The *Reading Milestones* Program, the *Reading Bridge* Series, and the No Child Left Behind Act of 2001

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Today more than ever, our country is focused on the teaching of reading. One effect of this focus was Congress passing the No Child Left Behind Act of 2001 (NCLB). This act encourages school personnel to teach phonemic awareness, phonics, vocabulary, comprehension, and fluency and to use methods that have a sound theoretical and research base. This paper describes the *Reading Milestones* program and the *Reading Bridge* series, demonstrates the programmatic aspects, and shows how the programs conform to the recommendations made in NCLB.

The *Reading Milestones* Program and the *Reading Bridge* Series

The series is comprised of two parts: The *Reading Milestones* program and the *Reading Bridge* book series. The *Reading Milestones* program addresses the needs of beginning readers whose reading levels range from kindergarten through fourth grade and contains an interest level appropriate for elementary students. The materials include four-color readers, a teacher's manual, workbooks, spelling books, and a placement test.

The *Reading Bridge* series serves as a link from the *Reading Milestones* program to grade-level reading. The readers are written on the fourth- and fifth-grade reading levels and will interest students through junior high school age. Workbooks and teacher's guides accompany the readers.

Originally developed for students who are deaf, the *Reading Milestones* program and the *Reading Bridge* series are now being used with readers who lack proficiency in the English language, such as students with developmental disabilities; persons for whom English is a second language; and students with language, learning, or reading disabilities. The series provides appropriate instructional-level materials that incorporate consistent reinforcement and accessible language structures and vocabulary. The program develops reading skills systematically through direct instruction that progresses in small, sequential steps so that students can transition into the general reading curriculum.

Theory and Research-Based Support for the *Reading Milestones* Program and *Reading Bridge* Series

The Reading First initiative of the No Child Left Behind (2001) legislation requires that schools use reading instruction programs that are developed from scientifically based reading research. The *Reading Milestones* program and the *Reading Bridge* series are based on extensive research of hearing and deaf children's development of English language and its relationship to learning to read. Quigley and colleagues conducted a series of studies based on a national investigation of standard English syntax in the language development of both children and youth who are deaf and children and youth with hearing (Brasel & Quigley, 1977; Power & Quigley, 1973; Quigley, Montanelli, & Wilbur, 1976; Quigley & Power, 1972; Quigley, Smith, & Wilbur, 1974; Quigley, Wilbur, & Montanelli, 1974, 1976; Wilbur, Montanelli, & Quigley, 1976; Wilbur, Quigley, & Montanelli, 1975). Questions guiding the investigation concerned the order of difficulty of syntactic structures, the establishment of syntactic rules, and the developmental stages in the acquisition of syntax. Following is an analysis of the research supporting these programs organized into the areas of initial research and support, promoting early success in reading, and effects on achievement.

Initial Research and Support

The first major study was conducted over an 8-year period and included several hundred deaf students between 10 and 19 years of age. The participants were a stratified random sample of 50 deaf students (25 male and 25 female) from each age level. In addition, 60 children with hearing in Grades 3, 4, and 5 were included as a general comparison group. The results are published in detail in the book *Linguistics and Deaf Children: Transformational Syntax and Its Application* (Russell, Quigley, & Power, 1976). Quigley's findings indicated that deaf children's development of vocabulary, comprehension of complex syntax patterns, and understanding

of the morphological rules of English were significantly delayed when compared with those of hearing children. These early studies have been supported by additional research throughout the years (e.g., Allen, 1986; Ewoldt, 1990; Kelly, 1996; see Schirmer & McGough, 2005, for a review). Kelly (1996) analyzed the vocabulary and syntactic knowledge test scores of 325 students who were deaf or hard of hearing. His results indicated that students with more complex syntactical skills were more able to apply their knowledge of vocabulary during the reading process. Ewoldt (1990) conducted an observational study with nine young children who were deaf. The study focused on the development of literacy skills within the home and school settings. These observations noted that "children progress along a continuum of literacy development…If they have no (prior) experiences, the next phase will be slower in developing or development may be arrested" (p. 109).

Promoting Early Success in Reading

The delay in English language development experienced by children who are deaf is one of the major challenges in learning to read (McAnally, Rose, & Quigley, 2007). When children have no basic foundation in the English language, learning to read becomes a cognitive task greater than that encountered by children with English language proficiency (Brown & Brewer, 1996). The significant gap between the reader's language base and the reading materials being taught results in children trying to learn to read a language they do not know. Learning the conventions of language (e.g., syntax, semantics) and learning to read are two demanding cognitive tasks which occur differently in hearing and deaf students.

To further understand the differences of English development between hearing and deaf students, Quigley and colleagues analyzed general education materials used to teach deaf children to read and concluded that the reading text contained English structures and vocabulary unknown to the reader (Russel et al., 1976). Quigley and colleagues developed a reading series based on the language structures and vocabulary of new English language learners, eliminating the barrier created by the gap between the deaf reader's language base and the language in the instructional reading materials. To promote early success in reading, the authors incorporated the syntax and semantics that coincided with the English language development of young deaf children. Language components (e.g., syntax, vocabulary, figurative language) were introduced in the sequence and at the levels that the research indicated (Dulay & Burt, 1972, 1974; Quigley & King, 1980). The selection of vocabulary items was based largely on the frequency of occurrence (e.g., Dale & O'Rourke, 1976; Dolch, 1942).

Effects on Achievement

Researchers have conducted quasi-experimental studies addressing how text that is rewritten in simpler syntactic structures affects comprehension (Isralite & Helfrich, 1988; Negin, 1987; Yurkowski & Ewolt, 1986). The results of these studies suggest that text cohesion is weighted equally between reader access to linguistic structures and semantic content. Subsequent to these findings, revisions of *Reading Milestones* (1991, 2001) and *Reading Bridge* (1991, 2003) incorporate a balanced approach to controlled linguistic structures and semantic and contextual richness.

Several teachers of the deaf have monitored student progress using the *Reading Milestones* program. In a series of case studies, Meredith and Walgren (1998) reported sustained growth in reading fluency and comprehension with students who were deaf and reading 2 years below grade level.

Meeting the Requirements of NCLB

The Reading First initiative of the NCLB (2001) legislation recommends five essential components of reading instruction: phonemic awareness, phonics, fluency, vocabulary, and text comprehension. Both the *Reading Milestones* program and the *Reading Bridge* series focus on each of these components in the instruction of reading with students.

Phonemic Awareness and Phonics

Activities to develop phonemic awareness and phonics in a language context are included in the Student Workbooks, the Spelling Program, and the Teacher's Guide with specific adaptations and instructional recommendations to accommodate children with hearing loss. The National Reading Panel (NRP; National Institute of Child Health and Human Development, 2000) reported that teaching children to manipulate phonemes in words was highly effective across all the literacy domains and outcomes. The *Reading Milestones* program instructional tasks focus on developing phonemic awareness and phonics as recommended by the NRP.

Fluency

The NRP (U.S. Department of Health and Human Services, 2000) reported that repeated oral reading with feedback, guidance, and well-developed word recognition skills lead to improvements in reading fluency. Extensive work on developing automaticity of vocabulary and sight words is presented in the *Reading Milestones* program and the *Reading Bridge* series materials using the instructional strategies reported in the research findings of Soderbergh (1985). The NRP's (U.S. Department of Health and Human Services,

2000) analysis of guided oral reading procedures led to the conclusion that such procedures had a consistent and positive impact on word recognition, fluency, and comprehension. For deaf children who do not use speech, guided oral reading is not likely to be a useable strategy (McAnally, Rose, & Quigley, 2007). Alternative strategies are incorporated into the *Reading Milestones* program and the *Reading Bridge* series that reinforce and extend the silent reading experience to include reading silently with guided teacher interactions, such as story mapping, story frames, story retell, and story completion strategies.

Comprehension

Text comprehension receives major emphasis in the *Reading Milestones* program and the *Reading Bridge* series with activities that reinforce research-based comprehension strategies such as prediction, Question–Answer Relationships (QAR; Raphael, 1982), monitoring, and summarizing. Few studies have been conducted on the effectiveness of individual reading strategies with deaf children (Shirmer & Winter, 1993); however, there is a considerable body of research with hearing children. Because the reading process is similar in hearing and deaf children, instructional strategies are generally applied across populations, making adaptations for those strategies that require hearing.

In summary, the development of the *Reading Milestones* program and the *Reading Bridge* series is grounded on a firm foundation of research and practice. Both programs reflect and implement the major requirements and recommendations included in NCLB (2001), Reading First (U.S. Department of Education, Office of Elementary and Secondary Education, 2007), and The National Reading Panel (U.S. Department of Health and Human Services, 2000). Research accumulated over the past 26 years demonstrates the effectiveness of the programs when used appropriately with children who are deaf as well as those children who have English language differences.

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