DOCUMENT RESUME

ED 445 321 CS 014 101

TITLE	The Challenge of Improving Reading. LAB Education Notes Volume 1, No. 2.
INSTITUTION	Northeast and Islands Regional Educational Lab. at Brown Univ., Providence, RI.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	1999-11-00
NOTE	10p.
CONTRACT	RJ96006401
AVAILABLE FROM	The Education Alliance, 222 Richmond St., Ste. 300, Providence, RI 02903-4226. Tel: (401) 274-9548 or (800) 521-9550, Web site: http://www.lab.brown.edu.
PUB TYPE	Collected Works - Serials (022) -- Reports - General (140) -- Reports - Research (143)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Brain; Elementary Secondary Education; Literacy; National Competency Tests; *Reading Achievement; *Reading Improvement; *Reading Instruction; *Reading Research
IDENTIFIERS	National Assessment of Educational Progress; *Phonemic Awareness

ABSTRACT

This focused newsletter features articles about reading, reading research, and teaching reading. The newsletter's lead article, "The Challenge of Improving Reading," enumerates the problems that schools and families can encounter when trying to raise student performance in reading. Another article in the newsletter, "The Longest War: How Best to Teach Reading," cites teaching the beginning reader to acquire phonemic awareness as the key first step in developing reading abilities. A third article reports that National Assessment of Educational Progress (NAEP) scores show some improvement as to reading assessment and gives results for the nation (in grades 4, 8, and 12), for states (in grades 4 and 8), and reading results by student subgroup. Other brief articles discuss brain-based research about how humans learn to read and a 2-phase study (undertaken with the University of Vermont) centered on the Secretary of Education's reading priority. Information about tutoring reading and current initiatives in reading and literacy is also included. Contains a list of reading resources and references. (NKA)

The Challenge of Improving Reading.

LAB Education Notes,

Volume 1, No. 2.

November 1999

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The Challenge of Improving Reading

"I can think of no higher purpose than passing on literacy and the love of reading to the next generation of Americans."

— US Secretary of Education Richard W. Riley

Reading and literacy are more than just skills. They represent a means of participating in the exchange of the ideas, feelings, and information that define a thriving society. But too many children in America's schools—38% at the fourth-grade level, according to the 1998 National Assessment of Educational Progress—score below the "basic" level of reading (NAEP, 1999). (See related charts, page 3 and 4.) Their struggle with reading blocks them from making the most of their education and they often emerge from school poorly prepared for their roles as citizens and employees. Without question, literacy in general and reading in particular are the most complex and important challenges American schools face.

What are the sources of the problem?

It might seem a simple matter for schools and families to raise student performance in reading, and there are certainly many actions that can influence student literacy for the better. But difficulties with reading often have complex causes.

Environment plays a crucial role in a child's early years as brain cells are formed, and sensory environmental stimulation affects the structure and organization of neural pathways (Cole & Cole, 1989; Myers, 1992). Parents need to be their children's first teachers if their children are to start school successfully. Preschool programs with parental involvement—like Head Start—appear to be more successful generally than those without parental involvement (Myers, 1992). (See also "Library cards for infants," page 6.) The window for developing reading competence is smaller than previously thought—so small that first-grade reading performance is now a predictor of reading proficiency for the rest of life. New research indicates that pre-natal health and experiences soon after birth, particularly in the first three years of life, dramatically influence brain development.

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The Longest War: How Best To Teach Reading

Without question, teaching the beginning reader to acquire phonemic awareness and competence is the key first step, without which other reading abilities cannot develop. Learning the sound-letter correspondences and connecting them to words already known in speech is the most effective way to "crack the code" in any language. Current research, aided by advances in technology that facilitate precise measurement of eye movements and brain activity, confirms that the gateway to normal and competent reading acquisition is phonemic awareness, an ability that is best developed through direct instruction (Spector, 1995; Pugh, 1999). There is also no doubt that the so-called "balanced approach" of also teaching children to read for meaning and using high-quality children's literature leads to reading competency.

Despite these findings, the "reading wars" rage on between "meaning-first" (whole language) and phonics-first beginning reading methodologies. The wars date back

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Studies have found the types and forms of literacy practiced in some homes—often of low income, ethnic and cultural minority, and immigrant families—to be largely incongruent with the literacy encountered in school.

—Braunger and Lewis, 1997

"The Challenge of Improving Reading", continued

In fact, many factors influence how well children learn to read. Most significant is the instruction they receive. When it is inadequate, a child's reading skills development (and perhaps his or her motivation) can suffer. In the early grades, one year of poor reading instruction can set a student back significantly, initiating problems that can last for several years if not addressed.

By grade three, most of the "learning to read" phase is over and the remainder of the years in school is "reading to learn." A recent study by the University of Chicago showed that if children were behind in reading at the end of the third grade, there is an 87% chance they would never make up the deficiency. Children who do not experience early reading success often feel discouraged in school and may be prone to "acting out" behaviors. Only through informed educational practice can these negative outcomes be averted.

Students can also encounter barriers to reading success because of the complex relationship between their own cultural or language background and the predominant culture or language in their school. Students for whom the dialect of English spoken in their school is unfamiliar, for example, can struggle to develop links between sounds and symbols because of their experiences with a greater variety of represented sounds. Furthermore, different cultural groups value literacy in a variety of ways, sometimes emphasizing different uses of literacy or having different roles for parents and teachers to play in its acquisition. While adults from minority communities often place a positive value on literacy, variations in how cultural groups view reading can influence how students participate in school literacy activities.

In some schools, literacy expectations and resources differ from one group of students to the next. When these factors are combined with differences in instructional practices, a school sets in motion a snowball effect that makes it very difficult for some groups of students to gain needed reading skills once they have fallen behind. School climate can further undermine the importance of literacy, leading to poor performance not just in reading but also in other subjects that depend on reading as a primary means of gaining information and participating in the exchange of ideas.

Given the complex causes of student reading difficulties, a study by the National Research Council states, "Excellent instruction is the best intervention for children who demonstrate problems learning to read" (NRC, 1998). The challenge, of course, is making excellent instruction a reality for all students.

"The Longest War: How Best To Teach Reading", continued

at least 30 years to the *First-Grade Studies* and *Learning to Read: The Great Debate*. Marilyn Jager Adams, a leading phonics advocate, writes that how best to teach reading "may be the most politicized topic in the field of education" (Lemann, 1997). Nicholas Lemann further comments that "phonics is also a long-standing cause of the political right; in a number of communities it is one of the main organizing issues for the Christian Coalition. Whole-language is generally a cause of the left." (Lemann, 1997). Gerald Coles, writing in *Education Week*, suggests that the ongoing quality of the wars reflects the "deep, divergent, and irreconcilable conflicts about people, social purposes, resources, and power that run through the entire society." (Coles, 1998) In response to the ongoing battles, legislators are saying, "If it isn't fixed yet, we are going to do something to fix it ourselves." And so conservative state lawmakers have introduced legislation mandating—in increasingly prescriptive terms and with funding strings attached—phonics-first instruction. California, with its student population of more than five million, is one of the states moving in this direc-

after falling to the next-to-last position nationally in NAEP scores.

The State of the Art: NAEP Scores Show Some Improvement

In 1998, the National Assessment of Educational Progress (NAEP), the nation's only ongoing assessment of what students know and can do in various subject areas, conducted a national reading assessment for grades 4, 8, and 12, and a state-by-state reading assessment of students in grades 4 and 8. Students' performances are described in terms of average scores on a 0 to 500 scale, and in terms of the percentage of students attaining Basic, Proficient, and Advanced achievement levels. The summary at right, taken from the *Reading Report Card for the Nation,* highlights the major findings.

Parents of children not in the dominant cultural group must be supported to become partners with the school in their children's literacy development. It is not lack of interest in their children's school success that keeps these parents at a remove from the school. Rather it may be that the school lacks the appropriate strategies and mechanisms to involve them. Beyond giving generic advice to "read to your children," schools can share resources, demonstrate strategies, and otherwise invite parents into the literacy process.

— Braunger and Lewis, 1997

Results for the nation

- Average reading scores increased for students in grades 4, 8, and 12.
- While the national average increased in all three grades, grade 4 score increases were observed only among lower-performing students. In grade 8, increases were observed among lower- and middle-performing students. In grade 12, increases were observed among middle- and upper-performing students.
- At grade 4, no significant changes since 1994 or 1992 were observed in percentages of students attaining any of the reading achievement levels.
- At grade 8, a greater percentage of students performed at or above the Basic level and the Proficient level in 1998, compared to 1994 and 1992.
- At grade 12, a greater percentage of students performed at or above the Proficient level and the Advanced level, compared to 1994.

Results for states

- Of 43 jurisdictions in the grade 4 sample, **Connecticut** had the highest average score for public school students. The cluster with the next highest scores included Iowa, Kansas, **Maine, Massachusetts**, Minnesota, Montana, **New Hampshire**, and Wisconsin.
- Of the 40 jurisdictions in the grade 8 sample, the cluster of highest performers included **Connecticut**, Department of Defense schools, **Maine,** Massachusetts, and Montana.

Reading results by student subgroup

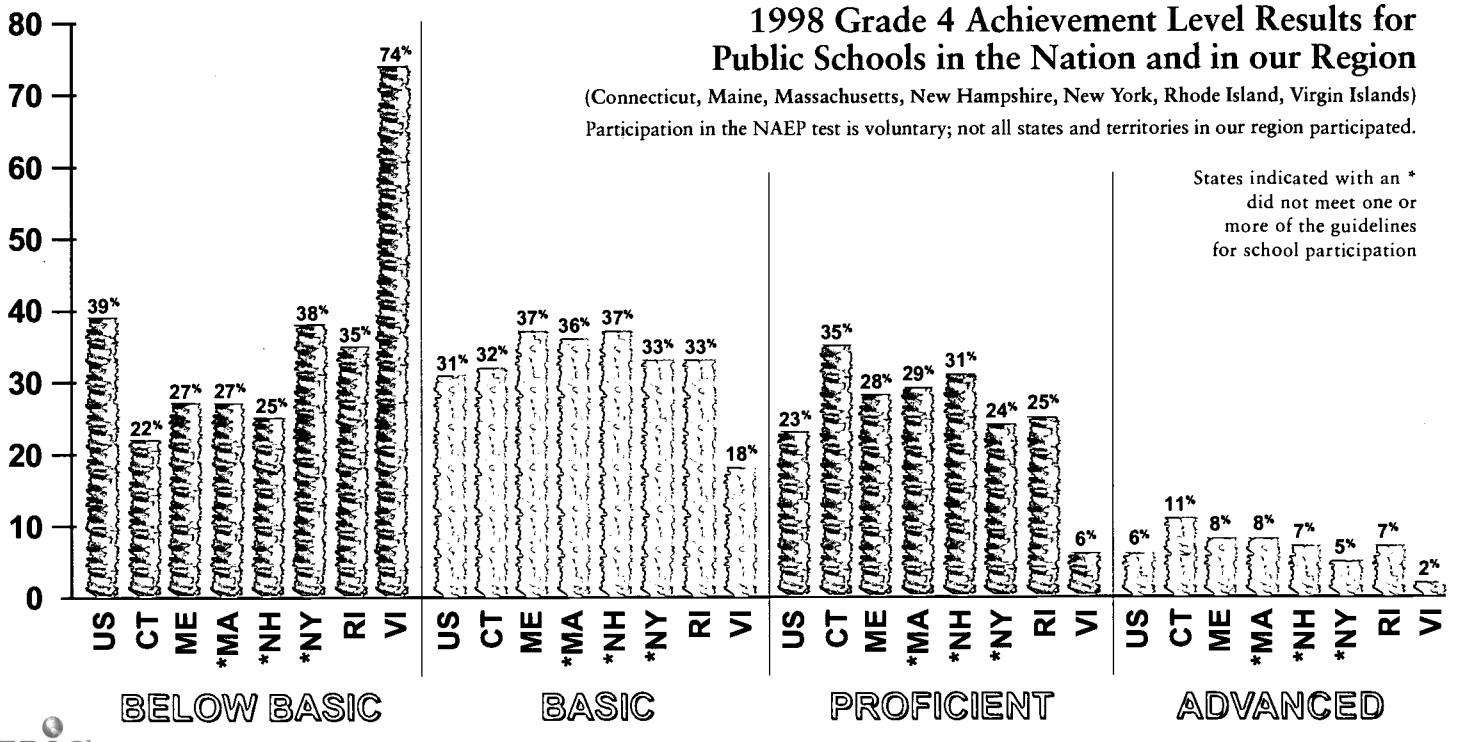
- *Gender*: At all three grades, female students had higher average reading scale scores than male peers.
- *Race/ethnicity*: At all three grades in 1998, the average reading score for White students was higher than that for Black, Hispanic, and American Indian students.
- *Parents' level of education*: Students in 1998 who reported higher levels of parental education had higher average reading scale scores.
- *Regions of the country*: 1998 results by region indicated that fourth- and eighth-graders in the Northeast and Central regions outperformed their counterparts in the Southeast and West.
- *Type of location*: In 1998, fourth- and eighth-graders in central city schools had lower average reading scores than counterparts in rural or small schools or urban-fringe or large-town schools.
- *Free or reduced-price lunch*: At all three grades, students eligible for free or reduced-price lunch had lower average reading scores than students not eligible for the program.
- *Type of school*: 1998 results indicated that students attending nonpublic schools had higher average scale scores than counterparts attending public schools.

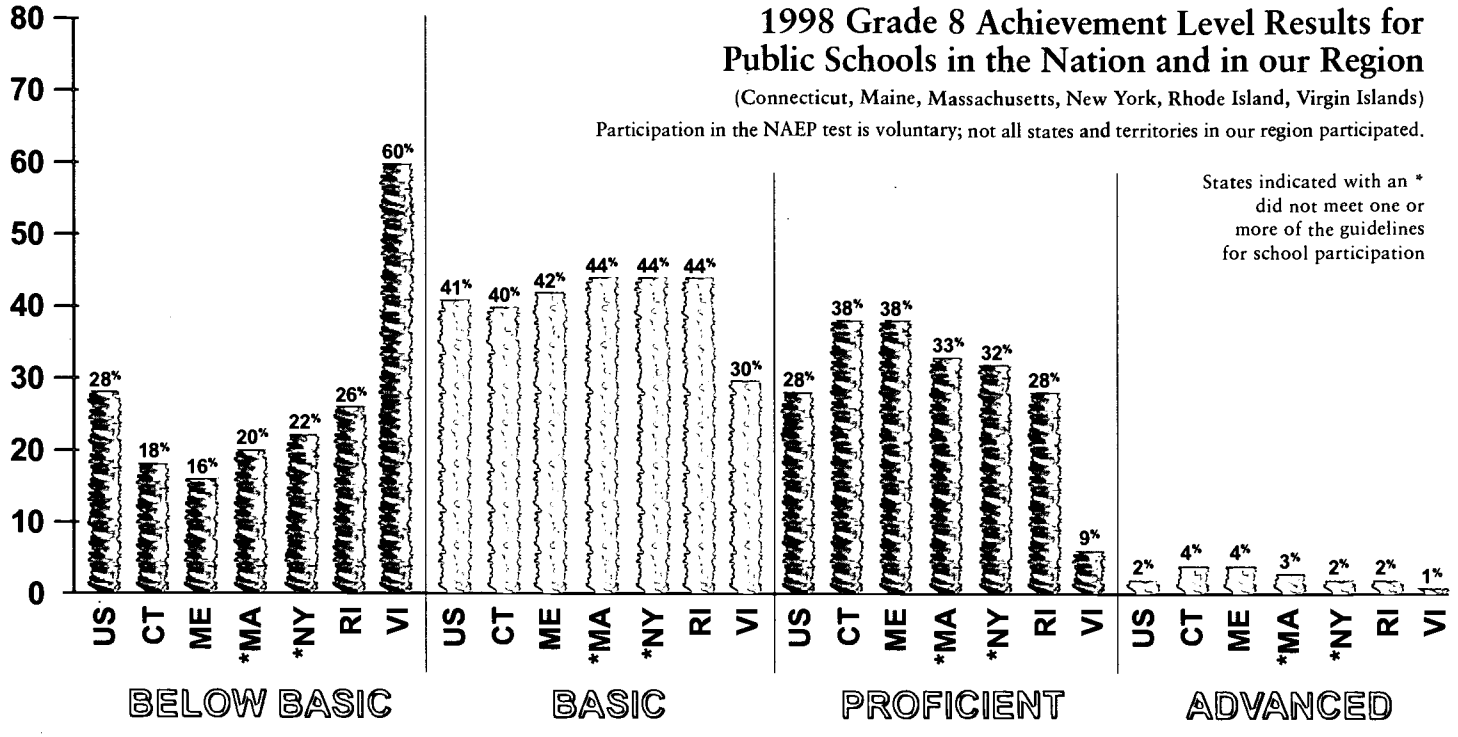
1998 Grade 4 Achievement Level Results for Public Schools in the Nation and in our Region

(Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Virgin Islands)

Participation in the NAEP test is voluntary; not all states and territories in our region participated.

States indicated with an * did not meet one or more of the guidelines for school participation





Connecticut Scores Soar

Connecticut has made great strides in raising students' performance levels on reading assessments (see charts on pages 3 and 4). Educators credit this increase to the state-wide reforms in standards and assessments. The advent of the Connecticut Mastery Tests put great pressure on districts to improve literacy skills. Students are tested in reading, writing, and mathematics in grades 4, 6, and 8.

Millions of dollars in funding are earmarked for early intervention programs, and last year monies were allocated for an urban-schools grant program to finance literacy improvement efforts in early grades. According to Theodore S. Sergi, Connecticut's commissioner of education, "These strong gains show the value of emphasizing reading skills through focused instruction and assessment."

This publication is based on work supported by the Office of Educational Research and Improvement (OERI), U.S. Department of Education, under Contract Number RJ96006401. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of OERI, the U.S. Department of Education, or any other agency of the U.S. Government.

Developing Language: The Science Behind Learning To Read

Brain-based research continues to uncover new information about how humans develop the capacity to read. LAB researcher Robert Greenleaf, a specialist in brain-based teaching and learning, lays out some of the newest technology-assisted findings about what the brain does when a child decodes the printed word.

By the time most young children enter school, they have acquired a vocabulary of more than 17,000 words. The human brain is designed to do this with relative ease, primarily through hearing. What presents a new challenge to young children's neural networks is dealing with what seem at first quite arbitrary symbols on the printed page.

Dr. Kenneth Pugh, a psychiatrist and medical researcher at the Haskins Laboratory at Yale University, has been studying the neural pathways that are generated in good readers using positron emission tomography (PET) and functional magnetic resonance imaging (fMRI). Skilled readers have neural networks that take the visual sensory input from "eye to meaning" in about 150 milliseconds. Dr. Pugh has been able to observe specific areas of the brain collaborating to convert letters into sound equivalents and units of meaning. Less-skilled readers tend to move from orthographic configurations directly to meaning instead of taking printed symbols to their respective phonemic equivalents. It seems that this inhibits the flow of reading and degrades the quality of the reader's comprehension. Thus, the core deficit of poor readers may be primarily phonological.

Further research using PET and fMRI, this time with dyslexics and illiterates, recorded an increase in blood flow in the frontal region during reading activity by poor readers, as compared to increased blood flow in the posterior regions of skilled readers' brains. The frontal region of the cortex is not efficient in decoding language sounds and performs such tasks far too slowly to generate meaning.

For years, education practitioners have encouraged children who lack phonemic awareness to use meaning or context as an alternative strategy. The recent findings suggest this may prompt a beginning reader to use an inefficient strategy which is unlikely to support skill development over time. An increased emphasis on phonemic analysis may benefit the neural development of struggling readers.

Beyond the Reading Wars—The Vermont Reading Project

A team of University of Vermont of researchers,* collaborating with the LAB, has undertaken a two-phase study centered on the Secretary of Education's reading priority. The topic is also integral to Vermont's own state reading standards. The UVM team has set aside the "reading wars" to guide beginning teachers into a greater understanding of reading and literacy. The first phase trains beginning teachers to use a developmental reading assessment tool to determine whether a child reads competently at the late-second grade level, and if not, to suggest appropriate instructional interventions. Teachers administer the assessment individually by having students read and retell selected short books. Using uniform guidelines and procedures, they score students' oral reading for accuracy and retellings for comprehension. Proficiency levels are based on ranges of text difficulty at which a student can read accurately and demonstrate comprehension of the story.

The results are an assessment tool for implementation of state standards, and teacher training that develops the teacher's understanding of children's reading behaviors. The tool also develops the teacher's ability to identify important basic reading abilities such as phonological or phonemic awareness and understanding story structure elements. The Vermont study regards comprehension as the heart of reading without discounting the importance of phonemic awareness and phonological skills. It uses story retelling rather than comprehension questions. And it considers what is reasonable to expect of second-graders while still keeping standards high.

The second phase of the study identified six target schools with which to conduct research on best practices and "successful contexts" for high performance levels in early reading as determined by the Vermont Developmental Reading Assessment tool.

Preliminary data suggest that "successful contexts" share the following themes:

- Everybody in the school spends a great deal of time reading and discussing books.
- The quantity of books in the school and classrooms is extensive.
- Teachers read aloud to children often.
- Everybody appears to be working together toward a shared vision, or there is a focused staff with a common goal. There is a genuine respect for each other.
- High quality, expertise, and commitment to their work characterize the K-4 teachers. These teachers are knowledgeable and articulate.
- There has been a long-term commitment to literacy and literacy improvement (5+ years).
- There has been and continues to be extensive professional development.
- There is strong influence of an individual (administrator, librarian, individual teacher).
- There is a very lively *pace* of instruction; *time* is spent on instruction and practice (versus [illegible]gement, etc.)
- Block scheduling is used to dedicate adequate time to instruction and literacy.
- There have been external influences promoting (or even pressing for) development and improvement.

The following characteristics were *not* the same across schools and classrooms:

- Approach and methodology
- Experiential background of the students
- Resources available in the school
- District-level administrative support
- Class size, although all have relatively low class size
- Student-teacher ratio or use of para-educators

The design of this study accounts for community wealth or parental influences on student performance through "clustering" of schools with certain demographic characteristics in common. The research team found that schools did not perform by demographics; all could be analyzed by the same standard.

*UVM project team:
M. Lipson, J. Mosenthal, J. Mikkelsen, B. Russ, and S. Sortino.

Pediatricians Play Role In Encouraging Reading

(This article is excerpted from Scott J. Turner, "Pediatricians play key role in getting parents to read to their kids," originally published in Brown's George Street Journal *23.27 [May 7-26, 1999], pp. 1, 8.)*

It's a simple prescription: Take home a book, read to your children, enjoy. And it's powerful medicine, say three recent Brown University studies.

In the first study, pediatricians dispensed bilingual board books, handouts, and explained the benefits of reading to 65 low-income Hispanic families visiting for regular infant or toddler check-ups. A year later, the odds of parents reading to their children at least three days per week were 10 times greater in those families, compared to 70 similar families who received no literacy promotion from clinic physicians.

In a second study, low-income families who received board books and reading guidance during well-child clinic visits for their infant or toddler were much more likely one year later to report book sharing as one of their child's three favorite activities and as one of their three

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"Pediatricians . . .", continued
favorite things to do together, compared to counterparts who received no reading support from clinic pediatricians.

A third study underscores the dire need for low-income families to receive books and reading guidance. The study of 199 mostly low-income parents and their children, ages 1 to 5, enrolled in regular pediatric care found that half of the parents rarely read books or newspapers. Sixty percent of the children had fewer than 10 children's books at home. A quarter of the homes contained fewer than 10 books total. For these families, language was a significant issue, as 55 percent of those surveyed were immigrant parents. Dr. Pamela High, M.D., led the study, which appeared in the April issue of *Pediatrics*.

"The studies make the strongest statement to date for supporting the provision of children's books and literacy-promoting guidance as part of pediatric well-child care," said High, clinical associate professor of pediatrics in Brown's School of Medicine. Several pediatric-clinic-based reading initiatives exist nationwide to promote literacy, as reading failure unequally affects low-income children throughout their school years.

Library Cards For Infants — They're Never Too Young

In an effort to encourage "reading readiness" in young children, some public libraries are offering library cards to infants. The goal is to have parents read to their children from an early age so the tots will develop strong vocabularies and an interest in the written word well before they are old enough to read themselves.

At the Boston Public Library, parents receive a card, a book, and a list of suggested reading for their newborns. Another kit there offers a six-week lesson plan for day-care providers of young children, with instruction ideas that emphasize shapes, numbers, and colors. In nearby Pembroke, Massachusetts, a program brings toddlers and their parents into the town library for shared story-time and singing. The new programs are sparked by increasing evidence that pre-verbal and pre-literate children need ongoing and extensive exposure to language in order to begin learning to use it effectively.

Volunteer Reading Tutoring Programs Need Structure And Evaluation

For a study sponsored by the U.S. Office of Educational Research and Improvement, researcher Barbara Wasik reviewed 17 volunteer reading tutoring programs. Only three of the programs compared equivalent treatment and comparison groups to determine the effectiveness of the programs. Five had no evaluations. Wasik noted several important aspects of successful volunteer-based tutoring programs, including:

- A certified reading specialist to supervise tutors
- Ongoing training and feedback for tutors
- Structured tutoring sessions that contain certain basic elements (including sound-letter relationships and word analysis)
- Tutoring a minimum of 1.5 hours a week
- Quality materials
- Ongoing assessment of students
- Tutoring coordinated with classroom instruction (Wasik, 1998)

Although one-to-one tutoring is one of the most effective forms of instruction, considerably more research is needed to ensure that tutoring by volunteers will result in meaningful and cost-effective benefits to children.

Beyond Reading, To True Literacy

Literacy isn't just a children's issue. An estimated 90 million adults—about 47% of the U.S. population—performed at the two lowest levels of literacy in 1992 on a national survey of adult literacy. Literacy is defined as "using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential." (National Center for Education Statistics, 1992)

In *Illiteracy: Women Wear The Chains* (Levine, 1994), the author describes an elderly New York City woman who teetered on the brink of death for no apparent reason. After hours of questioning, hospital doctors handling her case determined that illiteracy spurred the crisis: for several weeks, she had ingested too much medication because she could not read the prescription label. She is not alone. Studies by the U.S. Department of Education's National Center for Education Statistics show that one in five adult Americans cannot read the instructions on a soup can. Another 34% cannot read and write well enough to address an envelope correctly.

According to a 1998 study in *World Education Report,* released by the United Nations Educational, Scientific, and Cultural Organization, almost one-quarter of the world's population—nearly 905 million people—cannot read (UNESCO, 1998). Women account for 65 percent of the globe's illiterate population. UN studies also show that education raises income, promotes health, and increases productivity, especially when the students are women. In Brazil, for example, uneducated mothers have an average of 6.5 children, as opposed to women with a secondary education who bear on average only 2.5 children.

Beyond needing literacy for our basic survival, our lives also require literacy for cultural enrichment and for gaining the knowledge needed to spark positive change. And, of course, adult literacy can influence children's reading experiences.

Bilingual Literacy Study And Video Available

A new publication available from the LAB addresses the particular challenges of literacy education for English language learners. *Enabling Academic Success for Secondary Students with Limited Formal Schooling: A Study of the Haitian Literacy Program at Hyde Park School* by Catherine E. Walsh offers a case study of the Haitian literacy program at a public high school in Boston, Massachusetts. The program teaches literacy and numeracy skills to high-school age students with limited formal schooling.

This publication includes a historical overview of Boston's literacy programs for students with limited formal schooling and provides background on the Haitian student population in Boston. It goes on to give a detailed description of the goals and instructional approach of the Hyde Park High School Haitian Literacy Program and discusses measures of student success within the program, in high school generally, and in higher education. Appendices contain literacy assessment tools used in the program. The publication costs $8 per copy; to order, visit the LAB's Web site: http://www.lab.brown.edu/public/pubs/pub_index.shtml.

An hour-long video captures the events of *First and Second Language Literacy: From Research to Practice,* a literacy teleconference hosted by Pacific Resources for Education and Learning (PREL). In the video, regional and national educators explore research-based effective practices for teaching reading to diverse student populations. Through video vignettes, viewers enter classrooms in which reading is taught in English as well as in heritage languages.

Viewers see classrooms from three Pacific island communities: Kosrae, where initial reading is taught in Kosraen; American Samoa, where English is the language of instruction and Samoan is used for support; and Hawai'i, where English speaking students are taught through immersion in Hawaiian. The video can help expand understanding of research-based strategies for teaching reading to English language learners. To order a copy of the video, send check, money order, or purchase order made payable to PREL for $19.95 per video. Mail payment to Pacific Resources for Education and Learning, Distribution Department, Ali'i Place, 25 th Floor, 1099 Alakea St., Honolulu, HI 96813.

Current Initiatives In Reading And Literacy

Here are just a few examples of initiatives underway to help make increased literacy a top priority:

Grants

The Reading Excellence Program, a $260 million Federal grant program, will competitively award grants to states to improve reading. The program is designed to provide children with the readiness skills and support they need to learn to read once they enter school; teach every child to read by the end of the third grade; and use research-based methods to improve the instructional practices of teachers and other instructional staff. For more information, visit the program's Web site at http://www.ed.gov/offices/OESE/REA/index.html

Assessment

The National Assessment of Educational Progress tracks student performance in reading through periodic large-scale tests. NAEP's 1998 report on student reading performance (summarized on pages 3 and 4) can be found at http://nces.ed.gov/nationsreportcard/pubs/main1998/1999500.shtml

Events

The US Department of Education's September 1998 "Reading Summit" was a key event whose homepage (http://www.ed.gov/inits/readingsummit/) provides links to many resources related to reading and literacy.

Information Resources

The National Research Council's "Preventing Reading Difficulties in Young Children" provides an overview of the current state of research on reading and literacy. Visit their Web site at http://www.nap.edu/readingroom/books/prdyc/ for more information.

The National Clearinghouse for ESL Literacy Education (NCLE) (http://www.cal.org/ncle) recently added a new feature to its Web page. "Worth a Visit" provides links to Web sites offering the latest information on adult ESL literacy and instruction (http://www.cal.org/ncle/links.htm).

Links are organized into the following categories, making it easy for visitors to find information:

- National, regional, and international organizations
- Online ESL publications
- Lesson plans
- Sites for teachers and students

On July 26, Secretary of Education Riley released two new booklets for raising student reading achievement. *Start Early, Finish Strong* looks at what families, early care providers, teachers and schools, community leaders, policymakers, and citizens can do to help every child become a reader. *The Compact for Reading* helps families and schools develop written agreements on how they can work to improve student reading. The 80-page compact provides 400 activities to link the family at home with the classroom curriculum. Both are available at the America Reads Challenge Web site: http://www.ed.gov/inits/americareads/

Also available from the US Department of Education and America Reads is "*So That Every Child Can Read: A Review of Effective and Promising Practices in Volunteer Reading Tutoring Programs.*" It includes chapters on determining effective and promising practices, building effective partnerships, and tutoring programs. Resources and bibliography are also included. The publication is free and can be ordered online via the Department of Education's Web site: http://www.ed.gov/pubs/edpubs.html.

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Reading Resources

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