

earobics®

FOUNDATIONS AND CONNECTIONS
THE RESEARCH BASIS



RESEARCH BASIS

Earobics[®] answers the district's call for scientifically based reading programs for K–3, supporting the core literacy curricula with research-based supplemental literacy instruction and intervention in each of the five areas of reading. The classroom resources, instructional strategies, and professional development services that comprise an implementation of **Earobics Foundations & Connections** help teachers to deliver effective instruction in critical areas of early literacy development, combining software, multimedia, manipulatives, and classroom activities to create engaging and language-rich learning experiences that improve student reading performance.

Earobics has been recognized by the National Institute of Health as an effective reading program (Henry, 2001), and the Florida Center for Reading Research (2002) has favorably reviewed both the instruction that the program provides and the independent research that has been conducted to determine its efficacy. "The research base for **Earobics** is strong," the Florida Center for Reading Research notes, and its evaluation of the program declares that **Earobics** is aligned with the requirements of Reading First.

Earobics incorporates instructional strategies that are consistent with the findings and determinations of the National Reading Panel (2000), and each feature of its design is underpinned and explicated by an extensive body of literacy research and reflects insights from the position statements of respected institutions concerned with literacy and education, including the International Reading Association and National Association for the Education of Young Children (1998) and the American Speech-Language-Hearing Association (2000).

The design of **Earobics**, and the design of each of its components, follows from the assumption that learning to read is not an organic process (Lyon, 1998), but rather one that requires active development and practice, as well as systematic and explicit instruction. The materials included in **Earobics Foundations & Connections** and the instruction that they support are derived from a model of literacy acquisition that synthesizes the conclusions of leading researchers to forward the assertion that learning to read is most usefully conceived as a process that involves exercise in, and successful development of, a set of reciprocally related foundational skills. These skills include oral language and vocabulary development, phonological awareness and knowledge and understanding of the alphabet, and decoding and spelling, and they culminate in fluency, comprehension, and the ability to read and write for knowledge and understanding.

Earobics allows teachers to provide their students with research-based instruction in each of the reciprocally related literacy skills that make up the reading process, including phonemic awareness, phonics, fluency, vocabulary development, and comprehension.



PHONEMIC AWARENESS

What the Research Says

The systematic and explicit phonemic awareness instruction provided by **Earobics** is based on research reviewed by Adams (1990); Snow, Burns, and Griffin (1998); and the National Reading Panel (2000). Adams (2001), in a restatement of her conclusions on the value of phonemic awareness instruction, notes that research in cognitive science reveals that in fluent reading, recognition of printed text, construction of meaning, and phonological processing occur simultaneously. Key to this process, Adams points out, is automaticity, which can only be acquired through training in the alphabetic principle and phonemic segmentation. According to Adams, early phonological training is the necessary first step in the development of fluent reading. Similarly, Snow, Burns, and Griffin (1998) conclude, "Beginning readers need explicit instruction and practice that lead to an appreciation that spoken words are made up of smaller units of sounds." Snow, Burns, and Griffin stress that a knowledge of the sounds of language and the symbols to which those sounds correspond (the alphabetic principle) is crucial for children as they develop the ability to read fluently and for meaning. The National Reading Panel (2000) recommends phonemic awareness instruction as one of its five essential areas of early literacy instruction citing the consistently large effect sizes that such instruction produces as a foundational component of a balanced literacy curriculum. Many respected researchers have informed such recommendations, including Stanovich (1986), who concludes that phonological awareness is the single most potent predictor of reading success; Ehri (1992) and Treiman (1993), who link phonemic awareness to successful decoding and spelling; and Stuart (1999), who notes that early concentration on teaching phonemic awareness can radically improve students' reading and spelling, regardless of their reading readiness experiences or primary language.

How the Research is Applied in Earobics

These research conclusions are the impetus behind the design of **Earobics** software, which employs patented, adaptive technology to provide students with self-paced, systematic, and explicit instruction in phonemic awareness that automatically adjusts to their individual skill levels. The potential for effective phonemic awareness instruction via computer has been studied by a number of researchers. All of the studies of computer-based phonemic awareness instruction reviewed by the National Reading Panel (2000) showed significant effect sizes, and in its summary of findings and determinations on phonemic awareness, the National Reading Panel asserts that both classroom teachers and computers can be effective in teaching phonemic awareness skills. Accordingly, **Earobics** reinforces the phonemic awareness instruction delivered by **Earobics** software with classroom activities and manipulatives. The effectiveness of using manipulatives for phonemic awareness instruction, particularly manipulatives that also teach sound-symbol correspondence as children practice phoneme manipulation, has been demonstrated by Haskell, Foorman, and Swank (1992) and affirmed by the report of the National Reading Panel (2000).



Materials for Phonemic Awareness Instruction Included in Earobics Foundations & Connections

Earobics Foundations & Connections software includes multi-leveled, interactive games that provide systematic and explicit instruction in phonological awareness and automatically adapt the degree of difficulty to student's skill-level and progress. **Earobics** software includes data management features and support English Language Learners with the ability to deliver the software task instructions in up to ten different languages.

The Sound Starters and Sound Stories series is a collection of books and audio recordings that helps students explore the connections between sounds, letters, and words; includes a Big Book for teacher-led reading; three sets of 30 little books (one little book for each phoneme covered by the series); CDs and audiotapes for chants and sing-alongs that teach initial sound awareness, alphabet knowledge, and letter-sound relationships; and thirty additional titles that use repetitive and alliterative stories to help students practice sound-symbol correspondence in a meaningful context. (**Earobics Foundations**)

Earobics Phonological Awareness Teacher's Guide includes Rhyming, Blending, Phoneme Identification & Manipulation, and Segmentation activities that reinforce and extend phonemic awareness skills and incorporate literature and multimedia materials, allowing students to practice phonemic awareness within the greater context of reading itself. Each activity follows the research based Gradual Release of Responsibility (GRR) model, providing each child with significant opportunity to build and acquire crucial phonological and phonemic awareness skills.



PHONICS

What the Research Says

Researchers, including Evans and Carr (1985), Cunningham (1990), and Juel (1994), note that alphabetic knowledge, decoding, spelling, and the development of a sight word repertoire are prerequisites for fluent reading and the development of reading comprehension. The National Reading Panel (2000) concurs that teaching the alphabetic system alone is inadequate in helping students develop the ability to read, noting that the beginning reader's knowledge of the alphabet must be expanded to include a comprehensive knowledge of the letter-sound correspondences represented by print. To build this knowledge, the National Reading Panel recommends systematic instruction in phonics, which involves teaching "not only the major correspondences between consonant letters and sounds, but also short and long vowel letters and sounds, vowel and consonant digraphs . . . and blends of sounds that frequently occur as subunits of many words . . ." According to the National Reading Panel, instruction in sound-symbol correspondence and in decoding and spelling can occur in many ways, but what all of the most effective methods of phonics instruction share is their systematic and explicit presentation of the skills involved.

How the Research is Applied in *Earobics*

To help teachers provide students with a foundation in these skills, ***Earobics*** includes classroom activities and course materials designed to support any core literacy curriculum's presentation of phonics. Phonics instruction with ***Earobics*** is explicit and uses a variety of research-based methods, all of which are designed to integrate into the lesson plans of a core literacy curriculum. Phonics activities from the ***Earobics*** Phonics Book in the Teacher's Guide support the core curriculum's phonics instruction by incorporating the use of manipulatives and multi-sensory learning techniques; this auditory, tactile, and kinesthetic approach to teaching alphabet knowledge and sound-symbol correspondence is based not only on the work of clinicians using the Orton-Gillingham Method, but also on research on the applicability of multi-sensory literacy instruction methods to students in general education classrooms, including the work of Defior and Tudela (1994).

The use that ***Earobics*** makes of multimedia and correlated texts for controlling a student's introduction to print and phonics concepts is informed by the system of phonics instruction designed by Lloyd (1993), which employs meaningful stories and pictures to reinforce recognition and recall of letter-sound relationships. Stuart (1999) demonstrated the effectiveness of Lloyd's method. Further, research has conclusively shown that the phonemic awareness skills taught by ***Earobics*** software and ***Earobics*** classroom activities build the foundation for the successful development of phonics skills. Studies by Christensen (1997), Fitzpatrick (1997), Ball and Blackman (1991), and Ehri, Barron, and Feldman (1978) all conclude that before phonics can be successfully taught, phonemic awareness must be established.



Materials for Phonics Instruction Included in Earobics Literacy Launch

Alphabet Mats and Letter Sets in both capital and lowercase versions, allow students hands-on practice in alphabet knowledge, decoding, and spelling. (**Earobics Foundations & Connections**)

The Letter/Sound Review Deck reinforces knowledge of the alphabet through identifying and associating letters and sounds with key words. (**Earobics Foundations**)

Picture/Word Cards build students' repertoire of sight words and provide extensive practice in decoding and spelling. (**Earobics Foundations & Connections**)

The Sound Starters and Sound Stories series is a collection of books and audio recordings that helps students explore the connections between sounds, letters, and words. This series includes a Big Book for teacher-led reading; three sets of 30 Little Books (one Little Book for each letter or digraph covered by the series); CDs and audiotapes for chants and sing-alongs that teach alphabet knowledge, alliteration, and letter-sound relationships; and thirty additional titles that use repetitive and alliterative stories to help students practice sound-symbol correspondence in a meaningful context. (**Earobics Foundations**)

The Sound Blends and Sound Rhymes series includes 40 titles that incorporate frequently occurring consonant blends and common rime families into stories that also develop comprehension. (**Earobics Connections**)

The First Story Rhymes series consists of three titles in multiple media and text formats, with one Big Book for each title, four corresponding Little Books (for a total of twelve), talking CD-ROM software corresponding to each book, and a version of each book on audio CD and video DVD. These texts encourage multiple readings of the same story and expose students to varying levels of print; the DVD also offers interactive exercises that build phonics skills. (**Earobics Foundations**)

The Second Story Rhymes series includes four titles in multiple media and text formats, with one Big Book for each, four corresponding Little Books, talking CD-ROM software, and books on audio CD and video DVD. These texts encourage multiple readings of the same story and expose students to varying levels of print; the DVD also offers structured interactive exercises that build phonics skills. (**Earobics Connections**)

The Earobics Phonics Teacher's Guide includes Print Concept, Alphabet Knowledge, and Decoding and Spelling activities that support a systematic and explicit approach to phonics instruction. (**Earobics Foundations & Connections**)



FLUENCY

What the Research Says

Many literacy researchers have investigated the differences between fluent readers and those who suffer from reading difficulties. Stanovich (1986) points out that students who do not learn to read independently and fluently at an early age are limited in their vocabulary development, since they cannot derive the benefit of learning unfamiliar words through text encounters, sounding them out, or inferring their meaning from context. According to Stanovich, readers who fail to develop fluency suffer from cognitive overload; as they pause to attempt to decode unfamiliar words, they are limited in their capacity to employ other crucial reading skills, such as comprehension strategies. The consequences of students' failure to develop reading fluency early on can be great; they may not only fail to make the third-grade transition "from learning to read to reading to learn," but also fall further and further behind their peers, and eventually, through continued frustration, lose interest in reading.

The National Reading Panel (2000) recognizes the value of providing students with explicit practice in fluency. Key to the National Reading Panel's conception of effective fluency instruction are two elements: 1) that students read aloud and with some form of support and direction, whether it comes from a teacher, peer group, partner, or multimedia technology; 2) that students receive opportunities for repeated practice with skill-appropriate texts that are both decodable and challenging.

How the Research is Applied in *Earobics*

In accordance with the National Reading Panel's recommendations for effective fluency instruction, ***Earobics*** includes a variety of classroom resources to help students develop their ability to read with speed, accuracy, and proper expression. ***Earobics*** includes texts that improve students' repertoire of sight words and build their decoding skills, while providing them with many opportunities for repeated oral reading. It also features multimedia instructional tools, such as talking CD-ROMs and books on CD and DVD that model fluent reading for students, and allow them to participate in technology-assisted reading. Mefferd and Pettegrew (1997), Blum, et. al. (1995), and Conte and Humphreys (1989) have all demonstrated the effectiveness of this method of using technology to build fluency. In addition, by making these books available in multiple formats, ***Earobics*** encourages repeated oral reading and choral reading, which Rasinski (1990) and Sindelar, Monda, and O'Shea (1990) conclude is effective in improving students' reading fluency. Finally, activities featuring the Picture/Word Cards, included in ***Earobics***, not only develop students' vocabularies, but also their ability to read by sight.

Materials for Fluency Instruction Included in *Earobics*

The First Story Rhymes series includes three stories in multiple media and text formats, with one Big Book for each title, four corresponding Little Books (for a total of twelve), talking CD-ROM software corresponding to each book, and a version of each book on audio CD and video DVD.



These texts encourage multiple readings of the same story and expose students to varying levels of print; the CD/DVD create opportunities for technology-assisted reading and choral reading and offer interactive, skill-building exercises that complement the reading process. (***Earobics Foundations***)

The Second Story Rhymes series includes four stories in multiple media and text formats, with one Big Book for each, four corresponding Little Books, talking CD-ROM software, and books on audio CD and video DVD. These texts encourage multiple readings of the same story and expose students to varying levels of print; the CD/DVD create opportunities for technology-assisted reading and choral reading and offer interactive, skill-building exercises that complement the reading process. (***Earobics Connections***)

The Sound Blends and Sound Rhymes series is made up of 40 titles that incorporate frequently occurring consonant blends and common rime families into stories that may be used for repeated oral reading and fluency instruction. (***Earobics Connections***)

I-Can-Read Books are a series of leveled texts for skill-appropriate learning. Advancing in their degree of difficulty from title to title, these texts provide students with a measure of their progress as they develop fluency. Each text in the series is ideal for partnered reading activities and guided oral reading. (***Earobics Connections***)

Picture/Word Cards increase students' repertoire of sight words. (***Earobics Foundations & Connections***)

The ***Earobics*** Fluency Teacher Guide contains High-Frequency word and Oral Reading Practice activities that build the foundations for fluent reading. (***Earobics Foundations & Connections***)



VOCABULARY DEVELOPMENT

What the Research Says

The American Speech-Language-Hearing Association (2001) acknowledges that spoken and written language have a reciprocal relationship and that rich oral language experiences are crucial for not only children’s vocabulary development, but also their school-readiness. Catts and Kamhi (1999) concur with this position, noting that, “Reading takes advantage of the linguistic knowledge and processes that have evolved primarily for speaking and listening.” Hart and Risley (1995) explored the connection between children’s development of reading skills and their early oral language experiences and discovered that children from low-income families who were not spoken to frequently from the ages of two to five, entered kindergarten likely to understand only half the meanings and language conventions that are understood by children from high-income families whose parents have provided them with regular verbal interaction. As Hirsch (2001) notes in an assessment of the gap between low-income and high-income students on the National Assessment of Educational Progress, reading programs that are to be effective in bridging the gap between students of different socioeconomic statuses, must work to expose students to oral language experiences and new vocabulary, even as they develop their decoding skills and fluency.

How the Research is Applied in *Earobics*

The design of ***Earobics*** recognizes that vocabulary development is as crucial as the development of decoding skills. The program includes activities and course materials that allow teachers to immerse their students in a language-rich learning environment that develops oral language and expands vocabulary. Activities in the ***Earobics*** Vocabulary and Communication Teacher’s Guide engage students in discussions that build their ability to use expressive language, while introducing them to appropriate conventions of conversation and new vocabulary. Through repeated reading experiences, ***Earobics*** provides students with frequent exposure to words that researchers, such as Senechal (1997) and Leung (1992) have indicated to be effective in vocabulary development, and the program also includes Picture/Word Cards and language enrichment exercises that actively engage students in building vocabulary knowledge. These exercises are informed by research that highlights the benefits of active strategies of vocabulary instruction, including studies by Dickenson and Smith (1994) and Drevno, et. al. (1994).

Earobics also builds students’ vocabulary through decoding exercises that introduce students to prefixes and suffixes; instruction that introduces students to word stems and affixes is related to the Benchmark School Word Identification/Vocabulary Development Program outlined by Gaskins, Downer, and Gaskins (1986). The National Reading Panel (2000) indicates that effective vocabulary instruction involves allowing students to be exposed to new words in a variety of contexts; the multimedia and correlated texts included in ***Earobics***, as well as its lesson plans that integrate characters from ***Earobics*** software into teacher-guided oral language development activities, ensure that students will encounter and use new words in a number of different contexts.

Materials for Vocabulary Instruction Included in Earobics

Picture/Word Cards introduce students to new vocabulary and serve as visual cues for language enrichment activities, including sentence production and storytelling. (***Earobics Foundations & Connections***)

The Letter/Sound Review Deck is incorporated into Teacher's Guide activities that encourage students to actively develop their vocabulary through asking and answering questions. (***Earobics Foundations***)

The What a Show! activity book incorporates characters from ***Earobics*** software into teacher-guided language enrichment activities, including conversation starters, language concept development, and vocabulary building activities. (***Earobics Foundations***)

The First Story Rhymes series is composed of three stories in multiple media and text formats, with one Big Book for each story, four corresponding Little Books (for a total of twelve), talking CD-ROM software corresponding to each book, and a version of each book on audio CD and video DVD. Vocabulary development exercises included in the ***Earobics*** Vocabulary and Communication Teacher's Guide use the titles in this series to provide students with practice in using context clues to define new vocabulary. Written literature response exercises from the ***Earobics*** Writing Teacher's Guide offer students the opportunity to use new vocabulary in sentences and develop their use of descriptive language. (***Earobics Foundations***)

The Second Story Rhymes series includes four stories in multiple media and text formats, with one Big Book for each, four corresponding Little Books, talking CD-ROM software, and books on audio CD and video DVD. Writing exercises from the ***Earobics*** Writing Teacher's Guide use these texts as the basis for activities that provide students with practice in comparing and contrasting word meanings, and using new vocabulary to tell their own stories. (***Earobics Connections***)

The *Earobics* Vocabulary and Communication Teacher's Guide includes Listening and Speaking and Vocabulary development activities that expose students not only to new words, but also to language concepts that form the basis of future vocabulary acquisition, such as prefixes and suffixes, antonyms, synonyms, homonyms, and idiomatic expressions. (***Earobics Foundations & Connections***)



COMPREHENSION

What the Research Says

The National Reading Panel (2000) advises that instruction in text comprehension should not be neglected in the primary grades, as children are mastering phonics and word recognition and developing fluency. Teaching reading skills in isolation does not constitute effective literacy instruction; reading is an act of constructing and sharing meaning and the purpose of reading is comprehension.

In keeping with this crucial idea, the National Reading Panel (2000) recommends that students receive systematic and explicit instruction in a variety of comprehension strategies. "For teachers," the National Reading Panel writes, "the art of [text comprehension] instruction involves a series of 'wh-' questions: knowing when to apply what strategy with which particular student." The National Reading Panel points out that teachers should not only use flexible strategies in teaching comprehension, but also verse their students in flexibly applying a variety of strategies for understanding what they read. "When faced with a comprehension problem, a good strategy user will coordinate strategies and shift strategies as it is appropriate to do so" (National Reading Panel, 2000).

How the Research is Applied in *Earobics*

Based on cognitive research that asserts that reading is a purposeful and active process (Pressley & Afflerbach, 1995), the comprehension instruction supported by ***Earobics*** introduces students to a wide array of comprehension strategies. The program includes shared and guided reading activities in which the teacher models the use of background knowledge, context clues, and graphic organizers, and guides students in practicing these strategies with shared texts. As Loranger (1997) concludes, "Predicting, questioning, clarifying, and summarizing improves comprehension, and students who use these strategies are more engaged in the texts during reading, participate in dialogue and discussion more freely, and apply what they learn during independent reading."

Earobics activities that systematically and explicitly teach students comprehension strategies, reflect the research of a number of reading experts (Pressley, et. al., 1989; Pressley, et. al., 1994), and have their basis in the observations of Durkin (1993), who has pointed out the importance of introducing systematic and explicit comprehension instruction into elementary reading programs.

Materials for Comprehension Instruction Included in *Earobics*

Katy Grows Up is a Big Book and multimedia strand based on characters from ***Earobics Foundations*** software. *Katy Grows Up* is accompanied by four Little Book versions of the text, as well as CD, DVD, and CD-ROM versions. These books introduce students to language concepts, vocabulary, and comprehension strategies, such as activating background knowledge, using context clues, employing graphic organizers, and asking "wh-" questions. (***Earobics Foundations***)



The First Story Rhymes series includes three stories in multiple media and text formats, with one Big Book for each story, four corresponding Little Books (for a total of twelve), talking CD-ROM software corresponding to each book, and a version of each book on audio CD and video DVD. These texts encourage multiple readings of the same story and offer opportunities for instruction in comprehension strategies. (***Earobics Foundations***)

The Second Story Rhymes series includes four stories in multiple media and text formats, with one Big Book for each, four corresponding Little Books, talking CD-ROM software, and books on audio CD and video DVD. These texts encourage multiple readings of the same story and offer opportunities for instruction in comprehension strategies. (***Earobics Connections***)

I-Can-Read Books are a series of leveled texts that gradually introduce students to comprehension challenges of greater difficulty, encouraging them to actively employ the variety of comprehension strategies they learn through instruction with ***Earobics***. (***Earobics Connections***)

The ***Earobics Reading Comprehension Teacher's Guide*** includes activities in Book Basics, Before, During, and After Reading, Nonfiction, and Reading Application, that use the imaginative literature from ***Earobics*** to introduce students to concepts of print and provide them with practice in a variety of comprehension strategies, including the use of context clues and background knowledge, making predictions, inferences, asking and answering questions, predicting outcomes, and more. (***Earobics Foundations & Connections***).

EFFICACY RESEARCH

Earobics has been successfully implemented in a variety of school settings, including as a supplemental program correlated to the core literacy curriculum, as an afterschool program, a Tier II and/or Tier III intervention, and as a summer school program. The success of ***Earobics*** when it is implemented in these formats has been repeatedly verified by independent research. In a position paper advising educators on how to select reading programs on the basis of the research on their effectiveness, the International Reading Association (2002) highlights the importance of comparing the conditions under which the efficacy research on a program has been conducted to the conditions under which that program will be implemented. Research on the effectiveness of ***Earobics*** has been conducted by school systems that are eligible for Reading First funding, with the demographic characteristics, resources, and teaching staffs that are similar to many Reading First school districts.

A variety of assessments measuring student performance in each of the five areas of reading have been employed for studies on the effectiveness of ***Earobics***, and regardless of the assessment used or student groups assessed, each of these studies has demonstrated that students who receive instruction with ***Earobics*** achieve statistically significant gains in literacy skills. Assessments used in these studies include the *Phonological Awareness Literacy Screening (PALS)*,



the *Phonological Awareness Test (PAT)*, the *Observation Study of Early Literacy Achievement*, the *Test of Reading Accuracy and Fluency*, the *Peabody Picture Vocabulary Test (PPVT)*, and the *Stanford-9*.

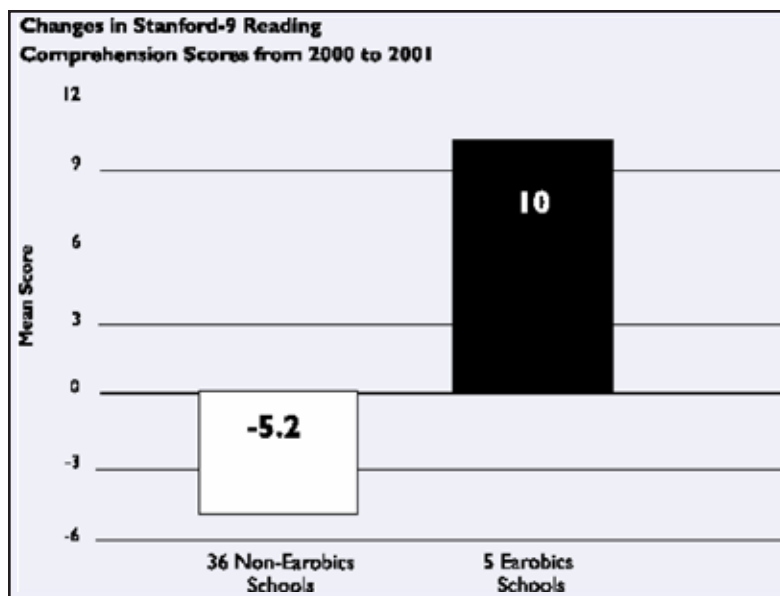
Moreover, independent evaluations of **Earobics** that employ control groups demonstrate that students who receive instruction with **Earobics** as a supplement to the core literacy curriculum achieve significantly greater gains on literacy assessments than those students who receive instruction with the core literacy curriculum alone or with other programs. The statistically significant gains achieved by students who use **Earobics** have been consistent across subgroups, including economically disadvantaged students, English Language Learners, and special education students.

Independent studies of **Earobics** that informed the district’s decision to select the program to provide supplemental materials and professional development include:

Polk County School District

A study conducted by the Polk County School District, Florida. Students in 21 first-grade classrooms in five Title I schools who received instruction with **Earobics** achieved significantly higher results on the *Stanford-9* assessment of reading comprehension than did first-grade students in 36 Title I schools who used the primary literacy program (*Open Court* or *Success for All*).

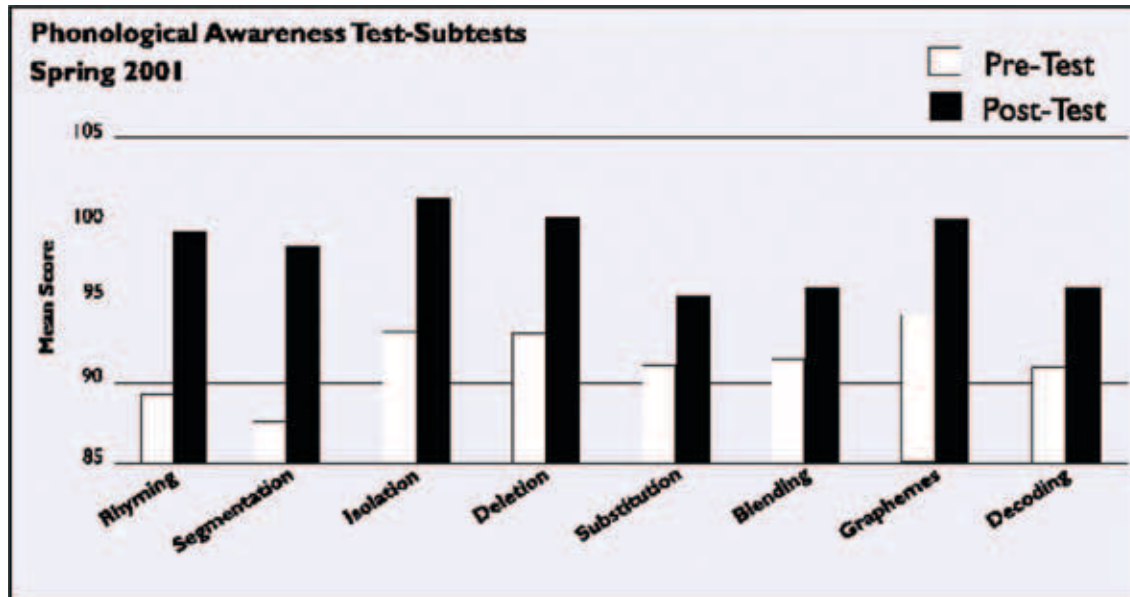
Polk County School District, FL



Chicago Public Schools

A 12,000-student pilot study conducted by the Chicago Public Schools in Chicago, Illinois. Students in Pre-K through third grade achieved statistically significant gains in phonemic awareness, decoding, and spelling after twelve weeks of instruction with **Earobics**. English Language Learners made similarly significant gains. 90% of Chicago Public School students represent minority populations. The chart included here compares pre- and posttest scores of first graders on the Phonological Awareness Test.

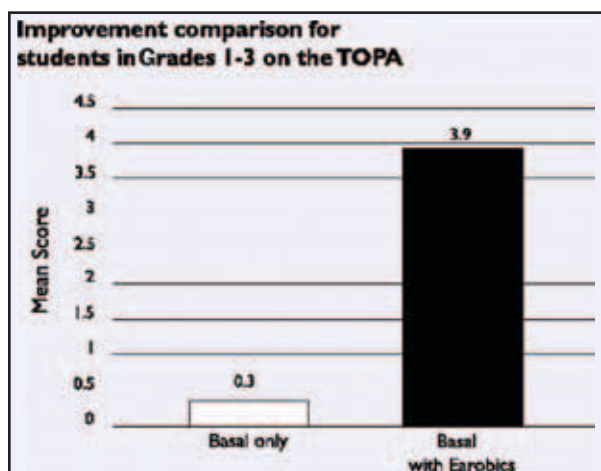
Chicago Public Schools, IL



District of Columbia Public Schools

A study conducted by the District of Columbia Public Schools in Washington, D.C. First-, second-, and third-grade students who received Language Arts instruction using **Houghton Mifflin Reading** and **Earobics** achieved significantly greater improvements on the Test of Phonological Awareness than did students who received the same amount of instruction using **Houghton Mifflin Reading** alone ($P \leq 0.006$). 96% of the students in the District of Columbia Public Schools represent minority populations.

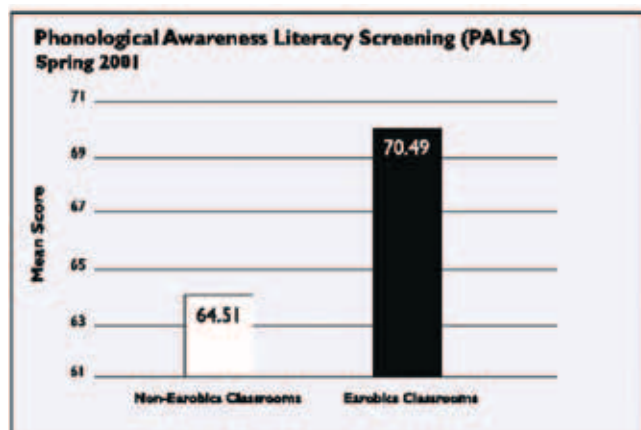
District of Columbia Public Schools, Washington, D.C.



Newport News Public Schools

A study involving 44 kindergarten classrooms conducted by the Newport News Public Schools, Virginia. At-risk students who received instruction with **Earobics** achieved significantly higher results on the Phonological Awareness Literacy Screening (PALS) than did students in a control group who received instruction using alternate reading interventions ($P = 0.017$). 60% of the students in Newport News Public Schools represent minority populations.

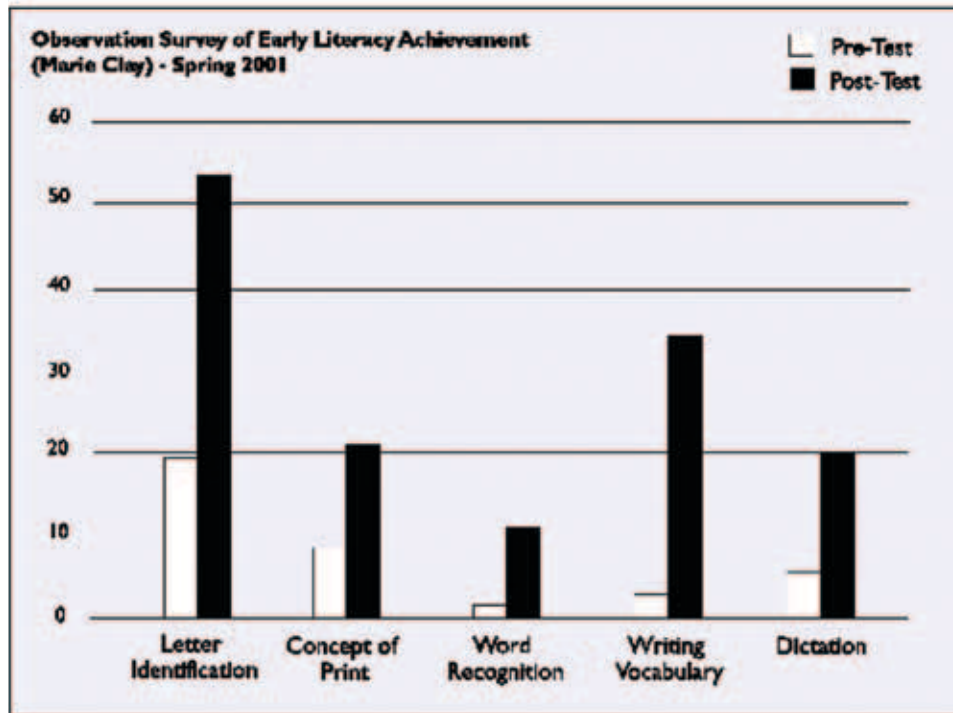
Newport News Public Schools, VA



Spring Branch Independent School District

A study conducted by the Spring Branch Independent School District, Texas. Kindergarten students achieved statistically significant gains ($P = 0.000$) on the Observation Study of Early Literacy Achievement after using *Earobics* in their classrooms three to five times per week. 51% of the district's students are Hispanic.

Spring Branch Independent School District, TX



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