

Phonemic Awareness

Prevents

Reading Disabilities

BY RON TEFFAINE

I believe we can make a much greater difference in the lives of students who are at risk for developing reading disabilities. If kindergarten and primary teachers were to adopt research-based teaching techniques to enhance the phonemic awareness of students, we may be able to prevent or minimize most reading disabilities and associated problems.

As a school psychologist, I see many youngsters with severe reading problems who by the time they are referred, have already become very discouraged, with low self-esteem, and in some cases act up in class because of their learning difficulties. In addition, when a student is significantly behind, it is extremely difficult to catch up. This leads to a future of reading frustration, along with serious limitations to a student's educational and vocational choices in life. Moreover, there is research evidence that links poor school achievement with later adolescent delinquency (Tremblay, Masse, Perron, Leblanc, Schwartzman, & Ledingham, 1992).

Many people assume that severe reading problems, traditionally referred to as dyslexia, are associated with difficulties in visual perception, but much research has shown that the most common type of dyslexia, representing about two-thirds of all types, is associated with auditory processing, or the brain's ability to interpret sounds (Boder, 1982, p. 84).

More recently, it was estimated that 50 to 70 percent of the variance in reading ability could be attributable to a lack of phonemic skills (Masland & Masland, 1988). Phonemes of course, are the basic sound units of our language, and phonemic awareness has been defined as "... the ability to examine language independently of meaning and to manipulate its component sounds" (Griffith & Olson, 1992, p. 516). This area of auditory perception is not affected by an individual's general level of intelligence (Lundberg, 1988), which is why students can be intellectually competent and still struggle with reading.

Phonemic awareness involves a hierarchy of sub-skills progressing from easier tasks like rhyming

words, recognizing rhyme, and auditory discrimination, to intermediate tasks such as blending phonemes and syllable splitting, to difficult tasks such as phoneme segmentation in spoken words, and manipulation of phonemes to form different words (Truch, 1993; Griffith & Olson, 1992).

Lundberg, Frost, and Petersen (1988) found that kindergarten children can be trained in phonemic awareness outside the context of formal reading instruction, and this instruction facilitates reading (word decoding) and spelling acquisition in the primary grades. Moreover, they discovered that the most significant phonemic awareness skill was that of segmentation. Hurford (1990) also managed to train older children with reading disabilities in second and third grade to improve their performance in phonemic segmentation. Finally, the impact of phonemic awareness was dramatically demonstrated in a longitudinal study by MacDonald and Cornwall (1995). They found that phonemic awareness ability measured in kindergarten was a significant predictor of word recognition and spelling skills eleven years later!

Since phonemic awareness seems to be a necessary and important component of word decoding and spelling acquisition, and it can be taught, it may be beneficial for all children to receive some phonemic awareness training. In fact, some school divisions (e.g., Arco, Idaho, and Santa Maria Elementary School District in California, Truch, 1991) have used the ADD program, mentioned later in this article, to successfully prevent children from developing reading failure, while most regular students made significant gains in reading (e.g., 50th to 75th percentile on the Stanford Achievement Test).

Yopp (1992, 1995) suggested a number of activities that could be used to develop phonemic awareness in the regular classroom. These tasks included the following: (a) read-aloud books that emphasize speech sounds through rhyme, alliteration (repetition of initial sounds in adjacent words), assonance (repetition of vowels), phoneme substitution, and phoneme segmentation (e.g., Dr. Seuss's ABC; There's a Wocket in My Pocket, I Can't Said the Ant, etc.), (b) guessing games to encourage blending the phonemes in words related to thematic stories (e.g., the teacher states a word category, asks, "What am I thinking of?" and then says the mystery word in a segmented fashion: "/h/-/a/-/t/"), (c) sound matching activities (e.g., children are asked to decide

which of several words begins with a given sound, or they generate a word beginning with a specific sound) (d) adding or substituting sounds in familiar songs (e.g., Old MacDonald Had a Farm can have "ee-igh, ee-igh, oh, changed to "bee-bigh, bee-bigh boh," etc.), and (e) segmenting sounds in words by using phoneme repetition of the first sound in certain words (e.g., "J-J-J-Joe") during rhyme or song. A large variety of these types of activities for early-years education may be found in two user-friendly books entitled, "Phonemic Awareness: Playing With Sounds to Strengthen Beginning Reading Skills" (Fitzpatrick, 1997), and "Phonemic Awareness: listening activities to develop pre-reading skills" (Kang, 1997).

In addition to the Fitzpatrick and Kang books, students in grades one through six could also be introduced to a procedure called "Making Words," (Cunningham & Cunningham, 1992; Cunningham & Hall, 1994a; Cunningham & Hall, 1994b). With this program, students are taught to manipulate letter cards during guided invented spelling exercises in a game format. In addition to enhancing phonemic awareness, the procedure is also effective in helping students learn letter-sound relationships, word decoding, and spelling.

Early screening in kindergarten or grade one may help to identify students in need of more intensive help. The Yopp-Singer Test of Phoneme Segmentation (Yopp, 1995), the Rosner Test of Auditory Analysis Skills (Rosner, 1993), or The Phonological Awareness Test (Robertson & Salter, 1997) could be used for this purpose.

Once children are identified as significantly weak in phonemic awareness, specific training through resource, E.A.s, volunteers, and even parents can begin using a variety of strategies drawn from different remedial materials. Rosner's (1993) Auditory Perceptual Skills training program provides a six step developmental series of phonemic analysis tasks that correspond with his Test of Auditory Analysis.

Marie Clay, the founder of Reading Recovery, proposed the use of Elkonin boxes to teach phonemic awareness (Griffith & Olson, 1992). Essentially, this involves the use of file cards with pictures at the top, and empty line boxes underneath into which poker chips are slid as the teacher and then student verbalizes each phoneme sound in the word identifying the picture above. She teaches an easy-to-difficult sequence of skills including clapping out

syllables, blending phonemes onto the picture cards, and spelling with phonemic box cues. Cards such as these could be used by a teacher or trained educational assistant to instruct children individually or in a small group setting. In addition, there are published materials that incorporate the Elkonin box method.

One of these is the More than Words curriculum (Donnelly, K., Thomsen, S., Huber, L., & Schoemer, D., 1992). It provides a number of phonemic awareness exercises to teach analysis of words into syllables, rhyming, sound blending, and phoneme segmentation. Another curriculum called Sounds Abound (Catts, H. & Vartiainen, T, 1993) for children in grades K to 3, includes phonemic awareness activities such as rhyme play, blending and segmenting syllables and phonemes, and grapheme-phoneme relationships. The same authors introduced a board game having a similar name in 1996, which teaches sound blending, deletion, and segmenting.

Two newer kits for learning disabled students include The Phonological Awareness Kit for grades K to 3 (Robertson & Salter, 1995), and The Phonological Awareness Kit-Intermediate, for grades 3 to 8 (Robertson & Salter, 1997). The first of these covers rhyming, segmenting syllables and sounds, sound placement and blending, and repeating multi-syllabic words. The latter kit teaches sound segmenting, blending, isolation, deletion, and substitution, as well as some phonics, like the silent e rule, diphthongs, and digraphs. Each of these kits contains a manual, visuals, game-like manipulatives, and reproducible activity sheets.

An older but proven remedial program for developing phonemic awareness is the Auditory Discrimination In Depth curriculum (Lindamood, C.H. & Lindamood, P.C., 1975). This was mentioned earlier in this article as the ADD program. It teaches a multi-sensory (ear, eye, mouth) self-monitoring process to develop auditory-perceptual judgment in students of any age with a phonological reading disability. Unfortunately, this program is complex and requires a great deal of training to implement properly. Nevertheless, it is available through many speech/language pathologists.

Recently, a new breakthrough remedial program called Fast ForWord has been released using interactive internet and CD-ROM based software (Tallal & Merzenich, 1997). This program, which is

based on 25 years of research, retrains the way a child with auditory dyslexia processes the phonemes within speech. Studies have shown dramatic improvements in language comprehension after only several weeks of training. The program, designed for children between the ages of 4 and 12, employs several games incorporating slowed and specially treated speech sounds which are gradually accelerated to normal speed as the child learns to discriminate the phonemes within words. This program has the advantage of experimental research support and ease of administration.

Other remedial training programs (e.g., Bradley and Bryant; Wallach and Wallach) are described in the book entitled, "The Missing Parts of Whole Language" (Truch, 1991). This is a great book for the serious remedial educator intent on integrating various skills. ■

Ron Teffaine, M.Ed., is a school psychologist with Student Services in Hanover School Division, No. 15, Manitoba, Canada.

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Teaching phonemic awareness helps children develop into strong readers and is especially important for learners with dyslexia. One of the key skills children must develop before they learn how to read is phonemic awareness—being able to hear and manipulate the sounds that make up words. Phonemes are the smallest units of sounds that can change meaning -- if you switch the middle vowel sound in hat, everything shifts from definition to part of speech and usage. Phonemic Awareness is a sub-skill of phonological awareness, which refers to students' sensitivity to the sound structure of spoken words at different levels (like rhymes, syllables, and sounds). Phonemic awareness specifically refers to students' ability to identify and manipulate the individual sounds in spoken words. Phonemic awareness skills such as blending and segmenting are essential to spelling, reading and writing. Phonemic Awareness is an important early reading skill for preschoolers and kindergarteners to develop. It is the ability to play with sounds in a variety of ways to manipulate, substitute, and hear isolated sounds. It is also an essential skill to develop before a student can learn to read. Many of the kiddos in my second grade classroom who had phonics difficulties also had an underdeveloped phonemic awareness. They could not isolate and blend sounds.