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Phonics is Phondamental to Literacy Acquisition: An Examination of the Impact of Systematic Phonics-Based Instruction and Whole-Language Approaches

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Abstract

This literature review investigates the effect of systematic phonics-based instruction and the whole language approach on early reading acquisition, specifically phonemic awareness, decoding, and orthographic mapping. Studies selected for this literature review contain empirical, qualitative, and quantitative research from 1998 to 2025, primarily focused on preschool through the primary grades and highlighting struggling readers. Theories, classical, and contemporary research consistently reveal that explicit phonics instruction is an effective instructional method to improve reading acquisition outcomes with effect sizes ranging from 1.0 to 2.0 (e.g., Lane et al., 2025; Johnston & Watson, 2005) and indicate that whole-language approaches lack efficacy due to English's deep orthography. However, many studies are outdated, lack longitudinal data, and few examine implementation in preschool or bilingual settings. Survey data from Michigan educators reveal the implementation challenges contributing to the resistance in early childhood settings to systematic phonic-based instruction. This literature review highlights the necessity for classroom-based research that aligns with professional development and supports curricular decisions grounded in reading science. The results from this literature review illuminate the implications for theory, practice, and policy particularly aimed at closing the literacy gap for at-risk learners. The review concludes with a reflective application of the findings to instructional practice, offering insights for practitioners navigating the shift toward structured literacy.

Keywords

Reading Instruction, Early Literacy, Literacy Acquisition, Foundational Skills,

Phonemic Awareness

Debates on integrating explicit and implicit instruction in early childhood education persist. However, research supporting explicit structured literacy is increasing. Explicit literacy instruction, synthetic phonics, bottom-up approaches, and structured literacy incorporate the direct method of teaching the alphabetic principle and English Orthography using a structured, logical scope and sequence. Explicit instruction is often described as rote learning and is opposed by many early childhood philosophies and play-based methods. Despite a growing body of literacy research, classrooms prioritize play-based, meaning-emphasis curricula and whole-language approaches, creating a misalignment between research and practice. Urgently, the current disconnect raises significant questions on the most effective way to integrate explicit instruction into early childhood education curricula. This discussion leads to a closer examination of the impact poor reading has on life outcomes.

Students' reading ability is directly influenced by literacy development and overall academic performance. Poor readers often struggle in all content areas due to comprehension issues across their academic careers. Additionally, individuals considered to be poor readers earn lower wages and are less likely to attain skilled employment, thus limiting their earning potential (Mulcahy et al., n.d). Reports by Clark and Dugdale claim a direct relationship by stating that 60% of prisoners have significant literacy difficulties and are categorized as having a reading age below 11 (2008, as cited in Mulcahy et al., n.d). Equally alarming, students considered poor readers and living in poverty have increased risk factors, such as a 26% non-graduation rate, which is 6 times more than the risk for professional readers (Hernandez, 2011). To further cement the urgency, students not reading by third grade are four times more likely not to graduate with their cohorts (Hernandez, 2011). Consequently, this reinforces the urgency of examining foundational literacy instruction approaches in early childhood education.

As a result, this research interest is based on four years of teaching preschool and three years of teaching in the primary grades. A strong disconnect exists between literacy instruction practices at both ends of the early childhood continuum. Notably, there is a preference for whole-language and play-based methods of curriculum instruction in preschool. In the primary grades, what is known as structured literacy (also known as the science of reading or SOR) is now just being implemented. Furthermore, explicit literacy instruction uses a structured scope and sequence to teach students the alphabetic principle or code to decipher English orthography. At the same time, whole-language approaches emphasize whole-word reading extraction of meaning through a top-bottom approach. Curricula and instructional methods that emphasize whole-language characteristics are suitable for other developmental domains and content areas but may not be the best approaches for reading instruction.

Despite the debate, classical and contemporary research support explicit instruction as critical to early literacy development and nonnegotiable to avoiding reading difficulties. Early childhood curricula and philosophies argue for a whole-language approach and do not align with the upcoming research. This literature review will identify the best contemporary evidence in support of explicit literacy and synthetic phonics instruction and develop a framework for incorporating these best practices with curricula. The central question for this literature review will be: How do synthetic phonics and whole-language instruction affect early reading development, particularly in phonemic awareness and decoding? Targeting the impact of explicit literacy instruction practices can help bridge achievement gaps, especially for children already at risk of reading difficulties and failure. As an educator, I have observed the impact of explicit literacy instruction, and I can also recall the limited gains of the whole-language and play-based methods. Findings from this research can inform early childhood curriculum development that integrates structured and explicit literacy instruction. Additionally, this research will contribute to the discussion to advocate for early childhood curricula that support explicit literacy instruction to have a role in closing the achievement gap for at-risk learners and avoiding reading difficulties.

This literature review aims to examine, critique, and evaluate contemporary, empirical, and classical research on the impact of synthetic phonics and whole-language approaches on reading development. This literature review will examine empirical, qualitative, and quantitative research between 1998 and the present to ensure a contemporary analysis and promote current developments in the field. To provide coherence, this literature review is organized into the following sections: theoretical and historical perspectives, analysis and synthesis of the literature, conclusions, and recommendations. This literature review will discuss, in turn, the central themes of Theoretical and Historical Perspectives, Phonemic Awareness in the Science of Reading, The Implicit-Explicit Argument, Evidence for Explicit Phonics Instruction, English Orthography Necessitates Explicit Phonics Instruction, and Synthetic Phonics Instruction in Diverse Contexts.

1. Literature Review

Theoretical and Historical Perspectives

A comprehensive review of reading instruction's theoretical and historical foundations is essential for analyzing the divide between implicit (whole-language) and explicit (phonics-based) approaches. This section discusses influential theoretical frameworks foundational to reading research and the debate on implicit and explicit phonics instruction. The American education system has continued a firm debate often referred to as the "reading wars". Despite scientific evidence from the National Reading Panel's (National Reading Panel, 2000) meta-analysis of research spanning over ten years supporting phonics instruction, the debate over whole-language approaches persists.

Two primary methods govern contemporary thinking on the best methods for

reading instruction. The divergence of the methods reflects two differences in beliefs about reading acquisition. One method embodies direct teaching of sound-symbol relationships (grapheme-phoneme) or through what is believed to be the immersion of natural exposure and learning in context.

Systematic phonics instruction includes two primary subtypes: Synthetic phonics and Analytic phonics. Synthetic phonics is described as a bottom-up approach, where children are taught letter-sound correspondences and synthesize words by blending the letters and their combinations (Shanahan, 2018). Synthetic phonics prioritizes mastery of the alphabetic principle with support from a logical and structured scope and sequence. Analytic phonics, on the other hand and when considering the alphabet principle, concentrates on a top-down approach that aims at using whole and larger word parts such as word families, onsets, rimes, or using known words like analogies to learn new words (Shanahan, 2018). As a result, analytic phonics can delay the mastering of the alphabetic principle and encourage children to instead analyze word patterns, which can be less effective for reading acquisition especially in languages with deep orthographies like English.

The epitome of explicit, systematic literacy teaching is represented through synthetic phonics instruction, where students are directly taught the grapheme-phoneme relationships that govern English orthography through logical scope and sequences. The synthetic phonics instruction approach draws attention to teaching young children the alphabetic principle so they can use their decoding skills to blend phonemes and later form words, a bottom-up approach. Synthetic phonics instruction embodies the science of reading, a collective movement to inform educators and stakeholders of the best current teaching of reading practices and recognize that reading is not a natural process, like language acquisition (Lexia Learning, 2025). Throughout the years, synthetic phonics instruction has gathered a significant body of support, and the literature demonstrates consistent results that it is an efficacious method for improving reading and spelling outcomes (Johnston & Watson, 2005; Ehri, 2014).

Unlike synthetic phonics instruction, implicit and meaning-driven approaches are central to whole-language instruction. In whole language approaches and meaning-driven approaches, reading acquisition is a natural process similar to how young children develop oral language. Young children are immersed in literacy context (often workshops) instead of isolating phonic skills and relying on context and whole word recognition, according to Goodman, 1986 (as cited in Castles et al., 2018). This philosophy is centered on the idea that reading acquisition ought to be child-centered and enjoyable; however, it lacks the systematic focus and understanding of the complexities of English orthography and decoding unfamiliar words.

Initial support for systematic phonics instruction emerged from two key studies that provided significant evidence supporting better reading outcomes. Jean Chall 1967 is described as a pioneer through her seminal work, a large-scale analysis of over 300 classrooms in three different countries demonstrating effectiveness through the

comparisons of phonics and whole-language approaches (as cited in Hempenstall, 2005). However, the whole-language philosophies persisted well into the 1990s and in contemporary classrooms today (Hempenstall, 2005).

The Whole-Language movement erupted in popularity in the 1980s and 1990s and was primarily led by Goodman. Goodman 1986 describes whole-language approaches that emphasize principles promoting and encouraging young children to develop their skills at their own developmentally appropriate pace in a proper environment (as cited in Hempenstall, 2005). The whole language philosophy and approach designates the role of a teacher as a concerned facilitator and one that holds the perspective that explicit instruction is harmful and unproductive to young children's creative development. The belief that reading functions as a natural process similar to language acquisition is integral to the whole-language approach. Instructional approaches that underscore the whole-language approach emphasize meaning-making and direct immersion into rich literacy environments and texts (Hempenstall, 2005). The central argument against this instructional approach is the lack of systematic teaching of phonological awareness and subtypes, such as phonemic awareness and decoding, which are crucial for literacy development (National Reading Panel, 2000). Two theoretical perspectives support the debate on systematic phonics instruction.

Systematic phonics-based instruction is led by a fundamental model called the Simple View of Reading by Gough and Tunmer, 1986 (as cited in Duke & Cartwright, 2021). The model illustrates that decoding multiplied by comprehension equals reading success. This literacy equation is supported by cognitive science and orthographic mapping research conducted by Ehri (2014). Linnea Ehri is regarded as a prominent figure and key researcher through her seminal work on literacy development. Systematic phonics-based instruction ensures that students develop grapheme-phoneme awareness and master the alphabetic principle necessary for decoding and accessing the text (Ehri, 2014).

These major theoretical perspectives underpin the debate. Cognitive science and reading research highlight the importance of phonemic awareness and decoding through explicit instruction for reading acquisition. At the same time, whole-language approaches prioritize literacy immersion through their meaning-driven process. Historically, many schools have implemented a balanced literacy approach to instruction, but the name is misleading. Balanced literacy, as made popular by Lucy Calkins, is categorized as a meaning-emphasis approach; this fails to provide systematic phonics instruction by utilizing workshops where children exercise their skills without direct instruction (Castles et al., 2018; Lexia Learning, 2025). The Lucy Calkins method is often criticized for heavily relying on contextual cues to infer, predict, and guess words, which is known as the three-queuing system (Moats & Tolman, 2019). It is highly scrutinized for a lack of phonics instruction and encourages students to guess and learn from context. The early childhood field adds complexity to the debate by sharing the view that phonics is rote memorization and is often too rigid for young children. However, the re-

search heavily supports this method for decoding unfamiliar words and beginning, improving, and sustaining literacy development. The whole-language approach gained popularity for its meaning-making and emphasis on student engagement. However, it lacks systematic phonics instruction, raising concerns about its effectiveness, especially for poor readers. Research in cognitive sciences, English orthography, and literacy acquisition has provided new insight for supporting systematic phonics instructions and early literacy. After establishing a foundation for the theoretical and contextual perspectives above, the next section will examine how these perspectives translate into classical and contemporary literacy research.

2. Literature Analysis and Synthesis

After establishing the theoretical frameworks previously outlined, this section synthesizes research from the science of reading and integrations from different fields to offer a comprehensive understanding of literacy development. One key area identified is the significant role of phonemic awareness in early literacy development. The ability to recognize and manipulate sounds in spoken language is phonemic awareness and is a prerequisite to decoding ability (Ehri, 2014; Duke & Cartwright, 2021). Decoding ability is a foundational skill for reading acquisition. However, reading comprehension requires other linguistic processes. The Simple View of Reading (SVR) is a widely accepted model introduced by Gough and Tunmer in 1986 and is used to translate the Science of Reading research to educators (as cited in Duke & Cartwright, 2021). The SVR model describes phonemic awareness through its predecessor, decoding, a subcomponent of word recognition. The model identifies the undeniable necessity of decoding and linguistic comprehension in reading acquisition and describes reading comprehension as the product of decoding and comprehension, expressed as R = D (word recognition) × C. This framework continues to promote the role of phonemic awareness in decoding by enabling young children to grasp the alphabetic principle (Ehri, 2014). Research continues to demonstrate the impact of phonemic awareness interventions that provide significant gains to improve decoding ability and thus support half of the SVR equation (Ehri, 2014; Duke & Cartwright, 2021; National Reading Panel, 2000).

Duke and Cartwright (2021) challenge the simple view of reading by proposing a contemporary comprehensive model called the Active View of Reading (AVR). The arguments arise from the Simple View of Reading, which does not consider reading difficulties beyond decoding and word recognition. However, Duke and Cartwright's (Duke and Cartwright, 2021) theoretical model lacks empirical support and provides an opportunity for current research to examine. Duke and Cartwright (2021) examine empirical research and conclude that students continue to struggle despite having appropriate word recognition and comprehension skills. Thus, they advocate for the Active View of Reading model, which is considered an extension beyond decoding and language comprehension. The AVR model

also establishes interrelatedness rather than separate processes and adds cognitive processes, vocabulary, fluency, and psychological awareness as bridges between decoding and comprehension. Scarborough's Reading Rope is another model used to translate reading research to train educators.

Scarborough's Reading Rope is a conceptual model that explains the processes behind skilled reading. The rope metaphor illustrates the different strands, interconnectedness, and reading as a dynamic process (The Reading League, 2022). Ultimately, two fundamental processes intertwine in this model: word recognition and language comprehension, all of which have subcomponents, with phonemic awareness being part of the phonological awareness strand (The Reading League, 2022). Duke and Cartwright (2021) propose that active self-regulation plays an important role in reading development. A key highlight of the active view of reading is its bridging of processes through the integration of word recognition, language, comprehension, and self-regulation. Research conducted over five decades is known as the Science of Reading (SOR). This prominent research informs educators about the Science of Reading to better understand the development of the profession, reading, and writing and why some individual students struggle. At the same time, it informs educators on how to effectively assess and teach to provide specific outcomes (The Reading League, 2022).

According to the SVR, reading comprehension is the product of decoding and language comprehension. Ehri (2014) expands on this by demonstrating the significance of orthographic mapping and explaining that this cognitive process allows students to move from decoding to automatic recognition. Ehri is considered a primary contributor to literacy development research, and her work continues to provide evidence that without explicit instruction in awareness, grapheme-phoneme relationships, and letter-sound relationships, students cannot officially store words in memory, which results in persistent decoding difficulties and fluency.

Orthographic mapping describes the cognitive mechanism that helps readers create permanent connections between graphemes and phonemes and increases their path toward automatic word recognition. Ehri (2014) examines, through synthesis of a qualitative review, the process of orthographic mapping and its effects on sight word recognition, spelling memory, and vocabulary learning. Orthographic mapping is the process of involving the formation of grapheme-phoneme connections that adhere to spellings, pronunciations, and meanings of specific words and memories. According to Ehri's Phase Theory of Word Reading Development, 2005, Orthographic mapping overlaps these phases, and each phase is characterized by a connection to the spelling of words and to their pronunciations and memory (as cited in Ehri, 2014). She describes the necessity of phonemic awareness and phonemic segmentations as essential prerequisites to blending and the storage of sight words through the explanation of her theory, which illustrates children navigating from nonalphabetic to complete grapheme-phoneme connections (Ehri, 2014).

Phonemic awareness and grapheme-phoneme relationships enable ortho-

graphic mapping and support sight-word recognition (Ehri, 2014). Phonemic awareness has long been documented as an effective method to improve reading and spelling; however, the specific properties that help form connections remain unclear (Ehri, 2014). In the qualitative review, Ehri (2014) states that there is reason to believe that sounds processed by the ear are less central than articulatory gestures, which are mouth movements. It is believed that articulatory gestures rather than acoustic features represent phonemes in the brain and is supported by the motor theory of speech perception by Liberman, 1999 (as cited by Ehri, 2014). Ehri (2014) synthesizes the recommendations for educators to incorporate phonemic awareness with articulatory gestures. Although this qualitative review has valuable contributions to the discussion of the role of phonemic awareness in reading acquisition, more empirical research in contemporary classrooms is necessary to evaluate further instructional implications.

Additional support for phonological awareness comes from a study by Boyer and Ehri (2011), which supports phonemic segmentation. Phonemic segmentation is the ability to break down spoken words into distinct sounds, also known as phonemes, and manipulate those sounds (Boyer & Ehri, 2011). Phonemic segmentation is a nonnegotiable pre-reading skill. It helps young children develop the relationship between sounds and letters, developing the alphabetic principle for learning languages with shallow orthographies. Phonemic segmentation has a leading role in learning to decode and encode words. Boyer and Ehri (2011) developed a quantitative study with an experimental design that included a control group to examine the effects of phonemic segmentation instruction on early literacy skills while comparing two instructional approaches. The first method, the letter and picture of articulatory gestures approach, focused on training young children with letters and images that demonstrated proper mouth motions. The letter-only group focused on training children with only letter name knowledge, and the control group received no training. Sixty preschoolers who already knew their letter names but were not readers were the participants of this group. Boyer and Ehri (2011) conclude that both the articulatory pictures and the letters-only group significantly impacted phonemic segmentation, word reading, and spelling compared to the control group. However, results indicate that the training with articulation pictures had superior reading performance compared to the letters-only group with posttest measures of 5.10 (3.5) and 3.60 (2.3), respectively (Boyer & Ehri, 2011). Boyer and Ehri (2011) conclude that phonemic segmentation training can help enhance early reading and spelling skills and suggest that adding articulation pictures into the early childhood curriculum can have benefits for learning words, which further supports the integration of articulation instruction in curricula (Boyer & Ehri, 2011; Ehri, 2014). This study supports phonemic segmentation instruction to promote word reading and reading development. More research is necessary to investigate classroom implementation since the study did not take part in whole-group instruction. Additionally, this study was relatively short-term, 40 days, and more research is essential to investigate the long-term

effects to see if the gains persist over time.

Bhattacharya and Ehri (2004) developed a study to determine how graphosyllabic analysis would help struggling readers spell and read words. The study design consisted of a quantitative experimental design, which was conducted using random assignment. Students were replaced in three conditions: graphosyllabic instruction, whole-word instruction, and a no-instruction control group. The study focused on 60 adolescents from 6th grade to 9th grade, reading below grade level between the third-grade and fifth-grade equivalents. Students in the graphosyllabic group focused on analyzing words using graphosyllabic units, while the whole-word group focused on words as unanalyzed wholes. The primary objective of the study was to investigate whether students receiving instructions on how to pronounce the spellings of syllables would enhance their ability to add words to their memory for reading and spelling. The findings conclude that syllable instruction can enhance decoding skills, words, memory, processes, and analogizing. According to Bhattacharya and Ehri (2004), readers develop their reading of words by creating connections between spelling and pronunciations of syllables. When struggling readers understand and receive graphosyllabic analysis, if they function at a higher stage of spelling and reading development, current researchers can study the long-term effects of graphosyllabic instruction. Graphosyllabic analysis is a type of phonological awareness that provides additional support for understanding the criticalness of awareness and the stages of encoding development.

Due to the irregular and inconsistent spelling of the English language, cracking the alphabetic principle is a nonnegotiable for beginning readers. Phonemic awareness is a prerequisite to developing and unlocking the alphabetic principle (Foorman et al., 2016). Students who explicitly taught phonological awareness and letter-sound correspondences can develop decoding of monosyllabic words, at least 70% of regular monosyllabic Words, including words like eat, fish, and sun (Foorman et al., 2016).

Phonemic awareness enables children to establish grapheme-phoneme correspondences and form a basis for orthographic mapping (Ehri, 2014). Recent research by Contreras and Parisi (2024) provides additional support for integrating explicit orthographic mapping instruction into structured literacy programs to promote the reading development of primary-grade students. The study reports found that incorporating phoneme-grapheme mapping into the daily phonics routine improved spelling accuracy and stronger phonological awareness, supporting structured literacy's role in early reading development (Contreras & Parisi, 2024).

The study had a quasi-experimental design and lasted over 4 weeks. The study did not specifically mention randomized control or control groups; however, it compared two second-grade classrooms: one English general education and one two-way dual language immersion class (TWDLI). Contreras and Parisi (2024) assessed through spelling assessments that the results were 38% for the pretest,

70% for the protest, and 36% to 51% in the TWDLI class. The study duration was limited, though it provides opportunities for upcoming research that examines the long-term effects of orthographic mapping on literacy skills. Additionally, the orthographic mapping in the study emphasizes small-group settings. Further research is required to increase scalability for whole-group instruction. With these limitations in mind, the next session will examine empirical evidence demonstrating the insufficiencies and consequences of a lack of phonics instruction in early literacy development.

3. The Implicit-Explicit Argument

The discussion concerning implicit and explicit methods of early literacy, such as whole language versus phonics, continues to be among the most debated topics in literacy education. Critics of the whole-language approach highlight its inefficiency as an instructional method for reading development, especially in English, which has an irregular and deep orthography (Castles et al., 2018). The whole language instruction method assumes that reading development is a natural acquisition for young children when exposed to text. However, analysis consistently supports that this method does not provide structured phonics instruction for developing phonemic awareness, phonological awareness, and other subsets; arguments have favored a structured (synthetic phonics approach) (Castles et al., 2018).

The whole language approach has been historically at the center of the reading instruction debate. As previously stated, the whole language approach focuses on young children's natural reading acquisition development through the discovery of meaning in literacy-rich environments (Castles et al., 2018). Castles et al. (2018) provide a review article that synthesizes the large body of existing research and psychological science regarding reading acquisition, and it includes meta-analysis on longitudinal studies, cross-linguistic comparisons, and theoretical models to provide a comprehensive view of the field's current state. Additionally, the meta-analysis aims to evaluate the findings of several different studies and contribute to the discussion of the ongoing debate. There are still questions to be answered due to the misinformation in the public sector about the myths about phonics instruction and the challenge of best integrating systematic phonics instruction into today's classrooms.

Findings from the meta-analysis demonstrate the importance of systematic phonics instruction for alphabetic writing systems, especially in the early stages of reading acquisition. There is a significant impact and support for phonics instruction on decoding, encoding, and reading comprehension. Understanding the writing system in which students are trying to read is essential to choosing the best instructional methods. According to Castles et al. (2018), English has a deep orthography, and the student's primary purpose in early literacy development is to develop the alphabetic principle, which requires them to segment phonemes from speech and associate these phonemes with the graphemes of their writing

alphabetic systems. Due to the nature of these writing systems, there is a reciprocal relationship between alphabetic writing systems and decoding skills.

The meta-analysis conducted by Castles et al. (2018) reveals the need to focus on educator training programs instructing upcoming Educators on the English writing system and its deep orthography. However, more research is required to understand how young children develop sophisticated knowledge about alphabetic writing systems, especially in morphologically complex words. Further research will help translate the science of learning to read into effective classroom practice in a developmentally informed way and provide comprehensive immersion, not solely phonics. Castles et al. (2018) advocate for a 'balanced literacy' approach that integrates phonics and language comprehension, but the name is not to be confused with Lucy Calkins' Balanced Literacy.

In conclusion, writing systems will vary in orthographic depth, which is the consistency of their graphemes to represent phonemes. English is one of the languages with a deep orthography due to the inconsistency of this relationship between graphemes and phonemes. Deep orthographic inconsistencies mean that the same letter or letter combinations will represent various sounds depending on the language's rules. Due to English's deep orthography, whole language approaches of solely memorizing the visual shapes of words do not scale (Castles et al., 2018). These inconsistencies challenge reading acquisition, making it difficult to establish a relationship between spelling and the sound of similar-looking words. After all, they might sound very different. Words may sound the same but look very different. The need to understand English as having deep orthography provides arguments against whole language instruction and thus provides support for the alphabetic principle as a necessary and nonnegotiable for beginning reading instruction (Castles et al., 2018)

4. Evidence for Explicit Phonics Instruction

Research on early reading development highlights the importance of explicitly teaching grapheme names and phoneme sounds. Piasta and Wagner (2010) conducted a randomized control study investigating how different instructional approaches impacted preschoolers' ability to learn letter names and sounds. The findings support systematic phonics instruction when letter names and sounds are explicitly taught together. According to the findings, children were more likely to learn letter sounds that had phonemic cues in them, for example, the /b/ sound in B and /k/ in K. Children who were in a combined group that taught them letter names and sounds demonstrated to have the most significant improvement in letter-sound knowledge, particularly in consonant-vowel and vowel-consonant letters. These kinds of letters were more straightforward to learn than non-alphabetic letters that do not have phonemic cues ($p < 0.5$).

This empirical research adds to the conversation, supporting a logical scope and sequence through explicit letter-sound instruction. The study also examined how the types of instruction would impact children who had lower phonological pro-

cessing skills, and they also benefited from the explicit instruction. These findings support structured phonics programs for struggling readers. Findings from the research align with arguments supporting explicit instruction, which further helps or cements the explicit teaching of letter recognition and decoding skills of young children in early literacy development. Piasta and Wagner (2010) solidify the need for explicit phonics instruction in early literacy development and discredit whole language approaches that young children can learn the alphabetic principle independently through literacy-rich environments.

Lane et al. (2025) provide substantial empirical support for explicit, systematic instruction through a year-long experimental study. The study examined the effects of UFLI Foundations, a structured phonics-based program, and its impacts on kindergarten and first-grade students. Students who receive daily 30-minute phonics instruction outperform those in the business as usual control group with significant effect sizes ($g = 1.44$ and $g = 2.04$, respectively) (Lane et al., 2025). Additionally, the study emphasized monitoring teacher fidelity for the structured literacy program, which adds to the conversation on the importance of educator training in instructional practices. Lane et al. (2025) add to the discussion that systematic phonics instruction is essential for early literacy acquisition, strengthening the argument that it is a necessity for curricula to support deep orthographic languages like English (Castles et al., 2018; Lane et al., 2025). Additionally, Lane et al. (2025) provide empirical evidence suggesting that educators should prioritize explicit and systematic phonics instruction, especially for students with reading difficulties, to help develop their word recognition and decoding skills. Although the study has merit, future investigations should examine the impact of UFLI Foundations on long-term retention.

Current classical and contemporary research supports evidence for explicit phonics instruction as the most effective way to develop early literacy. As previously established, Whole language or meaning-based methods do not systematically instruct grapheme-phoneme correspondences and phonemic decoding. Explicit phonics instruction emphasizes grapheme-phoneme correspondences and phonemic decoding, ensuring young children have the foundational skills to decipher the alphabetic principle (Ehri, 2014; National Reading Panel, 2000). A limited amount of research has examined alternative approaches to integrating cognitive flexibility tasks into phonics instruction. However, studies indicate that structured, accurate first phonics approaches use the most substantial literacy results (Vadasy & Sanders, 2021).

A randomized study by Vadasy and Sanders (2021) aimed to compare explicit phonics instruction (plain condition) with flex phonics instruction, which incorporates cognitive flexibility tasks. According to the results, both instructional methods significantly impact students' letter-sound knowledge, word reading, and spelling (Vadasy & Sanders, 2021).

However, students who experienced the explicit phonics randomized assignment made significantly more meaningful gains in sound dictation spelling and

spelling accuracy, concluding that the plain condition, due to its focus on systematic phonics instruction, was the main result of this effect (Vadasy & Sanders, 2021). Young children could master the letter sound correspondence and decoding before processing more cognitively complex literacy skills. Moreover, the cognitive flexibility condition by Vadasy and Sanders (2021) requires the students to switch between letter names and letter sounds, adding additional cognitive demands that end up not providing much support for literacy development. The authors found no additional benefits for early readers with the cognitive flexibility tasks (Vadasy & Sanders, 2021). They provided the most substantial support for prioritizing and systematic phonics instruction, emphasizing accuracy over task-switching activities. Quantitative data resulted in an effect size of ($d = -0.25$), which indicates a slight yet meaningful disadvantage for the flex condition and spelling development; the effect size for letter sound writing resulted in ($d = -0.31$). The results from Lane et al. (2025) and Vadasy and Sanders (2021) provide empirical evidence to support the discussion that structured direct instruction in phonemic-grapheme relationships benefits young learners' reading development. A limitation of the Vadasy and Sanders (2021) study was the lack of a control group and the study's time frame, which lasted about 6 weeks. These findings support systematic phonics instruction, which leads to more substantial gains. Although the instruction approach is important, the characteristics of the language are equally important. The following part discusses why the complexity of English, and its deep orthography requires direct phonics instruction for effective reading acquisition.

5. English Orthography Necessitates Explicit Phonics Instruction

Historically, the debate between phonics-based instruction and whole-language approaches in literacy education continues. English orthography is challenging to understand due to the inconsistency in the grapheme-phoneme relationships (Moats & Tolman, 2019). Unlike languages considered to have shallow orthographies, such as Finnish and Spanish, English requires learners to decode various, often irregular combinations. Because the nature of English is deep orthography, explicit instruction is a nonnegotiable strategy to help learners attain the skills to master the alphabetic principle of decoding (Moats & Tolman, 2019). Moreover, they recognize words efficiently.

As previously stated, Linnea Ehri emerges as a pioneer and empirical researcher who discusses the importance of explicit instruction in building grapheme-phoneme knowledge. In one of her seminal works, she discusses the necessity for incorporating explicit phonics instruction due to the inherited complexities of the English writing system and the complex cognitive processes required when reading. According to Ehri (1998), learning to read English is not a natural process, much like learning to speak. The brain has evolved to master learning to speak but lacks special equipment for processing written language due to the short time that

written language has evolved (Ehri, 1998; Moats & Tolman, 2019). However, young children do not gain the skill of deciphering written language while they are learning to speak or in the same manner. Learning to decipher print is not a natural process due to processing speech not being a matter of processing sounds but instead as a collective and complex process of processing combinations of rapidly executed and moderate gestures that are controlled by sophisticated areas of the developing brain (Ehri, 1998) Due to the deep orthography and inconsistencies in the English language, learning to read requires special training through explicit instruction. According to Ehri (1998), alphabetic knowledge, grapheme-phoneme knowledge, is required for young children to reach a more mature reading state. However, irregular pronunciation often makes decoding individual letters insufficient and thus requires young children to receive instruction that involves systematic and complex scope and sequences.

Understanding how orthography and phonology are integrated and related is challenging in all the alphabetic writing systems. Seidenberg (2017) adds to the discussion in his book Language at the Speed of Sight: How We Read, Why So Many Can't, and What Can Be Done About It, noting that English is a complex language to learn due to its deep orthography. Finnish and Italian are languages that do not have a deep orthography and are considered to have shallow orthographies. Understanding the graphemes and how they relate to phonemes is enough to help young children discover reading. English is considered to have a deep orthography because of the inconsistencies in words spelled similarly and often have different pronunciations. In other shallow alphabets, the grapheme-to-phoneme correspondences is wholly consistent or almost close. Shallow languages have a one-to-one correspondence in their graphing to phoneme words (Moats & Tolman, 2019; Seidenberg, 2017). For example, some words in English include does, now, such, as, have, give, some, are, was, and said (Seidenberg, 2017).

Seymour et al. (2003) established a quantitative study with a cross-linguistic comparison to determine the impact of orthographic depth in shallow and deep languages and their impact on literacy development. The study aimed to explain why syllabic complexity slows the reading development of English Learners. The cross-linguistic comparative study examined children's early literacy development in 13 European languages with different orthographies. Results reported include that young children learning to read in shallow orthography, such as Spanish and Finish, become fluent in their language within the first year of schooling (Seymour et al., 2003). However, children learning to read in English and other orthographies considered to have a deep orthography like French took longer. According to Seymour et al. (2003), these children develop reading skills at less than half the rate of those in their comparative groups. The syllabic complexity of the language because it impacts coding efficiency; for example, German and French will be more challenging to learn than Spanish or Italian.

According to Seymour et al. (2003), deep orthography requires dual processing of foundational skills such as the alphabetic principle processing and the logo

graphic understanding, which is why literacy development in English orthographies is slow. The result of this cross-cultural analysis provides insight for educator training to understand the deep orthographies that are led by their instruction. Studies in the future have the opportunity to investigate how different teaching methods will ameliorate the challenges these deep orthographies present. Although the study provided valuable insight and understanding of the challenges of learning deep orthography languages, there are some limitations. For example, it may not be easy to generalize to bilingual or multilingual children because the findings primarily focused on monolingual learners. Having stated this, more information is needed to generalize to linguistically diverse populations.

Understanding the role of English as deep orthography and its relationship to explicit instruction is crucial. Empirical work conducted by Zaretsky (2020) highlights the importance of English language learners from Spanish-speaking backgrounds and the unique challenges they have because of the differences between Spanish and English in orthographic depth. The study provides quantitative evidence in the form of a cross-sectional study of 60 fifth and sixth graders who are English learners from Spanish-speaking backgrounds. The students were given phonological tests and spelling assessments to assess whether orthographic differences between Spanish and English resulted in specific error types. One of the study's significant outcomes was the conclusion that phonological memory is crucial to spelling acquisition and needs to be trained through explicit instruction (Zaretsky, 2020). Students who had issues with phonological errors and linguistic mistakes were the ones who had inadequate phonological training. This study further supports the need for explicit instruction and phoneme-grapheme mapping (Ehri, 2014; Zaretsky, 2020). Teaching phonics explicitly is crucial to developing phonological awareness and, in turn, helping English language Learners from shallow orthographies. Although this study has merit, it is limited by longitudinal data because more is needed. Future research could focus on more longitudinal studies emphasizing the long-term impacts of explicit instruction in dual language learning. These findings support systematic phonics instruction and raise a critical question: Why is systematic phonics instruction vital for English learners? To answer this question, the following section will examine the unique challenges of the English language and its deep orthography as it relates to reading acquisition in diverse contexts.

6. Synthetic Phonics Instruction in Diverse Contexts

Understanding the foundations and complexities of English orthography, the need for early explicit instruction intensifies. This section will examine research demonstrating how explicit phonics instruction supports reading acquisition of English in diverse learning contexts. Subsequently establishing the unique challenges in the English Language's complex orthography, it is important to examine how early phonics, and explicit instruction can ameliorate challenges and produce significant outcomes. We have established well that the complexity of English or-

thography is characterized by the inconsistency in its graphing-phoneme correspondences and numerous irregular spelling patterns, unlike other languages with shallow orthographies (Seymour et al., 2003; Seidenberg, 2017; Moats & Tolman, 2019). Whether a language has a deep shallow orthography affects the development of foundational reading skills.

Explicit phonics instruction proposes one of the most effective methods for addressing these challenges (Castles et al., 2018; Ehri, 2014; Moats & Tolman, 2019). Whole language methods, as previously established and discussed, emphasize memorization and analytical studies of whole word parts, and in contrast, explicit phoneme instruction teaches young children to connect letters to sounds systematically; building the alphabetic principle is key and necessary to segment sounds and support their decoding of unfamiliar words (Moats & Tolman, 2019). This section will examine contemporary research that supports systematic phonics instruction in early education.

Systematic and explicit phonics instruction is requisite to developing foundational reading skills. This approach supports reading accuracy and fluency; it can also ameliorate reading difficulties. This literature review focuses on the literacy development of the English language and thus establishes that it is also important to recognize how other countries are learning English. Empirical evidence supporting explicit instruction comes from Shenoy et al. (2022); their study aims to investigate the impact of phonics-based instruction within the context of schools in Mumbai, India. The study utilized a quasi-experimental and non-experimental quantitative design involving 627 kindergarten students placed into three cohorts. Cohort zero included 165 students who received no phonics instruction; cohort one included one year of phonics instruction and 234 students, and cohort two included 228 students who received two years of phonics instruction.

Shenoy et al. (2022) investigated systematic phonics instruction as an effective method compared to the widespread method, the Alphabet-Spelling Method, which, similarly to the whole-language approach, emphasizes word memorization over grapheme-phoneme correspondences. Results from the study demonstrate that scores improved from 72.83 in the no phonics group to 152.53 in the two years of phonics instruction, which depicts a large effect size ($d = 1.42$). Additionally, students who have scored originally 'well below benchmark' decreased from 64.24% to 13.60%, and the study depicted an increase for students performing at or above benchmark' with a rise from 13.33% to 71.93 % after 2 years of phonics instruction providing evidence for explicit phonics instruction as a method for ameliorating reading difficulties.

Although the study has merit, precautions and limitations are warranted. First, the study conducted by Shenoy et al. (2022) has contextual limitations due to being conducted at a private school in Mumbai, India. This limitation and context can limit the general generalizability to other Indian regions and American public schools. Additionally, the study lacked randomization because it primarily focused on quasi-experimental designs that did not include randomized control

groups, leading the authors to conclude causal interpretations.

Explicit phonics instruction is crucial to developing reading skills. Sound Right is a highly regarded program that establishes principles of SOR and direct instruction. It is identified as a systematic synthetic phonics program designed to teach decoding, encoding, and oral reading fluency through a structured approach. Sound Right systematically teaches young children to crack the alphabetic principle by connecting graphemes to phonemes, blending sounds to read words, and using the segments of sounds to spell words (Beaven et al., 2023). A highlight of the program is its instructional model, which provides explicit, teacher-led, and systematic instruction through a gradual release of responsibility (Beaven et al., 2023). The program was designed based on SOR principles and primarily the work of Professor Diane McGuinness, Emeritus Professor of Psychology at the University of South Florida.

Empirical studies continue to support the effectiveness of explicit phonics instruction. Beaven et al. (2023) focused on a qualitative case study examining the impact of systematic phonics instruction on early literacy outcomes for at-risk readers in an urban school in Australia. The case study demonstrated significant gains in decoding accuracy and reading fluency, with 20% points at an average in decoding and 15 words per minute fluency in the post-intervention results. The case study highlighted qualitative data through educators' perspectives that the program had increased reading confidence and engagement, giving insight into systematic phonics instruction that positively influenced academic and motivational aspects of literacy development. Beaven et al. (2023) demonstrated positive impacts; however, there were challenges, such as inconsistent parent support and resource limitations. Through teacher interviews, Beaven et al. (2023) report that ongoing professional development is necessary to deliver high-quality phonics instruction. Although the study has merit, there are issues when discussing generalizability. Beaven et al. (2023) also have a direct connection and were involved in creating the program, which may lead to bias concerns. Nonetheless, the case adds qualitative value to the continuous discussion that systematic phonics instruction effectively addresses literacy challenges, especially for at-risk students (Shenoy et al., 2022; Beaven et al., 2023).

Explicit phonics instruction helps develop readers, as demonstrated by longitudinal studies by Johnston and Watson (2005). The seven-year longitudinal study primarily compared the effectiveness of synthetic and analytic phonics instruction. The results demonstrate that students who received synthetic phonics instruction outperformed those in other groups' reading and spelling attainment. For 7 years, 300 children in primary school (the equivalent of 5 years old) were assessed in 13 different classes in Clackmannanshire, Scotland. Johnston and Watson (2005) report that Newman Keuls tests demonstrated that the synthetic phonics group was more deprived than the other two groups. However, they also did not differ from each other. Johnston and Watson (2005) provided phonics instruction using two methods for 16 weeks yearly, with 20 minutes of daily instruc-

tion while assessing students annually. The first impact of the primary one demonstrated that synthetic phonics was 7 months ahead in reading and spelling compared to the other groups. Additionally, the synthetic phonics group statistically significantly impacted higher nonword reading and letter sound knowledge (Johnston & Watson, 2005). By the end of primary year 7, the synthetic phonics group was reading at an average of 15.6 years, 3 years, and 6 months ahead of their chronological age (Johnston & Watson, 2005).

In contrast, the analytic groups achieved an average of 14.7 years, representing an 11-month gap between the groups (Johnston & Watson, 2005). The synthetic phonics groups were reported to be effective since the populations were considered socially economically disadvantaged, concluding that the socially economically disadvantaged students had outperformed the more advantaged students using analytic methods (Johnston & Watson, 2005). Incorporating synthetic phonics instruction can help address the challenges of English orthography and help improve literacy outcomes in different educational and diverse contexts (Johnston & Watson, 2005; Beaven et al., 2023).

The seminal work conducted by Johnston and Watson (2005) demonstrates that synthetic phonics instruction is an effective instructional method that significantly outperforms analytic phonics and develops the foundational skills required for reading and spelling. This pivotal research was influential in synthetic phonics instruction, which is a widely adopted phonics instructional method in Scotland due to the robust evidence it provided. Johnston et al. (2011) conducted a follow-up study to investigate the long-term effects of the initial advantages of synthetic phonics and investigated whether they were sustained over time. The same cohort was studied approximately 6 to 7 years later, when the students were 10 years old, to investigate the long-lasting impact of synthetic phonics instruction. To increase the validity of their findings, Johnston et al. (2011) used a comparison group from England that had been using analytic phonics and mixed methods approaches. The cross-comparison results were consistent and supported synthetic phonics as a superior method, helping mitigate the challenges of English's deep orthography (Johnston et al., 2011).

The study included data from the previous cohort, which included 190 students from Scotland who had received synthetic phonics instruction and compared with 203 students from England who had been receiving analytic phonics instruction. They were both compared at 10. To limit bias, the authors carefully matched the students based on socioeconomic status, age, and time in school. Students were carefully matched into social and economic categories that included moderately Advantage, moderately disadvantage, disadvantage, and significantly disadvantageous by using the Clackmannanshire Council's index of Disadvantage to categorize the Scottish students and the Department of Education and Skills Panda System to categorize the English students (Johnston et al., 2011). Results reported by Johnston et al. (2011) demonstrate that synthetic phonics continued to outperform analytic phonics with an average score of 108.2 (SD = 13.9) and 98.1 for the

analytic phonics group (SD = 13.6); no interactions between levels of disadvantage were reported. Results from the studies help to conclude that synthetic phonics instruction can help minimize the impact of economic disadvantages and add evidence to support synthetic phonics instruction as an effective method to teach early reading skills and to mitigate gender differences.

Synthetic phonics instruction effectively supports children's reading acquisition of English as a foreign language (EFL). Agüero and Francioni (2023) demonstrated empirical evidence through a qualitative action research design examining decoding accuracy and oral reading fluency in 11 EFL Learners ages 6 to 7. The intervention lasted over three weeks with six remedial sessions, and they focused on targeting phoneme to grapheme correspondences and blending skills. The results reported by Agüero and Francioni (2023) highlight significant gains in decoding accuracy and reading fluency, especially in challenging digraph and long vowel sounds such as the, i.e., and oo sounds. At the same time, it was reported that the students over-reading fluency increased faster and more accurately in the post-intervention; Agüero and Francioni's (Agüero and Francioni, 2023) study's short lifespan and small sample sizes concern generalizability. Agüero and Francioni (2023) acknowledge that current research needs to examine the long-term impacts of synthetic phonics instruction to maximize the instructional effectiveness of the approach. However, the results underscored the benefits of explicit and systematic phonics instruction in the development of foundational literacy skills, offering support for the universal applicability of synthetic phonics and the need for a structured approach and phoneme-grapheme instruction and diverse educational settings (Shenoy et al., 2022; Beaven et al., 2023).

7. Review Conclusion

Support for systematic phonics instruction comes from seminal studies that provide evidence for it being an effective and superior instructional approach that can help improve reading outcomes. Jean Chall 1967 conducted a large-scale examination of 300 classrooms in three different countries, which is considered one of the earliest pieces of evidence demonstrating that synthetic phonics instruction is superior to whole-language approaches (as cited in Hempenstall, 2005). The study became foundational in underscoring the importance of early phonics instruction and combated the rising popularity of whole-language philosophies consistent in the 1980s and 1990s. Goodman 1986, argued for whole-language movements and elevated the idea that reading acquisition was a natural process similar to how young children develop language and stressed that meaning-making and immersive literacy experiences are sufficient factors to help young children progress in literacy development (as cited in Hempenstall, 2005).

However, empirical research from cognitive science, such as the Simple View of Reading, proposed by Gough and Tunmer 1986, emphasizes that reading comprehension is a product of decoding and language comprehension illustrated by the equation ($R = D \times C$). Linnea Ehri is a prominent figure and key researcher in

the reading development literature and developed the orthographic mapping theory that indicates that decoding proficiency is essential for young learners to arrive at a mature state of automatic word recognition. Nonetheless, the accumulating evidence for systematic phonics instruction, balanced literacy approaches, and whole-language approaches continue to dominate educational settings and fuel persistence and debates about the most effective instructional methods (Castles et al., 2018). Contemporary advancements and support in language study have provided researchers and educators with additional context to understand the complexity of English's deep orthography. Languages with deep orthographies demand explicit teaching of grapheme-phoneme relationships to master the alphabetic code and phonological awareness, which are nonnegotiable in English.

8. Shift in Current Practice and Survey Results

This section will examine quantitative and qualitative data collected regionally to examine the state of systematic phonics instruction in Michigan and provide insight into changes and recommendations. Over a four week period in March 2025, quantitative and qualitative data was collected through three distinct Google Forms surveys targeted at early childhood educators, curriculum coaches, principals, and curriculum directors to understand teachers' perceptions, knowledge, and implementation of phonics-based (synthetic phonics) versus meaning-based (analytical-phonics) instruction and curricula through a mixture of scales, closed-ended, and open-ended questions. Center directors and principals were contacted directly about this survey and encouraged to have themselves complete it and to disseminate it to qualified staff. Additionally, the surveys were shared to Eastern Michigan Alumni and other educator support groups through Facebook, aimed at reaching educators who have a distinct role in shaping and implementing early literacy instruction.

Qualifications for this survey are professionals working from birth through third grade. In the educator survey, there were 72 responses: two responses from the principals and curriculum directors and nine responses from the instruction/curriculum coaches form. These responses were selected because each has a unique role in supporting systematic literacy environments, and their perspectives are valuable in informing systematic literacy improvements using principles from empirical research, SOR, and systematic phonics instruction. The data were collected anonymously and analyzed descriptively to identify patterns and trends stemming from implementation barriers (**Figure 1**).

A noticeable trend discovered across all three surveys was the growing awareness and adoption of phonics-based programs. Respondents across the three surveys selected research-based and efficacious curricula that embodied systematic synthetic phonics instruction. The top three curricula selected were the University of Florida Literacy Institute (UFLI), Fundations, Core Knowledge Language Arts, and Orton-Gillingham, all determined to be high-quality curricula. In the literature review, UFLI demonstrated positive literacy outcomes in phonics

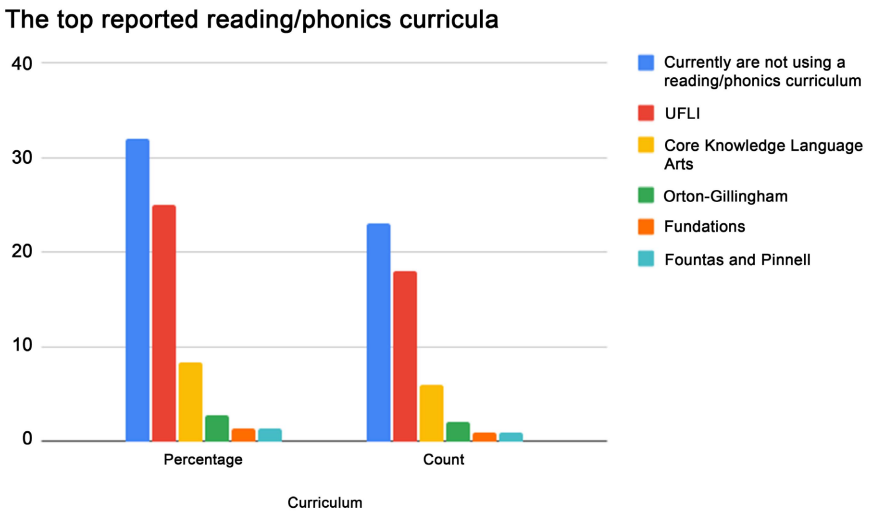

Figure 1. Reading curriculums used in lower east Michigan today. Note. **Figure 1** was created using Google Form survey data.

and word reading (Lane et al., 2025). Educators also share their perspectives on critiquing the Balance of Literacy curricula in programs led by Lucy Calkins and Fountas & Pinell, and they share their discontent with their districts continuing to use such programs. The research and survey results highlight an emphasis on structured literacy and phonics-based instruction, and a recommendation is to encourage these districts, educators, and principals to adopt and sustain evidence-based curricula. Practitioners can use curriculum evaluation rubrics designed by The Reading League to evaluate research-based alignment between the curriculum that they are selecting. Teachers and coaches should be included in decision-making to ensure the long-term adoption of programs that are long enough to access impact.

Another trend examined across the three forms was inconsistencies and gaps in systematic phonics instruction training and teacher confidence. 46.5% of educators responded to having training in phonics or systematic, structured literacy instruction in the past 6 months, while coaches reported that 50% of their challenges come from a lack of training. Additionally, educators rated themselves as only moderately confident when leading explicit phonics instruction. Educators need more sustained district-wide professional development to feel confident and teach explicit phonics. Additionally, there needs to be vertical alignment in training from pre-kindergarten through early elementary, and refreshers that are strategically planned throughout the year can be beneficial in helping educators see themselves as more than moderately confident. Professional development is one of the significant ways that educators build their confidence, skills, and curricular knowledge. Although Michigan has catapulted Language Essentials for Teachers of Reading and Spelling (LETRS is a comprehensive training that translates science of reading research to educators), nearly one in two educators (49.3%) have not received any recent training. Additionally, when asked to rate their confidence and describe the science of reading, only 31% of Educators rate themselves as hav-

ing the highest confidence. Additionally, 29.2% of educators rated themselves as being experts in teaching explicit phonics. When asked to describe and categorize their curriculum as being code-emphasis, many educators were unsure of how to categorize their curriculum, with 18.1% saying they were unsure.

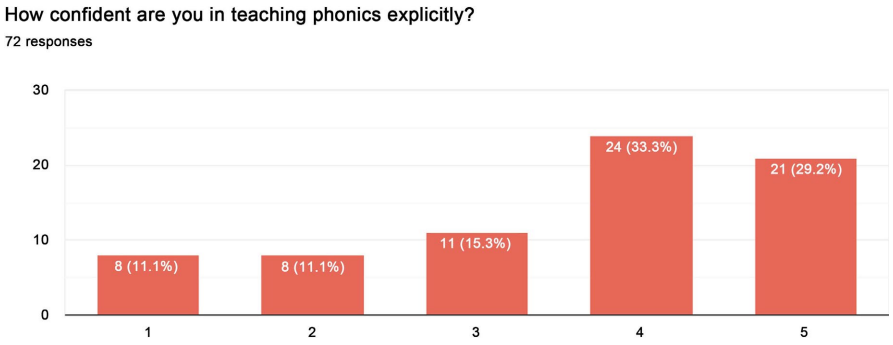

Figure 2. Educator self-confidence in the teaching of explicit phonics. Note. **Figure 2** was created using Google Form survey data. 1 indicates not at all and 5 indicates expert.

Survey results also illuminated classroom implementation challenges and the need for systemic and District-level support. Teachers reported time constraints, limited materials and outdated resources, student diversity, and inconsistent instruction or fidelity as significant barriers. Educators again describe not being heard when sharing their concerns about the expectations of using programs not grounded in research. Concerned, one educator wrote: "The district I currently teach in continues to use Calkins and F&P curriculum. I will not utilize that and use my own money to purchase resources to support SoR [Science of Reading].". This example illustrates the frustration with mandated curriculum, specifically with districts that continue to support Lucy Calkins and Fountas & Pinell, which educators continue to discover are not aligned with the evidence-based structural literacy approaches. To provide support in time constraints, Educators and principals can come together to audit schedules and design phonics sectors in their schedules that are protected and not negotiable.

Additionally, districts can seek educator input to see what materials would best help them implement systematic phonics instruction. The curriculum coach or early childhood specialist should master modeling the instructional fidelity of their curriculum. Often, educators are expected to treat a curriculum with fidelity with limited background knowledge and professional training.

Curriculum decisions are made by leadership and often do not include Educators' perspectives. Although some responses testified for teacher preference when asked about the decisions to select their current curriculum, others reported that team consultants, curriculum directors, or other leadership often make the major decisions. One educator wrote, "Curriculum Director. Sometimes, hired consultants narrow it down and then teachers vote on it. Then it must be approved by the Board of Education.". This illustrates a top-down curriculum selection process where teacher voice and input are not presented or often filtered through the ad-

ministrative leadership. This highlights that decisions are not always rooted in what educators or the classroom needs. Other inconsistencies arise with leadership simply letting educators pick whichever curriculum they want to utilize, and this contributes to inconsistencies across different classrooms, especially given that educators are not frequently trained. Other respondents highlighted the challenge and difficulty of changing beliefs among leadership, with one curriculum director writing: "It is a struggle to shift some leadership's mindsets, but I'm hoping we are headed in that direction." These perspectives highlight the main curriculum decisions and leadership beliefs and their inconsistencies with implementation alignments.

Another trend reported was the special attention that should be given to educators in GSRP and Pre-K. Some educators shared that phonics instruction in their program is not permitted and is considered developmentally inappropriate. One educator wrote: "We don't teach phonics in preschool, only identifying letters and their sounds, no curriculum or guidance.". Other similar responses reflect the structural barriers to phonics instruction in early childhood education settings. However, educators have identified the responsibility of implementing some elements of systematic phonics instruction. Some components of phonological awareness, such as rhyming, letter recognition, and sound recognition, were stated as some examples. This creates an issue because educators are being asked to implement literacy foundations. However, they do not have access to the aligned tools or curriculum, and this can create confusion and inconsistency in horizontal and vertical alignment. Lack of training alignment and resources leaves these educators under-supported.

When asked what resources would help them implement systematic phonics instruction better, educators highlighted a resource and training gap, especially for those working in Michigan's GSRP and preschool settings. These results highlight the need for aligned training and materials to understand the full scope and sequence of reading acquisition, not just sub-components of phonological awareness. Early childhood educators should be included in K-3 professional development. Michigan has recently restructured its certification process to encompass all these groups into one cohesive and coherent band (Pk-3); issues resulting from the disorganized field are evident in the lack of training and gaps. Establishing a definition in the Michigan legislature that describes early childhood as birth through third grade can help. Additionally, educators should participate in vertical professional development that allows them to share goals and benchmarks and support transitions from grade to grade.

Due to the data collected and research analyzed, I have reaffirmed and solidified my understanding of explicit phonics instruction, professional development, and advocacy. The literature and survey data highlight the critical role and need for systematic synthetic phonics instruction in reading acquisition. In response, I dedicate a protected 30-minute block for phonics instruction that centers on a logical scope and considers it nonnegotiable. While GSRP, Pre-K, and Preschool

may not formally engage students in explicit phonics instruction; I recognize the central role of systematic phonics instruction in the development and attainment of mastering the alphabetic code and grapheme-phoneme correspondences, required in English's deep orthography. I will focus on phonemic awareness, grapheme-phoneme identification, segmentation, blending, and substitution in these lower grades. I have also made it a goal to continue professional development through the LETRS cohort I previously enrolled in through the Michigan Department of Education. Lastly, I embrace the role of an advocate to support other educators in understanding the critical role of explicit phonics instruction in reading acquisition.

9. Implications for Practice

The Science of Reading and structured literacy movements have gained momentum, inspiring many practitioners to implement systematic phonics instruction in early childhood. This research offers insight into the implications for early literacy instruction, specifically by providing a comprehensive understanding of the historical debate between whole-language and structured literacy approaches in early childhood education. Observations as an educator with experience in preschool and the primary grades informed this research inquiry, illuminating a disconnect between play-based philosophies and the structure of literacy practices, steadily supported by empirical research. Previous advocates for play-based literacy learning in preschool classrooms may find their perspective shifting as current research continues to illuminate literacy development towards a more systematic and explicit approach.

A growing body of evidence continues to underscore the importance of systematic direct instruction in phonemic awareness, decoding, and word recognition, particularly to prevent and ameliorate reading difficulties. Structured literacy curricula such as Fundations and UFLI are necessary to support and sustain reading acquisition. Continued examination of such curricula requires considerations for fidelity implementation and developmentally appropriate literacy practices, all of which are essential in closing the achievement gap for students at risk of reading difficulties. Advocacy for structured literacy that is both developmentally appropriate and evidence-based will remain an essential aspect in bridging the gap between traditional early childhood philosophies and contemporary research.

Phonics programs currently being implemented in many early childhood settings include Fundations, which is categorized as a code-emphasis program. Code-emphasis programs employ bottom-up approaches to reading instruction and directly align with synthetic phonics principles. Fundations for grades K-3, uses a logical scope and sequence to address phonological awareness, word recognition, decoding, and other identifying elements depicted in research models such as Scarborough's Reading Rope. As previously mentioned, Scarborough's Reading Rope is often primarily used to translate the Science of Reading for educators.

Findings from the review of the research and Michigan regional data reinforce

the role of explicit synthetic phonics instruction in early childhood, including pre-kindergarten and Great Start to Readiness Program (GSRP) contexts. Play-based philosophies and other traditional philosophies that interfere with structured literacy implementation continue to be influential in early education. However, research continues to increasingly support the necessity of structured phonics instruction to guide children towards mastering key concepts like the alphabetic principle and progress in reading acquisition. Practitioners and the field as a whole must recognize the importance, role, complexity, and impact English's deep orthography has on reading acquisition. Equally significant is the realization and agreement that reading is not acquired naturally, like oral language, thus providing support for implementation of explicit teaching practices. Moreover, these findings underscore and illuminate the persistent disconnect between literacy approaches in early education and the primary grades, highlighting the urgent need for vertical alignment in instructional philosophy, curriculum design, and professional development.

Independently, educators should not be expected to design foundational literacy curricula; instead, their primary role ought to concentrate on the effective delivery of evidence-based programs and models with fidelity. Ensuring educators are implementing curricula with fidelity will increase the likeliness of replicating outcomes. The complexity of early reading research necessitates rigorous curricular designs that align with the developmental and instructional standards. When educators are tasked with designing curricula without adequate training and support, it can further exacerbate the inconsistencies and instructional gaps. The survey data from Michigan educators reveals the need for a paradigm shift. Educators, leadership, and policy makers will need to further extend this paradigm shift towards emphasizing the importance of early literacy instruction in Pre-Kindergarten and GSRP classrooms. To support current early childhood educators, dialogue must be centered around ways to implement explicit instruction and play-based experiences. Welcome conversations that can help blend play-based experiences and explicit instruction.

Observations from several years of teaching in pre-kindergarten classrooms reflect a widely held belief that phonics instruction is developmentally inappropriate for young children. Reggio Emilia and High Scope are philosophies highlighted by teacher preparation programs and are ultimately the root cause of these perceptions. These frameworks suggest that young children develop literacy skills through print-rich learning environments and exploratory play, with minimal explicit instruction. Research, however, supports children learning the alphabetic principle, phonological awareness, grapheme-phoneme correspondences, and other critical elements of reading acquisition through systematic instruction. Supporting educators' understanding of logically sequenced phonics curricula can complement play-based practices when they are carefully aligned with developmentally appropriate methods.

Recommendations

The research examined in this literature review and the survey data gathered highlight a critical and ongoing shift in the field: moving away from whole-language philosophies in the direction of evidence-based structured literacy approaches. Despite this shift, the research process for this literature review provided challenges in locating recent empirical studies. Most of the available literature is drawn from classical, seminal work, and primarily theoretical models and perspectives. The literature is heavily concentrated by the seminal work of Linnea Ehri or from advocacy groups such as the Reading League. This creates challenges in over-reliance on a limited number of resources. This challenge highlights the need for additional contemporary studies that substantiate the theoretical claims and further inform classroom practices.

Current educators, researchers, and policymakers increasingly recognize the critical role of explicit and systematic literacy instruction. Fundations, Orton-Gillingham, and UFLI are some examples of structured literacy curricula that are gaining popularity and being implemented across regional areas of Michigan. Most of the literature presented in this review is outdated and lacks direct classroom-based comparisons. This presents limitations and adds to the current need for well-designed, contemporary, empirical research that will further investigate and validate current practices in early literacy education.

Through this literature review process, the difficulty in locating contemporary research within the last 10 years was a challenge. Most fundamental studies examined in the literature review were classical to 2010 and had limitations, with few focus on reporting longitudinal data. This limits generalizing data gathered from classical studies to modern classrooms and populations. Additionally, most of the literature on this topic came from theoretical discussions, meta-analysis, and secondary analysis. This contributes to further limitations due to the lack of classroom-based empirical studies evaluating the effectiveness of whole-language approaches and systematic synthetic phonics instructional methods or curricula. Due to these limitations and lack of contemporary evidence, it is recommended that current and future research concentrate on designing empirical studies that compare classroom outcomes of whole-language elements versus structured literacy elements (synthetic phonics instruction). This may, in turn, help capitalize a paradigm shift towards synthetic phonics. Furthermore, subcomponents of synthetic phonics or structured literacy, such as phonemic awareness and decoding, will be explored with studies designed to deliver long-term reading outcomes.

An additional challenge came from an independent evaluation of systematic phonics curricula and programs throughout this research process. During the research process, one contemporary study provided independent evidence for UFLI reading outcomes. Future researchers can concentrate on designing studies that examine the outcomes of other high-profile programs like Fundations or Orton-Gillingham to contribute to the growing evidence supporting structured literacy curricula. The study by Lane et al. (2025) examined the outcomes of UFLI; How-

ever, it provided empirical evidence for structured literacy curricula, and the evidence was tied to publishers and in the early stages. Further studies must emphasize comparative methods that demonstrate student reading gains with control groups to add to the studies' validity. Although vendor-reported results offer insight, researchers should approach research through a third party to avoid bias from publishers and their programs to limit conflict of interest.

In addition, results from the survey data collected presented concerns regarding teacher attitudes and beliefs. Exploring the instruction of shifts and the consequences of teachers' attitudes and beliefs on these instructional shifts is critical to the advancement of the field and for the successful implementation of systematic literacy instruction and reading outcomes. Researchers can design qualitative studies such as interviews, focus groups, and surveys for pre-kindergarten and GSRP teachers to understand attitudes and beliefs about instructional shifts and adjustments. Qualitative data can highlight the continuing conflicts between structured literacy and play-based philosophies and contribute to a better understanding of the resistance and concerns for explicit instruction in early childhood. Qualitative data gathered can help design professional development to identify educators' knowledge gaps and increase confidence in implementing structured literacy approaches. Moreover, a current gap specifically targeting pre-kindergarten and GSRP is an opportunity to design pilot classrooms or case studies that implement structured literacy routines with existing early childhood curricula and philosophies. Insight from these case studies and pilot classroom results can contribute to examining how explicit instruction can be embedded into the routines already established in early childhood classrooms that support developmentally appropriate practices.

In conclusion, the current literature and survey data support the necessity for a critical shift from whole-language approaches to evidence-based structured phonics instruction. Fundations, Orton-Gillingham, and UFLI, are high-profile programs being implemented in Michigan, but more contemporary empirical research that validates and compares their effectiveness is needed. This literature review highlighted the disparity and abundance of theoretical discussions, meta-analysis, and classical studies, which comprise most of the current research and add challenges and limitations to generalizing findings to current student populations. To move the early childhood education field forward, future research should prioritize classroom-based empirical studies that compare elements of whole language and structure literacy methods. In expansion, the current high-profile curricula need further independent evaluations to contribute to unbiased and actionable research. Lastly, there is growing resistance from educators to implement explicit phonics instruction in pre-kindergarten and GSRP settings. Qualitative research will add insight into further understanding these attitudes and beliefs in this unique area of the early childhood continuum. Developing a comprehensive understanding of educators' perspectives will help identify additional patterns and trends in the shift towards structured literacy in all areas of

early childhood education and help bridge the gap between philosophy and explicit instruction. Current and future research that addresses these gaps will support more equitable, effective practices in early literacy.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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