

# BEGINNING TO READ

## Thinking and Learning about Print

by

Marilyn Jager Adams

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An Introduction and Brief Summary

Compiled by Charles Arthur

In 1987 the Center for the Study of Reading at the University of Illinois was awarded a legislated commission to prepare a comprehensive report that would review all aspects of phonics and early reading instruction in a straightforward, evenhanded way. The commission was granted by the U. S. Department of Education's Reading Research and Education Center. The directors of the Center for the Study of Reading appointed Marilyn Adams, a cognitive and developmental psychologist to prepare the report. *Beginning to Read* is the published edition of this report.

The Center for the Study of Reading has produced such publications as *Schooling and the Acquisition of Knowledge*, *Theoretical Issues in Reading Comprehension*, and *Becoming a Nation of Readers*, plus more than 500 reports focused on issues of basic processes and instructional practices in reading comprehension.

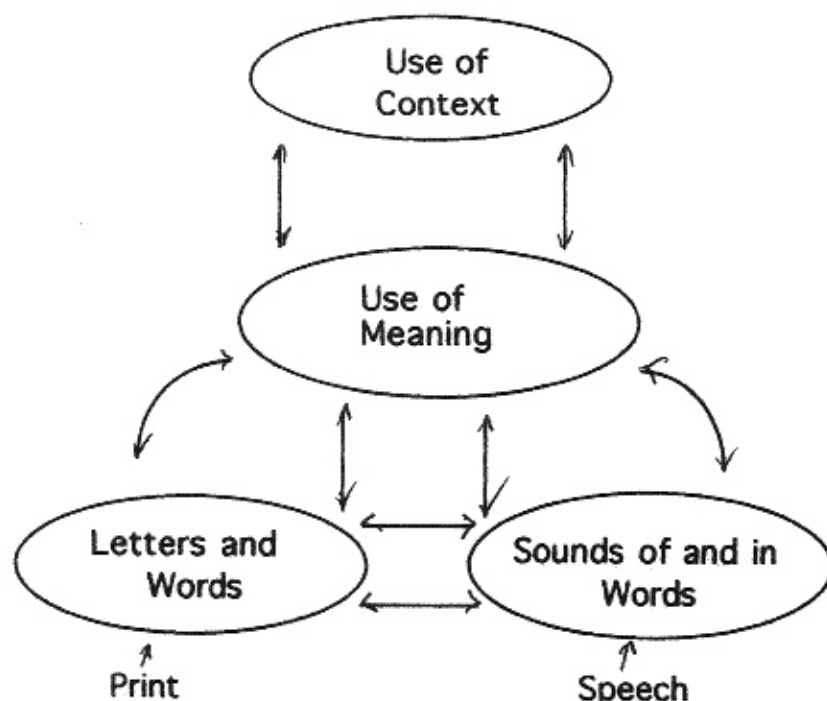
Marilyn Adams is a research specialist at Bolt Beranek and Newman Inc., a private think-tank in Cambridge, Massachusetts, that the Center for the Study of Reading has used to subcontract special projects. She is an expert on reviewing research on many subjects and had no previous position on the teaching of reading. She had done some research on word recognition, cognitive development of thinking skills and language comprehension, but had basically not come from a reading tradition. Her job as a Senior Scientist was to analyze studies and examine many points of view on various issues. In this report on beginning reading, she claims to attempt to meet the challenge of the commission by answering the questions: Is phonics a worthwhile component of reading instruction, and if so, why? Also, if this is the case, how might phonics be most effectively realized? Her studies took over a year and a half to complete and included the analysis of over 600 references. They covered such topics as:

- the history of the English alphabet,
- the controversies surrounding phonics instruction,
- issues and research in early reading instruction,
- basic perceptual and reading processes,
- the processes involved in identifying sounds, letters, words, and meaning, and
- the processes involved in learning to read.

This book reflects the recently completed research on phonemic awareness ( the ability to identify individual sounds within words from oral language) and invented spelling. It also interprets research on visual and auditory perception relevant to basic processes for word recognition within the context of the theoretical works of Rumelhart and McClelland on parallel distributed processing.

Some of Adams' conclusions make it possible to integrate many of the major concerns of both a "whole language" and a systematic phonics approach to teaching reading. She underscores the automatic nature of print perception in skillful readers while contrasting it with the attentive thought required for conceptual learning and understanding. She emphasizes the interdependence of meaning appreciation and orthographic facility in both fluent reading and its acquisition. The importance of preschool language and literacy experiences are stressed and descriptions of those that will best prepare children for reading instruction are given. Adams acknowledges that many students infer the entire symbol-sound system from vast exposure to print. Yet, for the vast majority, she insists on the value of teaching the symbol-sound system explicitly and early. She also recommends that phonemic awareness training be an important part of this instruction.

To stress the integration of the several kinds of skills simultaneously used in recognizing words in print, Adams draws on the work of Rumelhart and McClelland and presents a model of four processes. With some translation of terms, the model is shown below.



Wesley Becker (1990) has stated that a major theme of the book appears to be, "Why the dispute between phonics and whole language?" From Adams' review of the

research and literature, it would appear that "Whole Language people" often see phonics as a necessary "support" skill, and the "Phonics people" do not ignore the importance of reading comprehension skills. The raging controversy must be more a point of emphasis and instructional process than one of exclusion of the other view. Each contains essential interdependent skills. The major issue, therefore, is in finding the most effective teaching methods for all students.

Becker continues to comment that good programs must be designed that recognize and teach the many skills that are necessary in the whole reading process. Learning the phonetic principles of printed letters and words provides a link that helps tie together oral language with written language. For several reasons, phonic decoding is seen as a very essential preskill to reading comprehension. For comprehension to come into full play in reading activities, it is very essential that decoding skills become so well-practiced that they become automatic. Attention can then be fully devoted to comprehension activities.

An important part of this book is the report on how skillful readers read. Several questions asked about skillful readers were:

- Do skillful readers recognize words as a whole, relying on their overall patterns or shapes, rather than on close analysis of their spellings?
- Do skillful readers get the meaning of a word directly from its sight?
- Do skillful readers use context to anticipate upcoming words to reduce visual detail they need?
- Do skillful readers use context to anticipate meanings so that comprehension consists of confirming meaning?

Many of the answers to these questions came from detailed laboratory studies on eye movements made possible by computerized eye-tracking instruments. The conclusions about what skillful readers do are as follows.

#### SKILLFUL READERS:

- DO process every letter of every word.
- DO process every word of every sentence.
- DO automatically sound words out.
- DO go directly and automatically from spelling to meaning.
- DO perceive familiar words and spelling patterns holistically.
- DO automatically syllabify words.
- DO automatically analyze the syntactic structure of sentences as they read them.
- DO automatically register the syntactic function of words as they are read.
- MUST accomplish each of these activities quickly and effortlessly.

Developing these intricate word recognition skills are among the goals of reading instruction. For many people, bringing this processes to a level of automaticity is

very difficult. Although many students learn the necessary phonic skills that aide in the process of fluent word recognition on their own, most need the skills clearly pointed out for them and practiced extensively and effectively before they can become fluent and capable readers. There appears to be no easy short-cuts around this reality. The instructional practices used to clearly and effectively present and develop these skills in the context of increased meaningful reading are critical. Adams documents the difficulty in achieving an effective balance between teaching these skills and teaching the ultimate purpose of reading. Fortunately, there are very promising methods and materials that can make this difficult process successful.

In a smaller companion booklet, published by the Center for the Study of Reading and written by Steven Stahl, Jean Osborn and Fran Lehr, a list of the conclusions found in Adams' book are succinctly summarized. The following list of conclusions are quoted from this book.

### LIST OF CONCLUSIONS

#### Predictors of Reading Acquisition

- Performance on perceptual tests that do not involve linguistic skills or facility with print does not appear to relate to reading success.
- Letter recognition skills are strong predictors of reading success. It is not simply the accuracy with which children can name letters that gives them an advantage in learning to read, it is their basic familiarity with the letters - though this is typically reflected in the ease with which they can name them.
- Awareness that spoken language is composed of phonemes is an extremely important predictor of success in learning to read.
- Children's general awareness of the nature and functions of print is a strong index of their readiness to learn to read.

#### Before Formal Instruction Begins

- The single most important activity for building the knowledge and skills eventually required for reading appears to be reading aloud to children regularly and interactively.
- Children learn a great deal about both the nature and function of print through thoughtful interactions with adults.
- Language experience activities and the use of big books are excellent means of establishing print awareness (although they are less useful as primary vehicles for reading instruction itself).
- Children recognize a variety of environmental print that they encounter day to day, but environment print does not seem to contribute to reading success unless a child has first begun to learn about the individual letters.



- Learning to recognize and discriminate the shapes of letters is a difficult process requiring support and encouragement. Ideally, letter knowledge should be well established before children reach first grade.
- Among preschool children in the United States who learn about letters at home, it is typically the names of the letters that are learned first, often through the alphabet song. Learning about their shapes comes later, and their sounds, later still.
- Some children have difficulty conceiving of spoken language as consisting of individual words. The concept of "word" can be developed easily, though, through exposure to written text or through direct instruction. Children should also be helped to appreciate the relationship between the lengths of spoken and written words.
- Activities designed to develop young children's awareness of words, syllables, and phonemes significantly increase their later success in learning to read and write. The impact of phonemic training on reading acquisition is especially strong when phonemes are taught together with the letters by which they are represented.
- Early encouragement of printing is both a way of developing letter recognition skills and of enabling children to write independently.

### Beginning to Read

- Approaches in which systematic code instruction is included along with the reading of meaningful connected text result in superior reading achievement overall, for both low-readiness and better prepared students.
- Programs for all children, good and poor readers alike, should strive to maintain an appropriate balance between phonics activities and the reading and appreciation of informative and engaging texts.
- Matching children to different instructional programs based on dominant perceptual modality or styles does not appear to improve the efficacy of instruction.
- Writing and spelling activities, in general, are a means of developing and reinforcing knowledge of spelling and spelling-sound patterns.
- Independent writing activities are a means of developing children's deeper appreciation of the nature of text and its comprehension.
- The texts that children read influence the reading abilities they develop. Texts that contain a higher proportion of decodable words promote independent word recognition growth. As reflected by their writing, children also absorb the syntax, vocabulary, and conceptual structures of the texts they read.

### Phonics Instruction

- Phonics instruction is not only a means of teaching children to sound words out, but also of directing their attention to the spelling of words.
- To maximize word recognition growth, the wording of children's early texts should be carefully coordinated with the content and schedule of phonics lessons.

- The ability to recognize letters is extremely important to the development of word recognition.
- For children with little letter knowledge on entry to school, current learning theory suggests it is unwise to try to teach both upper case and lower case forms of all twenty-six letters at once. For children who do not know letter names on school entry, special care should be taken to avoid confusion of names and sounds.
- Classroom encouragement of invented spellings is a promising approach toward the development of phonemic awareness and knowledge of spelling patterns.
- The learning of regular spelling patterns and their phonic significance may be hastened through methodical use of onsets and rimes.
- Because most phonemes cannot be pronounced without a vowel, many programs avoid or limit the use of isolated phonemes in their instruction. This practice often leads to potentially confusing instruction. The advantages of asking students to articulate phonemes in isolation outweigh the disadvantages.
- Because children have special difficulty analyzing the phonemic structure of words, reading program should include explicit instruction in blending.
- Reliance on special terminology may subvert the purpose of the lessons in which it occurs.
- Although rules and generalizations cannot substitute for direct practice with the words to which they pertain, they may be useful for either directing student's attention to a particular spelling pattern, or providing strategies for coping with difficult decoding patterns.
- Phonic rules and generalization are, at best, of temporary value. Once a child has learned to read the spellings to which they pertain, they are superfluous.

### Beyond the Basics

- Children should be given as much opportunity and encouragement as possible to practice their reading. Beyond the basics, children's reading facility, as well as their vocabulary and conceptual growth, depends strongly on the amount of text they read.
- Reading comprehension depends on the ability to perceive words relatively quickly and effortlessly.
- Reading comprehension also depends on the conviction that text is meant to be understood and thought about.
- To maximize achievement, children should be given texts that they can read orally with 90% to 95% accuracy.
- Given that a text is at an appropriate level of difficulty, it is preferable that children be encouraged not to skip words that are difficult for them. Instead, they should be encouraged to take the time to study a word, and then reread the entire sentence or phrase in which it appears.
- Repeated readings of text are found to produce marked improvement in children's word recognition, fluency, and comprehension.
- Encouraging children to learn to spell words correctly is important because spelling knowledge directly affects their reading ability.

**BEGINNING TO READ**  
**Thinking and Learning about Print**  
**Marilyn Jager Adams**

A Synopsis by Charles Arthur

Repeatedly, throughout this book, Adams' states that skillful reading depends on the ability to rapidly, effortlessly, and automatically recognize words. If a reader is able to do this, he or she can then give adequate energy and attention to comprehension - learning and developing a wide variety of comprehension skills. She strongly argues that this ability to fluently recognize words ultimately pivots on deep and thorough over learning of letters, of spelling patterns, and of spelling-sound correspondences, i.e., knowledge of the alphabetic code. Adams states:

"The purpose of writing is to record or convey meaning. The purpose of reading is to reconstruct and consider that meaning. Given an alphabetic script, the purpose of over learning the spelling patterns and their phonological translations is to enable reading in its fullest sense: it is to enable the written word to flow quickly and effortlessly from print to meaning so that the reader's active, thoughtful attention can be devoted to the task of comprehension. The purpose of phonic instruction is to guide and expedite such learning."

Giving word recognition and its supporting graphophonic decoding skills this amount of importance is based on research evidence from a number of areas: program comparisons, research on prereader skills, knowledge about the performance of skilled readers, and theory on the nature of learning. The accumulated evidence from these four sources supports the idea that programs designed to explicitly teach a thorough knowledge of the alphabetic code produce better readers than those that do not. Yet, too many children still do not learn to read as well as they should. One of the goals of this book is to find ways to improve all reading instruction.

In spite of the research in favor of programs that emphasize decoding skills, in practice, many of these programs are often not as effective as the research indicates they ought to be. In fact, the basic argument against phonic programs has always been that they are often boring, ineffective, inefficient, and too much removed and abstracted from the real task of reading. The practical problems of curriculum programming and teacher execution remains an issue.

There are many difficulties in emphasizing phonics. Learning the many small connections of print with spoken language is very difficult for many children. Ways and means of making these learnings occur more easily and successfully are needed. Finding the best practical ways of teaching the technical details of written language and how it connects to spoken language while at the same time teaching the real purpose of reading has not been easy. Part of the issue is how best to couch phonic instruction, how to build on it, from it, and around it in ways that best ensure the ease and productivity of its acquisition. The issue also is how to make instruction on word recognition skills a self-engendering, motivating, and meaningful experience for the students and a manageable one for their teachers.