Reading Street Phonological and Phonemic Awareness

What is Phonological and Phonemic Awareness?

To learn to read, children need to become aware of the sounds of language, separate from meaning. Phonological awareness is a broad term that means the awareness of sounds in spoken language. It includes the ability to recognize and manipulate words, syllables, onsets and rimes, and phonemes. Phonemic awareness is a subset of phonological awareness. Phonemic awareness is the ability to identify and manipulate phonemes in oral language. Phonemes are the smallest meaningful units of sound in English, the smallest sounds that make a difference in the meaning of a word. For example, the word pin can be changed to a different word, tin, by changing one phoneme, /p/ to /t/. Pin has three phonemes: /p/, /i/, and /n/, which are represented in written language by the graphemes p, i, and n. (Graphemes are the letters that represent phonemes.) Phonemic awareness is the ultimate goal of phonological awareness instruction.

It is hard to hear individual phonemes because in speech they often blend together and are coarticulated. One way to hear phonemes better is to pronounce a word very slowly, stretching the sounds. Another reason it’s hard to hear phonemes is that phonemes often don’t correspond to the number of letters in a word. For example, the word ship has only 3 phonemes, one of which is represented by two letters. When asked to count phonemes, adults often mistakenly count letters instead.

Phonemic awareness is different from phonics, which is the study of how letters represent sounds in written language. Phonemic awareness is strictly oral, identifying and manipulating sounds in spoken words, and it can be taught to preschoolers and kindergartners before they know the letters that correspond to sounds in written text. Sometimes, however, phonemic awareness is taught along with letter-sound instruction. In this case, the letters are cues that help students hear the sounds. Once letters are introduced, however, the instruction is no longer pure phonemic awareness; it is also phonics.

Phonological awareness develops over time in young children. The easiest tasks are learned first and involve larger units of sound, such as sentences and words. Below are the tasks children need to learn at each level of phonological awareness:

Beginning Level of Phonological Awareness

- **Words**: segment a sentence into words (repeat a sentence, changing just one word, e.g. the first or last word; use counters to count the number of words in a sentence)
- **Rhymes**: recognize and produce rhyming words (listen to stories and poems and sing songs that have rhymes; sort pictures that rhyme; make up nonsense rhymes)
- **Syllables**: blend syllables into words (pronounce a word when the teacher says its syllables); segment words into syllables (clap the syllables in a word, mark syllables with chips or blocks, jump in beat to syllables, tell how many syllables in a word); delete a syllable from a word (“Say starfish without the fish.” [star])
Second Level of Phonological Awareness

- **Identify initial sounds in words:** identify spoken words that begin with the same sound (sort pictures according to initial consonant sounds)

- **Compare sounds in words:** notice similarities and differences in the sounds that make up words (“Which words have the same sound at the beginning—*ship, boat, shell*?” [ship, shell] or “Which word has a different sound at the end—*pin, bun, or rug*?” [rug])

- **Onsets and rimes:** blend onset and rime to produce a word (“What word am I trying to say: /m/ . . . ouse.” [mouse]); segment words into onset and rime (“The first part of *cat* is /k/; the last part of *cat* is /at/—/k/ /at/.”)

Third Level of Phonological Awareness: Phonemic Awareness

- **Phoneme isolation:** hear individual sounds at the beginning, middle, and end of words (“Tell me the first sound in *paste*.” [/p/] )

- **Phoneme blending:** listen to a sequence of spoken sounds and combine them to form a word (“What word is /s/ /k/ /u/ /l/?” [school])

- **Phoneme segmentation:** break a word into its sounds; tap or count the sounds or use a marker for each sound (“How many phonemes in *ship*?” [three: /sh/, /i/, /p/] )

- **Phoneme deletion:** state the word that remains when a specific phoneme is removed (“What is *smile* without the /s/?” [mile] )

- **Phoneme addition:** make a new word by adding a phoneme to a word (“What word do you make when you add /s/ to *mile*?” [smile] )

- **Phoneme substitution:** make a new word by substituting one phoneme for another (“What word do you make when you change /g/ to /n/ in *bug*?” [bun] )

**Why Teach It?**

For children entering first grade, phonemic awareness is a strong predictor of later reading ability (Juel, 1988). “A child’s level of phonemic awareness on entering school is widely held to be the strongest single determinant of the success that he or she will experience in learning to read—or, conversely, the likelihood that he or she will fail” (Honig et al., 2000, p. 7.6).

It is believed that the reason this is true is because English is an alphabetic language. The written language is coded at the level of phonemes. If children don’t notice that words are made of smaller sounds, the written system will seem arbitrary and they will never “break the code” and figure out that letters stand for these small sounds. Phonemic awareness seems to be necessary for the discovery of this “alphabetic principle” (Stanovich, 1986). As Ehri puts it, phonemic awareness helps children learn to read because, in order to read, learners must be able to segment words into phonemes that match up with graphemes so that they can connect phonemes with graphemes and store them in memory (Ehri, 1992, 1994). Adams, in *Beginning to Read* (1990), states that two things are prerequisites for learning phonics: phonemic awareness and a thorough visual knowledge of the letters of the alphabet.

It has also been found that deficits in phonological abilities are the basis of some reading disabilities. “The phonologically based deficit of students with reading difficulties has garnered such empirical convergence
that it has been deemed a ‘core deficit’ (Stanovich, 1986; Torgesen & Hecht, 1996). . . . Phonological awareness measures, in particular, have emerged as strong predictors of later reading skills that are causally related to reading success” (Good, Simmons, & Smith, 1998, pp. 219, 226). Torgesen et al. (1994) recommend that explicit, intense phonological training be a part of any preventive or remedial program for children who are at-risk or have reading disabilities.

Many studies have shown that phonemic awareness can be taught and that when it is taught to young children (preschool, kindergarten, and first grade) their later reading ability improves. The National Reading Panel (2000) conducted a meta-analysis of 52 research studies on phonemic awareness and concluded, “Overall, the findings showed that teaching children to manipulate phonemes in words was highly effective under a variety of teaching conditions with a variety of learners across a range of grade and age levels and that teaching phonemic awareness to children significantly improves their reading more than instruction that lacks any attention to PA” (p. 7).

How Teach It?

“Although phonemic awareness is not spontaneously acquired, it can be successfully taught. Furthermore, when reading instruction is methodically coupled with such training, the success rates are dramatic” (Adams, 1990, p. 329).

Teach Explicitly

Instruction should be explicit and include modeling and explanations before practice. If instruction begins with children making a list of words that sound the same or playing a board game where they win by saying a rhyming word, then they are being asked to practice a skill before it has been taught. Teachers must first model the skill. Even a straight explanation (“Rhyming words always have the same ending sounds”) will not be very helpful to a child just learning this skill. Much more helpful is for the teacher to model: “Listen. I can rhyme with /at/ and begin with /f/—fat. I can rhyme with /at/ and begin with /s/—sat. At, fat, sat all rhyme.” Following modeling, there should be guided practice, in which the teacher performs the task with the child (Snider, 1995, p. 448).

Focus on Phoneme Segmentation and Blending

Rhyming activities do not seem to be enough to develop phonemic awareness in all children (Nation & Hulme, 1997). A study by O’Connor, Jenkins, and Slocum (1995) provides evidence that focused PA instruction in segmenting and blending onsets, rimes, and individual phonemes can be more effective than a broader program of phonological and phonemic awareness. “This suggests that concentrating instructional time on segmenting and blending may contribute more to beginning-level reading skill than dividing attention among many PA activities” (Ehri & Nunes, 2002, p. 120).

Use Cues

Cues and concrete manipulatives make it easier for children. Auditory cues can include clapping or stamping (e.g. clapping the syllables in a word or the words in a sentence). Visual cues can be blocks, chips, or self-stick notes that represent sounds in a word or words in a sentence. Children can place a marker in a sound box to show where a sound occurs in a spoken word. Kinesthetic cues can include having children jump as they hear sounds or syllables.
Elkonin boxes are an effective way to help children segment words into sounds. For a set of 3-sound CVC words, draw a 3-box grid. Explain that the boxes stand for the sounds in the word. The teacher displays a picture and says the word. She asks children for the first sound of the word. As children say the first sound, the teacher places a marker (a chip or a self-stick note) in the first box of the grid. After all 3 sounds are said and marked, the teacher points to each box in sequence and has children say the sounds. Then the teacher guides children in blending the sounds to say the word. After practicing together, children can work in pairs with more 3-sound words and their own three-box grids. For advanced children who have learned all the sound-spellings, you can use sticky notes or tiles that have the letters written on them. (At times two or more letters stand for one sound and will be placed in one box: e.g., sh or igh.) Elkonin boxes also work well for phoneme deletion. Once the three boxes for a 3-sound word are marked, the teacher removes one marker and asks what word is left.

Use Sorts

Word sorts help children compare and contrast sounds in words (Bear et al., 1996).

**Picture Sorts:** Pictures are sorted into contrasting categories, such as two different initial consonant sounds. Children (in their small groups) are given a set of picture cards. The teacher models the process before children do it themselves. Children say the name of each picture before placing it in the right group. The teacher can model saying the name slowly, emphasizing the initial consonant sound. After small-group work, children may work in pairs with other picture cards to continue the activity.

**Open Sorts:** In an open sort, students choose the categories. Give each student a set of picture cards, and ask them to sort the cards into two or three piles in any way they want. Some may sort the words into actions and things, while others may sort them into initial s and initial m words. You can ask other students to look at the sort and guess what the categories are. Children can shuffle their cards and start over, trying to do a different sort.

**Word Hunts:** Have children hunt for pictures or objects with the sounds they are learning, at home or in school. Discuss the words they find, pointing out their sounds. Display groups of pictures in the classroom.

Use Letters

Phonemic awareness training is auditory training in hearing and segmenting sounds in words. It can be done without teaching sound-letter correspondences. However, training that includes information about letters and their corresponding phonemes seems to have a greater effect on reading and spelling than training that does not. *Put Reading First* (Armbruster et al., 2001) states, “Phonemic awareness is most effective when children are taught to manipulate phonemes by using the letters of the alphabet” (p. 7).

Blachman and colleagues (Ball & Blachman, 1991; Tangel & Blachman, 1992) used a program called “say-it-and-move-it,” in which children were taught to move tiles as they pronounced each phoneme in a word. At first the tiles were blank, but then the children were taught letter-sound associations and practiced moving letters as they pronounced phonemes to segment words. Kindergartners receiving this training outperformed a control group on word reading and spelling tasks. Other studies, too, have shown that adding letters to PA training produces better results.
Intervention Requires More Intensive Approaches

It is likely that children with serious deficiencies in phonological awareness will need more intensive and explicit instruction than other children. “One program that has been used successfully to stimulate phonological awareness with severely impaired children and adults actually helps them to discover the mouth movements or articulatory gestures that are associate with each phoneme (Lindamood & Lindamood, 1984)” (Torgesen & Mathes, 2001, p. 44).

Consider Dialect and First Language Issues

“More research on the impact of dialectic variations on PA learning is needed. The fact that there are regional phonemic variations means that teachers implementing PA programs need to determine whether their students’ dialects conform to or deviate from the phonological distinctions that are taught in the programs they are using. Ignoring deviations is likely to undermine the effectiveness and credibility of the instruction” (Ehri et al., 2001, p. 277).

When students speak a first language that is different from English, special issues may arise that affect phonemic awareness instruction. Some phonemes in English may not be phonemes in the student’s native language, making it hard for the student to hear those sounds. For example, Spanish speakers will not hear /ch/ and /sh/ as meaningfully different sounds, because the sound /sh/ does not exist in Spanish. Chinese and Japanese speakers will not hear a difference between /r/ and /l/.

Resources


