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Preschool and Kindergarten Teachers' Self-Reported Phonological Awareness Strategies and Challenges in Teaching English Learners

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Abstract

This study investigates the phonological awareness strategies and challenges of preschool and kindergarten teachers in teaching English learners (ELs). Using a mix method survey design, we analyzed 57 responses. Quantitatively, we examined teachers' use of best practices established in the literature. Qualitatively, we explored the specific strategies, challenges, and tools teachers used in the classroom. The results showed that 80% of teachers reported providing direct phonological awareness instruction daily or almost every day. However, some preschool teachers used implicit phonological awareness and rarely incorporated blending and segmenting practices. Teachers encountered challenges including language and cultural barriers, the need for developmentally appropriate and engaging materials, and support from districts and parents. Teachers desired explicit lessons, culturally relevant materials, and comprehensive toolkits. The findings underscore the needs for tailored training and resources for early childhood educators and their ELs, aiming to bridge the gap between evidence-based literacy practices and classroom implementation.

Keywords: phonological awareness, English learners, preschool, kindergarten

1. Introduction

Teachers' content and pedagogical content knowledge influence classroom practices, including what and how students learn. Kind and Chan (2019) emphasize the role of this knowledge in teachers' instructional practices and decision-making processes. Teachers choose a specific strategy based on their content and pedagogical content knowledge. In other words, teachers' instructional strategies relate to the knowledge, which directly influences children's literacy outcomes. The outcomes include expressive vocabulary, children's print knowledge, letter naming, and phonological awareness (Piasta et al., 2020). It is important for teachers to implement evidence-based practices, however, Wijekumar et al. (2019) found that teachers' reported reading comprehension strategies were not aligned with the recommendations of the National Reading Panel (NPR, 2000). Because of this discrepancy, it is important to investigate and address what strategies teachers reported and what evidence-based practice recommend.

For effective literacy instruction, understanding the components of reading is important. According to Gough and Tunmer (1986), decoding and language comprehension are the main components for reading success. This means that reading comprehension can be accomplished only when students have both decoding and language comprehension together (Gough & Tunmer, 1986). Decoding as code-based skills along with phonological awareness and sight word recognition is particularly important in the early literacy development (Gough & Tunmer, 1986; Scarborough, 2001). Phonological awareness is the ability to detect, segment, and manipulate the sounds in language, including words and syllables (large language units) and phonemes (small language units). Phonemic awareness is a subset of phonological awareness in which children manipulate individual sounds in spoken words (NPR, 2000). Building upon Gough and Tunmer's work, the NPR (2000) identified five components for reading success, including phonemic awareness, phonics, fluency, vocabulary, and comprehension. While the NPR did not address English learners (ELs), understanding and implementing these components are crucial for fostering literacy skills for ELs (August & Shanahan, 2006; Goldenberg, 2010).

The continuously increasing number of ELs is not new. Currently, 10% of the total K-12 student population is ELs (U.S. Department of Education, 2017). In Head Start, 29% of children speak a language other than English at home (Baker & Páez, 2018). Such growing number of ELs requires teachers to meet the needs of and effectively teach ELs. Addressing student

diversity and meeting their educational needs are challenges for teachers (Lew & Nelson, 2016). In Sullivan et al. (2015), teachers reported that they were insufficiently prepared to provide effective literacy instruction for ELs. Therefore, it is critical to explore the challenges teachers face when teaching ELs to offer support and enhance student learning.

The purpose of the study is to investigate preschool and kindergarten teachers' phonological awareness instruction and challenges in teaching ELs through self-reported surveys. Self-reported strategies can be a lens to explore teachers' content and pedagogical content knowledge, which relates to teaching approaches, including teaching methods, lesson planning, and further student learning (Guerriero, 2017). Teachers' reports about their practices are a starting point for comprehending the content of early literacy and examine its effectiveness (Burgess et al., 2001). With this investigation, we aim to prioritize needs for teacher professional development (PD) to improve early literacy instruction and alleviate challenges. The importance of tailored PD to meet teachers' needs has been addressed in the previous studies (e.g., Shelton et al., 2023). Discussed the research problems above- 1) misalignment between what teachers reported as effective strategies and what evidence-based practices suggest and 2) importance of investigating teachers' challenges- are aligned with the significance of developing tailored PD.

The research questions are: RQ1. What strategies do preschool and kindergarten teachers use to enhance ELs' phonological awareness? RQ2. What challenges do preschool and kindergarten teachers face when teaching ELs?

1.1 Significant of the Study

This study can address a gap in teacher preparation and instructional practices and contribute to the important discussion on evidence-based practices in literacy instruction by examining teacher-reported strategies and evidence-based recommendations. With knowing what challenges teachers have in teaching ELs, we can offer teachers targeted support. Lastly, this study can inform PD providers in designing more tailored trainings to enhance teachers' knowledge related to phonological awareness and EL instruction.

2. Literature Review

2.1 Self-reported Strategies in Teaching Phonological Awareness for Preschool and Kindergarten Children

This section presents preschool and kindergarten teachers' self-reported practices in teaching phonological awareness. In addition, only studies with teachers' self-reported strategies are included here because there is a discrepancy between what teachers report and what they do in the classroom (Cunningham et al., 2009).

Many teaching strategies we identified were focused on phonological awareness including syllable and rhyming activities. Phonological awareness and letter sound knowledge are the strongest predictors of how students learn to read (Carson et al., 2019). O'Leary et al. (2010) found that preschool teachers encouraged children to clap out the syllables in their names. In Weadman et al. (2023), preschool teachers used rhyming tasks such as pointing out rhyming words in books, encouraging onset-rime games, and playing nonsense rhyme games; however, only a few teachers reported that they implemented rhyming activities.

Teachers also reported phoneme activities. O'Leary et al. (2010) found that preschool teachers encouraged children to identify initial and final sounds of familiar words (see also Weadman et al., 2023). Such phoneme activities aligned with preschool curricula. Content analysis of preschool curricula (e.g., Teaching Strategies and High Scope) shows a focus on identifying initial sounds, listening, and rhyming, but less focus on phonemic awareness skills such as blending and segmentation (Skibbe et al., 2016).

Lastly, letter-sound correspondence is critical in reading. To master the letter-sound correspondence, children must have phonological awareness skills and be able to recognize individual sounds in spoken words (Baker et al., 2018). However, Burgess et al. (2001) show a lack of effort to promote young children's letter-sound knowledge, such as letter naming, letter production, and mapping sounds to letters. Similarly, few preschool teachers said that they implemented activities related to phoneme-grapheme correspondence and concept of print (Weadman et al., 2023). O'Leary et al. (2010) found that teachers were confused regarding whether letter sounds should be taught before, after, or at the same time a letter name is presented.

According to Gillon (2004), children develop their phonological awareness as early as three years old. More complex phonemic-level knowledge often develops between five and seven years of age (Paulson, 2004). Considering the studies discussed above are conducted with preschool teachers, less phonemic activities and more syllable and onset-rime activities seem appropriate for preschool children. However, letter-sound knowledge and activities such as categorizing spoken words by sound patterns, categorizing printed words by spelling patterns, or comparing word parts in printed words should be introduced and practiced in early years (Burgess et al., 2001). Moreover, some studies showed positive results of phonemic awareness instruction with preschoolers, such as Carson et al. (2019) and Goldstein et al. (2017).

2.2 Teacher Challenges in Teaching ELs

The ways of improving ELs' academic achievement have been discussed for decades. However, limited studies have been

conducted to explore challenges that teachers of ELs face in the classroom. Additionally, there is a dearth of studies that have systematically categorized the challenges in daily teaching practices for ELs (Khong & Saito, 2014). Previous studies discussed four main challenges teachers of ELs experience: 1) difficulties in communication with ELs' parents and Els; 2) insufficient time to meet ELs' needs: 3) the wide range of English proficiency, academic skills, and backgrounds ELs bring into the classroom; and 4) inadequate support from district resources and policies.

Language differences can cause miscommunication between teachers, ELs and their parents, further negatively impacting cultural background and values (Khong & Saito, 2014). Gándara et al. (2005) surveyed K-12 teachers and found the most significant challenge teachers reported was communication with ELs' parents. O'Brien (2011) found that language barriers between teachers and ELs were the most significant obstacle in social studies instruction.

The next challenge we identified was that teachers struggled with a lack of time and training to both teach ELs the regular curriculum and help them develop their English language skills. ELs learn both English and content knowledge simultaneously so they may need extra time and support to complete tasks (Khong & Saito, 2014). However, teachers reported difficulties providing small group instruction and scaffolding for ELs to meet their needs within the regular curriculum, while also responding to other students' needs (Gándara et al., 2005). Similarly, teachers were unable to devote time to make adjustments and provide differentiated instruction for ELs due to tight schedules (Cho & Reich, 2008). It has been argued that teachers' inability to modify coursework and materials is because of insufficient teacher training and professional development (O'Brien, 2011; Shelton et al., 2023).

Third, teachers experienced difficulties in dealing with ELs' varied English proficiency, academic skills, and backgrounds. Some ELs had formal education and academic skills, which helped them to build background knowledge, while some just entered the U.S. without these experiences and knowledge. Teachers are required to address the wide range of differences both ELs and non-ELs bring into the classroom (Gándara et al., 2005). According to Cho and Reich (2008), teachers adjusted their speech rate for ELs; however, they rarely provided different tasks and instructional materials. ELs' lack of background knowledge and English proficiency impeded their class participation and success in content areas (Cho & Reich, 2008; Duff, 2001).

Lastly, Gándara et al. (2005) point out inadequate support from district resources and policies. For example, the curriculum is neither culturally responsive (de Jong & Harper, 2005) nor adequately designed to draw ELs' interest and address varied English language development (Gándara et al., 2005). There are concerns about EL classification and assessment (Cho & Reich, 2008; Gándara et al., 2005) and identifying ELs that are inconsistent with the lack of common and consistent criteria (Short & Fitzsimmons, 2007).

3. Methods

Our study employs a mixed method survey design. The quantitative component of the survey allows us to probe preschool and kindergarten teachers use of best practices established in the literature. However, a quantitative approach alone cannot tell us how teachers are incorporating these methods in their classrooms, nor the nuanced challenges they face. Because of this, we include several free response items that probe the specific strategies, challenges, and tools that teachers use when teaching phonological awareness. By including the qualitative component, we gain a better understanding of teacher's attitude toward these educational practices and how they are implemented in the classroom. The combined insight of a mixed method design allows for informed decision making during this professional development needs assessment (Creswell & Plano Clark, 2018).

3.1 Survey Design

Survey items were developed by early childhood education faculty after reviewing previous studies related to effective early reading instruction for ELs on the What Works Clearinghouse (Institute of Education Sciences, n.d.). Each survey item was extracted from individual studies that WWC presented from Strong (Tier 1) to Promising (Tier 3) evidence. The items were then submitted to a cognitive interview with a kindergarten EL teacher, who provided feedback. Items were adjusted for clarity based on this feedback before being programmed into Qualtrics for distribution.

There were ordinal scale choice-select items and free response items about the frequency that teachers engaged in specific instructional behaviors of EL phonological awareness instruction. An example of a choice select question is "How often do you model the English sound of letters for your students?" with responses "Daily," "Almost every day," "2-3 days a week," "Once a week," or "Not at all." Teachers were asked free response questions about specific strategies they found successful, what challenges they faced, what tools would help them, and what professional development would help them in that area. Respondents were also asked to provide background characteristics, including gender, race/ethnicity, years of experience as an educator, and the grade they teach. In this study, we focused on the 15 items related to phonological awareness, reproduced in Table 1.

Table 1. Phonological Awareness Items

Item	How often do you…
1	Provide direct phonological instruction.
2	Model the English sound of letters for my students.
3	Explicitly point out different letter combinations that have the same sound.
4	Provide exposure to rhyming and alliteration.
5	Teach sentence segmentation.
6	Teach segmenting compound words.
7	Teach the manipulation of words at the sound level.
8	Teach blending and segmenting words at the syllable level.
9	Provide EL students with strategies for blending words.
10	Provide multiple opportunities within lessons for my students to blend and segment words.
11	Use physical movement to teach phonological awareness.
12	Use auditory cues with my EL students that show them movement from one sound to the next.
13	Use Elkonin boxes or colored tiles/papers with my students to segment words into sounds or syllables.
14	I teach letter sounds within words.
15	I teach word families and word patterns.

3.2 Survey Analysis

Participants were permitted to skip questions. To check whether there was a pattern to the non-responses, Little's (1988) Missing Completely at Random (MCAR) test was applied to the survey using the "naniar" package (Tierney & Cook, 2023) in R (R Core Team, 2023). We are interested in item-level response patterns and if there are differences between the kindergarten and preschool groups. Due to the ordinal nature of our data and our small sample size, we used Fisher's Exact Test using R statistical software (R Core Team, 2023) to evaluate the independence of group responses for each survey item. Significant results indicate differing response patterns between groups, making this test a suitable choice for our study's specific data characteristics. To control our family-wide error rate, we applied a Holm-Bonferroni correction to each p-value and compared the adjusted p-value to alpha of .05 to determine statistical significance.

Item responses were then cross-tabulated, and the proportion of each response selection was calculated as a percent (i.e., "Daily: 27%," "Almost every day: 42%," etc.). Calculations were made for both the overall sample and for preschool and kindergarten separately. Similarly, open response items were analyzed both overall and as preschool and kindergarten separately to uncover themes related to the strategies teachers use for elements of EL instruction, the challenges they encounter when implementing those strategies, and the differences, if any, between preschool and kindergarten classroom practices. Coding was a rigorous and iterative process. We leveraged both deductive and inductive approaches to analyze the data. Deductively, we employed thematic analysis techniques to guide coding and develop themes (Hsieh & Shannon, 2005). Deductive codes were based on general survey constructs (Qutoshi, 2018). Inductively, we refined the code book to capture emergent themes. Finally, the choice-select and open response items were analyzed in tandem.

3.3 Research Sample

1. Data Collection

After obtaining research approval from a school district in the southwest United States, surveys were distributed to preschool and kindergarten teachers via a State Department of Education and by contacting principals directly. The survey was open for two months, and 146 surveys were attempted. 88 were marked as not finished and were removed listwise. 1 remaining survey was removed for non-consent, leaving 57 (39.0%) surveys for analysis. The survey was estimated to take 15-20 minutes, and the median time taken was 15.48 minutes. The survey was voluntary, and participants were not compensated for participation.

2. Participant Demographics and Characteristics

Participant characteristics, including gender, race, years of experience as a teacher, and grade taught were captured in the survey (see Table 2). There were 57 teachers, including 26 preschool and 31 kindergarten teachers, with 56% of teachers having more than 11 years of teaching experience. Teachers with less than 5 years of teaching experience were 21%. Teachers were predominantly female, 93%, and White, 61%.

Table 2. Demographic Characteristics of Participants (N = 57)

Characteristic	Count	Percentage (%)
Gender		
-Female	53	93.0
-Male	4	7.0
Race		
-White	35	61.4
-Hispanic or Latino/a/x	9	15.8
-Black or African American	5	8.8
-Asian or Pacific Islander	4	7.0
-Native American or American Indian	1	1.7
-Two or more races	2	3.5
-Other	1	1.7
Years of Experience as an Educator		
-Less than 1 year	1	1.7
-2 years	2	3.5
-3 - 5 years	9	15.8
-6 - 10 years	13	22.8
-11 - 15 years	6	10.5
-16 - 20 years	11	19.3
-More than 20 years	15	26.3
Grade Taught		
-Kindergarten	31	54.4
-Preschool	26	45.6

Note: Percentages have been rounded to the nearest tenth.

4. Results

4.1 Phonological Awareness Survey Quantitative Results

Some participants did not answer all items. Little's MCAR test (Little, 1988) indicated that missing responses are missing completely at random ($\chi^2=1487$, $df=443$, $p< .05$), allowing for item-level listwise exclusion in the analysis. The 15 phonological awareness items were then submitted to Fisher's Exact Test, with teaching grade (preschool or kindergarten) as the grouping variable. The p-values were then adjusted using the Holm-Bonferroni method. 9 of the 15 items were statistically significant (Table 3). Item responses were then cross-tabulated, and the proportion of each response selection was calculated as a percent. Results of the cross-tabulations can be found in Table 4 in the Appendix.

Table 3. Fisher's Exact Test Results with Holm-Bonferroni Correction

Item	Unadjusted p-value	Adjusted p-value*	Significant**
1	0.063	0.189	No
2	0.133	0.267	No
3	0.321	0.321	No
4	0.028	0.166	No
5	0.003	0.030	Yes
6	0.029	0.166	No
7	0.006	0.040	Yes
8	0.004	0.031	Yes
9	< .001	0.001	Yes
10	< .001	< .001	Yes
11	0.001	0.015	Yes
12	0.002	0.019	Yes
13	0.003	0.030	Yes
14	0.045	0.179	No
15	0.002	0.021	Yes

**Holm-Bonferroni adjustment*

***Adjusted p-value < 0.05 indicates significance*

4.2 Teacher Strategies in Teaching Phonological Awareness for Preschool and Kindergarten Children

Overall, 80% of preschool and kindergarten teachers reported daily or almost every day providing direct phonological awareness instruction. The most common strategy both teachers used was modeling the English sound of letters for students, 92%. The least used strategy of both teachers was Elkonin boxes or colored tiles to segment words into sounds or syllables, 30%. The most common strategies preschool teachers used included teaching letter sounds within words (64%) and providing exposure to rhyming and alliteration (65%). Kindergarten teachers' the most common strategies included using physical movement to teach phonological awareness (96%), providing multiple opportunities within lessons for my students to blend and segment words (93%), and teaching letter sounds within words (93%). The least common strategies preschool teachers used included providing EL students with strategies for blending words (27%) and word families (e.g., cat, bat, mat, 19%). For kindergarten teachers, teaching segmenting compound words (61%) was the least common strategy.

There were notable differences in the response patterns of the kindergarten and preschool teachers on the phonological awareness strategies. For example, the percentages of daily or almost daily teaching blending and segmenting words at the syllable level were 81% kindergarten and 31% preschool teachers. Similarly, providing EL students with strategies for blending words was 84% kindergarten and 27% preschool teachers. Providing multiple opportunities within lessons for students to blend and segment words was 93% kindergarten and 23% preschool teachers.

In written responses, teachers reported using songs and games to support student-centered instruction. As one respondent explained, "Games, songs, iready, and videos. Basically anything that is not me the teacher. It gives a consistent visual and ways to practice phonological awareness." Teachers listed Heggerty as a successful strategy. One preschool teacher stated the following:

> We use Heggerty in the morning and stretch and blend words, listen for rhyming words, use the letters we know to write words, etc. all day long in play and in direct instruction. This is my focus because they need to hear the sounds so they can use the symbols to read and write. I also teach letter sounds as well as letter naming. I teach them together. We use Spanish to explain things to students who have had no English language exposure. All of this helps our students-all of them.

Teachers' knowledge about Spanish can be valuable. One teacher stated, "pointing out or connecting the letter to the Spanish sound to help so they can make letter approximations. Connecting the letter and word to known words and letters help as well." However, there was a concern about teaching phonological awareness to their preschoolers by stating

"3-year-old students are not necessarily ready for this type of learning. They do not have learning to learn behaviors. "My first couple of months of the school year are spent teaching proper learning behaviors." Another preschool teacher believed that just talking with students would help the students develop phonological awareness.

4.3 Teacher Challenges in Teaching ELs

4.3.1 Language and Culture

Many teachers bring up challenges they face when they do not understand their students' native languages and backgrounds. As one preschool teacher stated, "To be successful I link background knowledge and culture to learning." Similarly, one kindergarten teacher said their challenges include "curriculum pacing and requirements that don't include culturally relevant and authentic text interactions to introduce vocabulary in a variety of contexts." Others focused on students' English level. One teacher stated, "My preschool students do not even know most of the basic vocabulary words so it limits what words I can teach," and another stated "the students sometimes do not understand what I am saying even when showing a visual." There were also concerns about home language being a barrier to studying English. One teacher stated they struggle "finding appropriate home language pronunciation and visual aids that depict the word/vocabulary being taught," and another stated "They are learning hearing Spanish at home and English at school, so they become confused."

4.3.2 Developmentally Appropriate and Engaging Materials for ELs

Teachers overwhelmingly reported the need for materials that are ready to use in a specific lesson with specific strategies. For example, they want "explicit lessons and activities, pre-prepped," such as "[m]aterials that are well suited for 'read-aloud' and "illustrations, realia, photos, things students can actually feel and see." Another teacher lamented the challenges of "coming up with pictures that students can look at and understand." A teacher requested that vocabulary training "give practical tools for teaching vocabulary."

Specifically, teachers reported a need for age-appropriate training, strategies, and materials. Comments included a call for "training geared specifically for early childhood teachers." Another called for "anything aimed towards young students," and yet another asked for "a complete toolkit/set that matches what EL students at each level are expected to know would be nice." These comments suggest that existing training materials may be abundant but not be suitable for the needs of early childhood populations.

Teachers reported the need for engaging strategies. One teacher stated "[there is a] lack of engaging lessons, the lessons become monotonous after a while," As early childhood teachers, they valued fun and play-based strategies. One stated, "as a teacher I always promote classroom interaction with engagement strategies for my instruction," while others, "most of our instruction occurs during play sessions." Teachers believed that developmentally engaging strategies could help young children's learning.

4.3.3 Time Management

Teachers reported a lack of time to meet individual ELs' needs due to insufficient support from school and district and the busy nature of curricula. One teacher stated "we are on a bit of a time crunch with all subjects, and the recommendation from school and district staff is to teach it as it comes up, but this can make it more difficult for non-native speakers at times." The lack of support from school and district can include insufficient materials and an overwhelming number of students in a class. One teacher explained, "When they tell us to bring in materials to illustrate vocabulary, but do not provide the materials, a budget to buy them, or I don't even have enough time to find all the pictures to accompany it, it becomes frustrating." One kindergarten teacher stated "The biggest specific challenge is just the amount of students - in kindergarten all students are English Language Learners to a degree. Tracking data, changing groups, monitoring progress for 28 children is just an unmanageable task." Many teachers suggested additional personnel are necessary to adequately support ELs, "[We need] Personnel support, bring in someone to assess our kids so we can focus on teaching," and "I feel like I do a ton of work to show that students need more intensive intervention and I then the students never even get observed or tested to see if they could benefit from an IEP."

4.3.4 Support from Home

Some teachers struggle to have students engage in activities outside of the classroom, as evidenced by one teacher who said, "The challenges that I face are that my students' parents will not enforce this at home," and another who stated "students not practicing my recorded lessons at home." A lack of home support led to a prominent challenge in student attendance. One teacher reported their main challenge was "many students being absent every day." Another stated "Another challenge is attendance. something I want to do every week and the student is out on Mondays and Fridays all year! It's a rotating door of withdrawals and registrations. As soon as I get close the student moves... UGH!"

5. Discussion

The purpose of the study is to investigate preschool and kindergarten teachers' phonological awareness instruction and challenges in teaching ELs through self-reported surveys. Through this investigation, the study aims to prioritize needs that teacher professional development should address to improve instructions for early literacy and to alleviate challenges.

5.1 Teacher Strategies in Teaching Phonological Awareness for Preschool and Kindergarten Children

Overall, most preschool and kindergarten teachers in our study reported their daily phonological awareness instruction. Kindergarten teachers consistently described a wide range of strategies they implemented. This might be because a district-wide phonological awareness curriculum kindergarten teachers provided. The lowest strategy kindergarten teachers reported was the use of Elkonin boxes. Elkonin boxes can help students segment words into sounds and then blend them. Students can focus on the number of phonemes in the word, not letters. When using the boxes with letters, it helps students in decoding and spelling. Using Elkonin boxes can reinforce grapheme-phoneme correspondences (NRP, 2000). If the use of Elkonin boxes is missed in the district phonological awareness curriculum, supplementary materials to promote the strategy are necessary.

Most preschool teachers reported that they provided direct phonological awareness instruction, even though this was a lower number than kindergarten teachers. Our study showed that preschool teachers paid the greatest attention to letter-sound relationships, which was inconsistent with Burgess et al. (2001). Other common practices were teaching letter sounds within words and rhyming and alliteration. Rhyming activities were the most strategies preschool teachers used in O'Leary et al. (2010), but not in Weadman et al. (2023). Interestingly, our study showed that more preschool teachers implemented manipulation of words at the sound level than blending and segmenting words at the syllable level. This was surprising because of three reasons: first, sound manipulation is more difficult for young children than segmenting syllables. This does not mean that preschoolers are unable to learn sound manipulation. However, teachers need to pay attention to individual students and ELs who may need progression from syllable levels (larger units) to sound levels (smaller units of language) or from identifying first and last sounds to manipulating sounds (e.g., deletion, substitution). Second, sound manipulation was an uncommon strategy of phonemic awareness instruction that preschool teachers used. Most phonemic awareness strategies preschool teachers use include identifying initial and final sounds of words (O'Leary et al., 2010; Weadman et al., 2023). Third, the lack of blending and segmenting instruction our preschool teachers used aligned with the previous studies (see Weadman et al., 2023). NRP (2000) emphasized the importance of blending and segmentation for reading outcomes. In the meta-analysis of phonemic awareness instruction, Rice et al. (2022) found that studies with blending and segmenting instruction showed a larger effect than phoneme identification, isolation, and manipulation. Phonological awareness instruction with blending and segmentation is one of the most important strategies, however, many preschool teachers overlooked it.

We found that preschool teachers' beliefs impacted their reported phonological awareness instruction. Some thought preschoolers were too young for phonological awareness instruction. However, many studies demonstrated that preschoolers showed great improvement in phonological and phonemic awareness. For example, Carson et al. (2019) showed preschoolers' improvement in rhyme oddity, initial phoneme identity, final phoneme identity, phoneme blending, and phoneme segmentation. Similarly, preschoolers gained blending, segmenting, word part identification, and first sound identification skills in Goldstein et al. (2017).

Our study showed that some preschool teachers believed that implicit phonological awareness instruction (e.g., interaction and talking) was sufficient. However, NRP (2000) argues why talking and reading aloud are insufficient to distinguish individual phonemes by stating, …spoken language is seamless; there are no breaks in speech signaling where one phoneme ends and the next one begins. Rather, phonemes are folded into each other and are articulated. Discovering phonemic units requires instruction to learn how the system works (p. 2).

5.2 Preschool and Kindergarten Teachers' Challenges When Teaching ELs

Previous studies identified four challenges that teachers of ELs encountered: 1) difficulties in communication with ELs' parents and ELs, 2) insufficient time to meet ELs' needs, 3) the wide range of English proficiency, academic skills, and backgrounds ELs bring into the classroom, and 4) inadequate support from district resources and policies. Teachers in our study highlighted similar concerns and challenges. Consistent with previous research, language barriers between ELs' parents (Gándara et al., 2005) and ELs (O'Brien, 2011) were significant obstacles for teachers. In addition, teachers in our study noted challenges related to culture. These challenges included the absence of culturally relevant and authentic texts for ELs as well as difficulties in connecting instructions to ELs' background knowledge and understanding how ELs think, learn, and behave. According to Bronfenbrenner (1974), individual development and learning are influenced by the environment, from the immediate family setting to broader community contexts. Rogoff and her colleagues provided insights into how culture can affect children's attention and participation (e.g., Silva et al., 2010).

Furthermore, the National Association for the Education of Young Children (NAEYC) encourages educators to seek information from the families and community to understand and support children's learning and development. Without a solid understanding of ELs and their immediate environment, teachers may misinterpret ELs' behavior and approach to learning. Curriculum that is often developed based on Western norms (typically White, middle-class, monolingual English-speaking), which do not necessarily consider the cultural and linguistic diversity of children from various backgrounds (NAEYC, 2020). To effectively support ELs' learning, it is essential to leverage their linguistic strengths and cultural funds of knowledge in their reading instruction (Shelton et al., 2023).

In line with previous research, time management issues were highlighted in our study. These challenges were attributed to tight schedules (Cho & Reich, 2008) and the diverse needs of individual students (Gándara et al., 2005). Teachers in our study also emphasized that the lack of support from schools and districts contributed to time management challenges, such as the inability to monitor all students' learning progress and create developmentally appropriate and engaging materials. Due to time constraints, many teachers in our study expressed a need for pre-prepared materials and comprehensive toolkits ready for instructional use. However, Shelton et al. (2023) argue that teachers' ability to make instructional decisions integrating knowledge of ELs' language and literacy development is crucial. These abilities can be enhanced through participation in effective professional development programs (Shelton et al., 2023). Nonetheless, teachers in our study indicated a preference for more completed toolkits over professional development opportunities.

Finally, teachers in our study highlighted the importance of parental support for their children's education and school attendance. Poor attendance patterns have been linked to lower academic performance (Morrissey et al., 2014). To enhance students' attendance rates, schools should actively involve families. According to Galindo and Sheldon (2012), schools that engage and communicate effectively with families' experience increased family involvement in schools and higher academic achievement levels among kindergarteners.

6. Conclusion

We aimed to identify the gap in phonological awareness strategies between evidence-based practices and what preschool and kindergarten teachers reported. We found that preschool teachers appear to need training in explicit and systematic instructions for early literacy and code-based skills through professional development. The challenges teachers faced in teaching ELs shared similarities with previous studies; however, our study also highlighted issues related to culturally responsive teaching and attendance. By using self-reported surveys, we can gain insight into teachers' content and pedagogical knowledge (Burgess et al., 2001; Guerriero, 2017). Nonetheless, there may be discrepancies between what teachers report and what they practice in the classroom.

We conducted a needs assessment survey to identify teachers' current early literacy classroom practices and their needs. The results have been utilized to offer tailored support and professional development. We suggest that districts heed teachers' feedback and provide focused support to enhance teacher strategies and foster the learning of ELs to address the gaps and challenges. Early support for teachers during students' early childhood years increases the likelihood of implementing responsive teaching and aiding students, including ELs, in developing literacy skills for subsequent grades. Foundational early literacy skills are crucial for academic success.

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Authors contributions

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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No additional data are available.

References

August, D., & Shanahan, T. (Eds.). (2006). Executive summary. Developing literacy in second-language learners: Report of the National Literacy Panel on Language-Minority Children and Youth. *Mahwah*, NJ: Lawrence Erlbaum. Available at: http://www.cal.org/natl-lit-panel/reports/Executive_Summary.pdf

Baker, M., & Páez, M. (2018). *Dual language learners in Head Start, public pre-K, and private preschool programs.* Washington DC: Migration Policy Institute.

Baker, S. K., Santiago, R. T., Masser, J., Nelson, N. J., & Turtura, J. (2018). *The Alphabetic Principle: From Phonological Awareness to Reading Words.* Washington, DC: U.S. Department of Education, Office of Elementary and Secondary Education, Office of Special Education Programs, National Center on Improving Literacy. Retrieved from http://improvingliteracy.org

Bronfenbrenner, U. (1974). Developmental research, public policy, and the ecology of childhood. *Child Development, 45*(1), 1-5. https://doi.org/10.2307/1127743

Burgess, K. A., Lundgren, K. A., Lloyd, J. W., & Pianta, R. C. (2001). Preschool teachers' self-reported beliefs and practices about literacy instruction. *Center for Improvement of Early Reading Achievement*. University of Michigan-Ann Arbor.

Carson, K. L., Bayetto, A. E., & Roberts, A. F. B. (2019). Effectiveness of preschool-wide teacher-implemented phoneme awareness and letter-sound knowledge instruction on code-based school-entry reading readiness. *Communication Disorders Quarterly, 41*(1), 42-53. https://doi.org/10.1177/1525740118789061

Cho, S., & Reich, G. A. (2008). New immigrants, new challenges: High school social studies teachers and english language learner instruction, *The Social Studies, 99(*6), 235-242. https://doi.org/10.3200/TSSS.99.6.235-242

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and Conducting Mixed Methods Research* (3rd ed.). Thousand Oaks, CA: SAGE.

Cunningham, A. E., Zibulsky, J., & Gallahan, M. D. (2009). Starting small: Building preschool teacher knowledge that supports early literacy development. *Reading and Writing, 22*, 487-510. https://doi.org/10.1007/s11145-009-9164-z

De Jong, E. J., & Harper, C. A. (2005). Preparing mainstream teachers for English language learners: Is being a good teacher good enough? *Teacher Education Quarterly, 32*, 101-124. https://files.eric.ed.gov/fulltext/EJ795308.pdf

Duff, P. A. (2001). Language, literacy, content, and (pop) culture: Challenges for ELLs in mainstream courses. *The Canadian Modern Language Review 58*(1), 103-32. https://doi.org/10.3138/cmlr.58.1.103

Galindo, C., & Sheldon, S. B. (2012). School and home connections and children's kindergarten achievement gains: The mediating role of family involvement. *Early Childhood Research Quarterly, 27*(1), 90-103. https://doi.org/10.1016/j.ecresq.2011.05.004

Gándara, P., Maxwell-Jolly, J., & Driscoll, A. (2005). Listening to teachers of English language learners: A survey of California teachers' challenges, experiences, and professional development needs. *The Center for the Future of Teaching and Learning.* Santa Cruz: CA.

Gillon, G. T. (2004). *Phonological awareness: From research to practice*. Guilford Press.

Goldenberg, C. (2010). Reading instruction for English language learners. In M. Kamil, P. D. Pearson, E. Moje, & P. Afflerbach (Eds.). *Handbook of Reading Research, Vol. IV*. Newark, DE: International Reading Association.

Goldstein, H., Olszewski, A., Haring, C., Greenwood, C. R., McCune, L., Carta, J., … & Kelley, E. S. (2017). Efficacy of a supplemental phonemic awareness curriculum to instruct preschoolers with delays in early literacy development. *Journal of Speech, Language, and Hearing Research, 60*(1), 89-103. https://doi.org/10.1044/2016_JSLHR-L-15-0451

Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education, 7*(1), 6-10. https://doi.org/10.1177/074193258600700104

Guerriero, S. (2017). Pedagogical knowledge and the changing nature of the teaching profession, *Educational Research and Innovation*, OECD Publishing, Paris. https://doi.org/10.1787/9789264270695-en

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277-1288. https://doi.org/10.1177/1049732305276687

Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. (n.d.). What Works Clearinghouse. *U.S. Department of Education*. Retrieved from https://ies.ed.gov/ncee/wwc/

Khong, T. D. H., & Saito, E. (2014). Challenges confronting teachers of English language learners. *Educational Review, 66*(2), 210-225. https://doi.org/10.1080/00131911.2013.769425

Kind, V., & Chan, K. (2019). Resolving the amalgam: connecting pedagogical content knowledge, content knowledge and pedagogical knowledge. *International Journal of Science Education, 41*(7), 964-978. https://doi.org/10.1080/09500693.2019.1584931

Lew, M. M., & Nelson, R. F. (2016). New teachers' challenges: How culturally responsive teaching, classroom management, & assessment literacy are intertwined. *Multicultural Education, 23*(3-4), 7-13 https://files.eric.ed.gov/fulltext/EJ1119450.pdf

Little, Roderick J. A. (1988). A test of missing completely at random for multivariate data with missing values." *Journal of the American Statistical Association 83*(404), 1198-1202. https://doi.org/10.1080/01621459.1988.10478722.

Morrissey, T. W., Hutchison, L., & Winsler, A. (2014). Family income, school attendance, and academic achievement in elementary school. *Developmental Psychology, 50*(3), 741-753. https://doi.org/10.1037/a0033848

National Association for the Education of Young Children. (2020). *Developmentally appropriate practice: A position statement of the National Association for the Education of Young Children*. https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/position-statements/dap-statement_0.pdf

National Reading Panel. (2000). Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. https://www.nichd.nih.gov/publications/product/247

O'Brien, J. (2011). The system is broken and it's failing these kids: High school social studies teachers' attitudes towards training for ELLs. *Journal of Social Studies Research, 35*, 22-38.

O'Leary, P., Cockburn, B. M., Powell, D., & Diamond, K. (2010). Head Start Teachers' Views of Phonological Awareness and Vocabulary Knowledge Instruction. *Early Childhood Education Journal, 38,* 187-195. https://doi.org/10.1007/s10643-010-0394-0

Paulson, L. (2004). *The development of phonological awareness skills in preschool children: From syllable to phonemes*. [Ed.D. Dissertation, University of Montana]. UM Campus Repository. https://scholarworks.umt.edu/cgi/viewcontent.cgi?article=10558&context=etd

Piasta, S. B., Ramirez, P. S., Farley, K. S., Justice, L. M., & Park, S. (2020). Exploring the nature of associations between educators' knowledge and their emergent literacy classroom practices. *Reading and Writing, 33*(6), 1399-1422. https://doi.org/10.1007/s11145-019-10013-4

Qutoshi, S. B. (2018). Phenomenology: A Philosophy and Method of Inquiry. *Journal of Education and Educational Development*, *5*(1), 215. https://doi.org/10.22555/joeed.v5i1.2154

R Core Team. (2023). R: A language and environment for statistical computing. *R Foundation for Statistical Computing.* https://www.R-project.org/

Rice, M., Erbeli, F., Thompson, C. G., Sallese, M. R., & Fogarty, M. (2022). Phonemic awareness: A meta-analysis for planning effective instruction. *Reading Research Quarterly, 57*(4), 1259-1289. https://doi.org/10.1002/rrq.473

Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. In S. Neuman & D. Dickinson (Eds.), *Handbook for Research in Early Literacy*. New York: Guilford Press.

https://johnbald.typepad.com/files/handbookearlylit.pdf

Shelton, A., Hogan, E., Chow, J., & Wexler, J. (2023). A synthesis of professional development targeting literacy instruction and intervention for English learners. *Review of Educational Research, 93*(1), 37-72. https://doi.org/10.3102/00346543221087718

Short, D. J., & Fitzsimmons, S. (2007). Double the work: challenges and solutions to acquiring language and academic literacy for adolescent English language learners. *Report to Carnegie Corporation of New York*. Alliance for Excellent Education. www. all4ed.org/files/DoubleWork.pdf

Silva, K. G., Correa-Chávez, M., & Rogoff, B. (2010). Mexican-heritage children's attention and learning from interactions directed to others. *Child Development, 81*(3), 898-912. https://doi.org/10.1111/j.1467-8624.2010.01441.x

Skibbe, L. E., Gerde, H. K., Wright, T. S., & Samples-Steele, C. R. (2016). A content analysis of phonological awareness and phonics in commonly used Head Start Curricula. *Early Childhood Education Journal, 44*(3), 225-233. https://doi.org/10.1007/s10643-015-0703-8

Sullivan, B., Hegde, A. V., Ballard, S. M., & Ticknor, A. S. (2015). Interactions and relationships between kindergarten teachers and English language learners. *Early Child Development and Care, 185*(3), 341-359. https://doi.org/10.1080/03004430.2014.919496

Tierney, N., & Cook, D. (2023). Expanding Tidy data principles to facilitate missing data exploration, visualization and assessment of imputations. *Journal of Statistical Software, 105*(7), 1-31. https://doi.org/10.18637/jss.v105.i07

U.S. Department of Education. (2017). Our nation's English learners: What are their characteristics? National Center for Education Statistics, Institute of Education Sciences.

Weadman, T., Serry, T., & Snow, P. C. (2023). The oral language and emergent literacy skills of preschoolers: Early childhood teachers' self-reported role, knowledge and confidence. *International Journal of Language & Communication Disorders, 58*, 1. https://doi.org/10.1111/1460-6984.12777

Wijekumar, K., Beerwinkle, A. L., Harris, K. R., & Graham, S. (2019). Etiology of teacher knowledge and instructional skills for literacy at the upper elementary grades. *Annals of Dyslexia 69*, 5-20. https://doi.org/10.1007/s11881-018-00170-6

Appendix

Table 4. Phonological Awareness Cross-Tabulations by Grade Taught

Item	Grade	Not at All	Once a Week	2-3 Days a Week	Almost Every Day	Daily
	Overall	0 (0%)	2 (3.6%)	6 (10.9%)	11 (20.0%)	36 (65.5%)
1	Kindergarten	0 (0%)	0 (0%)	2 (6.7%)	4 (13.3%)	24 (80%)
	Pre-School	0 (0%)	2 (8%)	4 (16%)	7 (28%)	12 (48%)
	Overall	1 (1.8%)	1 (1.8%)	2 (3.5%)	12 (21.1%)	41 (71.9%)
2	Kindergarten	1 (3.2%)	0 (0%)	0 (0%)	5 (16.1%)	25 (80.6%)
	Pre-School	0 (0%)	1 (3.8%)	2 (7.7%)	7 (26.9%)	16 (61.5%)
	Overall	8 (14.0%)	11 (19.3%)	7 (12.3%)	13 (22.8%)	18 (31.6%)
3	Kindergarten	3 (9.7%)	4 (12.9%)	4 (12.9%)	7 (22.6%)	13 (41.9%)
	Pre-School	5 (19.2%)	7 (26.9%)	3 (11.5%)	6 (23.1%)	5 (19.2%)
	Overall	1 (1.8%)	3 (5.3%)	15 (26.3%)	15 (26.3%)	23 (40.4%)
4	Kindergarten	1 (3.2%)	1 (3.2%)	8 (25.8%)	4 (12.9%)	17 (54.8%)
	Pre-School	0 (0%)	2 (7.7%)	7 (26.9%)	11 (42.3%)	6 (23.1%)
	Overall	8 (14.0%)	5 (8.8%)	14 (24.6%)	9 (15.8%)	19 (33.3%)
5	Kindergarten	1 (3.3%)	1 (3.3%)	6 (20%)	7 (23.3%)	15 (50%)
	Pre-School	7 (28%)	4 (16%)	8 (32%)	2 (8%)	4 (16%)
	Overall	9 (15.8%)	7 (12.3%)	15 (26.3%)	10 (17.5%)	16 (28.1%)
6	Kindergarten	2 (6.5%)	4 (12.9%)	6 (19.4%)	9 (29%)	10 (32.3%)
	Pre-School	7 (26.9%)	3 (11.5%)	9 (34.6%)	1 (3.8%)	6 (23.1%)
	Overall	6 (10.5%)	9 (15.8%)	3 (5.3%)	13 (22.8%)	24 (42.1%)
7	Kindergarten	1 (3.2%)	3 (9.7%)	0 (0%)	9 (29%)	18 (58.1%)
	Pre-School	5 (20.8%)	6 (25%)	3 (12.5%)	4 (16.7%)	6 (25%)
	Overall	6 (10.5%)	7 (12.3%)	11 (19.3%)	9 (15.8%)	24 (42.1%)
8	Kindergarten	2 (6.5%)	1 (3.2%)	3 (9.7%)	7 (22.6%)	18 (58.1%)
	Pre-School	4 (15.4%)	6 (23.1%)	8 (30.8%)	2 (7.7%)	6 (23.1%)
	Overall	8 (14.0%)	7 (12.3%)	9 (15.8%)	11 (19.3%)	22 (38.6%)
9	Kindergarten	2 (6.5%)	0 (0%)	3 (9.7%)	7 (22.6%)	19 (61.3%)
	Pre-School	6 (23.1%)	7 (26.9%)	6 (23.1%)	4 (15.4%)	3 (11.5%)
	Overall	6 (10.5%)	8 (14.0%)	8 (14.0%)	10 (17.5%)	24 (42.1%)
10	Kindergarten	0 (0%)	0 (0%)	2 (6.7%)	8 (26.7%)	20 (66.7%)
	Pre-School	6 (23.1%)	8 (30.8%)	6 (23.1%)	2 (7.7%)	4 (15.4%)
	Overall	0 (0%)	4 (7.0%)	8 (14.0%)	10 (17.5%)	35 (61.4%)
11	Kindergarten	0 (0%)	0 (0%)	1 (3.2%)	5 (16.1%)	25 (80.6%)
	Pre-School	0 (0%)	4 (15.4%)	7 (26.9%)	5 (19.2%)	10 (38.5%)
	Overall	4 (7.0%)	4 (7.0%)	10 (17.5%)	14 (24.6%)	25 (43.9%)
12	Kindergarten	1 (3.2%)	0 (0%)	2 (6.5%)	11 (35.5%)	17 (54.8%)
	Pre-School	3 (11.5%)	4 (15.4%)	8 (30.8%)	3 (11.5%)	8 (30.8%)
	Overall	21 (36.8%)	7 (12.3%)	11 (19.3%)	7 (12.3%)	11 (19.3%)
13	Kindergarten	5 (16.1%)	5 (16.1%)	7 (22.6%)	4 (12.9%)	10 (32.3%)
	Pre-School	16 (61.5%)	2 (7.7%)	4 (15.4%)	3 (11.5%)	1 (3.8%)
	Overall	2 (3.5%)	4 (7.0%)	5 (8.8%)	9 (15.8%)	37 (64.9%)
14	Kindergarten	0 (0%)	1 (3.2%)	1 (3.2%)	4 (12.9%)	25 (80.6%)
	Pre-School	2 (7.7%)	3 (11.5%)	4 (15.4%)	5 (19.2%)	12 (46.2%)
	Overall	13 (22.8%)	7 (12.3%)	10 (17.5%)	7 (12.3%)	20 (35.1%)
15	Kindergarten	4 (12.9%)	1 (3.2%)	4 (12.9%)	6 (19.4%)	16 (51.6%)
	Pre-School	9 (34.6%)	6 (23.1%)	6 (23.1%)	1 (3.8%)	4 (15.4%)