLC also discussed interventions with the specific goal in mind of targeting PA instruction for FP learners. The PLC used their newly acquired knowledge from the activities in cycles one and two to answer the third research question:

What guidelines could be derived from the findings for teaching English PA in the FP?

To guide our discussion, we used the following questions:

- How did the new knowledge gained from the research process influence your perception of PA?
- How will this knowledge influence your future teaching and learning activities to enhance the teaching of English PA?
- In what ways did experiencing this process change your teaching practices and your role as a teacher?

In summary, the cyclic design of PAR was applicable and fitting for this enquiry because it allowed the members of the PLC to reflect effectively on practice, take action, reflect again, and then take further action toward achieving their goal (Zuber-Skerritt, 2011). This process made the research flexible so that each cycle could build on the understanding and experiences from the previous cycle while generating data in the processes.

3.6.4 Data analysis

According to Akinyode and Khan (2018), data analysis is an intricate and time-consuming yet creative and intriguing process of bringing data to order, structure, and meaning. Qualitative data is interpreted to answer the 'why', 'how' and 'what' questions relating to the research (Zuber-Skerritt, 2011, 2018), which this research study set out to do by understanding how PAR and PLCs can be used to enhance teacher professional development in teaching English PA in their classrooms. Content analysis was used to analyse the data from this qualitative enquiry. According to Creswell and Creswell (2018), content analysis is a data analysis process concerned with describing and making meaning of data through systematic classification by means of coding and identifying themes.

For the purposes of content analysis, all the recordings of the meetings that took place as well as the data recorded from the various activities (face-to-face meetings, fishbone diagram, collages, WhatsApp calls and videos) were transcribed verbatim and, as required according to Flick (2018a), were complete and contained all the questions that were asked and all the responses that followed.

The data that was in the three PAR cycles was analysed and discussed with the co-researchers, who reflected on and interpreted findings within the PAR cyclic process to facilitate a deeper understanding of the research question, *How can a collaborative approach enhance the teaching of English PA in the FP?*

The primary analysis of the generated data from each cycle was conducted by the PLC members collaboratively during face-to-face meetings – the reflective discussions that took place in each cycle were analysed collectively by the PLC at the end of each cycle to determine the specific learning that occurred and inform the activities of the next cycle. The flexible nature

of PAR (as discussed in 3.4.2.1) allowed each turn of the cycle to build on the understanding and experiences of the previous cycle as part of a data-generating process. The members of the PLC collaborated in analysing the primary data. As the facilitator of the study, I conducted a secondary analysis in which the data were compared with the theory to determine how the theory confirmed or contradicted the data. I then collated and analysed the final data that had been generated in the PAR by using content analysis.

As discussed, all the PLC members engaged in the PAR as co-researchers and played a role in generating and verifying the data. We used the information to reflect on the challenges FP teachers experienced when instructing PA and the strategies that could be developed to enhance learners' reading skills. Follow-up discussions were also held to generate data on the effectiveness of the strategies to enhance PA instruction for learners experiencing reading comprehension difficulties. The discussions were then analysed to determine the way forward. Chapter 4 provides more information on the data analysis process applied and the data that

emerged. Akinyode and Khan (2018), Creswell and Creswell (2018), and Duquia et al. (2017) were used to inform the data analysis in each cycle according to the following steps:

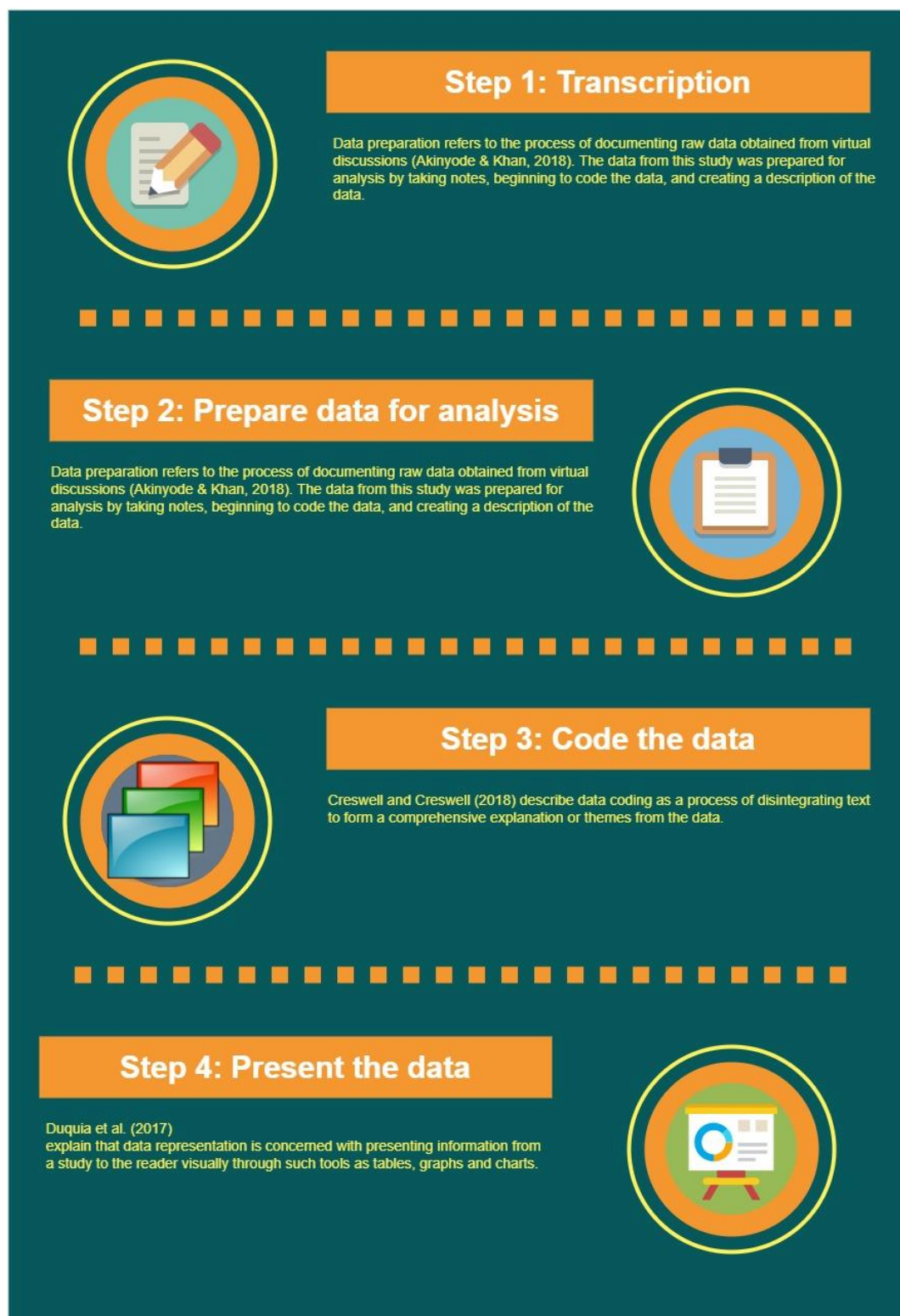


Figure 3-1: Steps followed to analyse data in this PAR study (own source)

As discussed, all data generated was transcribed, keeping in mind that step two took place continuously throughout all the cycles. As the primary researcher I collated and arranged

all the final data in preparation for coding. In **step three**, a coding frame with the main themes was created for this study. Each theme addressed one aspect of the material, while the themes that emerged were clarified and reinforced (Creswell & Creswell, 2018).

Content analysis requires the data to be segmented, and the coding frame had to account for all parts of the material (Kuckartz, 2019). Building the coding frame entails selecting a suitable amount of material that reflects the full range of data source materials (Kuckartz, 2019), and the material is preferably divided into smaller segments (Flick, 2018b), with coding frames built for each segment sequentially until all the themes were covered. After having constructed each coding frame according to the above measures, I reflected on and carefully and systematically analysed the experiences and knowledge that had been generated during and after each PLC meeting.

Notwithstanding that generating and analysing data are undoubtedly at the core of any research study, it is also crucial that the methods employed to do so are trustworthy, credible, valid, and ethically sound, as elaborated on next.

3.6.5 Trustworthiness

Trustworthiness refers to the degree of confidence in the data, interpretation, and procedures employed to ensure quality research (Ghafouri & Ofoghi, 2016; Gray, 2017; Tracy, 2019). Researchers should construct protocols and methods to offer conclusions worthy of consideration by readers in each study (Amankwaa, 2016).

The aim of trustworthiness in research is to support an argument in such a way that it is precise, consistent, and exhaustive by recording, organising, and disclosing an analysis with enough detail so readers can determine whether the process is credible. Measures for ensuring trustworthiness are determined by classifications relating to external and internal reliability, validity, and objectivity. Trustworthiness concerns internal validity, while transferability concerns external validity and dependability concerns reliability (Ghafouri & Ofoghi, 2016; Gray, 2017; Tracy, 2019). The nature of the data based on the PLC members' feedback could have an effect on the study's trustworthiness given that it was based on somewhat subjective qualitative

data based on personal experiences. This was addressed by substantiating this data with research findings.

Rigour, when conducting research that is focused on human learning and its functions, is critical within the field of education. Rigour is a scientific term that suggests the credibility of the research (Gray, 2017). Tracy's (2019) guidelines were employed in this study to ensure rigour and trustworthiness for qualitative research, which includes rich rigour, sincerity, credibility, and resonance. In addition, I considered how my study could make a significant contribution and meaningful coherence. These elements are discussed in the paragraphs that follow.

Rich rigour concerns theoretical constructs, data and time in the field, sample(s), context(s), as well as analysis techniques and data generation (Tracy, 2019). An in-depth literature review was conducted for this study to build a strong theoretical foundation (cf. 3.3-3.4). Data were generated using fishbone diagrams, collages, and reflective discussions in person and via WhatsApp messages and video calls in accordance with sound and ethical PAR principles. Finally, as proposed by Cohen et al. (2020), the members of the PLC were included in the research process as co-researchers, and everyone maintained complete transparency throughout the project.

Sincerity in the research process was achieved by "self-reflexivity concerning subjective values, inclinations, and biases of the researcher(s)" (Tracy, 2019, p. 208), as well as "transparency about the difficulties and methodologies" (Tracy, 2019, p. 26). To ensure these, the PLC used self-reflection when sharing experiences and knowledge. This way member's contributions were addressed and considered critically. Sincerity was also promoted by reminding the PLC through the research that all opinions were valid and that all contributions should reflect first-hand experiences. The reflective practices that were employed during the PLC interactions were emphasised at the beginning and end of each PAR cycle and were intended to assist teachers to think critically about their subjective experiences and measure them against a form of objective insights by discussing these with the members in the PLC.

Credibility relates to the trustworthiness and integrity of a research study (Ghafouri & Ofoghi, 2016). It involves the topic of consistency with which the research study's findings are presented and whether there is congruence between the opinions of the participants and the researcher's interpretation of the findings (Tracey, 2019). Credibility seeks to present a truthful picture of the topic under investigation (Flynn & Korcuska, 2018) and persuades a reader that the discoveries from the empirical work did occur the way they were related (Tracy, 2019). In essence, credibility is about how believable a study's findings are. In order to verify findings and guarantee that they represent their intended meaning, researchers seek confirmation from their participants. To this effect, in this study, every cycle began with a relationship-building activity (Tracy, 2019) to prolong involvement as everyone observed whether the content being addressed was suitable for the research. The reflective discussions included peer debriefing and member checking as techniques to strengthen credibility and forge a strong professional relationship with the PLC members that would promote openness and trust. The participants reported how they *"liked that [they] could go back to previous cycles to revisit"* aspects that needed clarification (teacher 2) and found the *"shared knowledge from the PLC [...]"* was beneficial to [their] understandings. This demonstrates the true value of PAR – the ability to foster a comparatively more hands-on understanding of a phenomenon through shared knowledge in a conducive environment.

However, Tracy (2019) and Ghafouri and Ofoghi (2016) warn qualitative researchers against the possible risk of introducing bias while reflecting on the data. To address this, during data generation I remained aware of my responsibility to be objective, transparent, and unbiased. The digitally recorded data enabled me to inspect the data multiple times before deciding on which aspects of the research situation to focus. The digitally recorded audio and visual contents of the PLC meetings also increased the credibility of the research by minimising selectivity and bias and giving the researcher the chance to employ rigorous strategies to enhance reliability. The greatest benefit of audio-visual material is that it allows the researcher to revisit the first-hand data and capture information they might otherwise not have had an opportunity to capture (Ghafouri & Ofoghi, 2016; Tracy, 2019).

Ghafouri & Ofoghi (2016) further stipulate measures for establishing the trustworthiness of the findings and lending the research credibility. Although this research seemed to have awoken a sense of agency, the period of data generation was too limited to determine whether the members of the PLC would continue to implement these newfound skills.

Resonance is defined by Tracy (2019) as a textual element that significantly resonates with and affects an audience. It refers to a researcher's ability to be receptive and approachable to participants. Resonance can be achieved through transferability, which, as Tracy (2019) suggests, the PLC members promoted through engaging in reflective discussions in person and via WhatsApp outside of the face-to-face PLC sessions. Here, transferability refers to the process by which the participants notice similarities in events and can instinctively apply the outcomes to their own circumstances. For example, the teachers would be able to transfer English PA teaching strategies to suit the needs of different classroom setups and learners' needs.

A significant contribution is a substantial or meaningful addition to knowledge that applies to the inquiry's circumstances. This means that the research should provide value and offer relevant insight into the research question. This study accordingly aided in the development of appropriate teacher knowledge of PA to aid in the development of FP learners' reading skills.

Meaningful coherence is accomplished by attaining the research goal by highlighting logical interconnection and consistency between the study's literature, methodology, and findings (Tracy, 2019). Meaningful coherence was created in this study through the interactive activities in the PLC (face-to-face meetings, messages, video calls) with a special focus on integrating the literature, research questions, findings, and interpretations through the cyclic process of PAR.

3.7 ETHICAL CONSIDERATIONS

The study is part of a larger existing approved research project (ethics number: NWU-00641-18-A2) in the socially disadvantaged community of the uMzinyathi District of KwaZulu-Natal, which aimed to provide support for teachers for inclusive education and learner support.

An independent gatekeeper was employed to identify and recruit participants for the PLC. The participants of this study were recruited by means of a recruitment letter that provided information about the study. The gatekeeper provided the participants with the necessary consent forms to be signed to consent to participate in this study. Once the ethical permission for this study had been obtained from NWU (Ethics number: NWU-00269-22-S2), I had a face-to-face contact meeting with the teachers and thereafter began with data generation. I abided by the ethical guidelines of the Ethics Committee of the North-West University, which included informed consent, transparency, and privacy of the participants. The written and oral information and the consent made it clear that no member of the PLC would be forced to participate in the study (Mertens, 2018). The participants were advised that they could withdraw from the study at any time and that their personal information would be kept confidential. The participants also provided consent to have their contributions in the face-to-face meetings and other platforms (WhatsApp messages, voice notes and voice calls, various activities) recorded and transcribed for data analysis.

As the facilitator, I was responsible for holding the PLC members accountable for the same ethical conduct. The participants' identities have been protected strictly during data dissemination by observing confidentiality and anonymity during and after the research. The participants have been assigned codes to replace their identities when reporting on their contributions in the study.

The findings from this research study have been reported completely and honestly without misleading others about the nature of the findings. The research upheld appropriate ethical measures to safeguard participants and community members affected by the research against any harmful implications (Mertens, 2018).

3.8 CONCLUSION

This chapter focused on the research design, methodology, and data methods of this study and provided an outline of the activities in the PAR design, including fishbone diagrams, collages, and reflective WhatsApp group discussions. It detailed how I took planned, deliberate,

and focused actions to answer the research questions and enhance the quality of the research and data generation through sound ethical principles of research.

CHAPTER 4: DATA ANALYSIS AND RESULTS

4.1 INTRODUCTION

The purpose of this study, as discussed in chapter one, was to answer the question: *How can a collaborative approach enhance the teaching of English phonemic awareness (PA) in the foundation phase (FP)?* In Chapter 3, an overview was presented of the research design and methodology adopted. The data obtained during three cycles of the participatory action research (PAR) approach were analysed and are discussed in this chapter.

4.2 POPULATION SAMPLE

As discussed in Chapters 2 and 3, the researchers formed a PLC with the participants that were selected from the sample. The PLC members indicated that they lacked the sufficient knowledge in English PA to teach it to their learners. They also indicated that they needed more professional development opportunities to help them achieve this goal.

4.3 THEMES AFTER DATA ANALYSIS

The following subsections discuss the three cycles that formed part of the PAR in this study together with the methods used to generate data. The cycles were based on the research questions, under which themes emerged. These themes guided the PLC to arrive at a set of recommendations with regards to teaching English PA in FP.

Table 4-1: Themes that emerged from data analysis

	Research question	Themes
1	The learning needs of FP teachers with regard to enhancing teaching English PA	Knowledge about PA How to teach English PA to learners from linguistically diverse contexts Learner support to enhance reading comprehension
2	Ways to address FP teachers' own learning needs towards improved teaching of English PA	Collaborate in a PLC Reflection on teaching and learning activities Planning and reflection on learner support
3	Guidelines to enhance teaching English PA in the FP	Clarify terminology PA with orthographic mapping to enhance reading comprehension

4.3.1 CYCLE 1: DETERMINING THE LEARNING NEEDS OF FOUNDATION PHASE TEACHERS WITH REGARD TO ENHANCING THE TEACHING OF ENGLISH PHONEMIC AWARENESS

Cycle one began with a relationship-building activity for us to become better acquainted as PLC members and co-researchers and establish a safe and trusting environment to answer the research questions and achieve personal development.

The three cycles in this study formed part of PAR. In line with PAR conventions (see Chapters 2 and 3), the PLC established a relationship of teamwork and cooperation. After this, the PLC was asked to form a collective vision for the research before proceeding with cycle one to generate data. With this in mind, we committed ourselves to evaluating and challenging one another's ideas to improve collaboration and personal progress (cf. 3.4.2) within our role as co-researchers.

Then we proceeded with the first cycle's main activity, which was for the PLC members to construct a fishbone diagram to determine their specific needs with regards to the teaching of English PA in the FP. This data informed the activities in the subsequent cycle (cf. 3.5.3). The themes that emerged from the fishbone diagram activity are presented below (see also Addendum D).

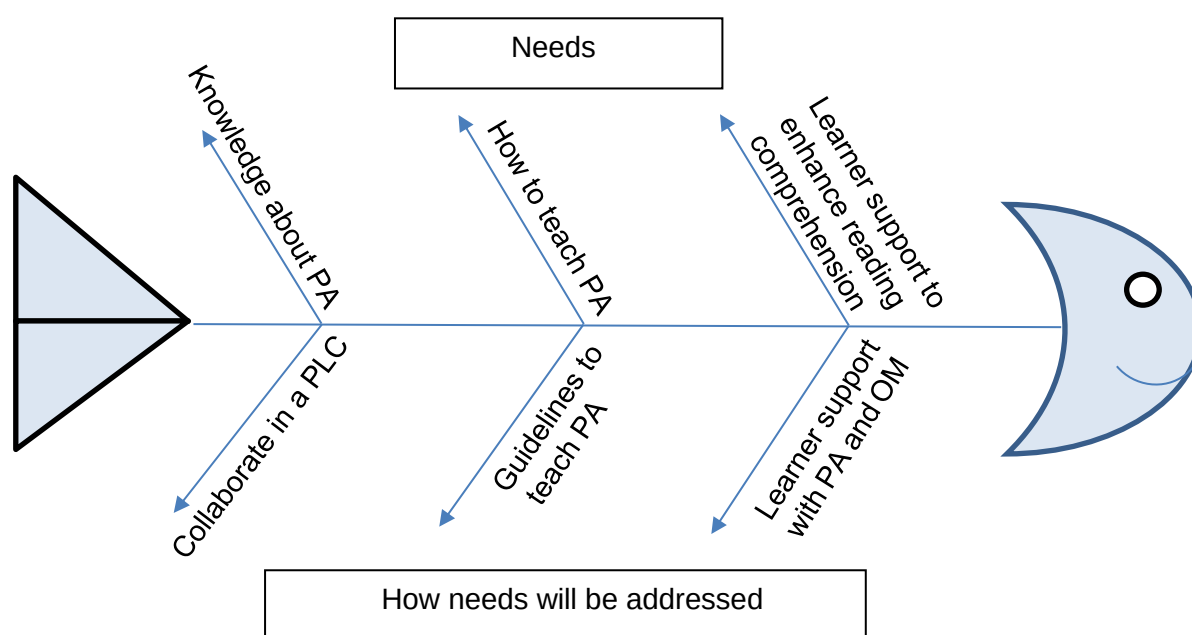


Figure 4-1: Data generated with the fishbone diagram

4.3.1.1 Research question 1: The learning needs of Foundation Phase teachers with regard to enhancing the teaching of English phonemic awareness

In the sections that follow, the themes that emerged from the fishbone diagrams are discussed. The results are supported by theoretical contributions from the body of academic literature with a view to improving FP teachers' knowledge about English PA based on a collaborative approach. The fishbone diagram was an important point of departure as we used it to arrive at recommendations for addressing the needs that emerged from the activity.

4.3.1.1.1 Theme 1: Knowledge about phonemic awareness

Need 1: Develop PA knowledge

Chapter 2 discussed at length the crucial role of PA in enhancing learners' reading skills. Since the FP teachers in the PLC reported that they did not know the difference between PA, phonological awareness, and phonics or how to teach PA explicitly and systematically (i.e. specific and methodically structured teaching of PA subskills and tasks in learners that progress from simple to complex), we determined that the first need was to develop the teachers' knowledge on these concepts and how they differ and relate.

On this point, teacher 1 expressed:

I can see when a learner has a reading problem, but I don't know what exactly to do more to prepare my learners because I do not have enough knowledge about phonemic awareness and activities so that I can help the learner. This is one of my biggest frustrations... I did not know how phonemic awareness can enhance reading comprehension of learners... I do not know where to start to implement phonemic awareness and start teaching it.

Teacher 3 concurred: *"I do not have an understanding or clear concept of phonemic awareness and how to apply it in the classroom. My knowledge is limited, and I do not have support"*.

Likewise, teacher 2 reported: *"I do not understand the difference between phonemic awareness and phonics. I need clarification [on my limited knowledge about PA]... and training to support a learner who is experiencing reading difficulties"*. Section 4.6 offers recommendations for addressing the above need.

4.3.1.1.2 Theme 2: How to teach English phonemic awareness in a multilingual classroom

The complex nature of education in South Africa with respect to its highly multicultural, multilingual, and socioeconomically diverse landscape demands a special focus on the development of teachers' knowledge in literacy skill instruction, particularly when the instruction occurs in a language other than the learner's mother tongue (Swartz et al., 2019). It is the teacher's responsibility to ensure that learning proceeds even when a learner's home language differs from the language of learning and teaching (LoLT) (Phakeng & Lerman, 2016; Swartz et al., 2019). In line with the theory in Chapter 2, the PLC pointed out that they require clear, explicit and systematic instructional knowledge and approaches in teaching reading and fostering PA development in order to enhance their learners' reading skills in a linguistically diverse context.

A specific challenge the PLC reported was that their pronunciation of words (accents) appeared to cause their learners to encounter difficulties with reading. Teacher 3 explained:

I can also see that learners who comes from a home where the primary language spoken is not English struggles to acquire English reading and grasp the "alphabetical principle". What [can I] do to help the learner? I want to be equipped with the knowledge

so that I can see the shortcomings in my teaching and learning. I need training to help me [sic].

Teacher 1 continued:

I struggle to teach learners [the correct pronunciation] because English is not my mother tongue. The language also differs between the learners and can confuse them [because of all varied accents].

Teacher 3 likewise explained:

The learners come from diverse backgrounds where they speak English, French, Afrikaans, Dutch, Zulu, Korean, and Sesotho. This makes teaching [English phonemes] difficult. There are three different pronunciations and sounds of language of teachers. So, each year I struggle if the learners comes from a previous grade because the accents of the teachers differs and they pronounce the words differently. Our accents as teachers also differs because English is not our home language [sic].

Teacher 2 agreed: *“Each time the child goes to a different grade, he gets taught by a new teacher and the accent differs, and the children get confused. For example, the pronunciation of word and letters of the alphabet”.*

4.3.1.1.3 Theme 3: Learner support to enhance reading comprehension

As discussed in Chapter 2, teachers should recognise that when learners hear a word, they pick out the individual sounds they are hearing in that word.

It stands to reason that learners who struggle to distinguish and manipulate the various sounds in the alphabet are likely to struggle with reading comprehension as they advance to the third grade and beyond (which requires higher levels of reading proficiency). This is supported by the literature in Chapter 2 indicating that PA is an important precursor of reading comprehension. This brings to light what teacher 3 explained as they commented on their learners' ability to distinguish sounds when reading:

I can also see that learners who comes from a home where the primary language spoken is not English [and] struggles to acquire English reading and grasp the 'alphabetical principle' [sic].

4.3.1.2 Recommendations from the fishbone diagram

After identifying the needs in cycle 1, we used the same fishbone diagrams to discover and make recommendations to address our needs towards enhancing our knowledge of English

PA. These recommendations were explored and expanded to inform the collage activity in the next cycle, cycle 2.

4.3.1.2.1 *Recommendation 1: Establish a PLC to address the need for training and professional development*

The growth of Grade 1 learners' PA has been positively correlated with strategic techniques for increasing early reading comprehension, which includes PA as part of the five essential components of literacy instruction (Kilpatrick, 2019, 2020). Even as a small PLC, we found that implementing key aspects of the SVR (as discussed in Chapter 2) can be used as part of such a strategy to help teachers better understand the vital role of PA in literacy instruction. The more we came to understand the interactive role of the five essential components of literacy instruction, the more we came to understand the importance of English PA (Kilpatrick, 2019, 2020). Following the knowledge gained from the PLC interaction, the members recommended that PLCs is an effective tool for professional development in teaching English PA in the FP. Teacher 2 remarked: *"I need training [as part of a PLC with other FP teachers in the school] to support a learner who is experiencing reading difficulties"*. Teacher 1 added: *"There is no support group (PLC at the school) and set out time to engage in discussion groups at school to help learners with reading problems. We need to establish a group... where we can learn collaboratively so that change can take place"*.

Teacher 2 agreed by saying:

I do not know what kind of interventions to do with the learners in my classroom [to use phonemic awareness to enhance their reading skills]. There are also certain goals I want to achieve with my learners. I want to support my learners through effective learning activities and reach those goals in mind.

We concluded that teachers could use small-group collaboration, such as a PLC, as a cost-effective, sustainable approach to teacher professional development in any school (Voelkel & Chrispeels, 2017). In this study the PLC contributed to the development of knowledge and skills to teach English PA in the PF. The value of the professional interaction between the PLC is realised in greater depth when considering the following recommendations that emerged from

the PLC discussions – that is, a collaborative attempt to arrive at practical, realisable measures to improve the English PA teaching competencies of FP teachers.

4.3.1.2.2 Recommendation 2: Guidelines to teach PA in the FP

It came forward from the PLC that the members (and by extension other FP teachers) need training to equip them with methods and strategies to teach English PA as part of language instruction. Teacher 3 envisioned that *“professional development programmes and training will really help me develop regarding this [teaching English PA]”*.

In addition to this, teacher 2 emphasised that she needed “guidance on how to identify shortcomings” in PA among her learners from “specialists with resources”.

The guidelines that were developed from the PLC activities, reflections, WhatsApp exchanges and voice discussions emanated from the teachers’ own needs to understand PA and understand how their learners could develop PA skills. This is an effective demonstration of how, through continued professional collaboration, a better understanding of a construct such as English PA can lead to professional development and effective classroom practices for phonics instruction.

Professional collaboration is an effective way for teachers to pool and exchange resources to compile custom PA material and activities (for assessment and intervention) built on a sound theoretical understanding of English PA.

The PLC also considered ways to evaluate learners’ decoding abilities to identify potential problems associated with a lack of PA. In this regard, the SVR is recommended as a tool for teachers to identify what PA abilities they needed to assist learners with, even though it was not explicitly mentioned. For example, teacher 1 reported she had a learner who is a poor decoder (PA) and teacher 2’s learner struggled to *“figure out what word the letters create”*. Teacher 3 had a learner who “struggles with language comprehension because of their difficulty reading words in a narrative like a story”.

The reading rope's (Duke & Cartwright, 2021) strands could be used to determine in what area of reading the learner is experiencing difficulty and as such, it assisted us in pinpointing the particular areas of need in our learners’ reading skill development and whether

those needs have a PA basis. Based on our observations, we concluded that lack of English PA skills causes difficulties with decoding and reading comprehension in the FP.

4.3.1.2.3 *Recommendation 3: Learner support with PA and OM to enhance learners' reading comprehension*

As discussed, the SVR (Gough & Tunmer, 1986) indicates that teachers should support learners' general language comprehension and decoding skills to help them become skilled readers. Reading comprehension issues may be the result of a fundamental oral language deficiency that develops before reading is even taught (Moats et al., 2012; Snow & Matthews, 2016). It turns out that learners with low reading comprehension frequently comprehend fewer spoken words, hear less of what is being said, and speak with inferior grammar, which often stem from a lack of PA (Moats, 2020). This was supported by the findings of the PLC, who observed that their learners exhibited this same behaviour: *"when they read, it is slow [and] they struggle to write in the correct grammar. They sometimes even struggle to sound out even simple words"* (teacher 1).

Again, this is supported by the literature in chapter two, which explains that strong decoding skills and language comprehension skills are both essential for effective and skilled reading (Howie et al., 2017; Reed et al., 2020; Vos & Fouché, 2021). We agreed that introducing our learners to solid content knowledge across a variety of subjects would strengthen their word recognition and decoding skills (Hjetland et al., 2019; Lonigan et al., 2018).

Based on these crucial needs, we arrived at several activities that could be useful for teaching English PA using OM in cycle 2 to support and develop the reading comprehension of FP learners from a diverse language context.

The PLC reported that learners had trouble sounding out words and recognising them when the context changed, in particular when it comes to the often-heavy non-native accents of teachers who do not speak the LoLT as their first language. Heavy non-native speaker accents may come to affect decoding, since letters and their representative sounds are not always clearly distinguishable, causing confusion between letters and the sounds they represent.

Throughout the PLC meetings, we used the SVR as basis for identifying and understanding problems with reading. Accordingly, we recommended that in the FP decoding, or the ability to convert text into speech, should receive explicit attention as the first element of reading, followed by language comprehension, or the ability to understand spoken language.

In parallel with the above, teachers should direct their focus on their learners' reading fluency, which also has a significant effect on English reading comprehension despite sufficient decoding ability. Reading fluency, as discussed in Chapter 2, is the extent to which learners can read with relative ease and expression by recognising word groupings, which facilitates comprehension.

Following reflective practice, we recommend that FP teachers should focus on letter-sound relationships to help the learners recognise familiar words quickly and figure out how to form new words through OM. Awareness of the sounds in spoken language (PA) was required to learn letter-sound correspondences, which included blending sounds to decode words, especially new ones, and then mapping them into sight vocabulary. Teacher 3 suggested: OM *"is an excellent activity that I am familiar with and I know if I use it, the learner will be supported and reading comprehension will be developed"*. This corroborated teacher 2's statement. She added:

Another important thing that I have learned is to look at the goals I want to achieve [with OM] and then plan the learning activities with those goals in mind. This can change the teaching and support strategies quite a lot.... therefore, I would be able to identify the reading problem. I do not know how to plan targeted interventions so that learners can meet their expectations [sic].

We further recommend that FP teachers should focus on PA based on their learners' (in)ability to comprehend the many components of spoken or written language, such as word meanings and the ways in which words are joined together to form sentences. In that regard, we recommend that three areas of language comprehension should be kept in mind when teaching phonics with a focus on English PA. These are vocabulary knowledge, contextual information, as well as knowledge of text and sentence structure. Shah and Rashid (2017)

emphasise that these three areas can facilitate language development and activate prior as well as new knowledge.

In this context the PLC suggests multimodal teaching techniques (such as graphic organisers, visuals, and mnemonics) as part of explicit, systematic PA teaching to assist FP teachers in teaching the meaning of new words to learners who struggle with comprehension because of low vocabulary skills and language comprehension. This is in line with the findings of Moats and Tolman (2019), who focused their efforts on determining the best single predictor of learners' future reading achievement and concluded that PA plays a significant role in the early detection of reading difficulties.

Additionally, considering that PA is both a precondition for and a predictor of reading comprehension, multimodal teaching strategies would be beneficial in teaching the meaning of new words to learners who struggle with understanding due to a lack of vocabulary skills and language comprehension (Howie et al., 2017; Reed et al., 2020; Vos & Fouché, 2021). Thus, learners will comprehend words they come across in written text when their language comprehension improves. Therefore, PA and phonics should be coupled with multimodal and visual cues to help learners learn new vocabulary.

In sum, the PLC members agreed that both phonics and PA instruction is essential for teaching learners to decode words accurately and fluently. PA can be developed through OM (which addressed phonics) to support learner reading comprehension as a part of phonics education (Heggerty & Van Hekken, 2020). Therefore, for phonics instruction to be effective, learners require systematic and explicit PA training in the FP. There is no need for teachers to wait for PA to be fully developed before starting phonics training. Instead, teachers should assist learners in making the connection between PA and phonics (Moats, 2020).

4.3.2 CYCLE 2: ADDRESSING FOUNDATION PHASE TEACHERS' LEARNING NEEDS

Cycle 2 commenced with a relationship-building activity followed by the construction of individual collages to answer the second sub-question:

How can FP teachers meet their own learning needs to improve their teaching?

This collage-making activity supported the FP teachers in forming collaborative partnerships and generating data about possible ways for FP teachers to enhance their teaching by meeting their personal learning requirements. All the discussions that took place in this cycle were recorded and transcribed verbatim.

The sections that follow discuss the data that was generated in this cycle.

4.3.2.1 Research question 2: Ways to address Foundation Phase teachers' own learning needs towards improved teaching

The following themes emerged from the reflection and the collage activity in cycle 2. The PLC acknowledged the advantages of the PLC at the school, especially the opportunity to collaborate to grow professionally as teachers. Reflection and collaboration were requirements for the PLC to critically reflect on possible teaching and learning activities as well as on learner support. To corroborate, teacher 2 mentioned that *"we need to establish a group [PLC] where we can learn collaboratively so that change [better professional development] can take place"*. Teacher 3 found, following PLC participation, that *"[they] have more understanding of PA and what orthographic mapping is"*. The following themes emerged in this cycle:

4.3.2.1.1 Theme 1: Establish a professional learning committee

PLCs are now officially recognised in educational contexts, although this progress has not been without difficulties. While useful for professional development, PLCs still require time, which is not always permitted given the high workload of teachers (Poultney, 2020). Despite this, the participants in this study recognised the value PLCs could bring in offering teachers much needed support and knowledge that had been lacking to offer. As such, the PLC members were willing to commit their already limited time to forming a PLC and working together to enhance the instruction of English PA. Teacher 2 reported:

There is no support group and set out time to engage in discussion groups in the school [such as a PLC] to help learners with reading [comprehension] problems. We need to establish a group [PLC] where we can learn collaboratively so that change can take place.

This was addressed within the context of their need for knowledge and professional development to teach English PA. Teacher 2 re-emphasised: *"There is not enough workshops*

and training on self-development and development so that we can learn about teaching methods to apply". Teacher 3's comment reflects the group's consensus that:

After our discussion I have more understanding of PA and what orthographic mapping is. I think we can expand our knowledge if we work in groups and have meetings at school or after school and help each other. We can make or find time to do more research of PA for example read books, Google, watch videos [and other activities to develop our needs].

PLCs, therefore, can hold great benefits for teachers that lack the necessary training and knowledge to identify and address learning obstacles caused insufficient PA in English as the LoLT teacher 1 mentioned on this point:

I do not know where to start to ... [give learners] the essential support to grow or overcome these obstacles [limited PA and decoding skills] they face.

This corroborates Nel et al. (2016), who found that teachers lack the necessary training to handle learning obstacles and therefore find it unpleasant to apply learner support techniques in their classrooms. In fact, most South African teachers say they are unable to adequately support learners who encounter obstacles to learning because they have not received specialised training in this area (Nel et al., 2016). This was also the case in this study, where the members of the PLC indicated that they needed more support. Teacher 1 mentioned that they [the PLC members] needed "*essential support*" with "*relevant activity books and resources*" as there are "*no relevant workshops and training development so that we can learn about teaching methods to apply*".

Consistent with Swartz et al. (2019), the teachers acknowledged the fact that the diverse language context posed challenges in preventing exclusion and prejudice based on socioeconomic and ethnic backgrounds, religion, gender, and the learners' skills. Diversity implies that the idea of the typical learner must be dispelled (Baglieri et al., 2011). These findings were based on the collage activity in cycle 2 of this research. Examples of the teachers' collages have been included in Addendum E.

4.3.2.1.2 Theme 2: Reflection on teaching and learning activities

PA is linked to text-reading fluency and is a proven predictor of early decoding and word recognition (Admiraal et al., 2021; Prenger et al., 2019). A common need that emerged from the collages is activities for the PLC members as FP teachers to develop their learners' PA skills. In response, the PLC searched for play-based, fun activities to teach PA and then reflected on these activities' potential effectiveness in our classrooms. It is emphasised at this point that reflection remained a continuous process throughout the PAR. The discussions' focus was on learning rather than instructing. PLC members benefited from the PAR in this cycle through the development of critical thinking and self-expression. Based on this need, we identified some methods that could be successful for English PA instruction in our classrooms.

The first method we discovered to be useful is the so-called "Homer method", an independent, professionally developed reading programme based on research "to promote problem solving and foster a lifelong love of learning" (Homer, 2022). This online resource offered useful activities for teaching PA in their respective FP classrooms. We assessed activities that addressed various language constructs that related to enhancing PA, including phonics and phonological awareness (cf. 2.3.2) and agreed to apply them in our classes. This yet again corroborates teacher 2's statement:

Another important thing that I have learned is to look at the goals I want to achieve [with OM] and then plan the learning activities with those goals in mind. This changed the teaching and support strategies [for phonics instruction and PA] quite a lot. Doing reading assessment helped me assess the skills and therefore I would be able to identify the reading problem. I do not know how to plan targeted interventions so that learners can meet their expectations.

Listening to learners sound out or decode words is the focus of the Homer method, which can assist teachers to evaluate learners' ability to mix sounds into words. Although teachers should keep in mind that learners develop in different ways and at different paces. For example, learners need one-on-one assessment and support (teacher 3). In these instances, the focus of the activities should be on phoneme matching, isolation, blending, segmentation, and manipulation, all of which involved the capacity to modify, change, or move the individual sounds in a word (phoneme mixing skills) (Moats, 2020; Scarborough, 2001).

The first activity the PLC identified was the *Guess-That-Word* game, which focuses on developing phoneme mixing skills as a part of phonics instruction. In this activity, we used “snail talk” or “slow-motion” talk, in which we (the teachers) pronounced the names of the objects and images in an absurd or comical voice. The learners had to use objects and images that they were familiar with and could name quickly. Before the teacher completed the word, the learners tried to guess what the object or image was. For example, when shown an image of a cat, the learner dragged out the /c/, /a/, and /t/ sounds as long as they could. The learners could shout out the name of the object whenever they wanted to participate. With this activity the learners were encouraged to focus on the individual sounds that made up the words in this task. Teacher 2 found that this technique effectively accommodated the slower decoders in her class.

The *Mystery Bag* activity was used for blending letter sounds within phonics (NRP, 2000) in some of our classrooms. To participate in this research, a separate box or paper bag and tiny plastic letter magnets were used to place on the classroom whiteboard. Three plastic letters that could be used to create a basic word were placed inside the bag (for example *sat* or “rat” or “mat”). In this activity learners should be encouraged to read each letter one at a time and were then asked about the different sounds that each letter made. The older learners (amongst their peers) should be encouraged to come up with their own nonsense words. Letter switching or letter deletion is also addressed with this activity, which involves altering or removing letters. Where the learners made mistakes, they can be asked “what happens if you remove the /s/ or /r/ letter?” (thus rendering the word “at”). The PLC considered this activity an “excellent [idea for a] practice to determine whether the learners were able to form a true word, a nonsense word, or (in the absence of a vowel) no word at all” (teacher 1).

The *Clapping It Out* game can be used to develop syllable awareness and segmentation ability as part of phonological awareness, which assists in decoding (of which PA is a subcomponent) (Gillon, 2017; NRP, 2000) as an essential component within the SVR (Gough & Tunmer, 1986) and the reading rope model (Scarborough, 2001). Teachers should furthermore inform the learners that they can select any song or nursery rhyme for this activity. Here, learners can be asked to clap after each syllable, which adds a kinaesthetic and audial learning

element, improving learner engagement, especially in the FP, to foster a pleasant learning environment. This activity has great potential to enhance the learners' syllable awareness and segmentation skills. Teacher 2 reported:

I had almost forgotten what children look like when they truly learn because it is difficult to get them to truly have fun. ... I might almost say they will be looking forward... Could it end up improving their PA skills? Yes. Because kids love music so they tend to repeat the songs.

All the activities above have a good potential to improve English PA in the FP. The following activities can be used to focus on the development of OM, which enhances PA (Kilpatrick, 2020).

With reference to the role of OM, learners are taught to distinguish between the sounds represented by each letter of the alphabet (alphabetical principle), the process through which words become sight words. During this process letter-sound connections are made to commit the spellings, pronunciations, and meanings of words to memory (Orpi, 2022).

With OM in mind, we found a useful activity for assisting learners in learning new phonic rules or reviewing old ones in the form of sound-symbol mapping, which is akin to OM. This activity can help our learners to connect phonemes to the graphemes that represent those sounds (Orpi, 2022). With this activity the learners are asked to say words out loud and connect the individual sound to the corresponding printed letter. Three boxes can be used to represent three sounds respectively. Then, multiple letters are used to represent sounds. The learners should then match the sound with the "correct box". For instance, the word trash has five letters but only four sounds, /t/ /r/ /a/ /sh/. The /sh/ is put in a single box since it stands for a single sound. Teacher 1 found this "a very constructive way to get the learners into PA because it's like they [will not] realise they're learning".

For phoneme-grapheme mapping as part of OM, we considered the following approach (any word could have the following phoneme-grapheme mapping): First, the learners say a word out loud and use their fingers to tap out the word to count the phonemes and sound it out. The learners then use different coloured lines or dots to connect the various sounds to their graphemes on the board and thereby spell out each sound. Then they are asked to write the

letters above the sound-representing manipulator and fill in the boxes with the letters that represent each sound. We discussed uncommon spelling patterns so that the learners could recall the word's meaning and origin. Then the teacher can quiz the class on the letter sequences, asking questions like, "What's the first sound you hear?" "What sound does the letter T make?" "What letter is represented by /b/?" "What letter comes after the sound /b/?" Next the learners are asked to blend the sounds into words by pronouncing each sound while swiping their finger across the line between the boxes.

Teacher 2 reported: *"My kids will learn a lot more about writing than they would have if they sat behind a desk actually writing. The writing will come. For now, they are visually inclined busybodies. Let them learn that way."*

4.3.2.2 Discussion

In all the PLC members' contexts, English is the language of learning and teaching (LoLT), and most of the learners and teachers come from multicultural and multilingual backgrounds where English is not their first language. As a result these learners and teachers lack English fluency and teachers often struggle with pronunciation, which can contribute to learner reading comprehension barriers. This diversity means that the learners' parents might not be able to help their children with their homework, because they too lack sufficient knowledge of English. The result in the given context is insufficient prior knowledge and PA skills to assist learners with English PA, which can hamper successful reading and eventually lead to learning problems as these learners progress to higher grades.

The PLC agreed that the activities they had identified are potentially effective to provide learners with knowledge they need to acquire PA skills. They expressed that the PLC helped inform them about the important role of PA in learning to read.

The PLC used the insights gained from the activities in this cycle and from cycle 1 to construct guidelines for teaching English PA in the FP. Together with professional collaboration, these guidelines could be used to assist other teachers in the FP to enhance the teaching of English PA knowledge.

4.3.3 CYCLE 3: REFLECTION, FINDINGS AND GUIDELINES FOR TEACHING ENGLISH PHONEMIC AWARENESS

This cycle was informed by the previous two cycles and focused on answering the third research question: *What guidelines for teaching English PA in the FP can be derived from the findings?* We engaged in reflective group discussions via WhatsApp and made use of video calls and voice messaging to discuss newly learned activities to teach English PA in the FP. The PLC noted possible observations in their classrooms about their findings, from which they formed guidelines for teaching English PA to enhance reading comprehension in a diverse language context. The WhatsApp group was a convenient tool because it could be used at any convenient time and location while being user-friendly and easy to maintain (Dania & Griffin, 2019). The research question served as the third theme that emerged from the generated data.

4.3.3.1 Research question 3: Guidelines for enhancing the teaching of English phonemic awareness in the Foundation Phase

The WhatsApp reflections were a crucial data-generating tool for reflecting on our own learning and how it altered and enhanced day-to-day English PA teaching in the FP classroom. All the discussions were recorded and transcribed verbatim. Together we analysed the data and identified the following guidelines.

4.3.3.1.1 Theme 1: Clarify terminology

The first need that arose among teachers in offering guidelines for English PA teaching in the FP stemmed from their lack of PA knowledge identified in cycle 1. Teachers require a clear understanding of the constructs that underlie English literacy teaching so that they can place PA in context when teaching PA in the FP.

Together we clarified terminology relating to PA so that we could use them in language instruction targeted at individual barriers that prevented learners from becoming skilled readers. We discussed English PA with OM to support older learners. We used our newly acquired knowledge from the activities in cycles 1 and 2 to answer the third research question:

What guidelines for enhancing the teaching of English PA in the FP can be derived from the findings?

After the discussions, we realised that our new knowledge had given us a better understanding of the different language structure elements as they related to PA. With this knowledge, we knew how to use various aspects of language instruction to focus on teaching English PA in the FP.

Teacher 1 reported: *“It [the PLC] helped me understand that the terms are different, but they are all used to support PA”*. Teacher 3 also related: *“Now I know where to begin, I am not so confused between the two [PA and phonics] to help the learner with their unique problem”*. Teacher 2 added: *“I feel equipped to help my learners now because I better understand phonics but also phonemic awareness”*.

The PLC identified the following terminology-specific essential components of reading and literacy instruction with a focus on making them easier to understand and providing sufficient detail for instruction purposes.

Difference between phonological awareness, phonemic awareness, and phonics

This section offers the following literature-based suggestions as an answer to the needs identified in cycle 1:

Teachers should know that PA forms part of the larger discipline of language and literacy instruction, including the five components of reading proposed by Scarborough (2001), namely PA, phonics, fluency, vocabulary, and comprehension (National Institute of Child Health and Human Development [NICHD], 2019; Scarborough et al., 2009) and interaction as part of reading instruction. Indeed, PA forms an important part of skilled reading but is especially important because it is taught at the earliest learning phase to develop strong decoding skills (Grade R) (Pretorius, 2014).

The PLC considered the value of the reading rope’s various strands and threads to understand the individual skills that are required for skilled reading. Teachers should consider these components, given that limitations in any of these will hamper reading ability.

We also considered word recognition within the reading rope model for PA instruction given that PA instruction improves word recognition skills and, thereby, decoding skills (Howie et al., 2017; Reed et al., 2020; Scarborough et al., 2009; Vos & Fouché, 2021). Three critical

skills are involved in word recognition that affect how we interact with printed text, namely phonological awareness, decoding, and sight recognition. Phonological awareness, of which PA is a component, is our ability to work with speech sounds during language use (Gillon, 2017). This also includes the learner's understanding that syllables make up words or recognising individual sound of words (Gillon, 2017).

Clarification between phonological awareness, phonics, and PA is crucial because varying the use of these terms may cause confusion for teachers (cf. 2.3.2). The members of the PLC referred to Table 2.1 (p. 25) to orientate themselves about these important differences and to prevent confusion during English PA instruction. The value of phonics as one of the foundational skills of reading and writing is indispensable to developing early literacy.

Essentially, teachers should place equal emphasis on phonics and PA to lay the strongest groundwork for developing rich language skills. Furthermore, by having learners "sounding out words" (Teacher 2) on the basis of the most prevalent sound-spelling correlations, phonics training can aid learners in decoding words (Hjetland et al., 2019; Lonigan et al., 2018).

Teacher 2 noted:

I used to think phonemic awareness was the same as phonological awareness. Understanding what phonological awareness is helps with word recognition and phonics is about linking what you see with what you hear. We could make effective activities that helped the learners. I could really see they were learning. They even pronounced better.

Teacher 1 agreed: "Yes, my learners also. The ones that struggle the most struggle with the phonics aspect. With this activity, [learners may be better able to] recognise and understand words"

The PLC further learned, in accordance with Hjetland et al. (2019) that one of the most crucial PA abilities to teach learners is segmenting and blending, or the act of splitting a word into component sounds and combining those sounds to say a word (Hjetland et al., 2019; Lonigan et al., 2018) and applied multimodal learning. Teacher 3 reported:

We used several senses to reach out to all types of learners. For example, my learners wrote letters in shaving cream while repeating the sound. We used movement and sensory information to create a link between the symbols and their pronunciations.

Moreover, after the learners in Teacher 1's class had "*mastered each letter and its sound*", they "*went on to letter blends. It helped [her] learners and they enjoyed the activity*".

With the help of the reading rope model and SVR, we were able to pinpoint the elements of reading and, consequently, areas of need and areas of strength for learners. The SVR was a useful tool that helped us (the PLC) direct the conversation in a meaningful direction and choose the most effective learner support activities to aid in PA and, ultimately, successful reading outcomes for our learners. The PLC agreed that if learners understand enough phonics to recognise the sounds that each word represents, "they will be able to employ PA to sound out and learn unknown words" (Teacher 1). Knowing phonics is required for effective PA, and PA is a necessary step in converting that knowledge into the ability to read (Hjetland et al., 2019; Lonigan et al., 2018). Teacher 2 concurred: "I never realised what a big deal phonemic awareness is in teaching reading. They can't read properly if they don't have that knowledge, especially the older learners".

4.3.3.2 Theme 2: Learner support with phonemic awareness with orthographic mapping

In the previous cycle the PLC established that OM knowledge is one of the primary role players in word identification and accounts for additional reading and spelling variations. This is supported by considerable evidence that reading print repeatedly leads to the acquisition of orthographic information (Varga et al., 2020; Zarić et al., 2021). While this is the case, the underlying mechanisms of acquiring such orthographic information are less understood. Frequent exposure to printed information may help learners commit orthographic representations of letter combinations and entire word units to their mind's lexicons (Varga et al., 2020; Zarić et al., 2021).

4.3.3.2.1 Influence of PA and OM on reading comprehension and spelling

We learned that OM is not a talent that can be taught to learners but rather a conceptual process and that PA and phonics abilities that support OM can be taught. For OM to occur, the following three abilities are necessary for us to develop in our learners (Gough & Tunmer, 1986; Scarborough, 2001): Firstly, knowledge of phonetics – learners must be able to recognise, consider, and manipulate the various sounds that make up words. Secondly, the connection

between letter sounds – learners must understand what letter the sounds represent. Learners must be able to hear a sound and recognise which letter or letters cause it, and vice versa. Thirdly, decoding – learners must be able to decode words swiftly and properly by recognising their sounds letter by letter and combining them to read the words.

This is in line with Varga et al. (2020) and Zarić et al. (2021), who propose that teaching beginner readers about the articulatory characteristics of phonemes and teaching grapheme-phoneme links via picture mnemonics with embedded letters facilitates OM to enhance sight word reading. Teacher 2 corroborates the former: “The word mapping tool [for OM] I intend to use in my class [will exposed the learners] to learn new words”.

Since PA is a predictor of reading achievement, it can significantly impact reading comprehension and spelling if combined it with OM. The PLC members stood in agreement, as teacher 3 explained:

The more words they manage to identify, the more comfortable they [should become] in reading independently. Plus they will really enjoy the activity.

We also found that PA is crucial to reading development because orthographies use the smallest units of speech (sound), called phonemes, to represent written symbols called graphemes (Yopp & Yopp, 2000). Furthermore, knowing that letters represent spoken language sounds is the foundation for reading alphabetic languages (Murray, 1998). This knowledge can be developed by using different activities for PA and OM (cf. 2.4). The teachers found this useful – teacher 3 reported: “*These small sound parts, if you know how to control them, you can read and write better [because a language’s written system becomes arbitrary]*”. This is corroborated by Yopp and Yopp (2000). In other words, the degree to which a beginning learner can rely on a certain sign or group of symbols to represent a particular sound is referred to as orthographic depth.

Especially within our multilingual context, we considered how the degree of regularity in the representation of sound in alphabetic languages may vary. This was influential in our classrooms, where the pronunciation of words would often differ between speakers, making PA more difficult to acquire. For instance, the grapheme “a” in English might stand in for a variety of

different phonemes, including “cat,” “made,” “car,” and “ball.” Due to this highly erratic nature of the mapping of English phonemes, English is thought to have a complicated or opaque orthography, whereas Afrikaans and Setswana have a “transparent” or “shallow” orthography. Therefore, learners learning to read a shallow orthography should do so more quickly than learners learning to read a deeper orthography. Shallow orthographies can be used for beginner PA development as they are simpler to read utilising word recognition procedures, including the language’s phonology, according to the orthographic depth hypothesis (Katz & Frost, 1992), and then more “opaque” elements can be introduced as the reading increases in difficulty. In line with this, the PLC members used OM activities for words with “simpler” orthographies that were closer to their mother tongue. Teacher 3 reported that this was a “very effective technique in bridging language barriers in the language classroom”.

4.3.3.2.2 Classroom activities – How to teach phonemic awareness with orthographic mapping

According to Ehri (2014, p. 5), “readers must possess certain talents in order to establish connections and keep words in memory”. Thus PA, particularly segmentation and blending, is required to familiarise learners with the writing system’s major grapheme-phoneme correspondences (letter-sound knowledge). The learners must be able to read unfamiliar words on their own. The PLC can use this activity to “[activate OM] to keep the spellings, pronunciations, and meanings of the words in memory.” (Ehri, 2014, p. 7). Teacher 2 ventured that she expects “[her] learners [should remember] more words after a few activities as a bit of commitment”. The PLC agreed that this is an effective strategy to incorporate PA and OM in literacy teaching.

Based on letter-sound correspondences, basic PA skills, and the basics of phonic decoding as the earliest stages of developing learner literacy, a learner should be able to orthographically map words. Young learners identify a word’s pronunciation by using their letter-sound knowledge to detect each sound in the word and then blending those sounds to decode (sound out) the word. Once these skills are mastered, usually by Grade 3, the majority of learners develop OM simply by engaging with letters and words (Kilpatrick, 2020). We recommend these are crucial factors teachers should not neglect when focusing on English PA

The teachers in the PLC agreed with both Kilpatrick (2015) and Parker (2019). Teacher one indicated the PLC's sentiments: *"I think now I have a better understanding; I realise they struggle with sight [word] reading, and using PA as a tool [in conjunction with OM] can definitely improve this"*. We recommend using the following activities in our classrooms as they appeared to meet the criteria relating to the above discussion.

Word mapping activity

Word mapping activities can be used as a tool to show the learners how phonemes and graphemes relate to one another (Moats, 2020). These activities should encourage the process of OM by enabling the learners to physically connect or match the letters with the sounds they represent. The word mapping exercises develop word recognition and decoding abilities, which enhance reading and writing fluency. To help learners understand given words in the class, they can be shown a picture of the words' orthographies followed vocalising the words. The learners can then be asked to map the phonemes (sounds) they heard and use the graphemes to spell the word. The PLC considers this activity a potentially effective technique to develop PA through OM, based on their understanding of PA. Teacher 3 expressed: *"Before this activity, I had no idea that struggling learners could improve this way"*.

Here, learners can also be given phoneme tapping and mapping worksheets to let them practice with words with short vowels, blends, digraphs, long vowels, and diphthongs. Teacher 1 felt this exercise would benefit the learners in her class who are poor decoders (*"they couldn't read the words fast and with understanding"*) and with poor phonetic knowledge (*"I could see they could not recognise sounds and understand how they could be merged"*).

Build a Bead Slide

A "bead slide" is ideal for small group teaching because it gives learners something to do with their hands while helping to make PA more concrete for them (Parker, 2019). With this activity learners can practise phoneme segmentation – the process of dissecting words into their component sounds – as they slide beads from one end of a shoelace to the other and to build their own bead slides. Teacher 3 observed that the beads on the shoestring should "become longer as their knowledge develops".

4.3.3.3 Theme 3: Phonemic awareness with orthographic mapping for learner support

During the PLC we learned that one of the primary obstacles that prevent our learners from being efficient decoders lies in the alphabetical principle (Moats, 2020). The alphabetical principle holds that letter patterns and letters replicate spoken language sounds and is different from oral language and PA in that it exposes learners to letters while also combining what they have already learned about sounds (Moats, 2020). PA greatly aided early reading problem detection, the PLC reported, as established by Moats & Tolman (2019). Teacher 3 agreed: “there was definitely an improvement in their recognition skills [letter-sound associations]”.

Moats (2020) accordingly defines OM as the creation of letter-sound associations in order to commit the spellings, pronunciations, and meanings of words to memory. According to OM, learners learn to read words by sight, spell words by memory, and pick up vocabulary words from print.

In order to understand how language is created and used, Moats and Tolman (2019) and Moats (2020) claim that PA can be used to alter and dissect oral language into its constituent parts. The highest degree of PA entails the knowledge that words are composed of distinct sounds as well as the skill to change these sounds by teaching learners how to segment, mix, or create new words (Moats, 2020).

Even though PA is a crucial part of reading comprehension, it cannot be taught alone and must always be a part of a full reading support program that incorporates all five of the five components of reading (i.e., PA, phonics, fluency, vocabulary, and comprehension) (NICHD, 2019; Scarborough, 2009). The teachers of the PLC observed that OM teaching activities worked best when taught in conjunction with culturally and socioeconomically relevant contexts that played off their linguistic strengths, even from other languages. We employed words that were orthographically and phonetically similar in their relationship to languages other than English (for example, using words in the English language that produce similar sounds as their Afrikaans counterparts, such as “cat”, “fat”, “hat”, etc.)

Indeed, PA did increase with phonics training, and phonics learning improved with phonics instruction, both of which were complemented by whole-word education (Moats, 2020).

The PLC employed OM as a key component of PA, which uses the area of the brain responsible for oral language processing to map or connect the sounds of recognised words to the letters in a word (spellings), as suggested by Moats (2020).

4.4 DISCUSSION

The application of Vygotsky's (1978) theory together with the SVR and the reading rope to PA education made the teachers active participants in the construction of knowledge, rather than expecting them to be the only source of PA knowledge. The most important premise of Vygotsky's theory teachers should keep in mind is that teachers are facilitators of knowledge, not transferer of knowledge to passive learners.

In the PLC, the SVR became a tool for us to identify what PA abilities would help learners learn to become skilled readers. For example, the teacher may identify, on the one hand, a learner who is a poor decoder (PA) and struggles to figure out what word the letters create. Meanwhile, another learner may struggle with language comprehension and has difficulty reading words in a narrative such as a story.

The reading rope model's (Duke & Cartwright, 2021) strands could be used to determine in what area of reading the learner is experiencing difficulty; as such, it assisted the PLC members in pinpointing the particular areas of need in the learners' reading skill development with a PA basis. We applied our understanding of evaluation and practice to the reading rope model to guide our instruction and support to learners. The reading rope model also provided us with a framework to understand reading comprehension and the role of PA within our unique teaching contexts. With the reading rope model, we were able to identify the components of reading and thereby not only areas of need but also areas of strength for learner reading as we exchanged our respective insights on English PA and knowledge from our own contexts. This helpful tool assisted us in guiding discussions and determining the best learner support activities to help our learners achieve PA and, ultimately, successful reading outcomes.

4.5 CONCLUSION

This chapter presented the needs of FP teachers regarding enhancing the teaching of English PA in a diverse context to help learners become skilled readers. Several challenges emerged from the PLC and the three cycles of this research. These challenges were that the teachers lacked sufficient knowledge and training to teach PA, experienced difficulty distinguishing between phonics and PA, and they did not know how to connect theory to practice (apply PA knowledge in teaching literacy). The PLC further considered ways to address its members' own needs for improved teaching practices. They proposed the best way to address their need would be to establish a PLC, engage in reflections on teaching and learning activities and plan and reflect on ways to offer learner support when teaching PA to learners who struggle to read skilfully. Lastly, the PLC considered possible guidelines that could be used to teach English PA in the FP. The guidelines entailed clarifying terminology relating to various language learning constructs (such as phonological awareness, phonics, fluency, decoding, comprehension, and vocabulary) as they related to PA so that teachers can develop sound and informed intervention practices to support learners with limited PA and reading comprehension problems.

The data that was presented in this chapter integrated literary and empirical findings to support the primary objective of the study, namely a collaborative approach to enhance the teaching of English PA in the FP. The reading rope clearly illustrates how PA is intertwined in the reading process in the link between language comprehension and word recognition (Scarborough et al., 2009). Decoding skills and language comprehension abilities are a requirement of reading comprehension. The SVR gave us, the PLC, clear instructions on how to evaluate learners with reading comprehension scores below grade-level standards and how to develop and use different intervention responses. Thanks to SVR, we could ascertain why learners respond differently to the same teaching and learning activities when it comes to English instruction. These theories in turn informed interventional strategies and ways to evaluate learners' decoding abilities before and after intervention. By doing so, SVR became a tool to identify reading problems and what PA abilities would help learners learn to become

skilled readers. The SVR is hence suitable for the identification of reading problems that are caused by poor PA skills.

The strands of the reading rope (Duke & Cartwright, 2021) can be used to determine which of the constituent parts of reading are lacking or underdeveloped. As such, the reading rope model assisted the PLC members in pinpointing the particular areas of need in the learner's reading skill development and whether this need has a PA basis. Hence, we were able to apply our understanding of evaluation and practice to the reading rope to guide our instruction and intervention. The reading rope also provided us with a framework to understand reading comprehension and the role of PA within our unique teaching contexts. With the rope model, we were able to identify the components of reading and thereby areas of need and strength for learners reading as we exchanged insights about English PA.

From the discussion presented in this chapter, it is evident that there is a need for teachers to work collaboratively, learn from one another and understand the roles they play in sharing and creating knowledge to find answers and solutions to their challenges. The final chapter presents an overview of the research project and its conclusions, its contributions, recommendations for further research, and limitations of this research.

CHAPTER 5 CONCLUSION, LIMITATIONS, AND RECOMMENDATIONS FOR FUTURE RESEARCH

5.1 INTRODUCTION

In Chapter 4, the data analysis was discussed in accordance with the study's objectives outlined in Chapter 1. A professional learning community (PLC) took part in a participatory action research (PAR) study to support and put measures into place in the Foundation Phase (FP) to enhance phonemic awareness (PA) teaching to improve FP learners' reading skills. A summary of the research findings, the study's contribution to the body of knowledge, suggestions for further research, the study's limitations, and my own experiences and growth as a teacher-scholar are presented in this chapter to conclude this research.

5.2 PURPOSE OF THE RESEARCH

The primary aim of this research study was to explore how a collaborative approach could enhance the teaching of English PA in the FP. This was accomplished by forming a PLC consisting of four FP teachers. During this process, we answered the secondary research questions through PAR, by meeting the following objectives: determine the learning needs of FP teachers with regard to teaching English PA; determine how FP teachers meet their own learning needs to improve their literacy teaching practices through PA; and deriving guidelines for teaching English PA in the FP from the findings. As a PLC we identified, assessed, implemented, and verified various strategies to enhance the teaching of English PA, based on the knowledge we gained from participating in the PAR cycles (fishbone diagram, collages, reflective WhatsApp discussions, relationship building). Equipped with the PAR inquiry method, I motivated the other PLC members to embark on a journey of professional learning and development from which many members of their community could benefit. The PLC members expressed a desire to continue working together as co-researchers to uncover further answers and solutions to enhance teaching in the FP.

I drew on the following theories for this study to interpret the findings: the simple view of reading (Gough & Tunmer, 1986) and the reading rope model (Scarborough, 2001). These

theories were applied within the PLC to understand how to enhance the teaching of English PA and thereby improve the reading skills of FP learners. These theories also aided us in defining and developing perspectives on how best to use PA to support and develop reading skills. These findings are in line with the PLC's expressed needs, as discussed in the section that follows.

5.3 SUMMARY OF THE RESEARCH

Chapter 1: The focus of this chapter was to introduce the research and research background. A short overview of the methodology of PAR was explained and discussed, along with the ethical considerations, methods and trustworthiness of this research. To bridge the gap between theory and practice through a course of professional development, PAR helped the FP teachers and myself, as the research facilitator, to identify our needs and implement strategies to enhance the teaching of English PA as a tool for learner support in a diverse classroom to improved reading skills. The chapter concluded with an outline of the research structure and an explanation of the importance of the research.

Chapter 2: This chapter consisted of a literature review on reading theories that underpinned PA and strategies for teaching PA, reading comprehension, and the importance of teaching English PA in the FP classroom.

Chapter 3: This chapter offered a theoretical justification of the research design and methodology. It demonstrated how a collaborative PAR process undertaken by PLC members can be used as a vehicle to find answers and solutions to meet their needs and overcome the challenges teachers face when teaching English PA to improve learners' reading skills. The chapter described and discussed the research paradigm, the research design, and the value of the research methodology and the theoretical elements underpinning the research (methodology, epistemology, ontology and axiology). It finally provided evidence that the research complied with the ethical standards for reliability and validity.

Chapter 4: This chapter presented and discussed the findings from cycles one, two and three in the PAR design. The findings from the data that addressed the research questions

which were stated in Chapter 1 were used to interpret the data. The PLC members supported the information with quotations and relevant literature.

Chapter 5: This chapter presents the summary, conclusions, guidelines for teaching PA in the FP and suggestions for further research.

5.4 FINDINGS

Having completed the data analysis, in this chapter, I evaluate how the findings support the primary research question:

How can a collaborative approach enhance the teaching of English PA in the FP?

Three secondary research questions were answered to answer the above primary research question, which are discussed below.

5.4.1 Secondary research question one

What are the learning needs of FP teachers with regard to teaching English PA?

We used the SVR and reading rope model to address our own learning needs towards improved teaching of English PA in the FP. These theories informed the teaching activities as well as data analysis to help us enhance our skills to teach English PA. This was done by focusing on blending sounds into words; segmenting words into sounds and removing and manipulating the sounds in spoken words; phonics to decode words using knowledge of letter-sound relationships; isolating phonemes into syllables or words; analysing the breaking of words or syllables into smaller speech segments; differentiating sounds; sound selection; sound substitution; and phoneme deletion. During the PLC meetings, we also made time to search for sources of content that guided us to meet our respective needs. Three themes emerged from the fishbone diagram that were used to identify recommendations for addressing the learning needs of FP teachers with regard to teaching English PA, which are discussed next.

5.4.1.1 Clarify terminology and receive training support

During our informal, virtual group discussions, we critically reflected on planned topics, to determine guidelines regarding the teaching of English PA in the FP and clarifying the terminology of PA, phonological awareness, and phonics. The discipline's terminology (relating

to literacy teaching and concepts) was clarified collaboratively for us to understand the constructs that underlie English literacy teaching so we could place PA in context when teaching our learners. We applied our knowledge of these concepts in our language instruction and targeted individual difficulties presented by our respective learners when it came to reading comprehension. We found that after the terminology was clarified, we could easily discuss strategies to support and enhance learners' English PA. Following the conversations, we saw that our new understanding had improved our comprehension of the various language structure components in relation to PA. We found that the information on the value of phonological awareness and PA in terms of decoding was evident in the reading rope. We also learned that assigning phonics and PA similar weights during literacy instruction creates the best foundation for the development of sophisticated language abilities.

5.4.1.2 Overcoming the challenges to implementing PA among FP teachers

In line with the literature (Ehri & Wilce, 1985; Gough & Tunmer, 1986; Kilpatrick, 2015; Kosanovich et al., 2020, 2021; Kunkel, 2021; Le Roux et al., 2017; Lucker, 2018; Moats, 2020; Mohammed & Amponsah, 2018; Scarborough, 2001; Scarborough et al., 2009), the findings of this study indicate that explicit and systematic teaching of PA and phonics should improve learners' decoding skills and reading comprehension. In this study, teachers gained knowledge and skills to teach PA through a collaborative learning approach. Through the PAR process, we were able to develop a deep, socially, and contextually relevant understanding of English PA that we could apply in our teaching practices to improve our learners' reading comprehension and proficiency.

The findings indicate that teachers lacked the necessary skills to teach PA and phonics explicitly and systematically. We were empowered through the collaboration in the PLC, because we developed professionally so that we could apply our learned knowledge and skills in our FP classrooms.

Since all of us had English as first additional language, we realised from the PLC interactions that understanding English PA improved our ability to teach English PA in the FP. We worked collaboratively to understand the construct of PA and how it related to other

language terminology such as phonological awareness, graphemes, morphological awareness and what was needed to develop PA. Limited PA knowledge meant that the teachers in the PLC could not, before this study took place, select suitable PA activities and implement them accordingly to ensure that an appropriate foundation is laid for reading skills development.

5.4.2 Secondary research question two

How can FP teachers meet their own learning needs to improve their teaching?

5.4.2.1 Establish a PLC and reflect on teaching and learning activities

During the collage-making activity, we (the PLC) came up with strategies to improve our teaching by taking into account our individual needs. As members of the PLC, we followed a collaborative approach to identifying the gaps in our knowledge of English PA and PA teaching and thereby enhancing our teaching practices. The teaching approaches we chose were informed by the various learning activities each member brought to the PLC meetings, which made them the most appropriate to improve PA in our contexts. We selected these activities not only because they helped our learners, but they also guided us toward improving our own teaching and comprehension of phonics and PA principles. The socio-emotional or affective factors that could be observed in our learners illustrates that professional development is critical to improve reading comprehension success. As a result, personal and professional development to enhance the knowledge of teaching PA and educational programmes and resources were expressed as an important need. In line with Moats, (1999) and in light of the above, to implement effective literacy teaching practices, teachers should possess the following knowledge and abilities:

Table 5-1: What teachers need to teach English PA

What teachers should know	What teachers should be able to do
Definition of PA	Assess PA and diagnose difficulties
The relation of PA to early reading skills	Produce speech sounds accurately
The developmental continuum of PA skills	Use a developmental continuum to select/design PA instruction
Which PA skills are more important and when they should be taught	Select examples according to complexity of skills, phoneme, word types, and learner experience
Features of phonemes and tasks that influence task difficulty	Model and deliver PA lessons
Terminology (phoneme, PA, onset rime, segmentation)	Link PA to reading and spelling
	Evaluate the design of instructional materials

(Adapted from Moats, 1999)

I expect them to have more nuances – especially that learners consisted of English second language learners- taught by EFAL teachers.

These were addressed through theory in Chapter 2 and empirical evidence in the PAR in Chapter 4.

5.4.3 Research question three:

What guidelines for teaching English PA in the FP can be derived from the findings?

Phoneme segmentation, phoneme blending and splitting, rime and alliteration, phoneme comparing and contrasting, and phoneme manipulation are a few PA skills that can guide teachers in teaching PA (Ehri & Wilce, 1985; Gough & Tunmer, 1986; Kilpatrick, 2015; Kosanovich et al., 2020; Kunkel, 2021; Le Roux et al., 2017; Lucker, 2018; Moats, 2020; Mohammed & Amponsah, 2018; Scarborough, 2001).

5.4.3.1 Teaching and learning activities to support PA and offer learner support

A common need that emerged from the collages is activities the PLC members as FP teachers can use to develop their learners' PA skills. In response, the PLC searched for play-based, fun activities to teach PA and then reflected on these activities' effectiveness in our classrooms. It is emphasised at this point that reflection remained a continuous process

throughout the PAR. The discussions focused on learning rather than instructing. After using the activities, the members of the PLC obtained more knowledge on how to teach English PA in a diverse language context.

From our interactions in the PLC, we found that many of our learners had difficulty mapping sounds onto letters and consequently applied the letter-sound relations in their reading and spelling. This significant barrier is caused by a lack of understanding that spoken words are made up of individual sounds (phonemes) and the ability to perceive and manipulate these sounds in spoken words. The learners who were able to read the printed words successfully and fluently had oral reading fluency, which has been referred to as the “bridge” to comprehension, as suggested by Moats et al. (2012).

We evaluated and decided on specific activities that addressed PA as a part of phonological awareness and to enhance our learners’ English PA. The PA material and activities (for assessment and intervention) that we constructed was tailored to the level of each learner in our classrooms, and this enhanced the learners’ English PA and reading skills.

Using the activities that included decoding from the SVR and the reading rope model demonstrated how we could focus on the development of our learners’ reading comprehension and decoding abilities, which had some noteworthy outcomes. The reading rope model is a framework to understand the function of PA in each of our teaching contexts.

We also assessed our learners’ reading comprehension abilities using the interventions we had identified and evaluated their usefulness, since we were now able to put the new information about PA and reading instruction and intervention to use. Our assessments that emerged through the PLC discussion demonstrated that some of the learners in the activities failed to advance in their decoding skills due to the lack of explicit and systematic PA instruction. From the collage-making activity, collaborative discussion and reflection in the PLC we also realised that PA does not develop spontaneously but that explicit instruction is required to facilitate the acquisition of this ability (Howie et al., 2017; Reed et al., 2020; Vos & Fouché, 2021); therefore, we moved to blending and segmenting a word into phonemes as suggested by

Heggerty and Van Hekken (2020). By doing so we found that learners were able to move from larger units of sound which were easier to grasp compared to smaller units of sound.

PA should be taught by implementing oral activities as a part of explicit, systematic phonics instruction (PA awareness) since, according to Moats (2020) and Tweedie et al. (2015), PA is a prerequisite for phonics (Gough & Tunmer, 1986; Moats, 2020; Moats et al., 2012; Scarborough, 2001).

Integrating PA into the curriculum would also be helpful, and the instructional activities of PA should focus learners' attention on the sound units of spoken language by using playful activities and literature already being used with learners.

The PAR showed that fun activities are a good vehicle for learners to explore and play with sounds in the English language. However, as Adams et al. (1998) point out, beginning levels of PA do not involve written letters; therefore, teachers cannot introduce phoneme blending before explicitly teaching the letter-sound correspondences.

The sound-grapheme mapping activity used to address recognition and spelling skills gave us insight into how learner support activities might be structured. Explicit phonics instruction should focus on isolated skills such as letter names, letter sounds, and sound-letter relationships. Balanced instruction of these terms should include authentic literature (context specific to the learner) where skills such as word analysis is embedded within a text as this may be a more effective approach to supporting learners who struggle to read skilfully.

This kind of instruction was more comprehensible to learners because it is connected to meaning and whole texts from the very start. Study findings from the literature (Chapter 2) (e.g. Admiraal, 2021; Gough & Tunmer, 1986; Mather & Faffe, 2021; Moats, 2020; Prenger et al., 2019; Scarborough, 2001; Scarborough et al., 2009) further suggest that decoding has succeeded in positively changing learners' attitudes towards learning English PA. Learners were more motivated to develop PA skills naturally because these skills were attached to fun and interesting activities within a familiar context. With this knowledge we realised that learners develop in different ways and at different paces when we were listening to them sound out and

decode words when we evaluated their ability to mix sounds into words. As such, this knowledge informed our instructions and strategies substantially.

The *Guess-That-Word* activity, which focused on developing phoneme mixing skills as a part of phonics instruction, showed us that some learners required one-on-one assessment. We found that this activity accommodated especially those learners who struggle to decode.

From the *Mystery Bag* activity, we found that the learners were able to blend letter sounds within phonics and perform letter deletion. This activity also helped us to identify learners who were able to form a true word, a nonsense word, or no word at all.

The *Clapping-It-Out* game, meanwhile, developed syllable awareness and segmentation ability, which form part of phonological awareness and assists in decoding, of which PA is a subcomponent (Gillon, 2017; NRP, 2000). These activities were identified for the purposes related to this study.

5.4.4 Summary

The findings indicated that there was a correlation between teachers' participation in the PLC and a change in their knowledge of PA, specifically phoneme manipulation and phoneme-grapheme mapping activities. The use of these activities in our classrooms also had a positive effect on our learners regarding their PA skills. The participants used the knowledge they gained during the PLC meetings to enhance and expand their instruction of English PA.

Through the collaborative PLC engagements, we discovered that we:

- required sufficient knowledge to enhance teaching of the English PA
- required effective support and materials to develop their PA teaching knowledge;
- established an atmosphere that is conducive of mutual trust and respect;
- required more time to prepare for classroom activities and collaborate; and
- we developed appropriate PA activities based on the specific needs of the learners in our diverse and multilingual classrooms.

We found that a collaborative approach could enhance the teaching of English PA in the FP in the following ways:

1. Using a collaborative approach where teachers form part of a PLC can help teachers develop their English PA knowledge and its interaction with various other components of reading instruction and development in FP learners and arrive at solutions most suitable for learners from a diverse sociocultural and language context.

2. Through a collaborative approach, teachers can identify several ways to meet their own learning needs regarding improved literacy teaching practices. Strategies to meet learning needs will differ between PLCs based on each member and group's needs and objectives. Tools typically employed to help teachers meet their own needs in an English instruction context are fishbone diagrams, collage-making activities, and relationship-building activities facilitated by a reflective process. Furthermore, through shared knowledge that results from a PLC, teachers can equip themselves with new activities they can use to enhance their learners' PA.

3. Teachers can engage in a collaborative approach to derive guidelines for teaching English PA, such as:

- Clarify terminology relating to PA to be used in language targeted at individual reading skill barriers under respective FP learners;
- Distinguish between phonological awareness, PA, and phonics when formulating explicit, systematic (levels of PA such as phoneme segmentation, blending, and manipulation) PA instruction;
- Use various strategies to enhance PA as part of systematic, explicit instruction; and
- Make recommendations and support future professional development.

5.5 LIMITATIONS AND RECOMMENDATIONS OF THE STUDY

Although the study yielded positive outcomes, there were a number of limitations that should be acknowledged. The first of which is that the instruction only lasted six weeks so as not to interfere with the teachers' usual school programmes and high work volume.

In further studies researchers may either prolong activities so that teachers can master PA and related elements of reading skills development of FP learners. The study was limited to a small sample of teachers from the uMzinyathi Kwazulu-Natal District, which is too small to be generalised to other school settings. Future studies may also need to increase the number of

learners based on the premise that if PA is needed for decoding, a learner who cannot make letter-sound relationships, segment, or blend, will struggle with decoding words, potentially affecting reading and spelling. It is essential that PA be integrated into the daily reading instruction as suggested by the NRP (2000) for reading success.

Recommendations that can be made from this study include, as previously stated, to formulate a clear definition that explicitly states the difference between phonological awareness and PA for teachers who struggle with the concept of PA and applying it in teaching practice. Explicit, concrete examples are required that demonstrate the meaning of PA and phonological awareness in order to assist teachers in developing ways to provide enhanced PA instruction.

Another recommendation is to conduct a research investigation to identify how many learners are entering school, including Grade R, the first grade and the second grade, that lack adequate PA skills. It is also noteworthy to determine how many FP learners are being referred to intervention services for PA deficits.

Lastly, additional studies still need to be conducted to determine what are the most effective strategies and approaches for teaching PA. PA thus remains an important skill to teach, for which teachers need resources and other forms of support. PA has been shown to be a good predictor of future reading success; therefore, it should continue to be a part of daily reading instruction. Teachers should use research-based effective strategies and approaches to teach English PA skills. It is therefore, strongly recommended that instructors and educational authorities consider using PA as a skill to enhance learner reading comprehension.

5.6 CONCLUSION

Based on the importance of this research, it is suggested that higher education institutions offer training on how to improve FP teachers' teaching of PA in the classroom. The DBE must collaborate with teachers to discover viable solutions to improve FP teachers' teaching of English PA, specifically in the diverse language context of South Africa. University teacher education programs should provide future teachers with sufficient content or practice with respect to PA instruction. To optimise early literacy development in learners, institutions that provide training to future FP teachers should include an emphasis on the importance of PA

development and the most effective methods of instruction to achieve this. Further emphasis should also be placed on the assessment of PA and early reading in teacher education, and trained teachers must understand the orthographic depths of the language(s) in which they teach reading, as well as the many reading strategies that apply to the various orthographies and instructional approaches that support reading.

Curriculum creation must include the participation of teachers. They are the ones on the front lines, dealing with the difficulties of teaching in diverse contexts. As described in the literature overview, one way to address this problem is to enhance the teaching of PA in FP teachers. As a result, more study on strategies to establish educator-parent interactions is advocated, and it should be included in educator training at higher education institutions. Members of the PLC recommend that teachers' inadequacies in PA knowledge should be the focus of formal instruction to improve their PA, accompanied by materials that can be for PA development activities in classrooms. This instruction should be evaluated for efficiency and efficacy for English PA instruction in multilingual FP classrooms. Teachers should furthermore be well-versed in available interventions suited to various levels of development. For example, they should allow learners to engage with real items while matching sounds before progressing to the more abstract level where sounds are represented by words. Informed classroom-based assessment is a critical aspect of teaching that necessitates the teacher's in-depth knowledge not just of components of literacy learning, but also of how to appropriately assess these.

Teachers are furthermore advised to equip themselves with a thorough understanding of various approaches to teaching English PA so that they will have a strategy for multiple contexts. In closure, the PLC was an effective intervention for developing the skills and knowledge we need to address our needs toward enhancing our English PA teaching.

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ADDENDUM A ETHICS APPROVAL LETTER



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ETHICS APPROVAL LETTER OF STUDY

Based on approval by the **Education Sciences Research Ethics Committee (EduREC)** on 28 April 2022, the Education Sciences Research Ethics Committee hereby **approves** your study as indicated below. This implies that the North-West University Senate Committee for Research Ethics (NWU-SCRE) grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: A collaborative approach to enhance the teaching of English phonemic awareness in the Foundation Phase																
Study Leader/Supervisor (Principal Investigator)/Researcher: Dr E Wessels																
Student / Team: HMC Davey (MEd student – 12416754), Dr J Keating																
Ethics number:	<table border="1"><tr><td>N</td><td>W</td><td>U</td><td>-</td><td>0</td><td>0</td><td>2</td><td>6</td><td>9</td><td>-</td><td>2</td><td>2</td><td>-</td><td>A</td><td>2</td></tr></table>	N	W	U	-	0	0	2	6	9	-	2	2	-	A	2
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<u>Status:</u> S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation																
Application Type: Single study																
Commencement date: 29/04/2022																
Expiry date: 29/04/2023																
Risk: <table border="1"><tr><td>Low</td></tr></table>															Low	
Low																
Approval of the study is initially provided for a year, after which continuation of the study is dependent on receipt and review of the annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation.																

Special in process conditions of the research for approval (if applicable):

General conditions:
<i>While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:</i>
• The study leader/supervisor (principle investigator)/researcher must report in the prescribed format to the ES-REC: – annually (or as otherwise requested) on the monitoring of the study, whereby a letter of continuation will be provided, and upon completion of the study; and – without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study. • The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the study leader/researcher must apply for approval of these amendments at the ES-REC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited. • Annually a number of studies may be randomly selected for an external audit. • The date of approval indicates the first date that the study may be started. • In the interest of ethical responsibility, the NWU-SCRE and ES-REC reserves the right to:

- request access to any information or data at any time during the course or after completion of the study;
- to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;
- withdraw or postpone approval if:
 - any unethical principles or practices of the study are revealed or suspected;
 - it becomes apparent that any relevant information was withheld from the ES-REC or that information has been false or misrepresented;
 - submission of the annual (or otherwise stipulated) monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and / or
 - new institutional rules, national legislation or international conventions deem it necessary.

The ES-REC would like to remain at your service as scientist and researcher, and wishes you well with your study. Please do not hesitate to contact the ES-REC or the NWU-SCRE for any further enquiries or requests for assistance.

Yours sincerely



Prof Jako Olivier
Chairperson NWU Education Sciences Research Ethics Committee

Original details: (22351930) C:\Users\22351930\Desktop\ETHICS APPROVAL LETTER OF STUDY.docm
8 November 2018

Current details: (22351930) M:\DSS1\8533\Monitoring and Reporting Cluster\Ethics\Certificates\Templates\Research Ethics Approval Letters\9.1.5.4.1 ES-REC Ethical Approval Letter.docm
5 December 2018

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ADDENDUM B TURNITIN REPORT

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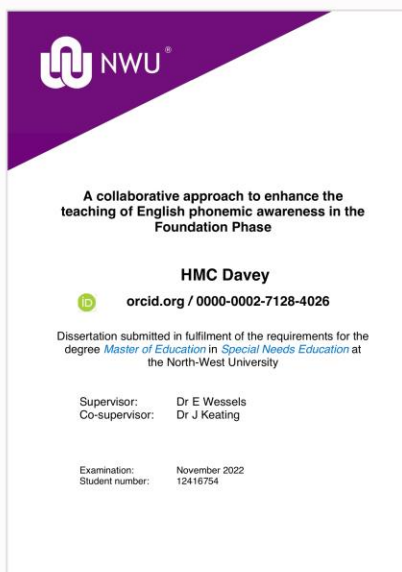


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ADDENDUM C SOLEMN DECLARATION



NWU Higher Degrees Administration

SOLEMN DECLARATION AND PERMISSION TO SUBMIT

1. Solemn declaration by student

I, Hendrina Magdalena Carolina Davey

declare herewith that the thesis/dissertation/mini-dissertation entitled (**exact registered/approved title**),

A collaborative approach to enhance the teaching of English phonemic awareness in the Foundation Phase

which I herewith submit to the North-West University is in compliance/partial compliance with the requirements set for the degree:

Master of Education in Special Needs Education

is my own work, has been text-edited in accordance with the requirements and has not already been submitted to any other university.

LATE SUBMISSION: If a thesis/dissertation/mini-dissertation of a student is submitted after the deadline for submission, the period available for examination is limited. No guarantee can therefore be given (should the examiner reports be positive) that the degree will be conferred at the next applicable graduation ceremony. It may also imply that the student would have to re-register for the following academic year.

Ethics number: NWU-00269-22-A2

ORCID: 0000-0002-7128-4026

Signature of Student:

University Number:

1 2 4 1 6 7 5 4

Signed on this 17 day of November of 20 22

2. Permission to submit and solemn declaration by supervisor/promoter

The undersigned declares that the thesis/dissertation/mini-dissertation:

- ☒ • Complies with the A-rules and the technical requirements provided for in the Manual for Higher Degree studies and in faculty rules;
- ☒ • Has been checked by me for plagiarism (by making use of TurnItIn software for example) and a satisfactory report has been obtained, and;
- ☒ • That the work was language edited before submission for examination.

Faculty specific requirements as per A-rules: 1.3.2, 4.3.2, 4.3.3, 4.4.2, 4.10.4, 5.3.2, 5.4.2, 5.10.2

- ☒ • Complies with regards to faculty rules on submission or acceptance by an accredited scientific journal;
- ☒ • Complies with regards to faculty rules on peer reviewed conference proceedings;
- ☒ • The student is hereby granted permission to submit his/her mini-dissertation/ dissertation/thesis for examination.

Signatures of supervisor(s) and Promoter(s): (*only compulsory in cases where there are co- or assistant- supervisor(s)/promoters*)

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Digitally signed by
Elsabe Wessels
Date: 2022.11.19
08:31:42 +02'00'

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JB Keating
Date: 2022.11.19
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Assistant -Supervisor
Assistant-Promoter

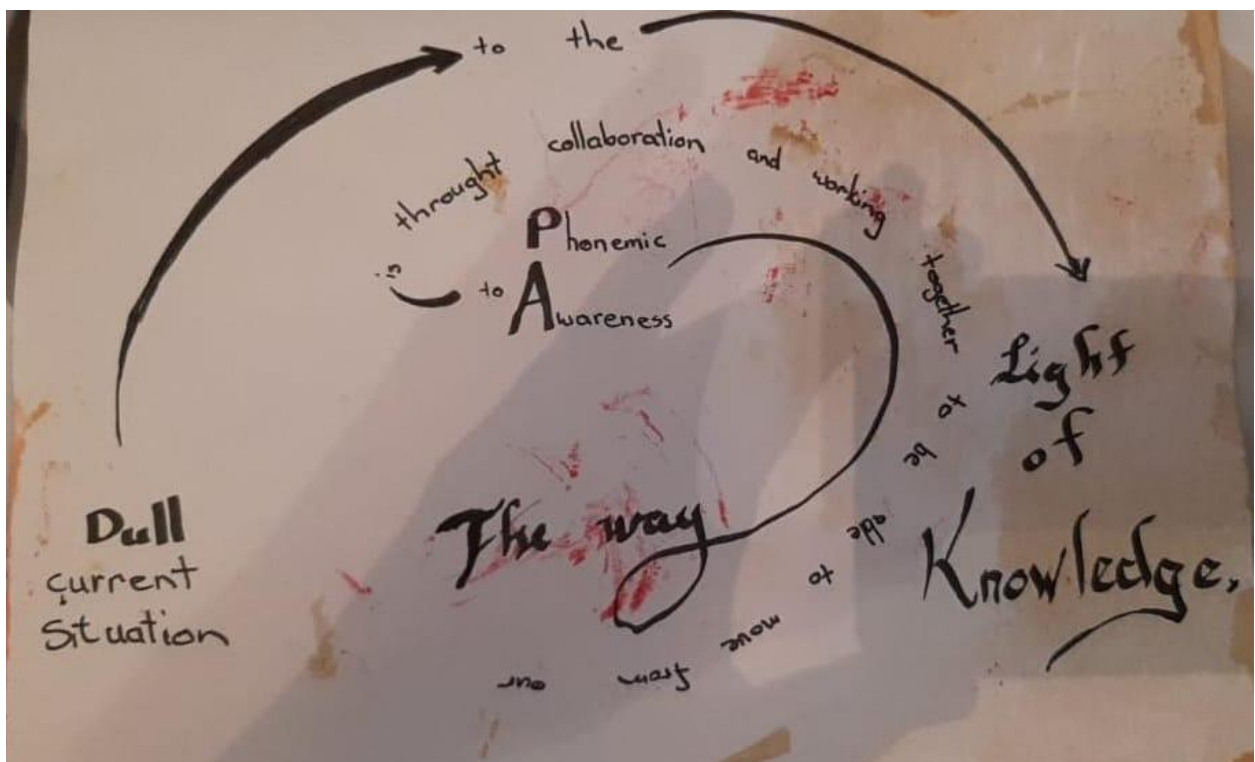
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Collaboration to teach phonemic awareness

Challenges

- Curriculum Books** → school
- Knowledge**
 - 1. Knowledge how to help a learner reading problem with the spelling
 - Knowledge
 - KNOW limited on PA
- Language barriers**
 - English is not my mother tongue
 - learners don't speak fluently in English
 - groundwork of learners: I come from Grade 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783

ADDENDUM E COLLAGE ACTIVITY





Limited Knowledge

- 1 - My personal knowledge and insight on the specific area of Linguistic development named PA was very limited.
- 2 I am currently doing my MEd in a collaborative approach to enhance the teaching of English PA in the FP.
- 3 By doing research, skyping, online training using face book, personal research groups on PA.
- 4 Videos on PA, Whats up groups.
- 5 Reading, Personal Reading and sharing with colleagues.
- 6 Through teaching practice, first hand experience is gained. Teachers learn as much from their learners as the teaching teacher learns from them. Both learn from each other.
- 7 Workshops, Training development, Discussions, Working together to collaboratively enhance our knowledge on PA through PLC.
- 8 Collaborate with senior teachers, subject adviser and knowledgeable individuals.
- 9 Sharing knowledge by corresponding and interviews.

With this new knowledge "lens" I see the world of language on PA in a total new perspective.

ADDENDUM F PROOF OF LANGUAGE EDITING

Language Editor's Declaration



■ Language Matters Pty Ltd
■ info@languagematters.co.za
■ 082 920 2991
■ www.languagematters.co.za

Language editing – Translation – Transcription – Simultaneous interpreting

info@languagematters.co.za
156 O R Tambo Street
Miederpark
Potchefstroom
2531

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Author(s): HMC Davey

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