

Florida Center for Reading Research

OpenBook to Literacy

What is OpenBook to Literacy?

OpenBook to Literacy is an educational software program created to facilitate the instruction of reading, writing, and speaking for emergent readers, students with learning disabilities, students in need of remedial instruction, and students with limited English proficiency. It is intended to serve as a supplement to a core reading curriculum to provide extra practice for students, or as an intervention. The program's multisensory approach includes a combination of voice, text, pictures, video, graphics and foreign language translation to capture the attention of its users while simultaneously keeping them academically engaged. Designed to function as an automated teaching assistant for students from kindergarten to adult, *OpenBook to Literacy* enables a student to easily and independently work through a predetermined set of lessons at his own pace. The student is guided by clear instructions, a structured and consistent lesson format and graphic presentation, and a toolbar offering detailed descriptions of a lesson page's features and functions. Teachers, reading specialists, and instructional aids may assist students with the program when necessary.

OpenBook to Literacy offers many features to assist the struggling reader and students with limited English proficiency. In order to scaffold instruction, several levels of prompting exist for students in need of extra help. Students' ongoing progress is gathered in the *OpenBook to Literacy* database, which in turn generates customized reports enabling teachers to further individualize instruction. When enrolling students in *OpenBook to Literacy*, teachers have the option to set the prompting of directions and explanations, or, to program translation of words and sentences into a student's native language. As students become more confident and independent, language support may be gradually withdrawn. Presently, translations exist for Spanish, Mandarin, Haitian-Creole, and upon request, the company will provide other translations. Work with the program can be arranged flexibly according to time and scheduling considerations with students working at computers in the classroom or the computer lab. If a student stops work in the middle of a lesson, the place is bookmarked for continuation at a later point. The *OpenBook to Literacy* starter kit includes 2 CDs, a Program User's Guide and Training Manual, installation guides for PC/INTEL and Macintosh, a Teacher Lesson Plan Guide, a Chart of Sounds Wall Poster, and Phonics Flash Cards.

OpenBook to Literacy consists of six broad categories: Assessments, Basic Literacy, Punctuation and Grammar, Vocabulary, Nonfiction, Movies and Cartoons. Each of these categories is further subdivided into chapters. A chapter is a unit of activities that has a specific scope and sequence and is geared to a particular grade range. Grade level use of the chapters could vary depending on the needs of the students. *OpenBook to Literacy* offers teachers numerous possibilities to create lesson sequences for individual students or groups of students by choosing the program's standard lesson sets or by customizing a lesson set designed to meet a student's specific needs.



The category entitled Basic Literacy encompasses all of the various aspects of beginning reading instruction. Phonics knowledge is acquired as students learn letter-sound relationships for 52 phonemes and phonograms (high frequency phoneme combinations). Through word activities, stories, and keyboard exercises, the connection between sounds and their written representations is made evident. Skill exercises are explicit, employ a systematic teaching sequence, and include a series of prompts that enable students to become independent. A speech language specialist models speech sounds through visual and audio interaction so that students may see how sounds are formed as they are listening to them.

How is OpenBook to Literacy aligned with Reading First?

The five components of reading instruction, phonemic awareness, phonics, fluency, vocabulary and comprehension are found in varying degrees within the *OpenBook to Literacy* program. Given the broad scope of content and the wide age range that is addressed by *OpenBook to Literacy*, this report will focus on instruction for students in grades K-3.

Phonemic awareness and phonics instruction occur concurrently while students learn individual sounds. Phonemic awareness instruction is uniquely at the level of the alphabetic principle, where a sound is spoken and the letter for that sound appears automatically. The sound/letter association is further developed when students click on any word in a story, in a word recognition activity, or on the words they are writing in their own stories and hear and/or see it pronounced and/or sounded out. The keyboard activities facilitate understanding of letter-sound correspondences by immediately having the student type the newly learned letters and/or words when hearing an auditory prompt. Icons on the toolbar offer students repeated opportunities to hear and/or see a model sounding out and speaking words. Sounds taught in isolation quickly appear within words. Following a logical process, words that are taught are immediately placed within word lists, sentences, and stories reinforcing pronunciation, usage, and meaning.

Decodable text is not used during the phonics lessons. Students are presented stories to read in which the text is comprised of phonic elements that they have not yet learned. This could be problematic for struggling readers unless they avail themselves of the opportunity to listen to the auditory reading of the story and participate in the systematic rereading and sounding out of individual words and sentences.

Phonics instruction for students in 2nd grade and above includes the teaching of certain phonics rules and exceptions, digraphs, and blends. Depending on the reading level of her students, a teacher can assign the same phonics lessons that are available to emergent readers.

During most exercises with this program, students can choose to see phonetic spellings of words as they are pronounced or sounded out. This feature was based on research by Ehri (1987) which showed that students who received training in phonetic spellings learned to read more rapidly than students who had only been trained in letter sounds. Ehri was not able to say with certainty whether this would be a plausible method of instruction, but instead suggested more research to confirm her results. One possible concern with the way this procedure is implemented in *OpenBook to Literacy* arises from the fact that students learn to read words through multiple exposures to their correct spellings in print. In *OpenBook to Literacy*, as students read and reread sentences and phrases, they will be continually exposed to the phonetic

spellings of words in addition to the correct spellings, which might interfere with their memory for the way the words actually appear in print.

Fluency is developed primarily by an audio and/or visual recording of a speech professional pronouncing words and reading sentences and stories expressively. Students may also record themselves reading the individual sentences from the stories and then compare their own reading to that of the speech professional.

Vocabulary development occurs implicitly within the context of story reading. The 41 high frequency words that are the instructional focus of the phonics lessons appear in the accompanying stories. Multiple meanings and usage of these words are clarified within the stories. During Word Recognition and Word Building activities, a picture is associated with the spelling and pronunciation of a word to encourage understanding.

Comprehension strategies are not taught explicitly but meaning is inferred through the use of pictures, drawings and videos. Questions that follow the brief stories target understanding of the main idea and factual details that support the main idea. Keyboard activities that occur after these stories use a cloze procedure and verbal prompts to tap students' recall. Listening comprehension rather than reading comprehension is the dimension developed through the *OpenBook* activities since all word activities, stories and questions are read aloud by a narrator.

Professional development consisting of a one-day training is offered and encouraged by OpenBook Learning for an additional cost. Additionally, the company suggests a once-a-year training to update information and assist new teachers. The Just-in-Time Training is built into *OpenBook to Literacy* software and functions as a guide for students and teachers, explaining the special features of the program.

Research Support for OpenBook to Literacy



The philosophical foundations of *OpenBook to Literacy* arose in the mid 1980s with the goal of synthesizing research in developmental reading and human-computer interaction. The educational software program Sequoyah was developed in 1996 and evolved into its present form, *OpenBook to Literacy*, in January of 2002.

A research study in four Georgia Elementary Schools was implemented to document the effectiveness of the *OpenBook to Literacy* program in teaching students the skills necessary to become proficient beginning and advanced level readers. Participation in the study was voluntary and included two kindergarten classes, one 1st grade class, two 2nd grade classes and one 3rd grade class, with a total of 81 students. Teachers identified students for participation based on their low performance in reading-related activities and on their grade-level reading skills. The students were all from low-middle income families, and the kindergarten students had been previously enrolled in the county's Early Intervention Program for reading support. From January to April of 2003 students used the program 2-5 times a week, 20 minutes per session. Improvement in four of the program's six components, (Word Builders, Word Recognition, Tools Usage and Basic Skills Use) were statistically significant. Results should be interpreted cautiously due to several limitations with this study. Although a pretest/posttest design was used, the lack of control groups and random assignment render it impossible to provide conclusive statements about the effectiveness of *OpenBook to Literacy* compared to other instruction. The small sample size, limited number of weeks of actual program instruction, and lack of standardized assessment tools to measure performance yielded results in which the validity is questionable.

The results of another study conducted in a Southwest DeKalb high school with twenty-eight 9th graders reading at a 2nd grade level or below are impressive. The intervention group documented a mean improvement of two grade levels or higher compared to the control group using the school's traditional remediation materials. Without more information, it is not clear whether or not the gains are due exclusively to *Openbook to Literacy*.

In sum, more rigorously designed ongoing research studies by third party evaluators using randomized control groups and larger sample sizes would confirm the effectiveness of *OpenBook to Literacy* in improving reading skills. Currently, several studies are in progress including a longitudinal study with results expected in 2003-2004.

Strengths & Weaknesses

Strengths of *Openbook to Literacy*:

- The program is highly structured with explicit instruction, sequenced lesson sets, and offers a consistent graphic format which could be helpful for struggling readers and students learning the English language.
- The phonics chart is always present and is gradually filled in as instruction progresses. Each letter is associated with a picture that represents that letter's sound. Students may click on a letter from the phonics chart to hear its pronunciation as often as they wish.
- The keyboard and word building activities reinforce letter sound correspondence while simultaneously developing word knowledge.
- The prompts offer several layers of support starting with a minimum amount and continuing to the strongest support.
- The preskills assessment of letters and sounds is useful as a guide for teachers to individualize instruction.

Weaknesses of *Openbook to Literacy*:

- If students begin typing a word phonetically, the program prompts the phonetic spelling rather than the correct spelling of the word.
- During letter-sound introduction, students see a speech professional forming each sound in the new word with the actual word shown below the person's mouth. Each letter is highlighted and enlarged as it is sounded out. Although this is a helpful technique, it may be confusing for a student to know where to focus attention, on the mouth forming the sounds, or on each letter as the word is sounded out.
- The pronunciation of sounds /b/, /p/, /r/, /w/ includes an /uh/ at the end. Distortions that add extra sounds or cut a sound off quickly are problematic for students who have difficulty hearing individual sounds in words.

Which Florida districts have schools that implement Openbook to Literacy?

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|--------------|--------------|------------|--------------|
| Bevard | 321-631-1911 | Martin | 772-219-1200 |
| Broward | 954-765-6271 | Okaloosa | 850-833-3109 |
| Charlotte | 941-255-0808 | Okeechobee | 863-463-5000 |
| Columbia | 386-755-8000 | Orange | 407-317-3202 |
| Collier | 239-254-4100 | Osceola | 407-870-4008 |
| Dade | 305-995-1000 | Palm Beach | 561-434-8200 |
| Duval | 904-390-2115 | Pinellas | 727-588-6011 |
| Gulf | 850-229-8256 | Polk | 863-534-0500 |
| Hernando | 352-797-7001 | St. Lucie | 772-468-5021 |
| Hillsborough | 813-272-4050 | Santa Rosa | 850-983-5010 |
| Jefferson | 850-342-0100 | Seminole | 407-320-0006 |
| Lee | 239-337-8301 | Union | 386-496-2045 |
| Leon | 850-487-7147 | Walton | 850-892-8331 |
| Marion | 352-671-7702 | | |

For More Information

www.openbooklearning.com

References

Ehri, L. C. (1989). Movement into word reading and spelling: How spelling contributes to reading. In Mason, J. M.(ed.), *Reading and Writing Connections*. Newton, MA: Allyn and Bacon, 1989.



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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.

For more information about FCRR go to: www.fcrr.org