Florida Center for Reading Research

Phono-Graphix

What is Phono-Graphix?

Phono-Graphix is a structured, systematic, multi-sensory reading and spelling program that is based on phonemic awareness and alphabetic code knowledge. Fluent and accurate reading and spelling are the goals of this program, with an emphasis on strategy instruction rather than rule memorization. The authors of *Phono-Graphix* encourage an early start in reading by directing initial instruction at four and five year old children who are learning to read. It is also intended for students in grades one through five who are struggling readers, and for students who have been diagnosed with a reading disability. A classroom teacher, reading specialist or mentor volunteer can teach *Phono-Graphix* in a variety of instructional settings such as the regular classroom, the resource room, or the after-school program. One-on-one or small group presentation of instruction is encouraged but the program can also be used for a larger group. Materials included in the classroom kit are a teacher's manual with scope and sequence, lesson plans, reproducible worksheets, a white board for error correction, and a diagnostic kit with other accessories, but this can vary depending on the setting in which it is used. *Phono-Graphix* can be used as a supplement to a school's core reading curriculum. It is strong enough however, to be used as the main method to get students up and going with beginning reading skills in phonemic awareness and phonics.

The *Phono-Graphix* program builds instruction on the sounds of our language. Since young children already "speak in sounds," the Phono-Graphix method gives them a means to access the code through sounds. It directly teaches students in the areas of segmenting, blending, and phoneme manipulation while also teaching the entire alphabetic code. Emphasis is placed on the fact that sounds are represented by letters rather than letters "making sounds." Underlying *Phono-Graphix* are four principle understandings about the code of written language: letters are pictures of sounds (sound pictures); sometimes a sound picture is one letter and sometimes two or more; there is variation in the code (sounds can be shown with more than one picture; there is overlap in the code (some of the sound pictures are used for more than one sound [show cow]). Instruction consists of four different skill levels: Level I teaches the basic code, one-to-one mapping of sound to print, 17 consonants and 5 vowels, cvc words; Level II continues with the basic code, the remaining consonants and consonant digraphs, vcc, cvcc, ccvc, and ccvcc words: Level III, the advanced code, teaches the remaining digraphs, phonograms, spelling alternatives and code overlap; Level IV, the multisyllabic level, breaks words into linguistic chunks and students are taught to analyze them phoneme-by-phoneme. Students segment, blend, manipulate phonemes, and read text at every skill level. Error correction is immediate, direct, and with specific feedback. Students learn to spell as they learn to read by a process called "mapping" in which students say each sound while writing the corresponding letter. To assess student knowledge before beginning instruction, *Phono-Graphix* includes simple tests in phone blending, phoneme segmentation, auditory processing, and code knowledge.

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Is Phono-Graphix aligned with Reading First?

Phono-Graphix is based on the premise that the phoneme is the foundation for the alphabetic code. Thus, with instruction moving from sound to print, students are systematically taught to segment, blend and manipulate phonemes. Phoneme manipulation is always done with letters. Research has found that phonemic awareness instruction can be most effective when letters are used so that students see the transfer to reading and spelling (Report of the National Reading Panel, 2000; Adams, 1990). Phonics instruction is direct, explicit and always within the context of a word, thus ensuring that meaning is not lost in isolated drill exercises. Students are actively engaged during word building activities by moving the sound pictures into place as a word is being said, and then by saying each sound while they write it. Through these activities, students learn how sounds are represented in words, that reading is a left to right sequence, and that spelling and reading are reversible processes. Although fluency is not directly addressed, it is inherent in the program. Every lesson includes word reading and connected text reading with many repetitions. Lesson extensions encourage reading aloud to oneself, reading into a tape recorder, and reading to a friend.

The program does not specifically address the development of vocabulary and reading comprehension skills. The inability of older students to comprehend text is often directly related to their inability to analyze sound patterns within words or to pronounce multisyllabic words. The authors of *Phono-Graphix* suggest that the reading comprehension of many students will automatically increase as their ability to read words accurately and fluently increases. However, students who lack adequate oral language skills may require specific instruction in vocabulary and comprehension to help them move toward grade level reading skills.

Professional development for *Phono-Graphix* is variable depending on the school district. A certified *Phono-Graphix* trainer who has received 35 hours of training during a 5-day period trains classroom teachers in the use of the program. Usually one teacher becomes a trainer for the district. There is also a 1-day training available for teachers and volunteers. Training is not required if the Word Work Kit for classroom use is purchased; however, it is highly recommended.

Research Support for Phono-Graphix

Phono-Graphix was developed between the years of 1989 and 1993, and the original clinical research on the program was conducted at the Read America clinic in Orlando, Florida. The results of this study were published in the Annals of Dyslexia, the research journal of the International Dyslexia Society (McGuinness, McGuinness, & McGuinness, 1996). This peer-reviewed journal article used a quasi-experimental design with pre-test/post-test comparisons and no control group. The study included eighty-seven children (35 had been previously diagnosed as learning disabled), ages 6 to 16, with reading and/or spelling difficulties. These children received one hour per week, one-on-one instruction using *Phono-Graphix* for a total of 12 hours or less. Active parental supervision and homework assignments were suggested. Results from the Woodcock Reading Mastery Test (1987) revealed an average gain of 13.7 standard

score points in Word Identification and 19.34 points on Word Attack (a decoding measure). Additionally, children made substantial growth in phonemic awareness as measured by diagnostic testing designed by the authors of *Phono-Graphix*, which included a variation of the Rosner and

Simon Auditory Analysis Test (1971). It is important to note that a follow-up study to determine whether these gains were maintained over time has not been conducted. Although this study did not include a control group, the speed at which the students made these reported gains and the age range of the students positively impacted is impressive. Other studies reported by schools reflecting similar results are reported on the Read America website: http://www.readamerica.net/.

In conclusion, the instructional content and design of *Phono-Graphix* is based on research in that it utilizes a very systematic method to teach reading and includes the critical elements of beginning reading. This method of instruction has been effective in improving word reading skills in a short amount of time for students diagnosed with learning disabilities as well as those who are struggling to learn to read. Additionally, plans to measure its effectiveness at the elementary level are underway. Currently, six additional studies are being conducted around the United States, Canada, and the United Kingdom.

Strengths & Weaknesses

Strengths of *Phono-Graphix*:

- The program is highly adaptable and can be implemented in a variety of settings.
- *Phono-Graphix* can be taught by professionals and/or mentor volunteers due to the clarity and conciseness of language.
- Teachers learn the subskills underlying the reading process.
- Students learn the subskills of *Phono-Graphix* by reinforcement through sentence and text reading rather than rote memorization of rules and isolated drill exercises.
- Phonics instruction emphasizes the patterns of language and spelling, from the basic code to the advanced code.
- At the multisyllabic level, students break 2-5 syllable words into chunks and analyze them phoneme by phoneme.
- Repetition and error correction with appropriate scaffolding are built into the program ensuring mastery.
- The multisensory approach to *Phono-Graphix* can be a powerful tool since students are actively engaged: they hear, see, say, move sound pictures and write sound pictures in a left-to-right sequence.
- Because the program emphasizes positive, specific feedback, the effort of the student is always validated.

Florida Counties

The following counties have either purchased the *Phono-Graphix* program or had people trained in the *Phono-Graphix* method.

Alachua	Highland	Orange
Bay	Hillsborough	Palm Beach
Brevard	Lake	Pasco
Broward	Lee	Pinellas
Charlotte	Leon	St. Johns
Clay	Manatee	Sarasota
Collier	Miami-Dade	Seminole
Duval	Monroe	Sumter
Flagler	Okaloosa	Volusia

For More Information

http://www.readamerica.net

References

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Important Note: FCRR Reports are prepared in response to requests from Florida school districts for review of specific reading programs. The reports are intended to be a source of information about programs that will help teachers, principals, and district personnel in their choice of materials that can be used by skilled teachers to provide effective instruction. Whether or not a program has been reviewed does **not** constitute endorsement or lack of endorsement by the FCRR.

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