Evidence Base for the Early Literacy Skill Builders

The Early Literacy Skills Builder

The Early Literacy Skills Builder (Browder, Gibbs, Ahlgrim-Delzell, Courtade, & Lee, in press) is for elementary-aged students with moderate and severe cognitive disabilities (e.g., intellectual disabilities, autism, and other developmental disabilities) who have not acquired print and phonemic awareness. One of the unique features of the Early Literacy Skills Builder (ELSB) is that all responses have been developed for either verbal responding or nonverbal responding. For example, nonverbal students may use assistive technology, pointing, or eye gazing to make target responses. Guidelines are offered for promoting active student participation in "reading" (e.g., saying a repeated story line) and understanding the story. Students who complete the ELSB are ready for instruction in a beginning reading curriculum. The series is also developed so that students who do not master all levels still acquire literacy skills with lifelong use such as gaining meaning from stories that are read, acquiring new vocabulary, and recognizing words and phrases of text. In a comprehensive review of the experimental research on teaching students with significant disabilities early reading, Browder, Wakeman, Spooner, Ahlgrim-Delzell, & Algozzine (2006) found that most research with this population has focused on the acquisition of sight words through massed trials with systematic prompting and fading. This systematic instruction approach is strongly supported through both the quality and quantity of research studies and through the large effect sizes evident in these studies showing that students with significant cognitive disabilities can acquire sight words through this method of intervention.

Starting with Sight Words

The ELSB utilizes a "sight word game" that is based on a constant time delay strategy (Collins, 2007). In the first round, the teacher prompts the correct response by pointing to the word as it is presented (zero delay). In the next round, a four second delay is used. For motivation, the puppet Moe "helps" the students as needed (used in prompting the correct response). As students acquire the sight words, the teacher can drop the zero second delay round. Browder, et al., (2006) also note the importance of comprehension. To promote understanding of the words, the students are asked to perform a second response in which they select between two of the sight words to complete a sentence. Because the students have just reviewed the words, this round is also at a four second delay for prompting. The sight words were chosen because of their high utility. When possible words were also selected that have utility in functional activities (e.g., "girl", "boy", "friend").

Going Beyond Sight Words

As Browder, et al., (2006) note sight words are only one component of reading. In fact, students would not be expected to become readers through sight word instruction alone based on the research compiled by the National Reading Panel (2000). The NRP selected 38 experimental and quasi-experimental (meaning a plausibly close approximation to experimental) research studies on reading instruction. Based on a quantitative averaging of the outcomes from these 38 studies, the most important conclusion of the NRP (2000) was that their findings provided compelling evidence that systematic explicit phonics instruction makes a more significant contribution to children's growth in reading than do alternative programs providing unsystematic or no phonics instruction. The NRP report established consensus on the following foundational skills as

critical components (i.e., Big Ideas) of beginning reading instruction: (a) phonemic awareness, (b) alphabetic understanding, (c) vocabulary, (d) comprehension, and (e) accuracy and fluency with connected text (NRP, 2000). The importance of reading success prompted researchers to examine the characteristics of children entering first grade who become successful readers. Research suggest that children entering first grade with phonemic awareness skills will experience more success in learning to read than their peers who enter first grade with little or no phonemic awareness (e.g., Hiebert & Pearson, 2000; Lyon, 1998; Perfetti, Beck, Bell & Hughes, 1987).

In contrast, most students with significant cognitive disabilities will need instruction to develop phonemic awareness in the elementary grades due to their developmental delay. The ELSB is based on the premise that it is not too late to begin promoting phonemic awareness skills for these students at ages 5-10. Instead, the early elementary grades may be an optimal time to promote the skills that can then bridge to reading by later grades. In an ethnographic study of the school experiences of students with significant disabilities, Kliewer (1998) found a consistent lack of focus on reading. Because of this lack of attention to reading for this population, the amount and pace of progress students will make in a comprehensive early literacy program is largely unknown at this time. The purpose of the ELSB is to provide a curriculum that will promote new opportunities for this population to learn to read by building on the science of reading found effective for students without disabilities or who have mild disabilities. Specifically, the ELSB provides instruction in the five components of early reading-vocabulary, comprehension, phonemic awareness, phonics, and fluency. The RAISE Project (Reading Accommodations and Interventions for Students with Emergent

Literacy) at the University of North Carolina, led by Dr. Diane Browder, will be continuing to evaluate the applications reflected in the ELSB through experimental research in the years to come.

Why the ELSB Emphasizes Phonemic Awareness from the Earliest Lessons

Phonemic awareness is a conscious understanding that words are made up of sounds along with the ability to identify and manipulate individual sounds in words (Carnine, Silbert, Kame'enui, & Tarver, 2004). The NRP (2000) reported that correlational studies identified phonemic awareness and letter knowledge as the best two predictors at school entry of how well children will learn to read during the first two years of school. Phonemic awareness is considered to be phonics instruction when children are taught to blend or segment the sounds in words using letters (Carnine, et al., 2004). Some students with significant cognitive disabilities do not yet have even the concept of word which is the ability to match spoken sounds with words in text (Bear & Barone, 1989).Morris (1993) longitudinal research illustrates the contribution of concept of word to learning to read. In the ELSB, the concept of word is taught through having the student supply the missing word in a sentence (e.g., "Moe jumped over the ___) and by having students point to each word in a line of text as it is read by the teacher. Phonemic awareness instruction includes recognizing letter sounds and later, identifying pictures that begin with those sounds. Students also learn to clap out the syllables in words; and later, to clap out individual phonemes in words. One alternative would have been to teach one of these skills to mastery with many trials and then introduce the next skill, but this linear sequence could result in a student becoming "stuck" on a skill.

Instead, the ELSB introduces multiple phonemic awareness skills with many repetitions across days, lessons, and units. In the ongoing implementation of the ELSB in the Charlotte Mecklenburg School Systems, students sometimes acquire skills earlier than expected and other skills come more slowly, but the specific order of acquisition of skills like identifying the sound or clapping out syllables varies across students.

Evidence Students with Significant Cognitive Disabilities Can Acquire Phonemic Awareness and Phonics Skills

Joseph and Seery (2004) examined studies conducted over the past 12 years that used phonemic awareness and/or phonics instruction with students with intellectual disabilities. Seven studies were found that used phonetic analysis (i.e., making letter-sound correspondences). These studies revealed that students with intellectual disabilities have the potential to benefit from phonemic awareness training and phonics instruction. More specifically, two studies had positive outcomes when letter-sound correspondences were introduced (Hoogeveen, Smeets, & Lancioni, 1989 & Hoogeveen Smeets, & van der Houven, 1987). Bracey, Maggs, & Morath (1975) found that six of eight students with moderate intellectual disabilities made significant improvement in three reading skills: 1) reading sounds, 2) blending sounds into words, and 3) word reading. Two additional studies found that phonic analysis paired with error correction helped children with intellectual disabilities decrease word recognition errors (J. Singh & Singh, 1985; N.N. Singh & Singh, 1988). Currently published early literacy curricula have sometimes been used successfully with students with significant cognitive disabilities. For example, Bradform, Shippen, Alberto, Houchins and Flores (2006) successfully used the *Corrective Reading Program* to teach decoding to middle school students with moderate

intellectual disabilities. In contrast, the ELSB provides an option for students who need to use augmentative communication, who do not have the phonemic awareness skills that precede the skills addressed in programs like *Corrective Reading,* and who may need more repetitions to learn. Similar to other published curricula, the ELSB can be used either with a small group of students or one-to-one. Teacher scripts are also provided so that teachers know how to word the introduction of each skill and to keep the lesson moving at a brisk pace.

Making Early Reading Skills be Meaningful for Students with Significant Cognitive Disabilities

Stories are what make early reading skills fun and functional for students. In the first part of the ELSB, the character "Moe" helps the students learn to read through participating with them in their teaching trials and having the starring role in the stories the read. The stories have been developed with carefully controlled text and are read repeatedly so that students can build listening comprehension skills. Students also practice their phonemic awareness skills using these simple stories. An essential second part of the curriculum is "Building with Stories" in which teachers use the books typical of the students grade level to practice additional listening comprehension and to learn conventions of print like identifying the title and author. An important trend in supporting young children in developing literacy is the use of high quality literature including both narrative and expository works as core instructional materials (Morrow & Gambrell, 2002). Important characteristics of this approach include reading to children daily and giving students the opportunity for both independent and collaborative book sharing (Allor & McCathren, 2003). Discussion of the literature is also commonplace. Children

who are read to daily tend to score higher on measures of vocabulary, comprehension, and decoding (Bus, van IJzendoorn, & Pellegrini, 1995; Senechal, Thomas, & Monker, 1995). The primary purpose of this read aloud event is the construction of meaning from the interactive event between the adult and child (Vygotsky, 1978).

Although research does not yet exist on the potential benefits of daily reading with school-aged students with significant cognitive disabilities, making this the core of literacy instruction promotes meaningful access to inclusive communities in several ways. First, shared stories can promote social interactions with peers who are nondisabled and families, as well as, with teachers. Most experts list social inclusion with peers and family involvement as strong values for the education of this population (Hamre-Nietupski, Nietupski, & Strathe, 1992; Logan, et al., 1998; Stainback & Stainback, 1987; Trivette, Dunst, Boyd, & Hamby, 1995). Shared stories may also become a vehicle for promoting self-determination. Students can choose stories to be shared and reading partners, view books alone, and take the lead in reading if they receive instruction in specific book sharing skills that will be described later.

Research on the ELSB

Through Project RAISE, about 50 students with significant cognitive disabilities including autism, moderate/severe intellectual disabilities, and multiple disabilities are receiving instruction in the ELSB as an ongoing part of their daily school routine. The grant staff trained teachers in the Charlotte Mecklenburg School System to implement the ELSB with fidelity. Students in these classrooms were randomly assigned to participate in the ELSB or the currently adapted reading program (sight word approach). Browder, Ahlgrim-Delzell, Gibbs, Courtade, and Flowers (2007) evaluated performance of 23

students who participated in the first year of RAISE. Students who received the ELSB had significantly higher scores not only on the pre/post test for the ELSB curriculum, but also on a Nonverbal Assessment of Literacy. One student with autism completed the entire ELSB in one year and began an early reading curriculum. The other students mastered from one to four levels. Students also had higher scores on standardized tests of language acquisition. Research will continue on the ELSB for five years and results will be posted as they become available.

Progress monitoring is an essential part of instruction for students with significant disabilities. As research continues on the ELSB, it is especially important to assess student progress on each level to see if the ELSB is promoting learning for the individual students with whom it is used. Instructions are embedded in the teacher's manual for making decisions about when to move forward from lesson to lesson and how to adapt some responses and prompting. Each level also has a pre and post test to determine level mastery before moving to the next level.

Summary

The Early Literacy Skills Builder is a curriculum developed specifically for young students with significant cognitive disabilities. Because this is one of the first curricula with this focus and due to the lack of focus on reading for this population in the past, research does not yet exist on long-term outcomes for this approach. What does exist is research from the National Reading Panel (2000) and a comprehensive review of reading for this population (Browder et al., 2006) that formed the foundation for this curriculum. Thus, this curriculum is based on research evidence. Early research specifically on the

ELSB also suggest that it is a promising practice for promoting early literacy skills for this population.

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