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The Reading Process: Cognitive and Psycholinguistic Perspectives

John Downing and Che Kan Leong
Psychology of Reading
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Review by
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As noted by Downing and Leong in their preface, the time is certainly ripe for a textbook on reading that integrates research from several disparate fields. A worldwide concern for literacy combined

with the growing recognition by psychologists and linguists of how language may reflect the workings of the mind have helped bring about a surge of interest in the topic. The present volume successfully draws on findings from developmental and cognitive psychology, linguistics, neurophysiology, and education to provide advanced students of educational psychology a comprehensive textbook on reading.

The authors' analysis of reading is cast within a framework that consistently guides the course of the text. This framework is described by the authors at the outset as a cognitive and psycholinguistic approach toward understanding the acquisition of literacy as a complex skill. Given this, the primary focus is on reading from the perspective of larger issues that guide the different fields. Pedagogical considerations are often discussed, but this is not a "how to" text on reading instruction. Rather, the concern is with the *process* of reading.

Contributions from different fields

Opening chapters on skill acquisition and later chapters dealing with affective and environmental factors influencing reading represent the major pedagogical discussions. The discussion of skill acquisition first outlines the authors' consideration of reading as a skilled task and then describes principles of learning that are relevant to skill acquisition. This discussion provides, perhaps, the most clear-cut set of guidelines in the book for actual classroom application. The chapters on affective and environmental influences focus on these factors as they contribute to reading success (or failure). Included in the discussions are attentional and motivational factors of the task, bilingualism, parental and cultural attitudes toward reading, and teacher variables.

Educators may be somewhat surprised to find that the book presents no overview of instructional techniques. There is no lengthy discussion of the topic of "phonics" versus "look-say" approaches to reading. Rather, aspects of this topic are presented throughout the text as they fit in with various other topics. Thus, for example, in the discussion of skill acquisition, the topic of reading instruction is mentioned in relation to the question of part versus whole learning. It is mentioned again in the discussion of factors in the school environment that influence reading acquisition. These discussions are brief. Both the phonics and the look-say

approaches are presented, and no ready answer is offered to the reader. Rather, the reader needs to form his or her own impression based on the analysis of the reading process presented throughout the text.

Contributions from the field of linguistics are discussed in chapters on the orthography and on language awareness. An interesting chapter on historical and cross-cultural perspectives on the orthography is followed by a discussion of how the English orthography relates to a phonemic representation of the language. The conclusion that the orthography does not fully capture a phonemic representation prompts a discussion of various linguistically based descriptions of the orthography. The chapter on language awareness is a somewhat scattered collection of topics pertaining to syntactic theory and metalinguistic awareness. In the discussion of syntax, different grammatical descriptions are presented. The discussion of metalinguistic awareness is concerned with what a child needs to "know" about language to become a successful reader. The authors offer relatively lengthy evaluations of the various linguistic opinions on this matter. Unfortunately, these evaluations are often more distracting than helpful.

Biological foundations of reading are presented next. The summaries are concise and informative, with a focus on neurological substrates of language. Mechanisms of hearing and seeing are reviewed. Included in the discussion of hearing is information about speech and speech perception as well as a brief introduction to how speech and language disorders may affect reading acquisition. At the heart of the discussion of vision is the question of how visual deficits may affect reading acquisition, with the discussion pointing to the conclusion that visual deficits per se play a much less important role in reading disability than might at first be thought. This sets the stage for cognitive and linguistic factors, which in subsequent chapters are given primary emphasis as determiners of reading success.

Two chapters are devoted to discussions of cognitive aspects of reading, with the first focusing on word perception and the second focusing on text comprehension. Most of the research in these areas has been done with adults, and the content of these two chapters reflects that fact.

The review of word perception follows a somewhat perplexing course. After a

discussion of the terms *coding* and *internal lexicon*, the authors set out to examine the literature on the involvement of phonological and visual codes in lexical access. The discussion, however, often strays from research on lexical access. At the conclusion of the review, we are suddenly informed that "The central problem in the study of lexical access is not whether or not speech recoding does or does not occur. The essential problem is rather to determine the conditions under which visual or phonological coding occurs and to localize the subsystems under which speech recoding may occur and from what cause" (p. 170). This restatement of the problem provides a cohesive framework for the study of phonological coding, and from here on the chapter is better structured. One cannot help but wish that this formulation of the issue had been made at the outset. The latter part of the chapter also deals with visual and dual access to the lexicon.

The treatment of text comprehension covers a diversity of topics including distinctive features in letter recognition, differences in listening and reading comprehension, schema, and propositional representation of meaning in text comprehension. Interactive processes and automaticity in reading are the major themes to emerge from this chapter. These themes recur in the final two chapters, which deal with children who have difficulty in reading acquisition. In both, the focus is on reading as a linguistic task, with reading problems reflecting problems in verbal processing. One of the great strengths of the book is that these final two chapters successfully incorporate information from each of the previous chapters, providing a happy synthesis of the material.

Comments

The book, appropriate for students at the graduate level, provides a thorough account of the reading process, successfully integrating many diverse topics and viewpoints. The diversity and depth of the topics covered make it an informative reference work. The authors' conceptual framework serves to tie together the large body of data presented in the book. Perhaps more important, this framework could usefully serve to guide students' thinking about reading and reading instruction in the future.

For the most part, the book provides a lucid review of relevant literature. The authors are particularly adept at providing understandable definitions of tech-

nical terms. Research findings are often evaluated not only from methodological perspectives but also, as the authors often admit, from their particular biases that derive from their framework. Extensive references and discussions directing the reader to important articles on related topics add to its value.

The authors directed the book to students of educational psychology. Therefore, it is primarily these students, rather than students of cognitive psychology or linguistics, who will find this book of interest. An apparent problem for classroom use, however, is the readability of the text. Although interesting information is presented throughout, the writing style is often dry. There are numerous quotations of works throughout the text that often seem to detract from the smooth flow of information that a well-written summary might provide. As a result, only the more interested or determined students may discover the value of the book. ■