



“It goes without saying that failure to learn to read places children’s futures and lives at risk for highly deleterious outcomes.

It is for these reasons that the NICHD [National Institute of Child Health and Human Development] considers reading failure a national public health problem.”

—Dr. G. Reid Lyon

*Before the House Committee on Education and the Workforce, Subcommittee on Education Reform, 2001*

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# The Voice of Evidence in Reading Research

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This booklet contains an abridged version of Chapter 11 (Critiques of the National Reading Panel Report) of *The Voice of Evidence in Reading Research* (Brookes, 2004) as well as background information on the National Reading Panel. In addition to the critiques and responses highlighted in this booklet, the book features an in-depth summary of the NRP critiques, plus information on the importance of scientifically based reading research, examinations of three types of reading research studies, and an introduction to critical additional findings on phonemic awareness, phonics, fluency, vocabulary, and comprehension.

## About the National Reading Panel

In 1997, the United States Congress answered an urgent call. After decades of unsatisfactory results in early childhood reading instruction, Congress called forth the creation of a panel to put educators and students on the right path to ending the mounting reading crisis. The panel was founded on three set principles.

### Have you already read the NRP Report?

Skip to the critiques and responses. [SKIP ►](#)

## Basic Premises of the NRP:

- Schools should try to improve children's reading abilities and close the achievement gap between rich and poor, black and white, and other social, cultural, and economical distinctions.
- Research could provide valuable direction toward improving achievement, and it was thus necessary to make an objective public determination of the scientific research evidence on reading.
- Research evidence had to be analyzed in a manner consistent with the highest standards for research synthesis to limit the influence of personal belief, self-interest, and other biasing factors.

McCardle, P., Chhabra, V. (2004) *The Voice of Evidence in Reading Research*. Baltimore: Paul H. Brookes Publishing Co.

At the request of Congress, the Director of the National Institute of Child Health and Human Development (NICHD) and the Secretary of Education selected individuals to serve on the panel. The result was a 14-member board consisting of prominent scientists, university professors, educational administrators, reading teachers, and parents.

## NRP Members:

### Donald Langenberg, Ph.D. (Chair)

Eminent physicist and Chancellor of the University System of Maryland since 1990. Highly respected nationally and internationally for his leadership capabilities, his ability to forge consensus on difficult issues, and his dedication to education at all levels.

### Gloria Correro, Ph.D.

Professor of Curriculum and Instruction and Associate Dean of Instruction, Mississippi State University. Highly respected educator and teacher educator credited with establishing kindergarten and early childhood programs in Mississippi, as well as the Mississippi Reading Assistant program.

### Linnea Ehri, Ph.D.

Distinguished Professor, Ph.D. Program in Educational Psychology, Graduate School and University Center of the City University of New York. Nationally and internationally recognized scientist for her research on early reading development and instruction.

### Gwenette Ferguson

Reading Teacher, North Forest Independent School District (Houston, Texas). Chair, English Language Arts Department; Kirby Middle School Teacher of the Year (1991). Received the Houston Area Alliance of Black School Educators Outstanding Educator Award.

### Norma Garza

Certified Public Accountant for Law Firm of Rodriguez, Colvin & Chaney, LLP. Founder and chair of the Brownsville Reads Task Force, located in Texas. Strong advocate for business community involvement in education. Received the Texas State Board "Heroes for Children" Award.

### Michael Kamil, Ph.D.

Professor of Psychological Studies in Education and Learning, Design, and Technology, School of Education, Stanford University. Chair, Stanford University Commission on Technology in Teaching and Learning Grants Committee; Chair, Technology Committee of the National Reading Conference (NRC).

### Cora Bagley Marrett, Ph.D.

Vice-Chancellor for Academic Affairs and Provost, University of Massachusetts-Amherst. As Assistant Director, National Science Foundation (1992-1996), was first person to lead the Directorate for Social, Behavioral, and Economic Sciences.

### S.J. Samuels, Ph.D.

Professor, Department of Educational Psychology, University of Minnesota. Received the Wm. S. Gray Citation of Merit from the International Reading Association and the Oscar O. Causey Award from the National Reading Conference for Distinguished Research in Reading.

### Timothy Shanahan, Ph.D.

Professor of Urban Education, Director of the Center for Literacy, and Coordinator of Graduate Programs in Reading, Writing, and Literacy at the University of Illinois at Chicago. Internationally recognized reading researcher with extensive experience with children in Head Start, children with special needs, and children in inner-city schools.

### Sally Shaywitz, Ph.D.

Professor of Pediatrics and Co-Director, Yale Center for the Study of Learning and Attention, Yale University School of Medicine. Neuroscientist nationally and internationally recognized for research contributions in reading development and reading disorders.

### Thomas Trabasso, Ph.D.

Irving B. Harris Professor, Department of Psychology, The University of Chicago. Cognitive scientist internationally recognized for investigations of comprehension during reading. Developed a connectionist model that simulates dynamic processing over the course of reading.

### Joanna Williams, Ph.D.

Professor of Psychology and Education, Columbia University. Internationally recognized scholar for research on linguistic, cognitive, and perceptual bases of reading development and disorders. Oscar S. Causey Award for Outstanding Contribution to Reading Research from the NRC.

Once established, the panel addressed its first matter of business: To narrow its focus in reading instruction to a select number of topics feasible for the panel to cover in a limited amount of time. After 6 months of deliberations, the panel pinpointed 8 reading instruction practices to pursue.

### Dale Willows, Ph.D.

Professor, Department of Human Development and Applied Psychology, Ontario Institute for Studies in Education, University of Toronto. Internationally recognized scholar in reading development and reading difficulties.

### Joanne Yatvin, Ph.D.

Principal, Cottrell and Bull Run Schools, Boring, Oregon. Forty-one years' experience as a classroom teacher and school administrator. Served as Chair of the Committee on Centers of Excellence for English and the Language Arts, National Council of Teachers of English.

National Reading Panel. (2001). *About the NRP – Panel Members Biographies*. Retrieved March 12, 2004 from <http://www.nationalreadingpanel.org/NRPAbout/Biographies.htm>.

## Instructional Practices Examined by the NRP:

- Comprehension
- Oral reading fluency
- Phonics
- Technology
- Encouraging children to read
- Phonemic awareness
- Teacher education
- Vocabulary

After the focus of the investigation was narrowed, the panel established strict guidelines for all studies to be measured against in order to determine their credibility and worthiness of inclusion in the NRP's report. The studies were first subjected to 3 criteria.

## Criteria for Studies Used in the NRP Report:

- Published in English in a refereed journal
- Focused on children's reading development in the age/grade range from preschool to grade 12
- Used an experimental or quasi-experimental design with a control group or a multiple-baseline method
- Studies that met all necessary criteria were further analyzed and coded to determine their eligibility in the NRP Report.

## Further Parameters of Studies Analyzed:

- Characteristics of study participants (age, demographics, cognitive, academic, and behavioral)
- Study interventions, described in sufficient detail to allow for replicability, including how long the interventions lasted and how long the effects lasted
- Study methods, with sufficient description to allow judgments about how instruction fidelity was insured
- Nature of the outcome measures and whether they were described fully

National Reading Panel. (2001). *About the NRP – Methodological Overview*. Retrieved March 12, 2004 from <http://www.nichd.nih.gov/publications/nrp/method.htm>

## Findings and Responses to the NRP Report (NICHD, 2000):

In April 2000, the NRP released its scientific based research in the form of two documents and a video. The *Teaching Children to Read* reports and videotape revealed that systematic phonics instruction in the early grades paves the way for better reading skills.

Although most people in the field of education support the NRP report, a number of outspoken critics have railed against the findings, particularly, the plan to implement phonics more heavily in reading instruction. Interestingly enough, many opponents of the NRP report have not challenged the findings. Instead, they have disparaged the panel members, the areas researched, and the use of quantitative data as the sole means of the investigation.

## Criticisms of the NRP Report

One of the things that *The Voice of Evidence in Reading Research* (Brookes Publishing, 2004) does is directly respond to critics of The National Reading Report (2000). In chapter 11 of the book, NRP member Timothy Shanahan, Ph.D., responds to general criticisms and specific critics. A portion of his responses related to each of the five criticisms Shanahan discusses is relayed in this section.

### Criticism 1: Some Important Reading Topics Have Been Neglected

#### Argument:

NRP panel member J. Yatvin writes in the *Minority View* section of the NRP report:

At its first meeting in the spring of 1998, the Panel quickly decided to examine research in three areas: alphabets, comprehension, and fluency, thereby excluding any inquiry into the fields of language and literature. After some debate, members agreed to expand their investigation to two other areas: computer-linked instruction and teacher preparation....

To have properly answered its charge, the Panel had to... [examine] the basic theoretical models of processes of learning that begin in infancy and continue through young adulthood.... The scientific basis for each of these models needed to be examined, then the effectiveness of the methods they have generated. The research on language development, pre-reading literacy knowledge, understanding of the conventions of print, and all the other experiences that prepare young children to learn to read also demanded the Panel's attention. And finally, the changing needs and strategies of adolescent readers called for a review of the existing research.

#### Response:

"Yatvin's factual claims about how the panel worked do not match the written record, nor does her understanding of the congressional charge match with those of the other panelists or apparently of Congress, which accepted the report," remarked Shanahan. Six months worth of debate, discussion, and public hearings ensued before the panel narrowed its focus from approximately 30 topics down to the final 8 topics. In its 2000 report, the NRP noted:

The panel did not consider these questions and the instructional questions that they represent to be the *only* topics of importance in learning to read. The Panel's silence on other topics should not be interpreted as indicating that other topics have no importance or that improvement in those areas would not lead to greater reading achievement.

In addition, Yatvin was encouraged by the panel to explore other areas of reading instruction not covered by the panel, but abandoned her research once she discovered that the data she examined did not offer the results she desired. Yatvin did not address the "missing issues" again until her minority report in which she criticized the panel's oversight of certain topics of reading instruction.

## Criticism 2: The Panel Was Too Narrow in Its Research Paradigm

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### Argument:

V. Purcell-Gates advocates for the use of qualitative research in *The Role of Qualitative and Ethnographic Research in Educational Policy* in a section of the Reading Online Web site (2000):

There is no doubt that experimental, and to some degree quasi-experimental, research is required to "prove" the effectiveness of an instructional approach, method, or intervention....While experimental and quasi-experimental studies are the gold standard for examining program impact, there are many critical issues facing education and educators that raise other types of questions.

### Response:

Qualitative experiments are helpful in deepening one's understanding of why a particular reading instruction might work, but they are not as useful in determining what works. Even if qualitative data

were imperative to discovering what works best in reading instruction, there is too little data on the selected topics to draw any concrete conclusions, especially when considering the repercussions an inaccurate report could have on the already troubled state of childhood and young adult literacy. Even some supporters of examining data in qualitative studies came to the conclusion after their own investigation that present qualitative studies were not suitable to be included in the NRP report.

J.F. Almasi et. al writes in the *Qualitative Research and the Report of the National Reading Panel: No Methodology Left Behind?* (2002):

Several of the qualitative studies reviewed were not rigorous....Many of the studies seemed exploratory in nature and occurred across such brief periods of time that prolonged engagement, persistent observation, and/or the triangulation of data sources were impossible.

## Criticism 3: The Panel Should Not Have Opposed Encouraging Children to Read

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### Argument:

T. Newkirk writes in "Reading and the Limits of Science" in *Education Week* (2002):

The reading report stunningly fails to find any solid evidence in support of independent reading, largely because it dismisses all correlational studies. Correlation, of course, does not demonstrate causation, but even fields like medicine and epidemiology regularly make use of it when experimentation is difficult (the effects of cigarette smoking, for example). If proficient readers typically read extensively on their own, as the research suggests, it would seem prudent, even scientific, to develop this habit in young readers.

## Response:

By its definition, correlational data demonstrates association but does not reveal which factor causes another. Therefore, correlational data cannot reveal whether strong readers read more than poor readers because they find reading easy or more reading leads to better reading.

When it comes to medical studies, researchers do use correlational evidence at times, but they do so with great sophistication.

Correlational evidence is never used in isolation. It is always supported with other forms of data to determine whether something works. In contrast, Newkirk proposed in his article that correlational studies be used as the sole determiner in revealing what does and does not work when it comes to encouraging children to read.

“Essentially, these critics are telling schools to accept the effectiveness of any and all incentive programs that pay children in some way to read more; any and all commercial programs that claim to encourage reading; and any and all free reading programs, book availability programs, and other reading encouragement approaches, including those that take the place of sound instruction from a professional teacher,” responds Shanahan. The ultimate goal is for *all* children to be reading more without sacrificing instructional time, especially for children having reading difficulties.

## Criticism 4: This Wasn't a Very Good Panel, It Did the Wrong Stuff, and Other People Are Going to Mess Things Up

### Argument:

E. Garan writes in *Resisting Reading Mandates: How to Triumph with the Truth* (Heinemann, 2002):

The scientific researchers on the National Reading Panel had vested interests in the outcome of the report both professionally and, unfortunately, financially. . . . While there are many connections between the researchers for the NRP report, McGraw-Hill Publishing, and the administration of George W. Bush, isn't it possible that the researchers are not [*sic*] guilty of deliberate misrepresentation to promote their own financial and professional interests?

### Response:

By law, panelists were not permitted to have financial interests in reading programs. Panelists were required to submit financial disclosure statements prior to being appointed to the panel to safeguard the credibility of the NRP's findings.

Some of the panelists might support President Bush, but such political preferences are irrelevant to the NRP report due to the fact that the panel was commissioned and carried out completely during President Clinton's term.

As for the other criticism concerning the panel's design and potential to misuse its findings, Shanahan goes on to warn in *The Voice of Evidence in Reading Research*:

There is no possible way that anyone who writes or speaks publicly can guarantee that his or her words will never be misappropriated, and there is no possible way that any scientist can guarantee that his or her results will never be misused. Furthermore, complaints about the misuse of the report, like the complaints about panel membership, say nothing about the value of the information in this report or its value to practice and policy.



## Criticism 5: The National Reading Panel Report Is a Fool's Errand

### Argument:

R.L. Allington writes in *Big Brother and the National Reading Curriculum: How Ideology Trumped Evidence* (Heinemann, 2002):

"I'll grant American schools could be improved, and that we could improve children's reading proficiency, but it seems to me that it's almost time for a national celebration of what we have accomplished up to this point"

Allington went on to declare his report that, "The notion of 'proven programs' is simply . . . wrongheaded," and that the "external expert intervention model to research how to teach reading is an enormously flawed approach."

### Response:

It is startling to hear that anyone would think a reading instruction system that continues to foster growing disparities between races and economic groups should be celebrated (Grigg, Daane, Jinn, & Campbell, 2003), never mind the fact that reading achievement in the United States has not increased since the 1970s.

As for the "external expert intervention model," Shanahan writes, "I am uncertain what he means...but apparently it includes studies in which teachers alter their typical instructional routines in order to see if children learn more than they would have otherwise."

Shanahan goes on to point out, "Various panels have endorsed the value of such approaches (Coalition of Evidence Based Policy, 2002; What Works Clearinghouse, 2002), and major reports on reading have embraced such methodologies by recommending instructional approaches based upon them (Snow et al., 1998), as have independent scholars (including, interestingly enough, Richard Allington, 2001).

**Reading Instruction Today:** Despite the direction the NRP Report provides educators, the implementation of the findings remains stilted in public education. Many educators are either not fully trained or resistant to put the scientifically based research to use in the classroom. Robert W. Sweet, Jr. writes in *The Voice of Evidence in Reading Research* (2004):

Research on reading instruction, perhaps more than any other area of education, is ready for application in the classroom. To do that will require that many deeply held beliefs be set aside in favor of what the evidence has proven beyond a reasonable doubt. It will require schools of education to convey to prospective teachers the valuable knowledge that has been accumulated in reading research and make it practical for classroom instruction. It will require that professional organizations give more than lip service to the findings of research and find ways to educate teachers already in the classroom to the value of research-based practices. It will demand that publishers revise the textbooks they present to school districts and state textbook adoption committees to make certain that reading instruction is consistent with a comprehensive approach and not based on false assumptions. It will require policy makers at local, state, and federal levels to require accountability for results, not just for process.

# The Voice of Evidence in Reading Research

“We wanted to make research information on reading more accessible to educators—not just the research findings, although these are crucially important because teachers are being asked to implement them, but also how research is done, and why different methods are used to address different kinds of questions.”

—Peggy McCardle, Ph.D., M.P.H.,  
Co-editor of *The Voice of Evidence in Reading Research*

## About the Book:

As education professionals work to incorporate scientific, evidence-based practices into reading instruction, one thing is clear: sound decisions depend on a solid understanding of what the research says. This book brings together all the information readers need in a single volume. A masterful synthesis of information from leading experts in the field, this accessible resource helps school administrators, educators, and specialists answer complex questions about scientifically based reading research and make informed choices about teaching practices. Readers will:

- learn how to read research literature, judge its value, apply it to practice, and recognize common myths about scientific research
- review the essential findings of the National Reading Panel report on Teaching Children to Read and examine up-to-the-minute research information about phonics and phonemic awareness, fluency, vocabulary, and comprehension
- find research-based explorations of practical classroom issues, such as preparing teachers to implement research findings, keeping students motivated, and helping students with reading disabilities
- learn about current brain research and neuroimaging and its influence on reading
- discover how reading research informs educational policy and get reliable information on current legislation

Required reading for all professionals whose work deals with reading instruction, this book gives readers the clear, detailed information they need about one of today's most critical topics in early education.

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## About the Editors:

**Peggy McCardle, Ph.D., M.P.H.**, is Associate Chief, Child Development and Behavior Branch, Center for Research for Mothers and Children, at the National Institute for Child Health and Human Development (NICHD). Dr. McCardle holds a bachelor's degree in French, a Ph.D. in linguistics, and a master's degree in public health (MPH). Early in her career, Dr. McCardle was an elementary classroom teacher. She has held both university faculty positions and hospital-based clinical positions, and has published articles addressing various aspects of public health and developmental psycholinguistics (language development, bilingualism and reading) . At the NIH she has served as a scientific review administrator and as a senior advisor to the Deputy Director for Extramural Research in the Office of the NIH Director, before joining the NICHD. In 1999, she joined the NICHD where, in addition to her duties as Associate Chief, she serves as Director of the branch's research program in Language, Bilingual and Biliteracy Development and Disorders; Adult, Adolescent and Family Literacy, which includes three interagency-funded research networks: the Biliteracy Research Network (Development of English Literacy in Spanish Speaking Children); the Adult Literacy Research Network; and the new Adolescent Literacy Research Network. She also serves as the NICHD liaison to the National Reading Panel and the Partnership for Reading, is on the steering committee of the National Literacy Panel for Language Minority Children and Youth, and leads or serves on various interagency working groups. Peggy McCardle lives in Maryland with her husband, is an avid gardener, and also writes outside of her life as a scientist administrator. With her close friend and coauthor, Brian Hartford, she has coauthored two books (*Change of Heart*, a nonfiction narrative life-story, and *Echo1 Five! Hotel!*, a fictionalized account of Brian's Viet Nam experiences). Most recently, a volume of her poetry, *Songs of My Spirit*, was published.

**Vinita Chhabra, M.Ed.**, is a Research Scientist with the National Reading Panel (NRP) and the Child Development and Behavior Branch, Center for Research for Mothers and Children, at the National Institute of Child Health and Human Development (NICHD). Ms. Chhabra has a bachelor's degree in business and management science and a master's degree in educational psychology. She also has a background in special education with an emphasis in reading disabilities. She has worked in the public school system, completing cognitive and educational assessments and recommending children for special education programs. She also has worked as an evaluator at the NICHD-Yale Center for the Study of Learning and Attention, conducting assessments of children with possible reading disabilities and attention-deficit/hyperactivity disorder and evaluating reading research data at the Yale University Department of Pediatrics. She has worked with the NRP since its inception and was responsible for researching and conducting searches of literature in reading for the NRP and coordinating and editing reading research materials for the Panel report. She is heading the dissemination activities for the NRP and works as a liaison to joint educational activities with the National Institute for Literacy and the U.S. Department of Education. In addition, Ms. Chhabra assists the NICHD's Child Development and Behavior Branch in adolescent and family literacy activities, with a focus in motivation in reading and literacy. Ms. Chhabra began working at NICHD in 1995 in a summer internship program with Dr. Reid Lyon. From that point on, she has been intrigued with the field of reading research and Dr. Lyon inspired her to continue her studies in psychology and reading. She has co-authored articles dealing with reading disabilities and is completing her doctorate in educational psychology at the University of Virginia. In her free time, Ms. Chhabra enjoys hiking and gardening. As the wife of a Marine Corps officer, she manages a volunteer spouse support and family readiness network for Marine Corps Families. Ms. Chhabra and her husband live in Falls Church, Virginia, and are expecting their first child this summer.

## Praise for *The Voice of Evidence in Reading Research*:

**"Outstanding and just what the field needs. It should be required reading in every School of Education."**

—Benita Blachman, *Trustee Professor of Education and Psychology, Syracuse University*

**"This comprehensive resource compels all of us...to understand the critical role research and evidence play in determining what works in improving reading instruction and student achievement in reading. Armed with evidence of what works and with research-based reading programs and instructional strategies, knowledgeable and skilled educators and administrators will meet the goal of every child reading well by the end of third grade."**

—Sandra Feldman, *President, American Federation of Teachers*

**"An extraordinary collection [by] the finest educational and neurological researchers...This book will surely become required reading for any and all who claim to care about the quality of reading instruction in America."**

—J. Thomas Viall, *Executive Director, The International Dyslexia Association*

**"There has been more heat than light in debates on the teaching of reading. This book presents a wide-ranging, authoritative and accessible overview of recent research evidence. It will be welcomed by researchers and teachers."**

—Tony Cline, *Professor of Educational Psychology, University of Luton, England*

**"A cornucopia of accessible information** to anyone concerned with the learning of reading...Should be **mandatory reading** for those still unpersuaded of the relevance of valid evidence-based instructional practices in the teaching of reading, or any other subject, at any level of education."

—Dr. Donald Langenberg, Ph.D., *Chairman, National Reading Panel; Chancellor Emeritus, University System of Maryland*

"This text provides a broad review of reading research, focusing primarily on the K-12 grade range and drawing heavily on NICHD-funded studies and reviews. It also **provides a framework for understanding the importance, methods, and interpretation of scientific research.** It is recommended to anyone who wants to probe deeply into the **knowledge base for guiding classroom practice."**

—Richard L. Venezky, *Professor, University of Delaware*

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