Research into practice

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Phonological awareness

Deslea Konza, Associate Professor, Faculty of Education and Arts, Edith Cowen University, Western Australia

"Phonological awareness is a broad term that refers to the ability to focus on the sounds of speech as opposed to its meaning, and it has a number of different levels or components."

(Konza, 2011, p.2)

Introduction

Phonological awareness, *phonemic awareness* and *phonics* are now used widely in discussions about reading but they are often misunderstood. The terms *phonological awareness* and *phonemic awareness* are sometimes used synonymously even in academic literature, so it is not surprising that there is confusion about their precise meanings. Some people also confuse phonics with phonemic awareness. Although phonics *depends on phonemic awareness*, these terms do not mean the same thing. This paper begins with some definitions of terms before a fuller discussion of phonological and phonemic awareness, and how these essential elements can be taught.

Definitions

Phonological awareness is a broad term, referring to the ability to focus on the sounds of speech as distinct from its meaning: on its intonation or *rhythm*, on the fact that certain words *rhyme*, and on the separate sounds. When children play with language by repeating syllables; they are demonstrating an awareness of the phonological element of rhyme.

Phonemic awareness is a subset of phonological awareness, and is the most important phonological element for the development of reading and spelling. Phonemic awareness is the ability to focus on the separate, individual sounds in words, the phonemes. "Phonemes are the smallest unit of sound that make a difference to a word's meaning" (Armbruster, Lehr & Osborn, 2003, p.2). Thus if you change the first phoneme in the word *man* from /m/ to /p/, you change the word from *man* to *pan*. Phonemic awareness is a prerequisite for learning an alphabetic code: if children cannot hear the separate sounds in words (and certain English sounds do not exist in some other languages), they cannot relate these sounds to the letters of the alphabet and so cannot use decoding skills to analyse unknown words.

Phonics refers to the relationship between individual sounds (phonemes) and the letters that represent them (graphemes). A phoneme is often represented by a single letter, but can be represented by two letters (e.g., *th*, *ck*), by three letters (e.g., *igh* in the word *high*) and even by four letters (e.g., *ough* in the word *although*). Phonics is also the term often used to describe the teaching of letter-sound relationships. For more information about phonics see **paper 1.3** www.decs.sa.gov.au/literacy/files/links/UtRP_1.3.pdf

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A hierarchy of phonological awareness skills

The broad hierarchy of phonological skills in their order of development is listed below before a fuller discussion of each. Although listed separately within phonemic awareness, blending and segmenting are reciprocal skills and tend to develop together.

Rhythm

Rhyme

Onset and rime

Phonemic awareness

- Isolation
- Blending
- Segmentation
- Manipulation

The earliest phonological skills: rhythm and rhyme

In terms of their growing awareness of the sounds of the English language, children usually first become aware of *rhythm*. In English, it is syllables that provide the rhythm. If children can clap the beats in their name or in multi-syllabic words, they are 'tuning in' to the rhythm of the English language. Chunking words into syllables is an important strategy for both reading and spelling, so this early skill has long-term implications.

Children then usually become aware that certain words sound the same at the end – that they *rhyme*. Understanding the concept of rhyming requires the student to know *which part of the word* is important for rhyming so it is important for teachers to model recognition and production of rhyme. Rhyming is a particularly important component of early language experiences. Children who cannot recognise or generate rhyme are at risk of not developing the skills they need to be successful in using familiar word parts for reading and spelling.

If children can recognise and produce rhyming patterns such as *ring*, *sing*, *king* and *wing*, they are actually demonstrating early phonemic awareness, because they are deleting the first phoneme (the onset) in the syllable and replacing it with another. While they are initially not aware that they are doing this, it opens the door to the realisation that words are made up of a sequence of single sounds.

This highlights the importance of including word play and rhyming activities in programs for young children whose first languages may be rich in storytelling and other important aspects of oral language, but not in rhyming. These children will come to school at a disadvantage if this particular door has not been opened for them.

These two early levels of phonological awareness – rhythm and rhyme – usually occur in the preschool years, and prime children for the more advanced phonological skills that are required for the development of reading.

Awareness of the onset-rime division in syllables

Onset and rime are divisions within a syllable. Children appear to naturally use the onset-rime division in their early attempts at segmenting syllables (Gunning, 2001). While many children do not need practice of this intermediate step before phonemic awareness, is very important for some. The onset is made up of the parts of the syllable that come before the vowel; the rime is the vowel and all subsequent consonants. All syllables have a rime, but not all have an onset. The word "at" for example, has no letters before the vowel, therefore has no onset. Examples of words divided into their onset and rime are as follows:

Onset	Rime
m	at
t	ent
st	amp
str	ipe

Oral rhyming activities build this understanding, as does building different words that have a common rime using magnetic letters. For example, children may have the common rime -*an* on their magnetic board, and several letters such as *p*, *r*, *f* and *m*. By adding different letters to the rime, they see how different words are made.

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Phonemic awareness

This is the most critical phonological skill for reading because phonemes are "the raw material of reading and writing" (Griffith & Olson, 1992, p. 516). Phonemic awareness refers to the ability to tune in to the separate single sounds; to be able to play with them, blend them together, segment them, swap them around, and so on. Identifying the separate sounds is necessary before letters can be attached to the sounds, and therefore provides the foundation for reading an alphabetic language like English.

Phonemic awareness itself has a number of subskills. Understanding the hierarchy of phonemic skill development and how to teach each level, using examples in a logical sequence, is very important particularly for the children who have difficulty picking up these skills easily.

Phoneme isolation

Phoneme isolation refers to the ability to recognise the separate phonemes in words. The first phoneme in a syllable is the easiest to identify, then the final phoneme, then the middle phoneme. The following questions probe this skill:

- What is the first sound in *man*? /m/
- What is the last sound in *duck*? /k/
- What is the middle sound in *cup*? /u/

Check that the children understand the concepts of *first*, *last* and *middle* before asking questions like these. If children have difficulty with any of these questions, explicitly modelling the identification of the separate phonemes should be the focus of instruction, and children should be involved in activities that provide multiple opportunities to practise the skills.

Phoneme blending

Phoneme blending is one of the most important phonemic skills and requires careful attention. Blending requires children to listen to a sequence of spoken phonemes and then combine them into a word. In the early stages, model *continuous* sounds and do not stop between phonemes (Carnine et al, 2006).

- /mmmaaannn/   man
- /sssuuunnn/   sun

When children can do exercises like that above, the phonemes can be separated.

- /m/ /a/ /n/   man

Then "stop" consonants like /p/, /b/. /g/, /d/ and /t/ should be introduced – those that can't be continued without distorting them.

- /paaat/   pat
- /tiiip/   tip
- /do…g/ (continue /o/ sound)   dog

Great care needs to be taken not to distort the phonemes when teaching children who are having difficulty. For example, the word pat should be said "paaat" not "paaatuh". Even more importantly, the initial consonant should not be distorted. The elongated word should be said "paaat", combining the /p/ and /a/ sounds, rather than saying "puhaaat".

After blending consonant-vowel-consonant (cvc) words orally, help children blend ccvc and cvcc words, and words with the long vowel sound.

- /ssslllliiip/   slip
- /mmmuuusssst/   must
- /mmmeat/   meat

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Phoneme segmentation

Phoneme segmentation requires the children to count out the separate phonemes in a word, saying each sound as they tap out or count it. Once again, model multiple examples of simple vc and cvc words before moving to ccvc and cvcc words, giving plenty of opportunities for children to copy your model and try examples for themselves.

- Listen to the sounds in *at* /a/ /t/ 2
- Listen to the sounds in *met* /m/ /e/ /t/ 3
- Listen to the sounds in *stop* /s/ /t/ /o/ /p/ 4
- Listen to the sounds in *trust* /t/ /r/ /u/ /s/ /t/ 5

Phoneme manipulation

Phoneme manipulation is the most sophisticated phonemic skill. The ability to manipulate sounds to form different words in order to support the flexible use of sound knowledge as one component of the reading and writing process. Phoneme deletion, addition and a combination of both are included in this very refined skill. Model exercises like those below several times before asking children to do similar examples.

- Listen to train without the /t/. (rain)
- What word do you have if you add /s/ to the beginning of *park*? (spark)
- What word do you get if you take the /s/ away from *slap*? (lap)
- What word do you get if you take the /s/ away from *slap* and put it at the end? (laps)

(Some of the material in this section has been adapted from Konza, 2006.)

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When should phonic skills be introduced?

Once children can discriminate separate phonemes (that is, can answer questions like those in the phoneme isolation section), letter-sound relationships can be introduced, as both phonemic and phonic skills can be taught simultaneously from this point. When letters are first introduced, they should be referred to by the *sound* they represent, not by the letter name. Teaching sounds along with the letters of the alphabet is important because it helps children to see how phonemic awareness relates to their reading and writing. Magnetic letters are very useful in helping children physically manipulate the processes of blending and segmenting. Learning to blend phonemes with letters helps children read words. Learning to segment sounds with letters helps them spell words. If children do not know letter names and shapes, they need to be taught them along with phonemic awareness.

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How much time should be spent on phonemic awareness instruction?

Research studies suggest that *for most children*, a complete phonemic awareness program should take no more than around 20 hours in total (NICHD, 2000; Armbruster, Lehr & Osborn, 2003). This could be made up of 10–15 minutes a day for the first two terms of Reception. After this period, phonics instruction should continue, which would consolidate phonemic skill development.

Children's readiness for different levels of instruction will depend greatly on their preschool experiences and whether or not they have any underlying difficulties in phonological processing. Some children will take considerably longer than two terms – these skills may still be developing after two or more years of schooling. There is no point, however, in persisting with phonemic skills only at the oral level without reference to letters after the very first year – the two are best taught concurrently, as long as the child can detect single phonemes.

Whole class, groups or individually?

Because children arrive at school at different stages of phonemic awareness, it is usually best to teach children in small groups. Early screening will help teachers group children according to their stage of development. There are many quick and easy phonological awareness assessment tools available, or teachers can devise their own. Some children may need instruction in rhyming and identifying initial sounds in words, while others may be ready for segmenting and blending sounds or adding and deleting phonemes. Some children may already be genuinely reading, that is, not just recognising words by sight, in which case, phonemic awareness instruction is unnecessary.

Principles of teaching phonemic awareness

- Ensure that everyone working with students in their phonemic awareness groups (teachers, school support officers, volunteers) can articulate the sounds being taught accurately and clearly. This may require some professional development but it is of great importance, particularly for those children whose first language does not contain phonemes that exist in Standard Australian English.
- When letters are first introduced, they should be referred to by the *sound* they represent, not by the letter name. It is the sound that will help them with the blending process.
- Work in small groups of four to six students for phonemic awareness training for all children if possible.
- Work in groups of 1–3 with children who are having difficulties.
- Concentrate on blending and segmenting, the most important phonemic skills for reading and spelling.
- Build from easy to hard when constructing practice items for children (vc, cvc, ccvc, cvcc, long vowel words)
- Give children multiple opportunities to practise. They should complete at least three successful practice items at least three days in a row before you can be confident they have achieved the skill. You should then review the skill a week or two later.

Will a good phonemic awareness program ensure children learn to read?

Phonemic awareness instruction is not a complete reading program and cannot guarantee reading and writing success for all students. It will, however, provide the foundation upon which independent reading, writing and spelling can be built. The overall success of a reading program will depend on the comprehensiveness and effectiveness of the entire literacy curriculum, and the extent to which it provides different levels of support for the wide range of student needs present in most classrooms.

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Websites for phonological awareness resources

http://www.loveandreilly.com.au

http://www.phonologicalawareness.org/

http://www.readingresource.net/phonemicawarenessactivities.html

http://www.starfall.com

http://pbskids.org/games/index.html

http://www.doe.virginia.gov/instruction/response_intervention/resources/ideas_activities_develop_phonological.pdf