Strategies Used to Teach Phonological Awareness in Selected Primary Schools of Serenje District, Zambia

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ABSTRACT

Phonological awareness (PA) is a critical predictor of early reading success. Although PA is included in Zambia's Primary Literacy Programme (PLP), low literacy levels persist in lower primary schools, highlighting a gap between policy expectations and classroom practice. This study examined the instructional strategies used to teach PA in lower primary schools in Serenje District, Zambia. A qualitative descriptive survey design was employed. Fifteen participants (four deputy head teachers, four senior primary teachers, and seven lower primary teachers) were selected from four urban public primary schools using stratified purposive sampling across the three professional-role categories. Data were collected through semi-structured questionnaires, in-depth interviews, lesson observation checklists, and researcher field notes, and analysed thematically. Trustworthiness was enhanced through triangulation, member checking with three participants, and peer debriefing with two senior researchers. Five main strategies were identified: generating rhymes, multi-sensory mapping, picture card snap, sound sorts, and treasure chest activities. Implementation was inconsistent, with the study reporting that 40% of teachers covered only three of the five PA competencies in a lesson, mainly because of time constraints and learner fatigue. Thirteen of the 15 participants reported no substantive pre-service preparation in PA; most described learning about it through workshops or Teacher Group Meetings (TGMs). Shortages of teaching and learning materials and gaps in teachers' own PA knowledge also constrained instruction. The findings provide context-specific insights into PA instruction in the four participating urban schools; they should not be assumed to represent all schools in Serenje District, particularly rural schools, which were not included. The study points to the need for systematic, explicit PA instruction, stronger teacher preparation, and improved access to appropriate teaching resources.

Keywords: Phonological awareness; phonemic awareness; literacy; instructional strategies; Systematic explicit instruction; early grade reading; teacher training

INTRODUCTION

Background to the Study

Literacy is universally recognized as a fundamental human right and a cornerstone of sustainable development. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), literacy empowers individuals, enables socio-economic progress, and strengthens democratic participation.[1] Globally,

literacy rates have improved over recent decades; however, approximately 10% of youth exit education systems without basic literacy skills. Africa has the highest number of countries with illiteracy rates exceeding 60%.[1] This continental challenge is mirrored in Zambia, where, despite significant policy reforms and increased access to primary education, literacy levels remain critically low. The 2015 Early Grade Reading Assessment (EGRA) revealed that 65% of Grade 2 pupils could not read a single word. More recently, the 2018 World Development Report indicated that only 45% of Zambian Grade 2 children could read a single word of text.[2] These statistics point to a persistent crisis in early reading instruction that demands urgent investigation.

Research has consistently demonstrated that early literacy skills are strong predictors of later academic success, including reading comprehension, subject-area achievement, and even high school completion.[3] Among these foundational skills, phonological awareness (PA) the ability to recognize and manipulate the sounds of oral language plays a particularly vital role.[4] PA encompasses a range of abilities, including the identification and manipulation of rhymes, syllables, onsets, rimes, and individual phonemes. It is widely understood as a precursor to decoding, spelling, and reading comprehension because children must first become aware of the sound structure of spoken language before they can map those sounds to written symbols.[5] Without well-developed PA, learners struggle to break the code of alphabetic writing systems, leading to cascading difficulties in word recognition, fluency, and comprehension. The relationship between PA and reading acquisition is well established in both monolingual and multilingual contexts. Children who struggle with reading typically exhibit deficits in PA and related phonological processing abilities.[6],[7] Castles and Coltheart emphasised that children with PA difficulties may struggle to match environmental sounds with corresponding objects, leading to reduced engagement in sound-related activities and delayed oral language development.[8]

Such challenges impede the ability to decode the sound-symbol code essential for reading and also contribute to persistent spelling difficulties.

Conversely, mastery of phonological skills enables children to map sounds to letters and letter clusters efficiently, which is foundational for successful spelling and reading fluency.[9] Therefore, effective PA instruction in preschool and early primary years substantially improves reading and writing outcomes, particularly for children from disadvantaged backgrounds or those learning in a second language.[10],[11],[12],[13]

In Zambia, the Ministry of General Education formally incorporated PA into the Primary Literacy Programme (PLP) introduced in 2013. The PLP curriculum specifies five core PA competencies that teachers are expected to deliver in lower primary grades: rhyme identification, syllable blending, phoneme segmentation, phoneme substitution, and phoneme deletion.[14] The PLP was designed as a structured, phonics-based programme to improve early grade reading, and it includes detailed teacher guides, lesson plans, and teaching materials. However, despite this policy inclusion, literacy outcomes have not improved as expected. Numerous studies have shown that teachers' classroom practices often do not reflect evidence-based PA strategies. For example, the National Association for the Education of Young Children noted that even where curricula exist, implementation fidelity is low.[15] Mulama,[16] Tambulukani and Bus,[17] and Mwanza[18] all reported persistent low literacy levels in Zambian lower primary schools, citing factors such as large class sizes, lack of appropriate materials, and insufficient teacher preparation.

More recent research by Mkandawire et al. found that while teachers use diverse strategies including language mixing, real-life materials, games, and word walls, they often lack deep knowledge of foundational literacy skills, including PA.[19] This gap between policy intent and classroom reality is particularly acute in rural and peri-urban districts such as Serenje, where access to training and resources is limited. Therefore, this study aimed to fill this gap by systematically documenting the actual strategies that teachers use to teach PA in Serenje District and by exploring the barriers that prevent effective implementation.

Statement of the Problem

Low literacy levels persist in lower primary schools in Zambia despite policy initiatives that include PA in initial literacy instruction. International research demonstrates that early PA is a strong predictor of later reading success and that systematic, explicit teaching of all five PA competencies is best practice.[3] However, teachers' classroom practices frequently do not reflect these evidence-based strategies; studies suggest that teachers either

lack awareness of evidence-based methods or lack the pedagogical content knowledge to implement them effectively. In Zambia, although the Ministry of General Education has formally incorporated PA into the PLP, there is limited empirical information on which instructional strategies teachers actually use in lower primary classrooms and why less effective practices persist. Without clarification of current classroom strategies and the barriers to implementing evidence-based PA instruction, interventions and policy are unlikely to produce the intended improvements in early grade reading. This study therefore examined the strategies used to teach PA in lower primary schools in Serenje District, Zambia.

Purpose of the Study

The purpose of this study was to examine and understand the strategies used to teach phonological awareness in lower primary schools in Serenje District.

Research Objectives

The study was guided by the following objectives:

1. To identify the strategies teachers use to teach phonological awareness in lower primary schools in Serenje District.

2. To examine how consistently teachers cover all five phonological awareness competencies in literacy lessons.

3. To explore the challenges teachers face when implementing phonological awareness instruction in lower primary schools in Serenje District.

Research Questions

The study was guided by the following research questions:

1. What strategies do teachers use to teach phonological awareness in lower primary schools in Serenje District?

2. How consistently do teachers cover all five PA competencies (rhyme, blending, segmenting, substitution, and deletion) in their literacy lessons?

3. What challenges do teachers face when implementing PA instruction?

Significance of the Study

This study will inform the Ministry of Education, curriculum developers, teacher training institutions, and school administrators about actual classroom practices regarding PA instruction. By documenting both the strategies that teachers use and the challenges they face, the findings will guide policy implementation, teacher professional development, and resource allocation to improve early grade reading outcomes in Zambia. Furthermore, the study contributes to the limited body of empirical research on early literacy instruction in multilingual, low-resource settings in sub-Saharan Africa. The results may also serve as a baseline for future intervention studies and for the design of pre-service and in-service training modules on PA.

Theoretical Framework

This study was guided by the Simple View of Reading Theory developed by Philip B. Gough and William E. Tunmer (1986), together with the Sociocultural Theory advanced by Lev Vygotsky (1978). These theories provided a foundation for understanding the importance of phonological awareness instruction and the role of teachers in supporting early literacy development.

The Simple View of Reading explains that successful reading comprehension is the product of two essential components: decoding and language comprehension. According to the theory, learners must first develop the ability to decode words accurately before they can comprehend written text effectively. Phonological awareness is a key component of decoding because it enables learners to recognize, manipulate, and differentiate speech sounds such as syllables, rhymes, and phonemes. Learners who lack phonological awareness often struggle to connect sounds to letters, resulting in poor word recognition and reading difficulties. In the context of this study, the theory helps explain why effective teaching strategies for phonological awareness are critical in lower primary education. If teachers do not explicitly teach phonological awareness skills, learners may fail to develop the decoding abilities necessary for reading success.

The study also drew on Vygotsky's Sociocultural Theory, particularly the concept of the Zone of Proximal Development (ZPD). Vygotsky argued that learning occurs through social interaction and guidance from more knowledgeable individuals such as teachers or peers. The ZPD refers to the difference between what learners can do independently and what they can achieve with support. In phonological awareness instruction, teachers play a central role in scaffolding learners' understanding through demonstrations, guided practice, songs, games, rhymes, sound manipulation activities, and corrective feedback. Strategies such as sound sorts, picture card games, and multisensory activities allow learners to gradually develop phonological skills with teacher assistance before becoming independent readers.

These theories were relevant to the present study because they emphasize both the cognitive and social dimensions of early reading instruction. The Simple View of Reading highlights the importance of phonological awareness as a foundation for decoding, while Sociocultural Theory explains how teacher support and classroom interaction facilitate literacy learning. Together, the theories provided an appropriate framework for examining the instructional strategies teachers use to teach phonological awareness in lower primary schools in Serenje District.

METHODOLOGY

Research Design

A qualitative approach was employed using a descriptive survey design. This design allowed the researcher to describe the strategies teachers use to teach PA in their natural classroom settings without manipulating variables.[20]

Study Area

The study was conducted in four urban public primary schools in Serenje District, Central Province, Zambia. Serenje District was purposively selected because it has a mixed linguistic environment, including Icibemba, Ichilala, Nyanja, and English. In the participating schools, Icibemba was the language of instruction in lower primary, although it was not necessarily the home language of all learners. The selection of urban schools provided a bounded setting in which to examine teachers' PA instructional practices. However, the study did not include rural public primary schools; consequently, the findings should be interpreted in relation to the participating urban schools and not assumed to represent the full range of schooling conditions across Serenje District.

Target Population

The target population comprised all lower primary teachers (Grades 1–3), senior primary teachers, and deputy head teachers in public primary schools in Serenje District, Central Province of Zambia. These educators were targeted because they are directly involved in the teaching, supervision, and implementation of literacy instruction, including phonological awareness activities in lower primary classes. The estimated population was approximately 830 teachers across the district.

Sample Size

The study involved 15 participants drawn from four urban public primary schools in Serenje District. The sample comprised four deputy head teachers, four senior primary teachers, and seven lower primary teachers. Of the participants, ten were female and five were male. All participants possessed at least a Diploma in Primary Education, and their teaching experience ranged from 3 to 22 years. The sample was deliberately structured to include participants with different professional responsibilities in literacy instruction, supervision, and school-level implementation.

Sampling Technique

The study employed stratified purposive sampling. The participant pool was first organised into three professional-role strata: deputy head teachers, senior primary teachers, and lower primary teachers. Participants were then purposively selected from each stratum because their different responsibilities positioned them to provide complementary information about PA instruction: lower primary teachers contributed direct classroom experience, while senior teachers and deputy head teachers provided perspectives on instructional support, supervision, and implementation. The final sample comprised four deputy head teachers, four senior primary teachers, and seven lower primary teachers (n=15). This approach was more appropriate than homogeneous purposive sampling because the study sought perspectives from distinct but relevant participant groups rather than from a single group sharing the same role.

Data Collection Instruments

Four instruments ensured data triangulation. First, a semi-structured questionnaire contained both closed and open-ended items about teachers' background, training, and self-reported strategies. Second, an in-depth interview guide was used with deputy head teachers and senior teachers to explore their observations, experiences, and challenges. Third, a lesson observation checklist was designed to record specific PA strategies, time allocation, learner engagement, and materials used. Fourth, the researcher kept a field notebook to record contextual details, non-verbal cues, and reflective notes after each school visit.

Data Collection Procedure

Permission was obtained from the District Education Board Secretary (DEBS) of Serenje District and from head teachers of the four selected schools. Written informed consent was obtained from all participants after explaining the purpose, voluntary nature, and confidentiality. Data collection occurred over four weeks. Questionnaires were administered first to all 15 participants. Subsequently, semi-structured interviews were conducted with the eight deputy head teachers and senior teachers; each interview lasted 30-45 minutes and was audio-recorded. Finally, seven literacy lessons (one per lower primary teacher) were observed in full, with the observer sitting at the back using the observation checklist. Field notes were taken during all visits.

Data Analysis

Thematic analysis followed the six phases of Braun and Clarke: familiarization, generating initial codes, searching for themes, reviewing themes, defining themes, and writing up.[22] Data from questionnaires, interview transcripts, observation checklists, and field notes were coded manually. Codes were grouped into categories, and categories were synthesized into themes. Direct quotations from participants are included using pseudonyms.

Trustworthiness

Credibility was enhanced through triangulation of four data sources: questionnaires, interviews, lesson observations, and researcher field notes. Using these sources enabled the researcher to compare participants' reported practices with observed classroom activities and contextual notes. Member checking was undertaken with three participants, who reviewed their interview transcripts for accuracy. Peer debriefing with two senior researchers from the University of Zambia over three meetings provided an opportunity to discuss the interpretation of the data and challenge emerging analytical assumptions. Transferability was supported through

description of the study context, participant characteristics, and instructional strategies, allowing readers to judge the relevance of the findings to comparable settings. However, because the sample was small and drawn exclusively from four urban public primary schools, transferability to rural schools or the wider district should be considered cautiously. Dependability was supported by an audit trail comprising raw data, analysis notes, and documented coding decisions, while confirmability was strengthened through peer debriefing and the use of data from multiple sources.

Ethical Considerations

Informed consent was obtained from all participants. They were assured of confidentiality and anonymity; pseudonyms (e.g., PT1 for primary teacher 1, DHT1 for deputy head teacher 1) are used in reporting. Participants were informed that participation was voluntary and that they could withdraw at any time without penalty.

Data were stored securely and used solely for research purposes. Ethical clearance was obtained from the University of Zambia's Humanities and Social Sciences Research Ethics Committee (HSSREC) before data collection.

FINDINGS

Participant Category	Number	Female	Male
Deputy Head Teachers	4	2	2
Senior Primary Teachers	4	3	1
Lower Primary Teachers	7	5	2
Total	**15**	**10**	**5**

Demographic Characteristics of Participants

All participants held at least a Diploma in Primary Education. Teaching experience ranged from 3 to 22 years (mean ≈11 years), indicating a mix of relatively new and experienced practitioners.

Strategies Used to Teach Phonological Awareness

Thematic analysis revealed five main strategies.

3.2.1Generating Rhymes. All 15 respondents reported using rhymes, poems, and songs. One female teacher (PT3) stated:

> *"I use rhyme generation during any segment of the literacy block, depending on my pupils' needs. I demonstrate the activity and coach my pupils in phonemic awareness skills during guided reading."*

Observation data confirmed rhyme generation in six of seven lessons, typically as a 5–10-minute warm-up. However, most observed rhyme activities remained at choral repetition and singing, with little explicit teaching of how to identify or generate rhyming words independently.

3.2.2 Multi-Sensory Mapping. Nine of 15 respondents reported using auditory, visual, and kinesthetic-tactile modalities (tracing letters in corn meal or sand, air writing, touching sandpaper letters, clapping syllables). A female senior teacher (PST2) explained: *"I help my pupils match letters and sounds, calling on individual pupils*

to match the target sound with a picture. After the sound sort activity, pupils write the letter in the air, chanting the sound." Observations revealed that only three of seven teachers effectively used multi-sensory techniques; the other four mentioned them during interviews but did not demonstrate them, suggesting over-reporting or lack of confidence.

3.2.3 Picture Card Snap. Twelve of 15 respondents used picture card games to match initial, medial, or final sounds. One male teacher (PT1) said: *"I use picture snap cards as a game, putting pupils in small groups so that every instruction can be followed with less difficulty."* In two schools, teachers made their own cards from recycled cereal boxes, but hand-made cards were often of inconsistent quality.

3.2.4 Sound Sorts. All 15 respondents used sound sorting activities (categorising picture or word cards by initial, medial, or ending sounds). A deputy head teacher (DHT1) observed: *"Sound sorts help pupils pay attention to the sounds inside words. They stop just looking at pictures and start listening."* Sound sorts were observed in five of seven lessons and appeared well-structured, but lack of pre-made kits meant teachers had to prepare cards manually.

3.2.5.Treasure Chest. This game-based activity focused on segmenting and blending phonemes. Pupils worked in pairs, using picture cards to practise segmenting (e.g., /c/-/a/-/t/) and blending; correct answers earned tokens for a "treasure chest." Only four of seven teachers reported using this strategy regularly, citing time constraints. Observations showed only one lesson with treasure chest, and the teacher rushed through blending because the bell rang early.

Summary of Strategy Usage

Strategy	Reported (n=15)	Observed (n=7)
Generating Rhymes	15	6
Multi-Sensory Mapping	9	3
Picture Card Snap	12	4
Sound Sorts	15	5
Treasure Chest	4	1

Inconsistent Coverage of PA Competencies

A critical finding was that teachers did not consistently teach all five PA competencies (rhyme identification, syllable blending, phoneme segmentation, phoneme substitution, phoneme deletion). Four teachers integrated blending, substitution, and sound identification within a single 60-75 minute lesson, while three teachers distributed PA components across two separate 30-minute lessons. One teacher from School B stated: *"I manage to teach all the PA components within the given time because learners understand fully when all components have been presented. I start with a song, then do rhyme, then syllable blending, then sound identification, then substitution. It takes planning."* In contrast, a teacher from School E expressed frustration: *"I find it difficult to teach all components due to time. Learners become tired. When I teach all components in a single lesson, learners stop paying attention as it takes more than one hour. I prefer to teach three components well."* This inconsistency means many learners do not receive explicit instruction in the full range of PA skills, leaving them unprepared for later phonics and decoding.

Creativity on the Part of the Teacher

Despite challenges, one teacher at School B demonstrated notable creativity. She used songs with target sounds, syllable charts, and syllable cards prepared in advance from local materials. She integrated local cultural rhymes into Icibemba instruction for example, using a traditional clapping game to teach syllable segmentation. She also adapted the "treasure chest" idea into a "sound basket" using empty tins and stones, allowing learners to drop a stone for each correctly segmented phoneme. Her lesson was rated "excellent" on the observation checklist, with high learner engagement throughout. This case shows that even with limited resources, a well-prepared teacher can deliver effective PA instruction.

Materials for Primary Literacy Programme

All four schools had severe shortages of PLP materials. Each school had only one copy of the Teacher's Guide, which was photocopied at the school's own expense. No pupil books were available for any observed class; all exercises were written on the board by the teacher, consuming an average of 15 minutes per lesson and reducing opportunities for individual practice.

Teachers reported that the lack of decodable readers, picture cards, and syllable charts forced them to rely almost exclusively on oral drills and board work, which is less effective for struggling learners. One deputy head teacher noted that the school had requested materials from the District Education Board for two years without success.

Medium of Instruction

Teachers used Icibemba as the primary language of instruction, as required by the PLP for Grades 1 3 in Central Province. However, because many learners speak Ichilala or Nyanja at home, teachers engaged in translanguaging strategically switching between Icibemba and local languages to aid comprehension. One teacher from School D explained: *"Apart from Icibemba as language of instruction, I also use Ichilala and Nyanja for clarity and better understanding for learners with problems in understanding Icibemba."* While translanguaging is a practical and culturally responsive strategy, it places additional demands on teachers to be proficient in multiple languages and to know how to teach PA across them. Several teachers admitted difficulty in correctly producing certain Icibemba phonemes (e.g., the /nkw/ cluster) and worried that their own pronunciation errors might be passed on to learners.

Phonological Awareness Training for Teachers

Responses regarding PA training were sharply divided. One respondent from School E reported receiving no training at all: *"My lecturers only talked about phonics, not PA. I have not received any orientation in TGMs because I missed the meetings."* Thirteen of 15 respondents received PA training only through Teacher Group Meetings (TGMs) or CPD meetings organised after the PLP was introduced. One respondent said: *"I was oriented in PA in a TGM when the PLP was introduced. The concept was new to me."* Only two teachers reported any pre-service exposure to PA, and even they described it as "briefly mentioned" within a broader literacy methods course. This finding indicates a major gap in pre-service teacher education.

Teachers' Own Phonological Awareness Deficits

During interviews, several teachers struggled to provide clear definitions of PA, confusing it with phonics. For example, one teacher said: *"Phonological awareness is knowing the sounds of letters."* In reality, PA is an oral skill that does not involve letters, whereas phonics involves letter-sound correspondences.

Additionally, teachers admitted difficulty in correctly producing certain phonemes, especially in Icibemba. One respondent stated: *"Sound identification demands that I produce it correctly. Sometimes I mis-sound particular letters and syllables such as /nkw/ as in the word nkwele (Icibemba)."* Another teacher added: *"I am not sure if I say the sounds right because at college we were not taught how to pronounce Icibemba phonemes. I just copy what other teachers do."* These deficits in teachers' own PA skills likely affect their ability to model sounds accurately and to diagnose learners' errors.

DISCUSSION

The study examined the strategies used to teach phonological awareness in lower primary schools in four urban public primary schools in Serenje District. Five strategies were identified: generating rhymes, multi-sensory mapping, picture card snap, sound sorts, and treasure chest activities. These findings align with Mkandawire et al., who observed that Zambian primary teachers use diverse strategies.[19] The use of multiple strategies is consistent with Adams et al., who advocated varied and explicit PA instruction.[23] The present findings also show that the presence of a range of activities does not necessarily mean that instruction is systematic or sufficiently explicit. For example, although all 15 participants reported using rhymes, observations found that rhyme activities were often limited to choral repetition and singing, with limited explicit support for learners to identify and generate rhyming words independently.

The study also identified inconsistent coverage of the five PA competencies. The reported finding that 40% of teachers covered only three of the five competencies in a lesson suggests that instructional time, lesson pacing, and learner fatigue affected the breadth of coverage. This finding should be interpreted alongside the qualitative accounts: some teachers described integrating several competencies in one extended lesson, while others preferred to distribute activities across lessons or concentrate on fewer competencies. The National Reading Panel recommends explicit and systematic instruction in PA components as part of effective early reading instruction.[3] The evidence from this study therefore points to the importance of careful sequencing and focused practice rather than simply attempting to include every competency without regard to learners' needs or lesson organisation.

A further concern is the limited pre-service preparation in PA reported by participants. Thirteen of the 15 participants indicated that they had not received substantive pre-service training in PA, while two described their exposure as brief coverage within broader literacy methods courses. This finding supports the argument that teachers require explicit subject knowledge and pedagogical preparation to teach foundational literacy skills effectively.

In Zambia, teacher training colleges historically focused on phonics rather than explicit PA, and brief workshops (TGMs) are insufficient to build deep pedagogical content knowledge.[29] The absence of pupil books and insufficient Teacher's Guides severely hampers PA instruction, echoing Matafwali and Bus that inadequate materials contribute to low literacy outcomes.[30] Finally, translanguaging reflects Zambia's multilingual reality, but teachers' own difficulties in producing Icibemba phonemes may transfer to learners.[31]

Theoretical Implications

These findings align with the Simple View of Reading: without explicit PA instruction (a component of decoding), reading comprehension will suffer.[32] The lack of systematic PA instruction in Serenje District likely contributes to the low decoding skills observed in EGRA (2015) and World Bank (2018) reports.[2] The study also supports Vygotsky's Zone of Proximal Development: teachers are not adequately scaffolding PA learning because they themselves lack the knowledge to identify learners' current PA levels and design appropriate next steps.[33]

Study Limitations and Scope of Interpretation

The findings should be interpreted in light of the study's scope and design. First, the sample consisted of 15 participants from four urban public primary schools. Rural public schools were not included, and differences in infrastructure, availability of teaching and learning materials, language environments, and teacher support may shape PA instruction differently in rural settings. The findings therefore offer an in-depth account of the participating urban schools rather than a district-wide estimate. Second, the small, purposively selected sample was intended to provide information-rich perspectives from three professional-role groups; it was not designed to support statistical generalisation. Third, some strategy-use findings were based on participants' self-reports, while observations covered seven lessons. The comparison between reported and observed practice is useful, but the limited number of observed lessons may not capture the full range of each teacher's practice over time. These

limitations do not invalidate the findings; they define the contexts to which readers may reasonably consider them applicable and point to the need for further studies involving rural and urban schools across Serenje District.

CONCLUSION

The study found that teachers in the four participating urban public primary schools in Serenje District used a range of strategies to teach PA, including generating rhymes, multi-sensory mapping, picture card snap, sound sorts, and treasure chest activities. However, the implementation of these strategies was uneven, and teachers did not consistently provide explicit coverage of the five PA competencies. Participants also reported limited substantive pre-service preparation in PA, shortages of teaching and learning materials, and gaps in their own understanding and production of speech sounds. These constraints may undermine the quality and consistency of PA instruction. The findings highlight a need for stronger pre-service and in-service teacher preparation, adequate classroom resources, and practical support for systematic PA instruction. Since the study involved only 15 participants from four urban public primary schools, its findings are context-specific and should not be generalised to all schools in Serenje District. Further research that includes rural schools and a wider range of school contexts is needed to establish how far these patterns extend across the district.

RECOMMENDATIONS

Based on the findings, the following recommendations are made:

- To the Ministry of Education: Integrate PA into pre-service teacher education within the next 12 months. All Colleges of Education and universities must revise literacy courses to include explicit instruction in PA theory, assessment, diagnostic tools, and teaching strategies. PA should be a stand-alone module, not a sub-topic within phonics.

- To the Ministry of Education: Provide ongoing, practice-based CPD. Replace one-off workshops with school-based coaching, lesson study, and peer observation focused on PA, with at least three coaching sessions per teacher per year.

- To the Ministry of Education: Supply adequate teaching materials. Produce and distribute pupil books, syllable charts, picture card sets, sound sorting kits, and decodable readers for all lower primary classes. Ensure every teacher has a copy of the Teacher's Guide.

- To Colleges of Education and Universities: Revise the literacy curriculum to ensure pre-service teachers demonstrate mastery of all five PA competencies and can design explicit, systematic PA lessons. Include PA in teaching practice assessment, with mentor teachers evaluating student teachers' PA instruction during practicum.

- To Schools and Teachers: Strive to cover all five PA competencies in every literacy lesson using short, focused activities (15-20 minutes daily) that include rhyme, blending, segmenting, substitution, and deletion. Use age-appropriate techniques such as "I spy," "what's the first sound?", and "sound detective" games.

- To the Government: Provide adequate funding to improve availability and affordability of literacy teaching materials and to support continuous professional development in PA instruction. Facilitate local production of low-cost teaching aids to reduce dependence on imported materials.

For Future research

(i) Researchers should conduct a large-scale quantitative study to establish the relationship between specific PA strategies and reading outcomes in Zambian languages;

(ii) evaluate the effectiveness of different CPD models (e.g., coaching vs. workshops) on teacher PA knowledge and classroom practice; and

(iii) investigate the role of translanguaging in PA instruction for multilingual learners in rural Zambia.

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