Developing Phonemic Awareness and Phonics Skills to Read and Write

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Abstract: Difficulty with fluent word recognition often originates from a weakness in phonological processing. Children should learn English language foundational skills during the beginning stages of learning to read. Phonemic awareness and phonics work together to help students decode and spell accurately. Instruction in phonemic awareness (awareness of the individual speech sounds in spoken syllables and the ability to consciously manipulate those sounds) and phonics (mapping of individual speech sounds to the letters representing them) teach struggling readers the essential elements of language required for reading and writing. This manuscript addresses how to connect phonemic awareness and phonics instruction, strategies on how to identify struggling readers, and best teaching practices to help students struggling with phonemic awareness and phonics.

Introduction

Johnny is a second-grade student who is struggling in reading and writing. He excels in math, has strong social skills, and has a supportive system at home. So, why does Johnny struggle to read and write?

When Johnny is speaking, it is often challenging for him to say sounds correctly. Instead of saying "specific," he says "pacific." Since Johnny struggles with the basic sounds of English, it is difficult for him to map sounds to the correct letters while reading. Therefore, it takes Johnny a long time to read, and he has many errors.

While writing, Johnny struggles with matching the sounds of a word to the correct letters. He frequently skips words and letters while writing and puts spaces between syllables. These writing challenges make it difficult for both Johnny and others to read his work.

Johnny must learn the English language foundations while he is still young. Researchers have studied students like Johnny to discover the best ways to help poor readers learn to read and write. A poor reader is someone who experiences difficulty learning to read (PhonicBooks, 2012). Among all English-speaking poor readers, 70-80% struggle with accurate and fluent word recognition (Moats & Tolman, 2019). This decoding challenge often originates with a weakness in phonological processing. Students who have difficulty with decoding often have difficulty learning sound-symbol correspondences, sounding out words, and spelling. Phonemic awareness and phonics lay at the foundational level of the English language. It is essential to learn these skills in order to read and write. Instruction in phonemic awareness (the awareness of the individual speech sounds in spoken syllables and the ability to consciously manipulate those sounds) and phonics (the mapping of individual speech sounds to the letters representing them) teach struggling readers the essential elements of language required for reading and writing.

Developing Phonemic Awareness and Phonics Skills

Phonemic Awareness

Phonemic awareness is the conscious awareness of the individual phonemes (sounds) in spoken syllables and the ability to consciously manipulate those sounds (Moats & Tolman, 2019). In 2003, The Partnership for Reading defined phonemic awareness as "the ability to notice, think about, and work with the individual sounds in spoken words" (Armbruster, 2001, p. 8). About 17-20% of school-aged children struggle with phonemic awareness (Lyons, 1999). Students need the opportunity to play with all 44 phonemes in English instead of knowing just one sound to represent each of the 26 letters.

Phonemic awareness activities do not involve print; they are speaking and listening activities. Students are not required to look at any letters during phonemic awareness instruction. Activities include blending phonemes to make a word, segmenting a word into phonemes, deleting a sound, sound substitution, and sound reversal (Moats & Tolman, 2019). Phonemes are articulated and spoken sounds. The act of speaking is possible through recalling and sequencing phonemes.

Phonemic awareness plays a vital role in learning to read because it helps children connect spoken language to written language (Birsh & Carreker, 2018). Blending directly correlates to decoding. Segmenting correlates to spelling. Students must learn to connect the spoken sounds of English to the letter(s) representing each individual sound.

Phonics

The study of the relationship between letters and sounds is known as phonics. Phonics requires the mapping of phonemes to their spellings and mapping spellings to their pronunciations (Birsh & Carreker, 2018). Systematic and explicit instruction in phonics has been proven effective for improving children's reading (Adams, 1990; NICHD, 2000; Armbruster, 2001). Phonics is both visual and auditory, and instruction must be focused on both reading and spelling (Moats & Tolman, 2019). Most phonics programs begin instruction with the letter names and letter sounds in kindergarten.

Phonics can be challenging to teach and learn due to the dynamics of English. English has 26 letters, but it has about 44 different phonemes and more than 250 graphemes (letters or letter combinations) to spell them (Birsh & Carreker, 2018). Students cannot learn to read and write in English by only learning one sound for each letter. The different phonics skills include graphemes, digraphs, trigraphs, vowel teams, blends, families, syllables, morphemes, and etymology (Moats & Tolman, 2019). Knowing how sounds connect to letters help students to read and spell words accurately.

Connecting Phonemic Awareness to Phonics

There is a clear distinction between phonemic awareness and phonics. Phonemic awareness studies the individual oral and auditory phonemes in words and begins

before children know their letters. Some of the activities associated with phonemic awareness include phoneme blending, phoneme segmentation, phoneme deletion, substitution, and reversal. It is important to note that blending correlates to decoding (reading) and segmenting correlates to encoding (writing) and the links between speech and print must be mastered to develop fluent readers and accurate spellers. Phonics studies the letters (visual) representing speech sounds (auditory) and instruction begins, generally in kindergarten, with letter names and letter sounds. Some of the activities associated with phonics instruction include teaching the letter or letter combinations that represent the 44 sounds or phonemes in the English language and student reading and spelling phonics patterns. Knowledge of how sounds connect to letters in print is important because it helps students to decode words (read) and encode words (write) accurately (Birsh & Carrker, 2018; Moats & Tolman, 2019).

In 2000, the National Reading Panel emphasized that phonemic awareness instruction must be linked to explicit phonics instruction. The phonemic awareness skills of blending, segmenting, and manipulating speech sounds within words or syllables are bridges to associations between letters and sounds (Birsh & Carreker, 2018). While phonemic awareness instruction is essential in learning how to read, educators must also instruct students to map the 44 phonemes to the letters representing them. Systematic and explicit instruction in phonics and the approximate 44 sounds in English has proven effective in improving children's reading (Birsh & Carreker, 2018).

Blending, one of the basic phonemic awareness skills, helps students when sounding out an unknown printed word. When a student blends, he or she takes apart the sounds of a word and blends them together. The student will separate the letters, say each sound, then blend the phonemes together. For example, the phonemes in the word "clap" must be read as /c/ /l/ /a/ /p/ then blended together as "clap."

When a word is segmented, the phonemes can then be directly linked to the letter(s) representing those sounds. For example, the word "map" can be segmented into each phoneme, /m/ /a/ /p/. After the word is segmented, it can then be spelled once the student has phoneme-grapheme knowledge or phonics. Links between speech and print must be mastered to develop fluent readers and accurate spellers.

Spoken phoneme manipulation can help students to read and write words that follow similar phonics patterns. A student could say the word "sun." Then, the student would orally change the /s/ to /b/ to say the word "bun." If a child can orally complete phoneme manipulation, the skill can be applied to graphemes. The student would be able to read and spell "bun," "fun," "run," and "sun." Children can then automatically read whole words by quickly changing a phoneme while reading.

Once the phonemic awareness skills of blending, segmenting, and manipulating phonemes can be done orally, they can be applied to letters. Applying sounds to letters is how phonemic awareness and phonics are connected. When students are reading, they use their letter-sound knowledge to blend and manipulate sounds in words. When a student is writing, he or she hears the word, segments the word, and then matches each sound to the letter(s).

Both phonemic awareness and phonics work together to help students decode and spell words accurately. When reading a printed word, beginning readers need to identify the letters, convert the letters to their corresponding sounds, then blend the sounds together to say the word (Baddeley et al., 1998; NICHD, 2000; Troia, 2014). Phonemic awareness comes first developmentally, but it is foundational to apply sounds to letters. Children need phonemic awareness instruction for phonics instruction to be effective.

Identifying Students Struggling with Phonemic Awareness and Phonics

The identification of a potential reading problem is the key to helping young readers. A child with delays in phonemic awareness will miss much of the reading practice in the primary grades essential to building vocabulary and fluency (Shaywitz, 2005). Children lacking vocabulary and fluency skills will fall further behind in developing their reading comprehension skills. Teachers can observe struggling readers informally in the classroom and formally with the use of assessments.

Kindergarten Students

In kindergarten, phonemic awareness predicts growth in word-reading ability (Torgensen et al., 1994). Understanding phonemic awareness is the single best predictor of later reading and spelling achievement in first and second grade (Catts et al., 2015; de Groot et al., 2015). One of the first signs that young struggling readers may show is difficulty with spoken language (Shaywitz, 2005). Kindergarten poor readers could begin speaking later in childhood (Eide, 2012). Early on, a teacher could listen for sounds that are not pronounced correctly while singing nursery rhymes. Other children could change, leave out, or reverse parts of spoken words. For example, a child could say "aminal" instead of "animal." By the time a typical child reaches five or six, he or she should not struggle to pronounce words correctly (Shaywitz, 2005).

As a child reaches kindergarten, he or she will begin to learn the letter names and sounds they produce. When children hear and produce phonemes incorrectly, it will interfere with their ability to learn letter names and sounds (Shaywitz, 2005). Children may have difficulty learning how to identify the individual phonemes in words (Eide, 2012). Children may also fail to know the letters in their own names (Shaywitz, 2005). These are some clues that could be observed in a kindergarten child struggling with English foundational skills.

Primary Students

In first grade, children may fail to understand that words can come apart into smaller speech sounds. For example, the word "sunshine" can come apart into "sun" and "shine." A child may experience a challenge in recognizing that a word can be broken down into phonemes. A one-syllable word, such as "bat", can be broken down into /b/, /a/, /t/. Such struggles often cause children to complain that reading is too hard (Shaywitz, 2005). Kindergarten and first grade teachers would observe these challenges in students struggling with phonemic awareness and phonics.

Elementary and Adolescent Students

From second grade to adolescence, students struggling with phonemic awareness may display similar challenges. First, a student could indicate problems with speaking. They may also need a longer wait time than typical students to think of an oral response to a question (Shaywitz, 2005). While reading, students might lack strategies to decode unknown words and will make slow progress in reading fluency. Small connecting words, such as that, an, and in, will be difficult for children. Oral reading is often slow, inaccurate, and does not mimic oral language in regard to prosody (stress patterns in speech and the rise and fall of the voice during phrasing).

A student's writing can also be impacted by a struggle with phonemic awareness and phonics. Handwriting could have inaccuracies in spelling (Shaywitz, 2005). Most children struggling with phonemic awareness will also struggle with learning how to read and spell (Eide, 2012). While these are all ways to observe a challenge in phonemic awareness and phonics, some assessments can be used in the classroom.

Assessments

Assessments, such as the Phonological Awareness Screening Test (PAST), can be used to assess the different components of phonological awareness (Kilpatrick, 2015). Structured literacy programs include assessments to measure students' phonics skills, including decoding and encoding. Assessments will help teachers identify struggling students and provide meaningful interventions during the beginning stages of learning to read.

Best Practices

The International Dyslexia Association and the National Reading Panel agree that all children should be taught to read using systematic, explicit, phonics-based reading instruction (IDA, 2016). When choosing books to read, children improve faster by reading controlled readers instead of leveled readers (Cork, 2017). Controlled readers have mostly words that follow the phonics patterns students have learned with common high-frequency words. In contrast, leveled readers will have syllable patterns that have not been learned.

In 2000, the 14 members of the National Reading Panel revealed the best practices in reading instruction based off of analyzed reading research (NICHD, 2000). The panel identified that the five critical components for teaching young children to read were phonemic awareness, phonics, vocabulary, fluency, and comprehension. The science of reading states that teachers must know how to provide instruction in all five essential components of early literacy.

In 2020, Woods and Graham examined if scientific reading instruction (the research that reading experts have conducted on how people learn to read) and structured literacy (explicit, systematic teaching that focuses on phonological awareness, word recognition, phonics and decoding, spelling, and syntax) were the same. Structured literacy, which is used in dyslexia programs, requires explicit, direct instruction. The teacher explains and demonstrates one language and print concept at a time. The teacher models and verbalizes each step, then guides the student to dem-

onstrate and verbalize with immediate feedback (Mather & Wendling, 2012; Slingerland, 2013). Structured literacy includes phonology, sound-symbol association, syllable instruction, morphology, syntax, and semantics (Moats & Tolman, 2019). Students struggling with phonemic awareness, decoding, and encoding respond best to programs with structured literacy components (Woods & Graham, 2020).

Both scientific reading instruction and structured literacy programs have been proven to help students read. Research shows that teachers must provide children with the skills to effectively decode words rather than use context clues and pictures to figure out what word would fit best in a sentence.

A report in 2006 issued by the education ministry in the United Kingdom summarized the issue in this way:

> Attention should be focused on decoding words rather than the use of unreliable strategies such as looking at the illustrations, rereading the sentence, saying the first sound or guessing what might 'fit.' Although these strategies might result in intelligent guesses, none of them is sufficiently reliable and they can hinder the acquisition and application of phonic knowledge and skills, prolonging the word recognition process and lessening children's overall understanding. Children who routinely adopt alternative cues for reading unknown words, instead of learning to decode them, later find themselves stranded when texts become more demanding and meanings less predictable. The best route for children to become fluent and independent readers lies in securing phonics as the prime approach to decoding unfamiliar words. (Primary National Strategy, 2006, p. 9)

For students to be able to decode words accurately, they must have instruction in phonics. For phonics instruction to be effective, students must also have a strong foundation in phonemic awareness. Teachers should encourage students to phonetically decode while reading instead of alternative cues. Connecting phonics and phonemic awareness helps students to develop their decoding skills while reading.

Conclusion

In regard to English-speaking struggling readers, 70-80% struggle with decoding and phonological processing. A challenge with mapping sounds to letters makes it difficult for students to spell accurately. The earlier a struggling child is recognized, the sooner interventions can improve his or her reading ability. Research has provided significant evidence suggesting that the best reading instruction is systematic, phonics-based, and includes phonemic awareness intervention. Students lacking foundational reading skills can learn to read and write; they must be identified and provided with the proper reading intervention. Instruction in phonemic awareness and phonics helps struggling readers learn the essential elements of language required for reading and writing.

References

Adams, M.J. (1990). *Beginning to read: Thinking and learning about print*. The MIT Press.

Armbruster, B. B., Lehr, F., & Osborn, J. (2001). *Put reading first: The research building blocks for teaching children to read. Kindergarten through grade 3*. National Institution for Literacy.

Baddeley, A., Gathercole, S., & Papagno, C. (1998). The phonological loop as a language learning device. *Psychological Review, 105*(1), 158. https://doi.org/10.1037/0033-295x.105.1.158.

Birsh, J. R., & Carreker, S. (2018). *Multisensory teaching of basic language skills* (4th ed.). Paul H. Brookes Publishing.

Catts, H. W., Nielsen, D. C., Bridges, M. S., Liu, Y. S., & Bontempo, D. E. (2015). Early identification of reading disabilities within an RTI framework. *Journal of Learning Disabilities, 48*(3), 281-297. https://doi.org/10.1177/0022219413498115

Cork, S. (2017, October 19). *The importance of controlled readers*. Brainspring. https://brainspring.com/ortongillingham-weekly/importance-controlled-readers/

de Groot, B. J., van den Bos, K. P., Minnaert, A. E., & van der Meulen, B. F. (2015). Phonological processing and word reading in typically developing and reading disabled children: Severity matters. *Scientific Studies of Reading, 19*(2), 166-181. https://doi.org/10.1080/10888438.2014.973028

Eide, B., & Eide, F. (2012). *The dyslexic advantage: Unlocking the hidden potential of the dyslexic brain.* Hudson Street Press.

IDA urges ILA to review and clarify key points in dyslexia research advisory. (2016). *Annals of Dyslexia, 66*(3), 251–255. https://doi.org/10.1007/s11881-016-0137-z.

Kilpatrick, D.A. (2015). *Essentials of assessing, preventing, and overcoming reading difficulties*. Wiley.

Lyon, G.R. (1999). *The NICHD research program in reading development, reading disorders, and reading instruction: A summary of research findings. Keys to successful learning: A national summit on research in learning disabilities*. National Center for Learning Disabilities.

Mather, N., & Wendling, B.J. (2012). *Essentials of dyslexia assessment and intervention*. John Wiley & Sons.

Moats, L. C., & Tolman, C. A. (2019). *LETRS* (3rd ed.). Voyager Sopris Learning, Inc.

National Institute of Child Health and Human Development (NICHD). (2000). *Report of the National Reading Panel: Reports of the subgroups. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (MIH Pub No. 00-4754). Government Printing Office.

PhonicBooks. (2012, November 5). *What is the difference between a 'reluctant reader' and a 'struggling reader'*. PhonicBooks for beginner and catch-up readers. Retrieved from https://www.phonicbooks.co.uk/2012/11/05/what-is-the-difference-between-a-reluctant-reader-and-a-struggling-reader/

Primary National Strategy. (2006). *Primary national strategy: Primary Framework for literacy and mathematics*. Crown.

Shaywitz, S. (2005). *Overcoming dyslexia*. First Vintage Books.

Slingerland, B. H. (2013). *A practical guide to teaching reading, writing and spelling* (2nd ed.). Slingerland Institute for Literacy.

Torgesen, J. K., Houston, D. D., Rissman, L. M., Decker, S. M., Roberts, G., Vaughn, S., Lesaux, B. (2007). A*cademic literacy instruction for adolescents: A guidance document from the Center on Instruction*. RNC Research Corporation, Center on Instruction.

Troia, G. (2014). Phonological processing deficits and literacy learning: Current evidence and future directions. Handbook of language and literacy: In C. A. Stone, E. R. Sillimann, R. J. Ehren, & G. P. Wallach (Eds.), *Development and Disorders* (2nd ed.) pp. 227-245. The Guilford Press.

Woods, L., & Graham, K. K. (2020). Are scientific reading instruction and dyslexia interventions the same? Distinctions for elementary education preparation programs. *SRATE Journal, 29*(1), n1.

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