THE JMC Review
ISSN:2456-9550
Volume 8 (2024): Role of Phonological Awareness in Early Literacy

RESEARCH ARTICLE

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Role of Phonological Awareness in Early Literacy

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[ABSTRACT: Scholars and theorists have been waging the 'reading wars' for more than a century. The most contentious part of these debates has centred on the role of letter-sound relationships and the awareness of sounds in words in learning to read. As a result, phonological awareness has remained a widely researched area in the field of reading. Many studies claim that phonological awareness is a reliable predictor of children's subsequent success in reading. However, these studies remain riddled with controversies and debates. The critiques of these studies find their bases in the questionable methodological rigour (design flaws) of the research and the conceptualisation (or its absence) of reading. The purpose of this paper is to carry out a systematic review of these studies and examine their claims about the role of phonological awareness in early reading in the light of developmental and holistic conceptualisations of reading.
KEYWORDS: Phonological Awareness, Reading, Phonemic Awareness, Early Years, Emergent Literacy]

Referring to a person's ability to recognise and manipulate the sounds in oral language, phonological awareness has been considered a robust predictor of reading, especially in the early years. Although research on phonological awareness and its role in reading acquisition has been developing as an area of study since the 1960s, it has only gained prominence since the 1990s. The assertiveness of the claims made by studies on phonological awareness and

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the quantum of studies have steadily risen with time. Bus and van Ijzendoorn claim that "About 500 studies with null results in the file drawers of disappointed researchers would be needed to turn the current results into non-significance" (as cited in Nicholson, 2006, p. 39). The decisiveness of tone in the available research literature is evident in expressions like, "unequivocal support for the critical role of phonological processes in learning to read" (Blachman, 2000, p. 483), "there is a strong and totally uncontroversial relationship between children's performance in phoneme judgement tasks and the progress that they make in learning to read (Bryant and Nunes, 2004, p. 3) and "it has been one of the most productive areas of inquiry to date in terms of advancing our scientific understanding of the reading process" (Blachman, 2000, p. 495). This paper focuses on examining the compelling claims made by the studies about the role of phonological awareness in reading in the early years.

The paper is broadly divided into four sections. The first section provides a brief explanation of the concept of phonological awareness. It describes the different levels and the various measurement tasks that are used in studies on phonological awareness. The second section presents a review of research literature on phonological awareness to trace the development of the concept. The field of reading has always been marked by debates, and the reading wars (Pearson, 2010) have been a significant feature of the field and have shaped it in defining ways. At different times, different aspects of reading have held sway and have informed instructional practices, but phonological awareness and its role in early literacy have been one of the most resilient and consistent components to survive the reading wars. The third section explores the limitations of the existing body of research on phonological awareness and the gaps it has failed to address. This section examines the designs of the studies closely, considering that phonological awareness is embedded in the broader context of reading. It then analyses the conceptualisation of reading in the studies on phonological awareness. The last section of the paper juxtaposes the underlying assumptions of the research on phonological awareness with the developmental perspective of emergent literacy and examines how phonological awareness is viewed within the framework.

Phonological Awareness

Spoken words can be broken down into their constituent sounds. The awareness of the structure of the sounds constitutes phonological awareness. This awareness enables one to think about the sounds (form or structure) in a word as distinct from its meaning (content). For instance, the word 'dog' has the form or sound structure with three distinct sounds /d/-/o/-/g/ and the word 'log' comprises /l/-/o/-/g/. To appreciate the difference in the meaning of the two words comes "intuitively and at a subconscious level" (Tunmer, 1997, p. 28), but it is the ability to segment the two words into their constituent sounds and single out the different sounds that defines phonological awareness. So, phonological awareness, necessarily, entails manipulation, reflection (on) and "objectification" (Sulzby & Teale, 1996, p. 745) of the spoken words.

Levels of Phonological Awareness: The awareness of a spoken word's phonological structure can be measured at different levels. The research literature indicates that there are three levels of phonological structure that are important for reading acquisition, namely, the

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syllable, the onsets and rimes, and the level of the phoneme. "Phonemes are the smallest sounds that change the meanings of words" (Goswami, 2000, p. 252): dog and log differ by a single phoneme (the initial phoneme), and so do dog and dig (the medial phoneme). "The onset is the beginning consonant(s), and the rime is the remainder of the syllable, including the vowel and optional consonants" (Nicholson, 1997, p. 53). Thus, the onset of 'dog' is /d/ and the rime is –og.

Measurement Tasks: Various tasks have been devised to assess children's awareness of the three levels of phonological structure. Most of these tasks are administered orally because they assess the awareness of sound structures of spoken words.

The tapping task was devised by Isabelle Liberman (Goswami, 2000), in which children are required to tap with a wooden dowel to indicate the number of sounds at different phonological levels. The clapping task seems to be a variant of this. In the oddity task, children listen to a group of words and select the word with a sound different from the other words in that group. This task was devised by Bradley and Bryant (Goswami, 2000). Treiman and her colleagues used the same-different judgment task in which children listened to a pair of words and judged whether they shared a sound (Goswami, 2000). Each of these tasks can be used to assess more than one level of phonological awareness.

The studies included in the following section, which review studies on phonological awareness, refer to the tasks described above. The section also provides details of the research design, age of the participants and the aspect of phonological awareness examined. It is critical to examine the details carefully to completely understand the implications of the body of research. These studies also indicate milestones in the development of this research area.

Research on Phonological Awareness

Teaching sounds in words to children has been around since the sixteenth century (Thompson, 1997), but research on phonological awareness and reading is more recent. Most research studies can be broadly classified into correlational and training studies. However, the studies reviewed here have been placed in chronological order, beginning with the earliest developments to more recent work, in order to highlight the development of various aspects of phonological awareness in research.

Development of the Concept of Phonological Awareness: In the early 1960s, Elkonin, a Russian researcher, explained that spoken words were a glass through which children looked at the world. If beginner readers could be made aware of the presence of that glass, they would have awareness of the phonological components in a word. This was called the glass theory. This was the first instance when phonological awareness was considered significant in reading. Elkonin reported research on the teaching of reading, where preschoolers were trained to segment spoken words. He did not give details of the results (Nicholson, 1997). Parallel to Elkonin's work in Russia, Alvin and Isabelle Liberman in the United States, with the aid of speech research, found out that phonemes were not like "beads on a string"

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(Nicholson, 2004, p. 37), and the task of isolating phonemes from a spoken word was not easy. What was being suggested was that "phonemes are not necessarily real at a high level of awareness" (1968 Liberman, as cited in Nicholson, 1997) and "we can learn to do it, but it doesn't come naturally" (Nicholson, 2004, p. 37). A study carried out by Bruce (as cited in Nicholson 1997, 2004) in England was one of the first to be published on children's understanding of the sound structures of words. Sixty-seven children, aged between 5 to 7 years, were tested to assess their ability to delete and substitute sounds in words. Bruce found that it was not till children had achieved the mental age of seven or beyond that they could delete or substitute phonemes (Nicholson, 1997). In one of the earliest studies in the United States, children's ability to count the number of syllables and phonemes was assessed (Liberman et al., 1974, as cited in Nicholson, 1997). The children were 4–6 years of age. The results varied with age and the unit of sound being assessed—syllable or phoneme. None of the 4-year-olds could do the phoneme task, but half of them were successful in the syllable task. Similarly, half of the 5-year-olds could do the syllable task, but less than a fifth could do the phoneme task. Among the 6-year-olds, 90% could do the syllable task, while 70% could do the phoneme task. Another significant strand of work in the United States in the 1960s was the First-Grade Studies and its parallel exercise of a systematic and critical analysis of the research already available on "What is the best way to teach children to read?" (Graves and Dykstra, 1997, p. 342) The First-Grade Studies (Pearson, 1997) consisted of 27 individual projects across the country, which, amongst other questions, tried to answer: "Which of the many approaches to initial reading instruction produces superior reading and spelling at the end of the first grade" (Graves and Dykstra, 1997, p. 342)? The Studies compared various reading methods, such as basal, phonics, and linguistic instruction, and "found high correlations between first grade reading achievement and knowledge of letter names and phonemic elements" (Chall, 1999, p. 8). It is worth noting that these Studies figure on the list of the 13 most influential literacy studies since 1961 (Shanahan & Neuman, 1997). The research, specifically, set out to find out the best method for teaching reading and unlike the other studies of that time, did not directly investigate children's phonological awareness. Many research studies followed these early attempts at understanding the role of phonological awareness in reading. Some of the major studies are referenced in the sub-section below.

Later Research Studies: A few studies by Bradley and Bryant investigated aspects such as rhyme and the role of phonological awareness in reading difficulties. Bradley and Bryant (as cited in Nicholson, 1997) used a more sophisticated reading level match design to compare a group of children (60 children) with an average age of 10 years with another group of children (30 children) with an average age of 6 years. A reading level match design holds reading constant and varies age (Goswami, 2000). The older children were poor readers, reading at the level of the children from the younger group. The younger group was reading at slightly above average levels. The intelligence scores of both groups were similar. In the test, children had to identify the phonological pattern in the given words and pick out the odd one. The results showed that the older, poor readers were significantly worse than the younger, average readers. The interpretation offered was that reading difficulties could be due to difficulties in phonological awareness.

In another study, Bradley and Bryant (as cited in Harrison, 2000) reported on a 4-year longitudinal study with 368 children that began when the participants were 4 or 5 years of

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age. The objective of the study was to establish the variables that were the best predictors of subsequent success in reading. The most significant finding was "that children's sensitivity to rhyme was the best single predictor of subsequent success in reading" (Harrison, 2000, p. 18). Bryant argued that sensitivity to rhyme was a causal factor in learning to read and spell in the subsequent three years. However, Bryant was also aware of the fact that the results of correlational studies cannot establish causal relationships. Therefore, he set out to establish a causal connection through intervention studies.

The most widely cited of which and the one with the "first clear findings" (Nicholson, 1997, p. 56) on phonological awareness training was published in 1983 (Bradley & Bryant, as cited in Nicholson, 1997). This became a landmark study because it trained children in phonological awareness over a two-year period before assessing their abilities. It also "led to the foregrounding of the issue of phonological awareness for teachers in the United Kingdom" (Harrison, 2000, p. 19). However, Harrison (2000), in giving an overview of reading research in the United Kingdom, stresses that the findings of the study were less clear-cut than the widely understood claim that teaching rhyme to 6-year-olds leads to significant improvement in reading ability. The study had two experimental groups and two control groups. One of the experimental groups was a dual-treatment group, which received training in phonological awareness and training in recognising letter-sound relationships. The other experimental group was taught only phonological awareness. Out of the two control groups, one group was a no-treatment group, while the other received additional time on vocabulary development. The results from the dual-treatment group strongly suggested that a combination of phonological awareness and letter-sound relationships is the most effective teaching method. Another notable training study by Ball and Blachman (1991) with kindergarten children instructed in phonemic awareness and letter-sound correspondences showed that the children made significantly more progress in reading words and non-words, developmental spelling, and phoneme segmentation. Similar results were achieved in an 11-week intervention to study the effect of phoneme awareness on invented spellings by Tangel and Blachman (1992).

The studies by Bradley and Bryant (1983) and Ball and Blachman (1991) indicated a shift in the field in two ways. First, results from the two studies brought focus to phonemic awareness. Second, research was not just observational or based solely on child assessments; training and intervention studies also became important. Examining the broad patterns in the research studies listed in this section, it is interesting to note that with each subsequent study, the designs and methodologies became more varied, complex, and sophisticated, and new levels or aspects of phonological awareness gained significance.

Goswami's (1986, 1990, as cited in Harrison, 2000) work on how analogies are used to decode new words is a seminal strand of research. She focused on onset-rime, a level of phonological awareness which had not been explored earlier. In a single syllable word like /bat/, the first consonant, /b/is the onset and the remainder of the word, /-at/ is the rime. She examined children's potential for decoding words unfamiliar to children at ages 5, 6 and 7. In her detailed account of the developmental sequence in which children's ability to form analogies developed over time, she explains that children first use the rime, then the onset, and finally just part of the rime.

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This view on the importance of onset-rime distinction and Bryant's earlier claim of the significance of rhyme sensitivity did not remain unchallenged for long. Muter et al. (as cited in Harrison, 2000) carried out a longitudinal study with 4-year-olds. Their argument was that not all measures of phonological awareness are equally good predictors of later reading. They carried out a factor analysis on the results of a battery of phonological tests given to children. An interaction effect based on the product of letter-knowledge and segmentation was identified as the key element, thereby revealing how children's knowledge of different aspects of language (here, letter-knowledge) and awareness about sounds are associated in complex ways. The interpretation the researchers derived from this finding was that it is important to teach children in a manner that explicitly connects their underlying phonological awareness with their experiences in learning to read. It is interesting to note that this interaction effect of letter-knowledge and segmentation is similar to the results of the dual-treatment group in Bryant's first intervention study, even though both studies focus on different measures of phonological awareness (rhyme in one and phoneme in the other). What is also becoming increasingly evident is that phonological awareness (or any of its single aspects like rhyme), by itself or in isolation, is not enough to explain reading.

In the last two decades, meta-analytic consensus (Ehri et al., 2001) and intervention studies, especially those using response-to-intervention (RTI), support systematic phonemic instruction as a core component of early literacy. The studies are leaning towards structured, evidence-based instruction. An important feature of the body of research described above is that the participant groups vary from kindergarten to grade one, from ages 4 to 10 years, from at-risk children to children from low SES backgrounds, and participant groups who need prevention and remediation of reading difficulties. These studies capture the broad trends in research on phonological awareness, with a greater emphasis on the development of the concept.

Based on the research studies sampled in the foregoing section, it is possible to arrive at a few general conclusions about the role phonological awareness plays in children's developing reading skills. One, it is the interplay between children's phonological awareness and some other aspects of reading, such as letter-knowledge, letter-sound correspondence, which provides them with more support in learning to read. Two, the development of phonological awareness progresses from the level of syllable through the onset-rime level to phonemic awareness. In other words, it proceeds from the largest possible chunk (in the given tasks): from word to syllables; to sub-units of syllable: from onset-rime to the smallest possible sound, phonemes. The larger the sound unit, the more accessible it is to the child. In fact, syllabic awareness and onset-rime awareness are known to develop before school entry and without any direct instruction (Goswami, 2000). According to this body of research, it is phonemic awareness that poses the biggest challenge for children in learning to read.

Technically, though phonemic awareness is subsumed under phonological awareness, researchers make a distinction between the two and phonemic awareness has emerged as an exclusive area of study. Much of the recent research in phonological awareness has focused on phonemic awareness. The following section discusses some questions that have been raised in reviews of the studies on phonological awareness. These questions draw attention not only to the gaps in the studies but also to the more fundamental question of how reading has been conceptualised.

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Gaps in Research on Phonological Awareness

The rapid expansion of research in phonological awareness and the attention it has received from practitioners warrants the need for a critical analysis of the experimental research used. One of the most extensive reviews of the research studies was carried out by Troia (1999) to examine the methodological issues. He reviewed 39 studies and applied the conventional criteria for assessing the strengths and limitations of quantitative research. The meta-analysis evaluated the studies for their internal and external validity. The internal validity criteria were broadly categorised by general design characteristics, measurement and statistical treatment, and the external validity criteria were classified into research hypotheses, participant selection and description, and transfer and maintenance measures. The most serious methodological shortcomings identified ranged from "non-random assignment of participants to treatment groups to inadequately described data" (Troia, 1999, p. 48), among several others.

Interestingly, only 7 of 39 studies met two-thirds of the internal and external validity criteria. Assuming these studies represent the best evidence in support of training children in phonological awareness, let us consider some of the limitations of the seven studies. None of the seven studies evaluated the effects of classroom-based intervention. This questions the ecological validity of these studies. There is a possibility that the intervention programmes are too complex or impractical to be implemented in a classroom study. The maintenance of the treatment effects (3 years) was determined by only one study out of the seven (Byrne and Fielding-Barnsley, 1991, 1993, 1995, as cited in Troia, 1999). If the effects of the training are short-lived, then the allocation of time and resources in such a programme cannot be justified. The best studies were the least representative of a typical classroom situation. The intervention was conducted either by research personnel or by specially trained teachers in small groups or with individual children from narrowly defined populations.

Based on the seven best studies, Troia (1999) concluded that giving instruction individually or in small groups for 2 months (sessions often are of 15-20 minutes duration and usually are provided twice per week) can improve phonological awareness. Bradley and Bryant's (1983) study, which was reviewed in this paper, was part of Troia's meta-analysis and ranked 32nd out of the 39 studies included in the corpus. It is important to recall here that this was a landmark study in phonological awareness.

Even though phonemic awareness has emerged as the most critical aspect of phonological awareness, the diversity of the participant groups in terms of age, grade, socio-economic status, the need of the group, the length of the intervention period and the level at which the training has to be pitched (Nicholson, 1997) makes it difficult to draw implications for a real classroom. Troia (1999) observes, "there is substantial variation among these studies with respect to the nature of the intervention employed, the methods used to assess treatment efficacy, and the specific conclusions reached" (p. 28). A related "problem with much of the research is that phonological training has also been accompanied by reading instruction, which makes it difficult to know whether it is the phonological awareness training itself that

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has made the difference, or some interaction of reading instruction with the training" (Nicholson, 1997, p. 58). On a similar note, Pearson (2010) cites Adams and Juel to emphasise that development of phonemic awareness could be a result of "learning phonics, learning to read, or especially learning to write, especially when teachers encourage students to use invented spellings" (p. 10).

The 'realness' of the training and testing situations in these studies is problematic. The training studies lack the palpable, dynamic features of real life or even a classroom-like context, though RTI-based interventions are more responsive to real-world classroom contexts and appear better in terms of applicability. Another issue related to real-world relevance is the nature of training. The activities for children must be engaging and motivating, and should also be in consonance with their curriculum. The intervention of the kind described in the studies, conducted under controlled conditions, may not be engaging enough for children, thereby affecting their learning.

Furthermore, a few of these intervention studies rely on individualised tutoring sessions, Bradley and Bryant's study (1983) being an example. Harste, Burke and Woodward (1994) have posed a transactional view of the reading process, which suggests that "written language growth and development are sociopsycholinguistic processes. To understand the cognitive and linguistic processes involved in reading and writing, we must look at the linguistic, situational, and cultural context in which that processing occurs" (1994, p. 49). In addition, they point that, "specific language information available includes how the graphophonemic, syntactic, and the semantic systems of language operate in relation to one another and in relation to those things known about the world" (Harste, Burke and Woodward, 1994, p. 65). This view appreciates not just the wholeness of the act of reading but also the context in which it takes place.

Another quarter from where debates questioning the research on phonological awareness have arisen is the whole-language lobby (Nicholson, 1997, 2006). The term whole-language is associated with "holistic pedagogy" and differentiated from "part-to-whole skill sequence" (Goodman, 1997, p. 87). The research on phonological training involves making children practice skills of the kind that help them discern different levels of sounds in a word. This is in sharp contrast with the belief system of the whole-language theorists. On the contrary, "whole language teachers, at all levels, build on the existing strengths of the learners, developing literacy in the context of using literacy to learn" (Goodman, 1997, p. 87). Research studies were also carried out to find out if children can gain from phonological awareness instruction in classrooms driven by the whole-language perspective (Castle et al., as cited in Nicholson, 1997). The results suggest that training in phonological awareness gives children a better start in reading and spelling in a whole-language classroom. Some whole-language theorists have pointed out that even though training studies improve phonological awareness and reading of made-up words, it does not necessarily help them in reading real words in real texts. (Coles, 2000; Krashen, 1999; McQuillan, 1998; all, as cited in Nicholson, 2006) Additionally, they argue that the gains children achieve in phonological awareness are relatively short-lived and typically disappear within 1–2 years. An interesting strand of research in whole-language classrooms suggests that awareness of sounds in oral and written language develops in the context of writing, as writing requires children to segment a word into its constituent sounds (Pearson, 2010).

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Besides the questions raised from a whole-language perspective, an important point to consider is the developmental perspective on literacy in the early years. Research in the last five decades has reconceptualised the reading and writing of young children in different ways. This development has led to the concept of emergent literacy. The following section briefly introduces the emergent literacy framework, followed by a comparison with some of the features of the research on phonological awareness.

The Developmental Nature of Early Literacy

The significance of the concept of phonological awareness is also due to the role attributed to it in learning to read. The early years of a child are the time when they are taught to read and write. Parallel to some of the major research work on phonological awareness in the 1980s, based on Marie Clay's influential research, the term emergent literacy also gained prominence. The emergent literacy approach recognises that children's literacy is qualitatively different from conventional adult literacy and progressively moves towards it with more interaction and exposure to functional and meaningful use of print in their socio-cultural environment. The most prominent effect of the development of this perspective was the expansion of the range of research from reading to literacy because it was observed that in literate environments, oral language, reading, and writing develop "concurrently and interrelatedly" (Teale & Sulzby, 1986, p. xviii). Teale and Sulzby (1986) believe that research exploring the importance and nature of children's writing and reading development during the early years represents a paradigm shift from the earlier and still prevalent reading readiness approach. The reading readiness approach implied that there was a suitable time in children's development when it was best to teach them to read and write, or readiness could be developed by engaging children in physical activities like hopping and skipping (Anderson et al., 1985). The approach focused on teaching non-meaningful and mechanical aspects, such as letter sounds and shapes, and the blending of sounds. Mason and Sinha (1993) have listed features shared by the studies that focus on the emerging nature of children's literacy. The studies emphasise that the years before formal instruction are important, and literacy emerges before children are formally taught to read. The significance of the whole act of reading and not merely attention to sounds and letters is highlighted, and the 'wholeness' includes the social setting of literacy. Lastly, the child's active engagement with emergent literacy constructs is important. Strangely, the studies on phonological awareness did not acknowledge the developing nature of literacy and the importance of daily-life encounters with language and literacy in the development of literacy beyond instructional and structured contexts.

Juxtaposing the features of emergent literacy with the assumptions underlying the research studies on phonological awareness described earlier makes evident the sharp contrast in the two views. Of course, all the studies are held together with the emphasis they lay on the significance of phonological awareness in learning to read. Even though the studies have moved away from examining phonological awareness in isolation, the concept never gets embedded in a comprehensive perspective of literacy. Admittedly, there are repeated reminders of the 'unnaturalness' of the phonological processes. "Phonological awareness has

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a strange role to play in learning to read because it is an unnatural awareness to acquire. However, it plays an important role and must be taught" (Nicholson, 2006, p. 36). Contrary to the emergent literacy framework, the research on phonological awareness considers it to be a prerequisite in learning to read and emphasises the need to teach it to children (certainly, phonemic awareness). Essentially, the developmental aspect of literacy is completely ignored, and conventional literacy is valued. Emergent literacy does not describe the child's unfolding literacy in terms of prerequisites.

Clay (2002) writes that preschool children can be familiar with features of print, write a few letters or words, can pretend to write or dictate stories "before they have begun to consider how the words they say may be coded into print, and in particular how the sounds of speech are coded in print" (p. 19). In contrast, structured and formal instruction programmes can discourage children from using the knowledge they have already constructed about language when the focus is primarily on abstract units, like sounds and letters (Harste et al., 1994). McGee and Purcell-Gates have raised three issues about emergent literacy growth. They are as follows:

> What are the differences, if any, between phoneme awareness that develops informally and that which is instilled by training, and what is the impact of those differences on learning to read and write? What is the quality or amount of knowledge that is needed to exhibit conventional behaviours? Who profits from training and who does not?" (as cited in Yaden et al., 2000, p. 440)

The articulation of these issues helps keep the available research literature on phonological awareness in perspective and highlights future research possibilities.

Conclusion

Phonological awareness must be situated in a more comprehensive theory of literacy, which takes cognisance of the developmental nature of children's reading abilities. Children's journey from emerging literacy to conventional literacy should be an essential part of this understanding. This shift in focus can be brought about by observing what children learn in informal and formal, meaningful encounters with print, and what children should be taught. The emergent literacy perspective discussed earlier provides a suitable theoretical construct to develop an understanding of the phonological aspects of reading.

Sulzby and Teale (1996) have considered three possible conceptualisations of the link between phonemic awareness and early conventional reading and spelling. The first is the one suggested by the research on phonemic awareness of the kind reviewed in this paper. This perspective considers phonemic awareness a prerequisite to conventional reading and spelling. The second conceptualisation considers that phonemic awareness is a consequence of reading and spelling ability. For instance, Ehri in 1984 and 1986) and Ehri and Wilce in 1985 (as cited in Sulzby & Teale, 1996) concluded that phonemic awareness is a consequence of literacy. Charles Read's (as cited in Nicholson, 2006) argument that the emergence of phonemic awareness while learning to read was 'highly suspicious' was based on his work

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on invented spellings. The third possibility is an interactive model, which tries to resolve the tension between the prerequisite/consequence positions. Sulzby and Teale (1996) conclude that, "though, phonemic awareness was found to be a valid concept, it is not simply a monolithic ability that children either have or do not have" (p. 747).

Thus, children's prior experience with literacy plays a significant role in helping them make use of direct instruction. The basic understanding of the "functions and uses of literacy and initial attitudes about the enjoyment and utility of written language" (Sulzby & Teale, 1996, p. 748) can only grow and develop out of literacy experiences at home and in the larger community. Any kind of direct instruction or training could also be an occasion for organising the knowledge children have already gathered about the 'code' through informal encounters with reading, such as storybook reading. As mentioned in the introduction about the reading wars and the contentious nature of the field, the science of reading is a phrase that has gained attention in the last few years. Making claims about the evidence-based nature of the approach, it strongly advocates for phonics instruction (Compton-Lilly et al., 2023). However, as discussed in the last section, phonics instruction fails to consider the complexity of language and its rootedness in the socio-cultural context of the learner.

To conclude, it is critical to recognise that children's experiences with literacy are extremely significant, and phonological awareness has a place in the broad and holistic conceptualisation of literacy. Phonological awareness, by itself, cannot be the single most important factor in learning to read.

FUNDING: No funding was received to research, write or publish this article.

References

Anderson, R. C., Hiebert, E. H., Scott, J., & Wilkinson, I. A. G. (1985). *Becoming a nation of readers*. Center for the Study of Reading & National Academy of Education.

Ball, E., & Blachman, B. (1991). Does phoneme awareness training in kindergarten make a difference in early word recognition and developmental spelling? *Reading Research Quarterly*, 26(1), 49–66.

Blachman, B. A. (2000). Phonological awareness. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 483–502). Lawrence Erlbaum Associates.

Clay, M. M. (2002). *An observation survey of early literacy achievement*. Heinemann Education.

Chall, J. S. (1999). Some thoughts on reading research: Revisiting the First-Grade Studies. *Reading Research Quarterly*, 34(1), 8–10.

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Compton-Lilly, C., Spence, L. K., Thomas, P. L., & Decker, S. L. (2023). Stories grounded in decades of research: What we truly know about the teaching of reading. *The Reading Teacher*, 77(4), 392–400.

Ehri, L. C., Nunes, S. R., Willows, D. M., Schuster, B. V., Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. *Reading Research Quarterly*, 36(3), 250–287.

Goodman, K. S. (1997). Whole language: The whole story. In L. van Lier & D. Corson (Eds.), *Encyclopedia of language and education: Knowledge about education* (Vol. 6, pp. 87–97). Springer.

Goswami, U. (2000). Phonological and lexical processes. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 251–267). Lawrence Erlbaum Associates Publishers.

Graves, M. F., & Dykstra, R. (1997). Contextualizing the first-grade studies: What is the best way to teach children to read? *Reading Research Quarterly*, 32(4), 342–344.

Harrison, C. (2000). Reading research in the United Kingdom. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 17–28). Lawrence Erlbaum Associates Publishers.

Harste, J. C., Burke, C. L., & Woodward, V. A. (1994). Children's language and world: Initial encounters with print. In R. B. Ruddell, M. R. Ruddell, & H. Singer (Eds.), *Theoretical models and processes of reading* (4th ed., pp. 48–69). International Reading Association.

Mason, J. M., & Sinha, S. (1993). Emerging literacy in the early childhood years: Applying a Vygotskian model of learning and development. In B. Spodek (Ed.), *Handbook of research on the education of young children* (pp. 137–150). Macmillan.

Nunes, T., & Bryant, P. (2004). *Handbook of children's literacy*. Kluwer Academic Publishers.

Nicholson, T. (2006). How to avoid reading failure: Teaching phonemic awareness. In A. McKeough, L. M. Phillips, V. Timmons, & J. L. Lupart (Eds.), *Understanding literacy development: A global view* (pp. 31–48). Lawrence Erlbaum Associates Publishers.

Nicholson, T. (1997). Phonological awareness and learning to read. In L. van Lier & D. Corson (Eds.), *Encyclopedia of language and education: Knowledge about language* (Vol. 6, pp. 53–61). Springer.

Pearson, P. D. (1997). The first-grade studies: A personal reflection. *Reading Research Quarterly*, 32(4), 428–432.

Pearson, P. D. (2010). The reading wars. In M. Cappello & B. Moss (Eds.), *Contemporary readings in literacy education* (pp. 3–23). Sage Publications.

Shanahan, T., & Neuman, S. B. (1997). Literacy research makes a difference. *Reading Research Quarterly*, 32(2), 202–210.

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Sulzby, E., & Teale, W. H. (1996). Emergent literacy. In R. Barr, M. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research* (Vol. 2, pp. 727–757). Lawrence Erlbaum Associates Publishers.

Tangel, D. M., & Blachman, B. A. (1992). Effect of phoneme awareness instruction on kindergarten children's invented spelling. *Journal of Literacy Research*, 24(2), 233–261.

Teale, W. H., & Sulzby, E. (Eds.). (1986). Emergent literacy: Writing and reading. Ablex Publishing Corporation.

Troia, G. A. (1999). Phonological awareness intervention research: A critical review of the experimental methodology. *Reading Research Quarterly*, 34(1), 28–52.

Yaden, D. B., Jr., Rowe, D. W., & MacGillivary, L. (2000). Emergent literacy: A matter (polyphony) of perspectives. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 425–454). Lawrence Erlbaum Associates Publishers.

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