



Phonemic Awareness: Concepts and Research

Phonemic Awareness (PA) is:

- 1) the ability to hear and manipulate the sounds in spoken words and the understanding that spoken words and syllables are made up of sequences of speech sounds (Yopp, 1992).
- 2) essential to learning to read in an alphabetic writing system, because letters represent sounds or phonemes. Without phonemic awareness, phonics makes little sense.
- 3) fundamental to mapping speech to print. If a child cannot hear that "man" and "moon" begin with the same sound or cannot blend the sounds /rrrrrruuuuunnnnn/ into the word "run", he or she may have great difficulty connecting sounds with their written symbols or blending sounds to make a word.
- 4) essential to learning to read in an alphabetic writing system
- 5) *a strong predictor of children who experience early reading success.*

An Important Distinction:

* Phonemic awareness is *not phonics*.

* Phonemic awareness is *auditory* and does not involve words in print.

Phonemic Awareness is Important...

- PA teaches students to attend to sounds. It primes the connection of sound to print.
- PA gives students a way to approach reading new words.
- PA helps students understand the alphabetic principle, that letters in words are systematically represented by sounds.

...But Difficult:

- There are 26 letters in the English language.
- Though the number of phonemes vary across sources, there are approximately 40 phonemes.
- Sounds are represented in 250 different spellings (e.g., /f/ as in ph, f, gh, ff).
- Phonemes are coarticulated, thus logical "sound units" are not readily apparent and must be taught.
- There are no "white spaces" between letters, syllables, or words.

Definitions:

- Phoneme: A phoneme is a speech sound. It is the smallest unit of spoken language and has no inherent meaning (National Reading Panel, 2000).
- Phonemic Awareness: The ability to hear and manipulate the sounds in spoken words, and the understanding that spoken words and syllables are made up of sequences of speech sounds (Yopp, 1992). Phonemic awareness involves hearing language at the phoneme level.
- Phonics: use of the code (sound-symbol relationships to recognize words).
- Phonological Awareness: The ability to hear and manipulate the sound structure of language. This is an encompassing term that involves working with the sounds of language at the word, syllable, and phoneme level.
- Continuous Sound: A sound that can be prolonged (stretched out) without distortion (e.g., r, s, a, m).
- Onset-Rime: The onset is the part of the word before the vowel; not all words have onsets. The rime is the part of the word including the vowel and what follows it.
- Segmentation: The separation of words into phonemes.

**BIG IDEAS** in Beginning Reading**Examples of Phonemes:**

The word "sun" has 3 phonemes: /s/ /u/ /n/ .

The table below shows different linguistic units from largest (sentence) to smallest (phoneme).

Sentence:	The sun shone brightly.
Word	sun
Syllables	sun, sun-shine, sun-ny
Onset-rime	s-un, s-unshine, s-unny
Phoneme	s-u-n

The word "shut" also has three phonemes: /sh/ /u/ /t/ .

Examples of Phonemic Awareness Skills:

- Blending: What word am I trying to say? Mmmm...ooooo...p.
- Segmentation (first sound isolation): What is the first sound in mop?
- Segmentation (last sound isolation): What is the last sound in mop?
- Segmentation (complete): What are all the sounds you hear in mop?

What Teachers Should Know:

- Definition of phonemic awareness (PA).
- The relation of phonemic awareness to early reading skills.
- The developmental continuum of phonemic awareness skills.
- Which phonemic awareness skills are more important and when they should be taught.
- Features of phonemes and tasks that influence task difficulty.
- Terminology (phoneme, PA, continuous sound, onset-rime, segmentation).

(modified from Moats, 1999)

What Teachers Should Be Able to Do:

- Assess PA and diagnose difficulties.
- Produce speech sounds accurately.
- Use a developmental continuum to select/design PA instruction.
- Select examples according to complexity of skills, phonemes, word types, and learner experience.
- Model and deliver PA lessons.
- Link PA to reading and spelling.
- Evaluate the design of instructional materials.

(modified from Moats, 1999)

What Does the Lack of Phonemic Awareness Look Like?

Children lacking phonemic awareness skills cannot:

- group words with similar and dissimilar sounds (mat, mug, sun)
- blend and split syllables (f oot)
- blend sounds into words (m_a_n)
- segment a word as a sequence of sounds (e.g., fish is made up of three phonemes, /f/ , /i/ , /sh/)
- detect and manipulate sounds within words (change "r" in "run" to "s" to make "sun").

(Kame'enui, et. al., 1997)

**Phonemic Awareness (PA) Research Says:**

"The best early predictor of reading difficulty in kindergarten or first grade is the inability to segment words and syllables into constituent sound units (phonemic awareness)" (Lyon, 1995).

- Phonological awareness is necessary but not sufficient for reading acquisition.
- Phonological awareness is teachable and promoted by attention to instructional variables. (Smith, Simmons, & Kame'enui, 1998)
- "Reading and phonemic awareness are mutually reinforcing: Phonemic awareness is necessary for reading, and reading, in turn, improves phonemic awareness still further." (Shaywitz, 2003, pg. 55)
- The ability to hear and manipulate phonemes plays a causal role in the acquisition of beginning reading skills (Smith, Simmons, & Kame'enui, 1998).
- There is considerable evidence that the primary difference between good and poor readers lies in the good reader's phonological processing ability.
- The effects of training phonological awareness and learning to read are mutually supportive.

References:

- Kame'enui, E. J., Simmons, D. C., Baker, S., Chard, D. J., Dickson, S. V., Gunn, B., Smith, S. B., Sprick, M., & Lin, S. J. (1997). Effective strategies for teaching beginning reading. In E. J. Kame'enui, & D. W. Carnine (Eds.), *Effective Teaching Strategies That Accommodate Diverse Learners*. Columbus, OH: Merrill.
- Moats, L. C. (1999). *Teaching reading is rocket science: What expert teachers of reading should know and be able to do*. Washington, D. C.: American Federation of Teachers.
- Lyon, G. R. (1995). Toward a definition of dyslexia. *Annals of Dyslexia*, 45, 3-27.
- National Reading Panel (2000). Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction [online]. Available: <http://www.nichd.nih.gov/publications/nrp/smallbook.htm>.
- Shaywitz, S. (2003). Overcoming dyslexia: A new and complete science-based program for reading problems at any level. New York: Knopf.
- Smith S. B., Simmons, D. C., & Kame'enui, E. J. (1998). Phonological awareness: Research bases. In D. C. Simmons & E. J. Kame'enui (eds.), *What reading research tells us about children with diverse learning needs: Bases and basics*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Yopp, H. K. (1992). Developing Phonemic Awareness in Young Children. *Reading Teacher*, 45(9), 696-703.