

Phonological awareness as a linguistic foundation in reading instruction for children with learning disabilities in rural Indonesian communities

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ABSTRACT

Phonological awareness plays a vital role in supporting reading development, particularly for children with learning difficulties. This qualitative case study explores the impact of targeted phonological awareness training on 30 educators, consisting of 15 female and 15 male participants from three rural regions in Indonesia. The participants included elementary school teachers, early childhood educators, community tutors, and education facilitators, with teaching experience ranging from 3 to 25 years (average 12.4 years). Data were collected through classroom observations, interviews, written reflections, and document analysis, and analyzed using the constant comparative method, which included open, axial, and selective coding. Educators in these areas face a range of systemic challenges, including limited teaching resources, limited access to professional development, unreliable electricity and internet, low parental involvement, large class sizes, and differences between the language spoken at home and the language used in schools. Before the training, most participants struggled to teach sound-letter relationships explicitly. The training helped address this issue by introducing practical and context-based strategies that could be applied in daily classroom settings. After the intervention, teachers reported feeling more confident and demonstrated better approaches in teaching phoneme-grapheme connections. While many structural barriers remain, this study shows that professional growth is possible when educators receive the right support. The findings highlight the need for continuous teacher development, locally relevant materials, and supportive policies to improve literacy outcomes for children with learning challenges in rural contexts.

Keywords: Learning difficulties; non-formal education; phonological awareness; rural educators

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INTRODUCTION

Phonological awareness is a fundamental aspect of early literacy development that plays a crucial role in children's reading skills (Mousavi et al., 2023). It refers to an individual's ability to recognize, differentiate, and manipulate sound units in spoken language (Share, 2021). This ability serves as the primary foundation in the decoding process, an

essential skill in early word reading and understanding written texts (Franchi et al., 2023). Children with well-developed phonological awareness tend to read more fluently, whereas those with reading difficulties, such as dyslexia, dysgraphia, or other language-based learning disorders, often experience significant challenges in

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developing foundational reading skills (Brady, 2019; Hall et al., 2023).

Reading difficulties are a specific learning disorder that can impact a child's academic abilities (Hall et al., 2023). One of the most common forms of reading difficulty is dyslexia, a neurological disorder that affects a child's ability to recognize words, comprehend written texts, and link phonemes with graphemes (Shaywitz et al., 2020). Children with dyslexia often struggle with phoneme segmentation, automatic word recognition, and reading comprehension (Snowling et al., 2019). Globally, the prevalence of dyslexia is estimated to be between 5% and 10% among school-aged children (Snowling et al., 2020). In Indonesia, although there is no systematic national data, local studies indicate that around 7-15% of school-aged children experience reading difficulties with signs of dyslexia (Ginting, 2017). With more than 25 million elementary-aged children across Indonesia (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2023), an estimated 1.7 million are at risk of dyslexia. This substantial figure underscores the critical need for targeted literacy interventions and highlights the urgency of educational reform, particularly in regions affected by ongoing structural inequities.

Children with reading difficulties face even greater barriers in rural areas where educational inequities are pronounced. Infrastructure limitations, minimal access to the internet and electricity, shortages of teaching materials, and limited opportunities for teacher training hinder the delivery of quality reading instruction (Masykar et al., 2022; Solehuddin et al., 2019). Furthermore, many rural communities experience linguistic mismatches between children's home languages and the formal school language, adding a layer of difficulty for students attempting to master phonological skills (Novianti et al., 2019). Compounding these challenges are large class sizes, low parental involvement, and entrenched perceptions that children with dyslexia are simply lazy or not trying hard enough (Makgato et al., 2022; Mun & Jumadi, 2020).

Without appropriate intervention, these children may experience long-term academic difficulties, reduced self-confidence, and increased learning anxiety (Vágvölgyi et al., 2021; Wang et al., 2020). The cumulative effects of unaddressed reading difficulties can lead to widening literacy gaps between rural and urban students, further perpetuating cycles of disadvantage (Nation, 2019). Therefore, effective and inclusive approaches to reading instruction are urgently needed in rural education systems.

A growing body of research highlights the effectiveness of phonological awareness-based instruction in improving reading outcomes for children with learning difficulties (Ehri, 2020; Paakkari et al., 2024). Instruction that incorporates

phoneme-grapheme mapping, sound blending, segmentation games, and multisensory learning strategies has been shown to boost reading accuracy and fluency. However, the majority of these studies have been conducted in urban, formal school environments where institutional support, teaching materials, and training are more readily available (Bedewy, 2020; Brady et al., 2021). Rural and community-based educational settings remain underrepresented in this area of research, creating a gap in understanding how phonology-based strategies function in less-resourced contexts. In addition, limited attention has been given to the roles of informal and non-formal educators in supporting early reading development. In rural Indonesia, education often extends beyond the walls of formal schools. Early childhood educators, community tutors, and learning center facilitators contribute significantly to children's literacy journeys, yet their perspectives and instructional needs are rarely addressed in mainstream research (Galbally et al., 2024; Yembuu, 2021). These actors often work in environments without access to structured curricula and rely heavily on personal experience and creativity. Professional development opportunities tailored to their needs are scarce.

Recent studies emphasize the importance of context-sensitive and participatory training models to address these limitations (Haile & Mendisu, 2023). Effective training must go beyond the transmission of knowledge. It should draw upon local experience, reflect cultural norms, and empower educators to apply strategies that resonate with their teaching environments (Craps & Brugnach, 2021). Community-based approaches that engage parents, local leaders, and other stakeholders have shown potential in fostering sustainability and shared ownership of educational outcomes (Kelty & Wakabayashi, 2020).

This study seeks to address the above gaps by examining the impact of phonological awareness training on educators working in rural areas of Indonesia. Specifically, it investigates how such training influences their understanding of phonology-based instruction, their ability to teach phoneme-grapheme correspondence, and their adaptation of strategies within various educational contexts. By including formal school teachers, early childhood educators, community tutors, and facilitators, the study takes a holistic view of the rural education landscape.

Reading Comprehension

Reading is a complex process involving various skills, including word recognition, text comprehension, and the ability to connect new information with prior knowledge (Duke & Cartwright, 2021). In the field of education, reading is not merely recognizing letters in a word but also comprehending the meaning of the text (Burns et al.,

2023). Experts have different perspectives on defining reading. Reading is a cognitive process that requires skills in decoding and understanding written text (Share, 2021). Decoding refers to the ability to recognize words by connecting sounds to letters, while comprehension involves interpreting and linking the text to prior experiences and knowledge (Kearns et al., 2019).

One well-known model for understanding the reading process is the Simple View of Reading, developed by Gough and Tunmer (Kargim, 2023). This model states that reading consists of two main components: decoding, which involves correctly converting letters into sounds, and language comprehension, which involves understanding the meaning of words and sentences in a text (Miriam & Muthee, 2024). According to this model, optimal reading skills can only be achieved if a person has strong abilities in both aspects. If one of these aspects is weak, reading comprehension will be impaired (Kuo, 2023).

One crucial skill that plays a role in reading development is phonological awareness. According to Franchi et al. (2023), phonological awareness enables children to recognize, distinguish, and manipulate sound units in spoken language, which ultimately forms the foundation for learning the relationship between phonemes and graphemes, known as decoding (Mooshammer et al., 2023). Brady (2019) adds that children who struggle with reading often have deficits in phonological awareness, making it difficult for them to recognize words and understand written texts (Brady et al., 2021).

A study by Kalashnikova et al. (2020) found that children with strong phonological awareness are better able to connect sounds with letter symbols, leading to better reading skills. Therefore, phonological awareness-based interventions are considered an effective strategy for improving reading ability, particularly for children with learning difficulties (Klimovich-Gray et al., 2023). Understanding reading and the factors that influence it has important implications for school-based reading instruction. One approach that can be applied is phonology-based teaching, especially for children struggling with reading (Araújo et al., 2024).

Phonological Awareness-Based Reading Instruction

Phonological awareness is the ability to recognize and manipulate sound structures in language, including syllables, rhymes, and phonemes (Layes et al., 2021). This skill is a primary predictor of early reading success. Children with strong phonological awareness find it easier to recognize the relationship between letters and sounds, allowing them to master reading skills more quickly (Sucena et al., 2023). Various studies have shown that phonological awareness-based approaches effectively enhance

children's reading skills, particularly those with learning difficulties such as dyslexia (Seki et al., 2008). This approach is implemented through strategies such as introducing children to sound patterns in words, engaging in rhyme games, and performing segmentation and blending activities (Snowling et al., 2019). By using these methods, children not only learn to read mechanically but also understand the phonological structure of their language (Thangarajathi & Menaha, 2020).

However, despite its effectiveness, implementing this approach faces challenges, particularly in educational environments with limited resources (Wessels, 2011). Many teachers have not received adequate training on phonological awareness, making this approach rarely used optimally in reading instruction (Carson & Bayetto, 2018). Knowles emphasized that teacher training should be participatory and based on real experiences to be effectively implemented in rural communities (Montfort, 2023). Therefore, developing contextual and community-based training programs is a strategic step in improving literacy for children with reading difficulties (Chen-Worley, 2023). With appropriate interventions, children with reading challenges, whether in urban or rural areas, can have equal opportunities to improve their literacy skills (Tilanus et al., 2016).

Reading Instruction Methods

In Indonesia, reading instruction is still dominated by traditional approaches, such as synthetic and analytical methods. In the synthetic method, children are first taught to recognize letters before forming syllables and words, while the analytical method introduces words as whole units before breaking them down into smaller components. These methods are widely implemented in schools, including in rural areas, but they often rely on rote memorization rather than providing a deep understanding of the relationship between sounds and letters (Mufidatul Helwah et al., 2023).

In rural areas, reading instruction presents more complex challenges (Mulia & Kurniati, 2023). Limited teaching materials supporting phonological awareness, insufficient teacher training, and differences between the mother tongue and the language of instruction in schools are major obstacles to mastering reading skills (Ummah & Saputra, 2025). Many children struggle to understand phonological relationships in Bahasa Indonesia because they are more familiar with local languages that have different phonological structures (Sagala et al., 2025).

Although many studies have examined the negative effects of inadequate reading instruction, such as low decoding accuracy, reduced motivation, and academic anxiety (Francis et al., 2019; Jannah & Juniardi, 2025; Kim et al., 2021), there remains a limited understanding of how these challenges are

experienced and addressed by educators in rural, low-resource contexts. Unlike previous research that mainly focused on formal schools in urban settings (Bedewy, 2020; Brady et al., 2021), this study explores how a targeted phonological awareness training grounded in local realities equips rural educators, including non-formal and informal instructors, to better support learners with dyslexia. This community-based intervention model offers a novel contribution by expanding the implementation of phonological strategies beyond traditional school systems, thereby addressing an overlooked gap in inclusive literacy development.

METHOD

This study employs an exploratory case study design to gain an in-depth understanding of how phonological awareness training influences educators' instructional beliefs and practices in rural contexts. The case study approach was selected because it allows the researcher to examine complex, real-life educational situations and incorporate multiple sources of data. Through this approach, the study explored how educators operating across formal, non-formal, and informal education sectors internalize and apply phonology-based reading strategies.

Research Site and Respondents

The research was conducted in three rural districts across different provinces in Indonesia. These regions were chosen based on specific criteria: limited access to professional development programs; under-resourced educational infrastructure, such as a lack of digital tools and learning materials; and a high percentage of students displaying symptoms of learning difficulties, as reported by school reports and regional education office data. In each of the selected regions, local education data indicated that over 30 percent of students in lower grades struggled with foundational reading skills. Symptoms related to dyslexia were most commonly reported, although other challenges, such as delayed phonological processing, limited vocabulary, and difficulties with letter-sound association, were also frequently observed. However, due to the lack of specialized services, formal diagnoses were rare.

A total of 30 educators participated in this study, comprising 15 males and 15 females. They came from a variety of professional backgrounds. 10 of them were early-grade elementary school teachers. 8 were early childhood education instructors who focused on foundational literacy for young learners. 6 were community tutors operating within non-formal education centers. The remaining six were community education facilitators who worked with children experiencing reading difficulties outside the school system. The combination of these roles

provided a comprehensive view of literacy instruction in different rural education contexts.

Participants were recruited using purposive sampling, coordinated with local education offices and community-based learning centers. School principals and local education coordinators initially nominated educators who were known to be actively involved in teaching reading, particularly to children with learning difficulties. These nominations were followed by a brief screening interview to verify each candidate's role, experience, and engagement in supporting struggling readers. Only those who had direct experience assisting children with signs of dyslexia or related literacy difficulties were included in the study.

Instruments

To capture multiple dimensions of educator experience, the study used three main instruments. First, a structured observation guide was used to examine educators' implementation of phonology-based instruction, focusing on instructional clarity, phoneme-grapheme mapping, multisensory methods, student engagement, and error correction. Second, a guided reflection template was distributed to collect participants' personal insights before and after the training. Third, a rubric for document analysis was developed to examine changes in instructional planning, including lesson plans and learning materials.

Each of these tools was reviewed by two independent education researchers and adjusted to fit the linguistic and contextual realities of the participating communities.

Procedures

Data collection occurred in three stages. In the first stage, classroom observations were conducted with all 30 participants. Each educator was observed twice, once before and once after the training, for a total of 60 observation sessions. These sessions lasted between 45 and 60 minutes, depending on the learning setting, whether it was a classroom, community center, or tutoring location. Observers recorded notes using the structured guide, and audio recordings were made with permission. Video recordings were not used due to ethical and technical limitations in rural areas.

In the second stage, all 30 educators submitted two written reflections. The first reflection was submitted immediately after the training, and the second was submitted two weeks later. Each reflection ranged from 300 to 500 words and addressed specific prompts about participants' evolving beliefs, readiness to implement strategies, and observed changes in student engagement. Submissions were received either in printed form or via messaging applications, depending on access and convenience.

In the final stage, the researchers analyzed 60 instructional documents, comprising 30 sets of pre-training and 30 sets of post-training materials. These included lesson plans, worksheets, and phonics activity sheets. The analysis focused on identifying signs of pedagogical change, such as greater integration of phonological tasks, improved scaffolding, and increased use of child-centered strategies.

Data Analysis

The study employed the constant comparative method for data analysis. First, open coding was used to identify recurring concepts and patterns from observation notes, written reflections, and instructional documents. These codes were then grouped into categories through axial coding to explore connections between different aspects of teacher practice and belief shifts. In the final stage, selective coding was conducted to generate cohesive themes that captured the transformative effects of the training program.

The analysis process was iterative and involved frequent comparison across data sources to ensure consistency and validity. Peer debriefing was conducted with two independent researchers, and member checking was performed by consulting four participants to confirm the accuracy of the

interpretation sources (Fadilla & Wulandari, 2023). All procedures were aimed at strengthening the trustworthiness of the findings and reflecting the authentic voices of rural educators. The results are expected to inform the development of more responsive and sustainable professional development programs tailored to rural education contexts.

FINDINGS AND DISCUSSION

The data analysis in this study revealed three major themes related to reading instruction in rural Indonesian communities: (1) teachers' perceptions of reading instruction, (2) teachers' views on challenges in teaching reading, and (3) teachers' instructional practices. These themes reflect how educators understand, experience, and respond to reading difficulties in their context, and how phonological awareness training influenced their professional practices. A comparative approach was used to analyze changes in teacher responses and classroom behaviors before and after the training intervention. This included comparisons of their stated beliefs, observed strategies, and instructional materials. Table 1 summarizes the key findings across the three themes, highlighting contrasts before and after the training program.

Table 1

Comparison of Teachers' Perceptions and Practices Before and After Training

Theme	Before Training	After Training
Teachers' Perceptions	Reading seen as memorization of letters and words	Reading seen as decoding sound-letter relationships
Instructional Challenges	Lack of effective strategies and materials	Increased awareness of phonological techniques, but still limited resources
Teaching Practices	Dominance of rote methods, minimal phoneme instruction	Use of phoneme-grapheme mapping, syllable segmentation, and interactive activities

Teachers' Perceptions of Reading Instruction

Before receiving phonological awareness training, most teachers in rural communities understood reading instruction primarily as the visual introduction of letters and words, without addressing the phoneme-grapheme connection. Their dominant strategy was rote memorization, often expecting children to recognize whole words without decoding them phonetically. This misunderstanding may be influenced by the phonetic nature of Indonesian, which allows relatively straightforward letter-sound correspondence (Mufidatul Helwah et al., 2023; Solehuddin et al., 2019). However, this does not mean that children, especially those with dyslexia, can learn to read effectively without explicit phonological instruction. Many teachers lacked foundational knowledge of identifying and supporting children with dyslexia, resulting in instructional gaps (Acheampong et al., 2019). As one teacher stated in an interview:

In the past, I taught children to read by having them memorize letters and words. I thought that the more often they saw the written words, the easier it would be for them to remember. (Interview, Elementary School Teacher RZ)

I used to believe that reading was about recognizing as many letters and words as possible. I never really understood how children process sounds when reading. (Interview, Early Childhood Education Teacher KT)

We often used letter, syllable, and word cards and asked the children to read them repeatedly. I thought this was an effective method, but when I encountered children who struggled even to remember letters, I started to wonder if there was a better way to teach. (Interview, Elementary School Teacher YN)

After attending the training, the teachers' understanding underwent a significant transformation. They realized that reading is not just about recognizing letters and words but also involves

cognitive processes such as phoneme recognition, segmentation, and sound blending. Some teachers expressed:

I just realized that teaching reading is not just about introducing letters and words. Now, I use more sound-based activities so that children understand how letters and sounds are connected. (Interview, Early Childhood Education Teacher MN)

After the training, I started implementing sound-based games, and the children found it easier to read letters. They no longer just memorize symbols but understand how sounds form words. (Interview, Facilitator RD)

Previously, I focused only on memorization, but now I use a sound-based approach, and I see better results in the reading abilities of children who initially struggled to read. (Interview, Elementary School Teacher TP)

Observations showed that changes in teachers' teaching methods began to appear in classroom practices. Teachers who previously relied solely on memorization methods started implementing phonological activities such as sound games, word segmentation, and blending exercises. Some examples of observed changes in practice included using phoneme cards to help children connect letters to their sounds, implementing sound-based games to enhance students' phonological awareness, and providing feedback on students' phonological errors rather than simply asking them to memorize the incorrect words again. A teacher noted in their training reflection:

After trying to implement phonological methods, I noticed that the children became more actively engaged in learning to read. They no longer just memorize words but begin to understand how words are formed from small sounds. (Reflection, Early Childhood Education Teacher TP)

This change supports the findings of [Snowling and Hulme \(2012\)](#), which emphasize that phonological awareness is a key prerequisite for successful reading. Additionally, other research ([Snowling et al., 2020](#)) has shown that phonology-based methods help children develop better decoding skills than mere word memorization methods ([Tallman, 2020](#)). Phonology-based strategies are more effective in improving reading ability than purely visual-based strategies ([McBride et al., 2022](#)).

Moreover, some teachers who were initially skeptical about the phonological approach admitted that they observed positive changes after adapting these strategies.

I used to believe that reading instruction should focus on exposing children to as much text as possible. But after trying the phonological awareness method, I noticed that children could better understand how to connect sounds with letters, rather than just memorizing words. (Interview, Early Childhood Education Teacher DK)

I have always been skeptical of new methods, but this time I truly see the difference. The children are more enthusiastic about learning to read." (Interview, Facilitator FN)

I feel that the phonological method has made children more confident in reading. They are no longer afraid of making mistakes because now they understand how to read through sounds, not just memorization. (Interview, Elementary School Teacher RH)

Thus, phonological awareness training has had a positive impact on teachers' understanding of reading instruction and the implementation of more effective methods in their classrooms. However, to ensure the sustainable application of these strategies, further support is needed in the form of mentoring, adequate teaching materials, and opportunities for teachers to continue practicing and developing their skills in teaching phonological awareness.

Teachers' Perspectives on Problems in Teaching Reading

The teachers involved in this study highlighted various challenges they faced in teaching reading, especially to children with learning difficulties. These challenges included limitations in reading instruction strategies, a lack of supporting resources, low student motivation, and limited time for implementing phonology-based strategies.

Limitations in Reading Instruction Strategies

One of the most frequently mentioned issues among teachers was the lack of variation in reading instruction strategies that did not explicitly focus on phonological development. Teachers struggled to teach the relationship between sounds and letters and had difficulty adapting teaching materials to meet the needs of children with learning difficulties.

We struggle to teach the sounds present in the Indonesian language to children. The teaching materials we have are not sufficient to help them understand how to connect sounds and letters. (Interview, Teacher AL)

Another teacher added:

I often use the word memorization method because children grasp it more quickly that way. But I know that it is not the best method in the long run. (Interview, Teacher BN)

A similar opinion was also expressed by a community education facilitator:

We need a more systematic method for teaching reading, but unfortunately, the training we received is still too general and not very practical. (Interview, Facilitator SC)

From these interviews, it is evident that limitations in reading instruction strategies lead teachers to rely more on memorization than on phonology-based strategies, which are more effective

in helping children understand the structure of language.

Limited Resources

Another challenge faced by teachers is the lack of resources to support phonological instruction. Most educators expressed that they do not have access to adequate teaching materials, such as letter cards or pictures that could help children understand phonological relationships. This issue is particularly challenging in rural communities with limited resources.

I want to use the methods taught in the training, but I don't have word cards or phonological games. I ended up making my own by writing words on paper. (Interview, Community Tutor DY)

Similarly, an elementary school teacher stated: We need more teaching aids such as letter cards, phonological picture cards, or simple applications that can help children recognize sounds and letters in a fun way. (Interview, Teacher EM)

Meanwhile, another teacher highlighted the importance of resources in reading instruction:

Many teachers in schools want to implement new methods, but we are hindered by the lack of tools and teaching materials. We need more support in providing resources. (Interview, Early Childhood Education Teacher FL)

From these interviews, it can be concluded that limited resources are a major obstacle to implementing phonology-based strategies. Without sufficient teaching aids, teachers struggle to effectively deliver the material.

Challenges in Children's Motivation

Children's motivation is also a major challenge in teaching reading. Many teachers reported that children with reading difficulties often lack motivation to practice reading independently and tend to lose interest in learning to read.

These children often feel frustrated because of their reading difficulties. They don't want to practice because they feel like they can't do it. As a teacher, I have to try to motivate them, but it's very difficult. (Interview, Teacher GP)

An early childhood educator added: Children tend to get bored when I ask them to repeat word sounds. They prefer to play rather than repeat sounds over and over. (Interview, Early Childhood Educator HK)

Meanwhile, a community facilitator tried a different strategy to address this issue:

I started using a matching game between sounds and pictures. The children seemed more enthusiastic and recognized sounds faster than before. (Interview, Facilitator IP)

From these interviews, it is evident that children with reading difficulties require more interactive learning methods to keep them motivated in their studies.

Lack of Time and Support in Implementation

Many educators feel that they do not have enough time to implement phonological strategies due to an already packed curriculum.

I want to use a phonological approach, but I also have to follow the established curriculum. The available time is very limited for teaching phonology in depth. (Interview, Elementary School Teacher J)

A similar concern was expressed by another elementary school teacher:

We have strict curriculum targets, making it difficult to allocate specific time for phonological learning. (Interview, Teacher K)

Another teacher highlighted the need for support from education policies:

If the phonological method is truly important, there should be more flexible policies allowing us to allocate sufficient time to teach it. (Interview, Teacher L)

These interviews indicate that although there is a willingness to implement new strategies, structural barriers such as curriculum policies and limited time remain major obstacles. Observations show that while teachers have started applying phonology-based methods, some still struggle to adapt them to children's learning styles. Several challenges identified in classroom observations include:

- (a) Children with reading difficulties still tend to rely on memorization despite phonological exercises being provided.
- (b) Teachers face difficulties balancing phonological methods with the existing curriculum.
- (c) Some children show resistance to new methods because they are already accustomed to the old approach.

One teacher's reflection noted:

I am still looking for the best way to teach phonological awareness effectively, especially for children who are used to memorization methods. I feel that I need more practice in adjusting this method to my classroom conditions. (Reflection, Elementary School Teacher FN)

These findings align with prior research emphasizing that a phonologically rich environment significantly supports literacy development, particularly for children with dyslexia and other reading difficulties. For instance, Ehri (2020) highlights that systematic phonics instruction builds foundational decoding skills crucial for early reading. Similarly, Chambrè et al. (2020) and Bedewy (2020) demonstrate that phonological decoding enhances

word recognition and reading fluency, even among young or at-risk readers. These results also resonate with the work of Brady et al. (2021), who found that holistic phonological processing correlates with reading accuracy in dyslexic learners. According to the phonological awareness theory developed by Adams (1994), phonological skills are a fundamental aspect of mastering reading.

Additionally, the learning motivation theory by Deci and Ryan (1985) highlights that intrinsic motivation plays a crucial role in successful learning. If children do not feel motivated to read, the effectiveness of phonology-based strategies will decrease (Sameroff, 2022). Therefore, using more interactive and enjoyable approaches may be a solution to overcoming these challenges.

Thus, although phonological awareness training has improved educators' understanding, the implementation of these strategies in teaching still faces various obstacles. Further support is needed in the form of adequate resources, the development of more engaging methods for children, and curriculum adjustments to be more flexible in accommodating phonology-based strategies.

Teachers' Practices in Teaching Reading in the Classroom

Regarding teachers' practices in teaching reading, this study reveals that although most teachers have received phonological awareness training, its classroom implementation remains limited. Teachers tend to rely on traditional methods that emphasize word recognition and memorization rather than integrating more explicit phonological strategies.

An elementary school teacher stated:

I have tried to apply some phonological techniques taught in the training, but in class, sometimes the children prefer simpler ways, such as memorizing words. (Interview, Elementary School Teacher AP)

A similar sentiment was expressed by another teacher, who stated that although phonological methods have been introduced, word memorization remains the primary strategy in class:

Children recognize words they frequently see more quickly, so I use drilling methods more than a phonological approach. (Interview, Early Childhood Education Teacher SD)

Meanwhile, another elementary school teacher added:

I tried using phonological exercises such as syllable grouping, but the children take a long time to grasp the concept, so sometimes I revert to simpler methods. (Interview, Elementary School Teacher MD)

However, unlike teachers who still struggle to adapt phonological methods, some teachers with a better understanding and more experience in teaching reading have successfully implemented these

strategies. A teacher with a special education background in literacy stated:

I use a phonology-based approach systematically. By breaking down learning stages step by step, children find it easier to understand the relationship between sounds and letters. (Interview, Elementary School Teacher EF)

A similar opinion was expressed by another teacher with extensive experience in early-grade teaching:

My years of experience teaching reading have shown that a phonological approach is more effective in the long run compared to memorization. Children can recognize new words more easily when they understand the basic principles of phonology. (Interview, Elementary School Teacher AF)

A teacher with a deeper academic background in phonology also added:

I feel more confident in teaching phonology-based strategies because I understand the theory behind them. I have also developed my own phonological learning modules tailored to my students' characteristics. (Interview, Elementary School Teacher G)

In addition, some educators in community education settings are also making efforts to implement interactive strategies to enhance phonological understanding. A community education facilitator stated:

I started using sound-matching games with pictures. The children seem more enthusiastic and recognize sounds faster than before. (Interview, Community Education Facilitator E)

This statement was reinforced by another facilitator who emphasized the effectiveness of game-based approaches:

I use sound puzzles to introduce letters and words. This way, children feel like they are playing while learning. (Interview, Community Education Facilitator G)

Meanwhile, another community educator added:

I tried using phonology-based educational apps. As a result, the children are more motivated to learn using digital media. (Interview, Community Education Facilitator HA)

These findings indicate that while there is awareness of the importance of phonology-based strategies in reading instruction, many teachers still face challenges in implementing them. Indeed, learning facilitators or teachers hold a strategic role in enhancing the quality of education. (Rasyad et al., 2020). This may be due to factors such as the habit of using traditional methods, limited resources, and time constraints in learning. However, some teachers with a stronger background in literacy education and longer teaching experience

demonstrate better capabilities in effectively implementing phonological strategies.

After the training, teachers began applying various phonology-based strategies in their classrooms. Some observed changes during classroom observations include:

- (a) Teachers provided more explicit examples of phonemes before asking children to read words.
- (b) Teachers started using multisensory techniques, such as hand gestures to mark sounds, to help children understand phonological concepts.
- (c) Teachers provided more opportunities for children to practice connecting sounds with letters independently.

A teacher noted in their reflection:

I see that this method truly helps children understand the reading process. They are more engaged and feel more confident when reading because they have a clearer understanding of the sounds in words. (Reflection, Elementary School Teacher RH)

These findings align with the phonological awareness theory (Stanovich, 1986 cited in [Saiegh-Haddad et al., 2020](#)), which states that understanding the relationship between sounds and letters is fundamental to developing reading skills. Furthermore, research by [Ehri \(2020\)](#) confirms that explicit phonological strategies help children recognize and remember word patterns more effectively than mere memorization. The success of this strategy's implementation largely depends on teachers' preparedness and the availability of adequate resources ([McBride et al., 2022](#)).

Thus, while teachers are making efforts to apply phonology-based strategies, there are still challenges that need to be addressed, particularly in providing teaching materials and ongoing training. To ensure the effectiveness of phonology-based reading instruction in rural communities, a more systematic approach and sustained support for educators are required. The findings of this study suggest that phonological awareness training has had a positive impact on teachers' understanding and teaching practices in rural communities. However, the successful implementation of these strategies depends on several supporting factors that must be considered. One of the key factors contributing to educational success is a deep understanding of the individual characteristics of those involved, including learners ([Sucipto et al., 2021](#)). By identifying each individual's needs, potential, and challenges, teaching strategies can be more effectively tailored to achieve optimal educational outcomes.

One key aspect that must be strengthened is educators' continuous training. Although initial training has provided teachers with new insights into reading instruction, without systematic mentoring,

the application of phonological strategies in daily teaching may not be optimal ([Chambré et al., 2020](#)). Therefore, training programs should not be a one-time event but should be conducted regularly to allow educators to continuously improve their skills and adapt their teaching methods to students' needs. This aligns with findings from [Rasyad et al. \(2020\)](#), who found that continuous workshop implementation significantly improved the competence of non-formal learning facilitators by 17.3%, especially when supported by educational background and teaching experience.

In addition to training, the availability of more contextually relevant teaching materials is a crucial factor in the success of phonology-based reading instruction ([Haile & Mendisu, 2023](#)). Governments and educational institutions must ensure that the teaching materials used are suitable for the local language and cultural context ([Madani, 2019](#)). This way, children can better understand the materials being taught, making the learning process more effective and relevant to their environment ([Priadi, 2020](#)).

Stronger policy support is also key to optimizing the implementation of this strategy. The government needs to pay more attention to teacher training and to allocating sufficient funds for the development of teaching materials. Policies that support the inclusion of phonology-based education can help improve children's literacy quality, especially those struggling with reading ([Rodgers et al., 2022](#)).

Equally important is the community's involvement in the learning process ([Compton-Lilly et al., 2020](#)). Parents and local stakeholders play a strategic role in supporting reading instruction outside of school. By fostering close collaboration between schools, families, and communities, children can have a more comprehensive learning experience both inside and outside the school environment ([Mitchell et al., 2024](#)).

By addressing the existing challenges, phonological awareness-based approaches in rural communities can be an effective strategy for improving literacy among children with reading difficulties. The sustainability and success of this program will largely depend on the synergy between various stakeholders, including the government, educational institutions, and local communities, in creating a more supportive learning environment for children in rural communities ([Shelley-Tremblay et al., 2007](#)).

The effectiveness of community-based training is strongly influenced by the learning approach used. Research highlights that an andragogical approach, which emphasizes active participation and experiential learning, is particularly relevant for training community educators ([Rasyad, 2016](#)). Additionally, training quality is shaped by key factors such as instructor competence, availability of

facilities and modules, material relevance, and the initial quality of participants (Rasyad et al., 2019). Involving parents also requires practical, context-sensitive training, especially for families from disadvantaged backgrounds, to help them support character and literacy development at home (Rasyad, 2015). Considering these aspects, phonological awareness training in rural areas should be adaptive, participatory, and contextualized to effectively empower educators and families in supporting children with reading difficulties.

CONCLUSION AND IMPLICATIONS

This study investigates how teachers responded to the phonological awareness training. It was conducted because phonological awareness plays a crucial role in reading instruction, especially for children with learning difficulties in rural communities. Although educators in rural areas recognize the importance of phonological awareness, they face several challenges in its implementation, such as limited explicit teaching strategies, a lack of appropriate teaching materials, and difficulties in increasing children's motivation and reading independence. The training provided has improved educators' understanding and confidence, but they still struggle to systematically implement these strategies in reading instruction.

The implications of these findings highlight the need for more systematic and sustainable training programs for educators in rural communities, across formal, non-formal, and informal education sectors. These training programs should be supported by policies that integrate phonology-based approaches into teacher training curricula and provide adequate resources. Such support will enhance the effectiveness of reading instruction in rural communities, particularly for children with learning difficulties, thereby improving literacy skills among children in areas with limited access to education.

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