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Beginning and remedial reading instruction: The intertwined role of phonemic awareness and phonics

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The relationship between phonics and phonemic awareness

By Dr. Kerry Hempenstall

Beginning and remedial reading instruction: The intertwined roles of phonics and phonemic awareness.

The debate about the role of phonics in beginning reading instruction has had a long and stormy history. However, research over the past twenty years has been sufficiently sound to allow firm conclusions about the necessity of phonics instruction. Recently, consensus has also been achieved within educational communities that these findings should be enshrined in educational policy and practice. Questions that now arise are (1) what kind of phonics does the evidence support? What is meant by explicit, implicit, embedded, systematic, analytic, synthetic? (2) What is the relationship between phonics and phonemic awareness? (3) What does the research indicate about older struggling readers?

Over the last ten to twenty years there has been increasing consensus about reading success and failure. Reviews by Hurford, et al., 1993; and Mann, 1993 have noted that the presence or absence of phonemic awareness predicts the future membership of good/bad reader categories, and discriminates good readers from poor readers.

Stanovich (1986) defined phonemic awareness as the "conscious access to the phonemic level of the speech stream, and some ability to manipulate cognitively representations at this level" (p. 362). Tasks used to assess shallow phonemic awareness tend to emphasise sensitivity to rhyme and alliteration; whereas, a more complex task might involve the manipulation or separation of sounds in a word. A further developmental advance involves a progressive reduction in the size of the unit comprehended - from whole word, to syllables, to intra-syllabic units, to individual phonemes.

In addition to correlational evidence, there have been a number of longitudinal training studies showing that the relationship between phonemic awareness and reading progress is causal. The most famous of these studies, presented in Bradley and Bryant's seminal paper in 1983, was described by Coltheart (1983) as the "first clear evidence of the mental procedures important in the early stages of learning to read" (p. 421). Subsequent intervention studies (Ball & Blachman, 1988, 1991; Byrne & Fielding-Barnsley, 1989, 1990, 1991, 1993, 1995; Cunningham, 1990; Hatcher, Hulme, & Ellis, 1994; Lundberg, Frost, & Petersen, 1988; Tangel & Blackman, 1992) obtained similar results, and those that employed follow-up have noted the endurance of the effects.

In a number of these studies, the teaching of phonemic awareness has occurred in conjunction with letter-sound instruction, a process described by Hatcher et al. (1994) as a "phonological linkage" (p. 42). Children in dual-input programs demonstrate more improvement in reading and spelling than those exposed to a solely oral phonemic awareness program. Presumably the reason for this advantage lies with the manner in which phonemic awareness provides a signpost to beginning readers that there is a logic to the reading process (Lieberman, Shankweiler, & Liberman, 1989). Ehri (1998) asserts that it is not until students appreciate how our alphabet is designed to represent speech in phonemic form that most phonemic awareness development occurs.

The relationship between phonics and phonemic awareness is sometimes misunderstood. Phonemic awareness is an aural/oral skill that (at least in part) can exist without contact with print. When print is encountered, the capacity to perform the phonemic operations described above becomes very important. In order to develop the alphabetic principle (that units of print map on to units of sound), students must already have (or soon develop) phonemic awareness. It is the alphabetic principle that allows students to move beyond the early logographic stage of reading in which each word has a unique shape to be recognised as a whole. Visual memory constraints make that a strategy of limited usefulness, as it does not assist students to decipher words not before seen and memorised.

It is apparent that one can enhance phonemic awareness skills through the implementation of a dedicated phonemic awareness program. To some degree at least and for some students, this is likely to enhance beginning reading development. Employing such activities in conjunction with graphemes may enhance the outcomes in terms of reading progress. However, it is not yet clear what implications the phonemic awareness research has for older children who struggle with reading. Could it be that there is an upper level of phonemic awareness (O'Connor, Notary-Syversson, & Vadasy, 1996) beyond which there is no advantage for reading development in attempting its enhancement? Indeed, for older children, some would argue that phonemic awareness is no longer the appropriate focus, as students are more in need of whole word reading strategies rather than a phonemically based approach. However, Share (1995) has argued that without the induction of the alphabetic principle, skilled reading (implying the use of a generative strategy capable of decoding novel words) will not occur. His view is supported by the finding that dyslexic adult readers (even those with strong orthographic capacities) still demonstrate phonemic awareness deficits, and struggle to decode novel words (Bruck, 1992; Hulme & Snowling, 1992; Pratt & Brady, 1988; Siegel, 1993; Solman & Stanovich, 1992).

Share and Stanovich (1995) assert that mature orthographic strategies are developed through multiple examples of success in decoding phonologically. If one accepts this view, then whole word strategies should not be emphasised, and the instructional focus for older students must still be placed on ensuring letter-sound correspondences, blending and segmenting, and practice. It is further argued that only through such laborious serial letter-by-letter decoding can precise letter-order become entrenched in the orthographic representation that forms the basis for accurate spelling (Adams, 1990; Ehri, 1998; Jorm & Share, 1983; Williams, 1991). Thus, phonics instruction continues to play an important role for older children and adults.

To those who would argue for meaning-driven approaches for older students, it is worth considering some recent research. An interesting study by Shankweiler, Lundquist, Dreyer, and Dickinson (1996) provides some evidence for the location of the

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fundamental problem areas and supports a code-based intervention focus. Their study of Year 9 and Year 10 learning disabled and low to middle range students found significant deficiencies across all the groups in decoding. They also noted that differences in comprehension were largely reflecting levels of decoding skill, even among such senior students. Elbro, Neilsen and Petersen (1994) also argued for emphasis upon the alphabetic principle because of the memory constraints imposed by training in whole word recognition. A number of similar studies involving adults with reading difficulties have revealed marked deficits in decoding (Bear, Truax, & Barone, 1989; Bruck, 1990, 1992, 1993; Byrne & Letz, 1983; Perin, 1983; Pratt & Brady, 1988; Read & Ruyter, 1985; cited in Greenberg, Ehri, & Perin, 1997). In the Greenberg et al. (1997) study the adults' performance on phonologically-based tests resembled those of children below 3rd grade. Even very bright well-compensated adult readers acknowledged that they have had to laboriously remember word shapes, have little or no idea how to spell, and are constantly struggling with new words, especially technical terms related to their occupations. These are classic symptoms of the need for a strong phonics emphasis in the instructional process; indeed, some have argued (Greenberg et al., 1997) that it is most likely the failure of the school system to address the phonological nature of the reading problem that precluded satisfactory progress for these individuals.

The aim of phonics teaching in a code-emphasis program is to make explicit to students the alphabetic principle. Teachers who limit their instruction to pointing out word-parts to students in the context of authentic literature as the situation arises (incidental or analytic phonics) create particular problems for at-risk students (Simner, 1995). According to Byrne (1996), the major problem involves the risk for such learners of teachers' failing to be explicit and unambiguous. "It might be prudent to tell children directly about the alphabetic principle since it appears unwise to rely on their discovery of it themselves. The apparent relative success of programs that do that (Bradley & Bryant, 1983; Byrne & Fielding-Barnsley, 1991, 1993, 1995) support the wisdom of direct instruction" (p. 424). Similar sentiments concerning the value of explicit or synthetic phonics approaches have been expressed by a number of researchers in recent years (Adams & Bruck, 1993; Baker, Kameenui, Simmons, & Stahl, 1994; Bateman, 1991; Blachman, 1991; Felton & Pepper, 1995; Foorman, 1995; Foorman, Francis, Beeler, Winikates, & Fletcher, 1997; Moats, 1994; Simmons, Gunn, Smith, & Kameenui, 1995; Singh, Deitz, & Singh, 1992; Spector, 1995; Tunmer & Hoover, 1993; Weir, 1990).

In recent times a plethora of government and independent reports have indicated a consensus concerning the importance of teaching phonics explicitly and systematically in order to ameliorate the current unacceptably high rate of reading failure. The critical variable is not age but stage - whether child or adult - the path to facile reading is similar. Certainly older students and adults have a history that cannot be ignored - most relevant is the likelihood of unproductive habits strongly engrained by years of practice. They need to unlearn in addition to learning. One implication is the potential for slower progress, with the requirement of greater amounts of practice (accompanied by feedback) to ensure the new habits are used effectively. In a positive vein, adults are usually vastly more experienced with language in general and, when their decoding difficulties are relieved, comprehension of what they read may be expected to improve much more rapidly than for most young children.

An understanding of the alphabetic principle is the starting motor for an engine subsequently fuelled by practice, confidence and enjoyment. Some starting motors turn sluggishly and demand a significant load from the battery (parents and teacher). If the battery fails, the journey may never begin. However, all phonics are not equal. It is possible to teach phonics carefully and with parsimony; it is possible to do so ineffectively and excessively; and it is possible to do it in name only. Questions such as "What/When/How much phonics?" continue to be examined, but not the question *Should we teach phonics?* for it has been answered resoundingly in the affirmative.

Adams, M. J. (1990). *Beginning to read: Thinking & learning about print* .. Cambridge, MA: MIT Press.

Baker, S. K.

, Kameenui, E. J., Simmons, D. C., & Stahl, S. A. (1994). Beginning reading: Educational tools for diverse learners. *School Psychology Review*, 23 , 372-391.

Ball, E. W., & Blachman, B. A. (1988). Phoneme segmentation training: Effect on reading readiness. *Annals of Dyslexia*, 38 , 208-225.

Ball, E. W., & Blachman, B. A. (1991). Does phoneme awareness training in kindergarten make a difference in early word recognition & developmental spelling. *Reading Research Quarterly*, 25 , 49-66.

Bateman, B. (1991). Teaching word recognition to slow-learning children. *Reading, Writing and Learning Disabilities*, 7 , 1-16.

Blachman, B. A. (1991). Early intervention for children's reading problems: Clinical applications of the research in phonological awareness. *Topics in Language Disorders*, 12 (1),51-65.

Bruck, M. (1992). Persistence of dyslexics' phonological awareness deficits. *Developmental Psychology*, 28 , 874-886.

Byrne, B. (1996). The learnability of the alphabetic principle: Children's initial hypotheses about how print represents spoken speech. *Applied Psycholinguistics*, 17 , 401-426.

Byrne, B., & Fielding-Barnsley, R. (1989). Phonemic awareness and letter knowledge in the child's acquisition of the alphabetic principle. *Journal of Educational Psychology*, 81 , 313-321.

Byrne, B., & Fielding-Barnsley, R. (1990). Acquiring the alphabetic principle: A case for teaching recognition of phoneme identity. *Journal of Educational Psychology*, 82 , 805-812.

Byrne, B., & Fielding-Barnsley, R. (1991a). *Sound Foundations* . Artamon, Australia: Leyden Educational Publishers.

Byrne, B., & Fielding-Barnsley, R. (1991b). Evaluation of a program to teach phonemic awareness to young children. *Journal of Educational Psychology*, 83 , 451-455.

Byrne, B., & Fielding-Barnsley, R. (1993). Evaluation of a program to teach phonemic awareness to young children: A one-year follow-up. *Journal of Educational Psychology*, 85 , 104-111.

Byrne, B., & Fielding-Barnsley, R. (1995). Evaluation of a program to teach phonemic awareness to young children: A 2- and 3- year follow-up and a new preschool trial. *Journal of Educational Psychology*, 87 , 488-503.

Byrne, B., Fielding-Barnsley, R., & Ashley, L. (1996). What does the child bring to the task of learning to read? A summary of the New England Reading Acquisition project. *Australian Journal of Psychology*, 48 (3), 119-123.

Coltheart, M. (1983). Phonological awareness: A preschool precursor of success in reading. *Nature*, 301 , 421.

Cunningham, A. (1990). Explicit vs implicit instruction in phonemic awareness. *Journal of Experimental Child Psychology*, 50 , 429-444.

Ehri, L. (1998). Presidential address. In Joanna P. Williams (Ed.), *Scientific Studies of Reading* , Vol. 2, No. 2, pp. 97 - 114. Mahwah, NJ: Lawrence Erlbaum.

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- Elbro, C., Nielsen, I., & Petersen, D. K. (1994). Dyslexia in adults. Evidence for deficits in non-word reading and in the phonological representation of lexical items. *Annals of Dyslexia*, 44, 205-226.
- Felton, R. H., & Pepper, P. P. (1995). Early identification and intervention of phonological deficit in kindergarten and early elementary children at risk for reading disability. *School Psychology Review*, 24, 405-414.
- Foorman, B. R. (1995). Research on "the Great Debate": Code-oriented versus Whole Language approaches to reading instruction. *School Psychology Review*, 24, 376-392.
- Foorman, B. R., Francis, D. J., Beeler, T., Winikates, D., & Fletcher, J. (1997). Early interventions for children with reading problems: Study designs and preliminary findings. *Learning Disabilities: A Multidisciplinary Journal*, 8, 63-71.
- Greenberg, D., Ehri, L. C., & Perin, D. (1997). Are word reading processes the same or different in adult literacy students and third-fifth graders matched for reading level? *Journal of Educational Psychology*, 89, 262-275.
- Hatcher, P., Hulme, C., & Ellis, A. (1994). Ameliorating reading failure by integrating the teaching of reading and phonological skills: The phonological linkage hypothesis. *Child Development*, 65, 41-57.
- Hulme, C., & Snowling, M. (1992). Phonological deficits in dyslexia: A "Sound" reappraisal of the verbal deficit hypothesis? In N. Singh, & I. Beale (Eds.), *Learning disabilities: Nature, theory and treatment* (pp. 270-301). New York: Springer Verlag.
- Hurford, D. P., Darrow, L., Edwards, T., Howerton, C., Mote, C., Schauf, J., & Caffey, P. (1993). An examination of phonemic processing abilities in children during their first grade year. *Journal of Learning Disabilities*, 26 (3), 166-177.
- Lieberman, I. Y., Shankweiler, D., & Liberman, A. M. (1989). The alphabetic principle and learning to read. In D. Shankweiler & I. Y. Liberman (Eds.), *Phonology and reading disability: Solving the reading puzzle* (pp. 1-33). Ann Arbor: University of Michigan Press.
- Lundberg, I., Frost, J., & Petersen, O. P., (1988). Effects of an extensive program for stimulating phonological awareness in preschool children. *Reading Research Quarterly*, 23, 263-284.
- Mann, V. A. (1993). Phoneme awareness and future reading ability. *Journal of Learning Disabilities*, 26, 259-269.
- Moats, L. C. (1994). The missing foundation in teacher education: Knowledge of the structure of spoken and written language. *Annals of Dyslexia*, 44, 81-102.
- O'Connor, R. E., Notary-Syversen, A., & Vadasy, P. F. (1996). Ladders to literacy: The effects of teacher-led phonological activities for kindergarten children with and without disabilities. *Exceptional Children*, 63, 117-130.
- Pratt, A. C., & Brady, S. (1988). Relation of phonological awareness to reading disability in children and adults. *Journal of Educational Psychology*, 80, 319-323.
- Shankweiler, D., Lundquist, E., Dreyer, L. G., & Dickinson, C. C. (1996). Reading and spelling difficulties in high school students: Causes and consequences. *Reading and Writing: An Interdisciplinary Journal*, 8, 267-294.
- Share, D. L. (1995). Phonological recoding and self-teaching: Sine qua non of reading acquisition. *Cognition*, 55, 151-218.
- Share, D. L., & Stanovich, K. E. (1995). Cognitive processes in early reading development: accommodating individual differences into a model of acquisition. *Issues in Education*, 1 (1), 1-57.
- Siegel, L. S. (1993). The development of reading. *Advances in Child Development and Behavior*, 24, 63-97.
- Simmons, D. C., Gunn, B., Smith, S. B., & Kameenui, E. J. (1995). Phonological awareness: Application of instructional design. *LD Forum*, 19 (2), 7-10.
- Singh, N. N., Deitz, D. E. D., & Singh, J. (1992). Behavioural approaches. In Nirbay N. Singh, & Ivan L. Beale (Eds.) *Learning disabilities: Nature, theory, and treatment*. New York: Springer-Verlag.
- Solman, R. & Stanovich, K. E. (1992). Information processing models. In N. Singh, & I. Beale (Eds.), *Learning disabilities: Nature, theory & Treatment*. New York: Springer Verlag.
- Spector, J. (1995). Phonemic awareness training: Application of principles of direct instruction. *Reading and Writing Quarterly*, 11, 37-51.
- Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21, 360-406
- Tangel, D. M., & Blachman, B. A. (1992). Effect of phoneme awareness instruction on kindergarten children's invented spelling. *Journal of Reading Behaviour*, 24, 233-261.
- Turner, W. E., & Hoover, W. A. (1993). Phonological recoding skill and beginning reading. *Reading & Writing: An Interdisciplinary Journal*, 5, 161-179.
- Weir, R. (1990). Philosophy, cultural beliefs and literacy. *Interchange*, 21 (4), 24-33.
- Williams, J. P. (1991b). The meaning of a phonics base for reading instruction. In The Orton Dyslexia Society (Eds.), *All language and the creation of literacy* (pp. 57-62).

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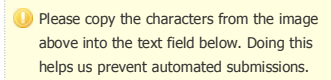
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