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5

Phonemic Awareness (PA) Training for Prelinguistic Children:

Do We Need Prenatal PA?

California's fourth graders ranked close to last in the country on the fourth-grade National Association for Educational Progress reading examination for the last two administrations. This dismal performance prompted the State of California to create a Reading Task Force, and the Task Force responded boldly to the crisis, urging that greater attention be paid to basics—such as phonemic awareness (PA, the ability to divide a word into its component sounds), phonics, spelling, and grammar—and urging that instruction in these areas begin early (California Department of Education 1995). Evaluation, they suggested, should begin in kindergarten, with screening for phonemic awareness, and intervention programs should begin no later than the middle of first grade (recommendations 2 and 3). The Task Force also recommended that phonemic awareness training should be "initiated in pre-kindergarten" (recommendation 6) and that intervention should be "rigorous" (recommendation 3).

This response appears to be a step in the right direction, but is it too little, too late? It has been established that poor readers in early school years often remain poor readers later on (Juel 1994), that three-year-old children differ in phonemic awareness (Chaney 1992), that phonemic awareness is a predictor of reading achievement, and that PA can be improved with training (Lundberg, Frost, and Peterson 1988; Cunningham 1990; Ball and Blachman 1991; Brady et al. 1994). Thus, it appears reasonable, and even imperative, that we begin phonemic awareness training much earlier. This suggestion is justified on academic as well as affective grounds: Without very early phonemic awareness training, some children will enter preschool behind their peers in phonemic awareness, which means difficulties with preschool phonemic awareness activities and certain failure at the kindergarten phonemic awareness screening. To avoid this problem, and the emotional scarring that would result from failing preschool, very early intervention is called for.

In pre-speech stages, we need pre-speech phonemic awareness. For children who have no or very little language development, we need to adapt regular phonemic awareness activities:

1. Yopp (1995) recommends the use of stories that contain language that stimulate phonemic awareness, such as stories in which certain sounds are emphasized. Because prelinguistic children will not understand such stories, we can focus just on the rhythm and syllable structure. Instead of "Once upon a time there were three bears . . ." the trainer can simply use a syllable such as /ba/: "ba ba ba ba ba, ba ba ba ba" (use intonation similar to the first line of "The Three Bears"). This will sensitize the child to the /b/ sound as well as to syllables and rhythm. Over time, more segmental phonemic awareness can be developed by altering the consonant and vowel, moving gradually to blends.

2. The previous activity can be generalized. To sensitize the child to simple consonant-vowel combinations, trainers can focus on one combination each day. On Monday, for example, all utterances to the child will be /ba/ and only /ba/. Instead of "give me a kiss," the caregiver would say, "ba ba ba ba," making the appropriate gestures with the appropriate intonation. On Tuesday, the focus would be /da/. Over a period of several months, all possible consonant-vowel combinations can be covered, and more complex syllables can be used.
3. Yopp recommends segmentation activities, such as the use of songs in which sounds are repeated: "For instance, when singing 'Pop goes the weasel,' the teacher may encourage the children to sing 'P-p-p-POP goes the weasel!' for the final line in the song" (1992, 701). This is a splendid activity, but it can be expanded to deliberate stuttering all day long. Caregivers can emphasize initial consonants this way.

Even Earlier Intervention

If this intervention fails, and we find children failing the preschool phonemic awareness test, we should, of course, consider even earlier intervention. Studies have shown that newborns can discriminate consonants. If a brief segment of speech is played for newborns sucking on a nipple for milk, sucking rate will increase (Eimas et al. 1971). The study took advantage of this phenomena to show that newborns have the perceptual underpinnings of phonemic awareness. They played the syllable /ba/ when sufficient sucking was demonstrated. After a few minutes, however, the infants tired of /ba/ and sucking rate decreased. Eimas et al. found that sucking rate would increase again if the syllable was changed. Using this technique, they

demonstrated that even one-month-old babies could distinguish the phonemes /b/ and /p/.

The implications of this discovery for literacy development are obvious: universal screening for consonant discrimination at one month of age, with training techniques for infants who perform significantly below their peers.

Prenatal Phonemic Awareness

Even infant phonemic awareness training may not be enough. There is now evidence from twin studies that phonemic awareness may be inherited (Olson et al. 1989). Those born with deficient phonemic awareness will be at a clear disadvantage when tested just after birth. To make sure these PA-poor babies have a chance to compete with their age-mates, we urgently need to encourage research in genetic engineering and prenatal phonemic awareness, along with eugenics: Couples considering marriage may want to have their prospective partner screened for defective phonemic awareness. (Of course, PA screening is only a crude measure: The PA gene might be recessive.)

Use of these procedures, of course, may have disadvantages. Use of syllables instead of real language, for example, may have detrimental effects on caregiver-child communication. This is, however, a small price to pay for the gains it will produce in phonemic awareness. A PA-trained child can enter preschool with confidence, knowing that he or she can actively participate in any phonemic awareness activity and be ready for the kindergarten screening exam.

Postscript: The Alternative

There is an alternative to intensive and early PA training. It has been established that PA develops on its own; young children become sensitive to rhyme at an early age (Goswami and Bryant

1990), and there is evidence that awareness of syllables develops early and without instruction (Wimmer et al. 1991; Morais et al. 1986), while the ability to segment phonemes appears to be a consequence of literacy development (Mann 1986; Read et al. 1986; Morais et al. 1986; Perfetti et al. 1987; Wimmer et al. 1991; Lie 1991). Juel's subjects (Juel 1994), in fact, all attained perfect scores on her test of phonemic awareness by grade three. Finally, control subjects in PA training studies (cited above) make clear progress in phonemic awareness without any special training.

There is also good reason to hypothesize that gaps in reading level are relatively easy to make up when children get to read interesting texts, when they get "hooked on books" (Fader 1976; Krashen 1993). Juel (1994) calculated that by grade four good readers had read 178,000 words in school, while poor readers had read only 80,000. Let us assume that good readers read much more at home, and that by grade four they have read over a million words, while poor readers read nothing at home. Thus, the difference between them is about a million words. It is not difficult to make up this gap: Comic books contain about 2000 words each; 50 comics thus contain about 100,000 words, about 10 percent of the gap. One Sweet Valley Kids novel contains about 7000 words; 14 of them contain 100,000, another 10 percent of the gap. As additional evidence that this is possible, McQuillan (1998) reported that home-schooled children who were allowed to begin to read whenever they wanted to occasionally began very late but rapidly achieved "grade level" and beyond, and Elley (1992), in a study of reading ability in thirty-two countries, reported "some advantage for an earlier start, but it can be said that countries which begin instruction in reading at age seven have largely caught up with the five- and six-year-old starters in reading ability by age nine" (37). Finland, with the best readers in the world, starts reading instruction at age seven. Also in support of

this alternative, it has been shown that quality of school libraries is associated with achievement in reading comprehension (Elley 1992; Lance 1994; Krashen 1995; McQuillan 1998).

While free reading could easily close the gap by grade four or five, super-early PA training has definite advantages. First, it ensures grade-level performance by kindergarten and success on the screening exam. Second, free reading is pleasant; if allowed simply to read for pleasure, children might get the wrong idea of what school is about. Life is tough, and we need to prepare them for life. The California Task Force recommends phonemic awareness training from preschool all the way through to the eighth grade (California Department of Education 1995, 18–19): Children will be matching sounds of words (grades K through 3), blending phonemes (K through 8), doing segmentation exercises on initial and final phonemes (grade 1), working up to medial phonemes (grades 1 through 3), and doing "more complex segmenting, blending, and transposition" all the way to grade 8, a program far beyond the recommendations of the most devoted PA researchers (Ball and Blachman's subjects did a seven-week program, while Cunningham's did a ten-week program. Lundberg, Frost, and Peterson's went for a full year, but even this is less than what is proposed by the task force). While these abilities will emerge without special training, and although it is true that millions of people have learned to read perfectly well without PA training, this plan has the clear advantage of preventing children from taking the easy way out—that is, developing phonemic awareness by simply reading. This intense focus on the meaningless aspects of reading (along with the heavy focus on phonics) will provide excellent discipline and help introduce them to the idea that life is full of meaningless tasks.

Third, more reading means more money for libraries. California, last in the country in NAEP reading, is also near last in

school libraries, in terms of books per students and number of school librarians per student. California, however, is so far behind in school libraries that catching up is nearly impossible without a massive commitment. We thus need to consider other avenues.[1]

Note

1. Moore (1993) offers a useful suggestion for students who want to read but don't have a good school library: "If you're fourteen and you really want to go to the library, your best bet is to steal a car, get high, rob a Seven Eleven, and shoot the clerk. That way, you'll be incarcerated by the California Youth Authority. They will provide an education, and a school library until you are released at twenty-five. One of their facilities serves 1750 youthful offenders with a full-time librarian and $50,000 for books. Use a gun—go to the library!" (17). In contrast, California has about six hundred full-time credentialed librarians for a school population of more than five million (Moore 1993).

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