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Phonics

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WHAT IS PHONICS INSTRUCTION?

Phonics is an essential component of evidence-based literacy instruction. Phonics instruction is the "direct teaching of a set of letter-sound relationships in a clearly defined sequence" (Armbruster et al., 2009, p. 12   ). Explicit and systematic phonics instruction teaches students the predictable relationships between written letters or letter sound patterns (*graphemes*) and individual speech sounds (*phonemes)*; Armbruster et al., 2009). When students master the relationships between printed letters and the sounds they make, they can use this knowledge to read and spell words with accuracy and automaticity. Teaching phonics is a powerful tool in the early literacy toolkit to help students learn how to read.

WHY DO WE TEACH PHONICS?

Research has consistently shown that phonics instruction that is explicit and systematic is the most efficient way to help students learn to read (Double et al., 2019). Explicit and systematic phonics instruction is beneficial for all emerging readers (Gersten et al., 2020; Ehri, 2020) and has been shown to be particularly beneficial for students who have difficulty learning to read (Miciak & Fletcher, 2020). A strong foundation in phonics knowledge paves the way for accurate decoding and, eventually, accurate and fluent text reading (Foorman et al., 2016; Scammacca et al., 2007).

Phonics instruction facilitates students' decoding by teaching students the predictable relationships between graphemes (printed letters) and phonemes (sounds). When a student is learning to decode words, the process of mapping graphemes to phonemes is slow and laborious. However, each time the student encounters the graphemes in the word and retrieves the associated phonemes, the retrieval becomes easier and more automatic; each time, the student can decode the word more efficiently. Therefore, students need explicit instruction and opportunities for practice encountering graphemes and correctly identifying the associated phoneme(s). This process facilitates *orthographic mapping* or the formation of connections between the spelling, pronunciation, and meaning of words. *Orthographic mapping* allows students to eventually read words without conscious effort (Ehri, 2005). Even in words with spellings that might be considered irregular (e.g., *where, were, said*), readers still map phonemes to graphemes in a way that allows them to recognize the words automatically (Ehri, 2020). This process of mapping phonemes to graphemes—and building automaticity to the point of effortless retrieval—facilitates fluent word reading. Fluent word reading enables students to read with comprehension, allowing students to focus more on meaning than on decoding (Foorman et al., 2016). Research has demonstrated that explicit and systematic instruction in phonics improves word-decoding skills (Petscher et al., 2020).
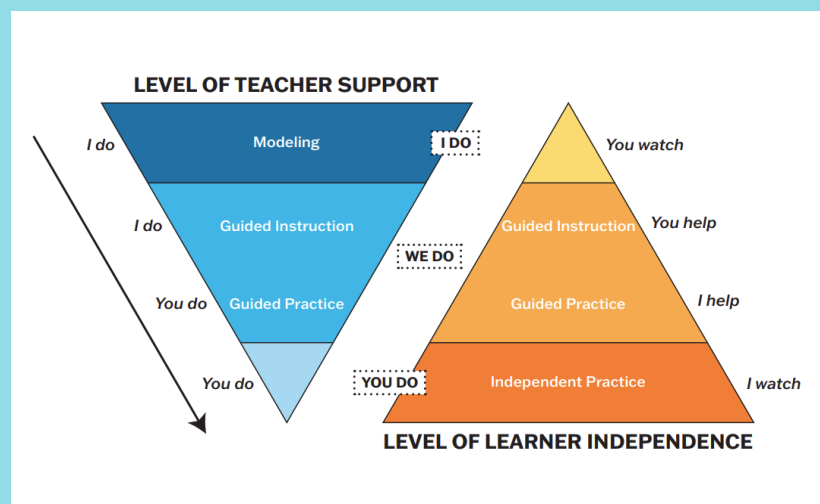
HOW DO WE TEACH PHONICS?

Phonics instruction is most effective when provided early in students' school careers (e.g., in kindergarten and Grade 1; Miciak & Fletcher, 2020). Researchers estimate that, in primary classrooms, at least 30 minutes of daily reading instruction should focus on phonics, with students who have more significant needs benefiting from more instructional time (Harn et al., 2008). In addition to starting phonics instruction in the early grades, instruction in phonics is most effective when it is explicit and systematic (Petscher et al., 2020).

Explicit Instruction. Explicit instruction involves deliberate teaching of concepts using clear and direct explanations within an instructional framework that includes teacher modeling, guided and independent practice, and frequent checks for understanding (Archer & Hughes, 2010). In early reading instruction, this instructional approach is often called the gradual-release model. In the gradual-release model, the teacher first models exactly what the students need to know or do (Pearson & Gallagher, 1983). Then the teacher helps students as they demonstrate new knowledge or skills together. Finally, the students demonstrate the new knowledge or skill on their own. Along the way, the teacher continually checks for understanding, reinforces correct answers, and clarifies misconceptions.

Systematic Instruction. Systematic instruction follows a logical scope and sequence that progresses from easier to more difficult concepts and skills (Mesmer & Griffith, 2005).   Research has found that teaching phonics systematically is much more effective than teaching phonics incidentally (NICHD, 2000). In a systematic approach, the sequence of instruction progresses from easier to more difficult concepts, and the teacher explains how each element or concept builds on what was previously learned. The goal of systematic phonics instruction is greater automaticity and fluency with word reading.

Cumulative Review. In addition to following a logical scope and sequence, phonics instruction is most effective when it involves frequent opportunities for cumulative practice and review (Allor et al., 2018). Within an explicit and systematic approach, teachers introduce new concepts in isolation before providing practice involving previously taught concepts. By offering ample opportunities for cumulative practice and review, teachers can ensure that students retain previously taught skills and help develop greater automaticity with application (Spear-Swerling, 2019).

LEVEL OF TEACHER SUPPORT

I do	Modeling — **I DO**
I do	Guided Instruction
	WE DO
You do	Guided Practice
You do	**YOU DO**

You watch
Guided Instruction — You help
Guided Practice — I help
Independent Practice — I watch

LEVEL OF LEARNER INDEPENDENCE

HOW DOES PHONICS KNOWLEDGE DEVELOP OVER TIME?

Although we know that systematic phonics instruction is the most effective way to teach phonics, there is not a single, agreed upon, scope and sequence for phonics instruction. However, most of the available scope and sequences for phonics instruction have some similar characteristics. There are some important aspects of sequencing of instruction that are important to consider. For example, students begin by learning phonemes represented by single consonants, as well as the short vowel sounds represented by each of the vowels. Later, they learn about consonant digraphs (e.g. "ch" and "th") and the sounds they represent. After students learn basic letter sounds, phonics instruction shifts to focus on the multiple ways sounds can be represented in English. Students learn that there are multiple ways to represent some sounds, such as spelling the long /ā/ sound using a-consonant-e (as in "lane"), ai (as in "rain"), ay (as in "play"), ey (as in "they") or eigh (as in "neigh"). Students also learn about variant vowel sounds, diphthongs, and graphemes with silent consonants. Over time and with the provision of cumulative practice, students develop greater automaticity with applying phonics knowledge to read and spell more words.

Assessing phonics knowledge can help shape instructional practice by informing teachers about what students already know and what they still need to learn. By assessing what students know within the sequence of phonics knowledge, teachers can make decisions about what students should learn next (i.e., considering the sequence of instruction in the curriculum), and then explicitly teaching the appropriate, unknown grapheme-phoneme correspondences. There are several ways to assess a student's phonics knowledge.

Letter-Sound Assessments. For very early readers, teachers should assess knowledge of letter sounds (i.e., knowledge of phonemes represented by single consonants and of the short vowel sound represented by each vowel). The skill of accurately matching letters with their associated sounds is predictive of later reading achievement (National Early Literacy Panel, 2008). As a part of a letter-sound assessment, students are asked to identify the sounds of letters presented in random order. Knowledge of individual letter sounds is necessary for early decoding.

Decoding Inventories. Decoding inventories assess more sophisticated types of phonics knowledge by examining the types of words a student can read (e.g., can students only read single-syllable words with one-to-one correspondences between graphemes and phonemes, or can they read words that include consonant and vowel digraphs?). These assessments prompt students to read words that are grouped by a common phonics feature. A decoding inventory may start with consonant-vowel-consonant (CVC) words (i.e., words that have two consonants sandwiching a vowel that represents a short vowel sound) and progress in difficulty. Decoding inventories often include nonsense words as well as real words so the teacher can determine whether the student can apply their phonics knowledge to words they have not seen before (Good et al., 2008).

Spelling Inventories. Spelling inventories similarly contain lists of words that range from easier to more difficult, demonstrating students' application of phonics knowledge. By assessing students' ability to match phonemes with their associated graphemes, teachers can gain insight into which phonics features a student has mastered and which features should be explicitly taught or reviewed.

CONCLUSION

Phonics instruction explicitly teaches the connections between individual sounds (*phonemes*) and letters or letter patterns (*graphemes*). When students develop mastery of these connections, they use this knowledge to decode and spell words. Research has demonstrated consistently that the most effective way to teach phonics is through teaching methods that are explicit, systematic, and cumulative. Explicit phonics instruction clearly explains the relationships between speech sounds and the letters that represent those sounds. Systematic phonics instruction follows a scope and sequence so that all phonics features are taught. Cumulative review ensures that students receive regular opportunities to practice applying previously learned skills or concepts, so that phonics knowledge is retained. Early phonics instruction focuses on single consonants and vowels and the sounds they represent. Students can use this early phonics knowledge to spell and read simple CVC words like "cat." Eventually, phonics instruction will help students to read and spell more complex words with consonant digraphs and blends, and with multiple syllables. Developing automaticity retrieving this knowledge of grapheme-phoneme correspondences facilitates reading fluency, and ultimately, reading comprehension.

Teaching phonics in an explicit, systematic, and cumulative manner can be difficult, especially given the heterogenous needs of students within a classroom. However, research has shown that phonics instruction is beneficial for all early readers (Gersten et al., 2020; Ehri, 2020). It is, therefore, imperative to consider the ways in which phonics instruction can be implemented and improved upon to meet the needs of every student.

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GLOSSARY

Digraph: two letters representing one sound (e.g. ch, sh, th, ph)

Diphthong: vowel phonemes where the mouth position shifts during pronunciation (e.g. ou, oy)

Grapheme: the smallest unit within a writing system that expresses a sound

Orthographic Mapping: the process of creating connections between the spelling, pronunciation, and meaning of words

Phoneme: the smallest unit of sound within a spoken language

Variant vowel: a group of letters that represents a vowel sound

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