Literate Thought

Understanding Comprehension and Literacy

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Production Credits
Publisher: David D. Cella
Associate Editor: Maro Gartside
Editorial Assistant: Teresa Reilly
Senior Production Editor: Renée Sekerak
Production Assistant: Sean Coombs
Marketing Manager: Grace Richards
Manufacturing and Inventory Control Supervisor: Amy Bacus
Cover Design: Kristin E. Parker
Cover Image: Book © Arosoft/Dreamstime.com; Brain © Linda Bucklin/Dreamstime.com; Keyboard © Janaka Dharmasena/Dreamstime.com; Screen © Seesea/Dreamstime.com; Sound © Vladimirdreams/Dreamstime.com
Composition: DataStream Content Solutions, LLC
Printing and Binding: Malloy, Inc.
Cover Printing: Malloy, Inc.

Library of Congress Cataloging-in-Publication Data
Paul, Peter V.
Literate thought : understanding comprehension and literacy / Peter V. Paul, Ye Wang.
p. ; cm.
Includes bibliographical references and index.
ISBN-13: 978-0-7637-7852-1 (casebound)
ISBN-10: 0-7637-7852-4 (casebound)
1. Comprehension 2. Developmentally disabled children. 3. Special education. I. Wang, Ye, 1977- II. Title.
[DNLM: 1. Comprehension. 2. Child. 3. Developmental Disabilities. 4. Education, Special. 5. Language Disorders. 6. Learning Disorders. 7. Reading. BF 325]
BF325.P38 2012
153.4—dc22

2010053635

6048

Printed in the United States of America
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

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Preface

> *But any true understanding of Einstein's imagination and intuition will not come from poking around at his patterns of glia and grooves. The relevant question was how his mind worked, not his brain.*
>
> *The explanation that Einstein himself most often gave for his mental accomplishments was his curiosity. As he put it near the end of his life, "I have no special talents, I am only passionately curious."*
>
> Isaacson, 2007, p. 548

Thus far, understanding how the *mind* works has eluded scholars and philosophers, despite their passionate endeavors and rigorous methods. Part of the difficulty is that we cannot actually observe the workings of the mind. We cannot see the *imagination*, *intuition*, or *curiosity* of the individual. As implied by the above passage, examining the structures and actions of the brain may not reveal much about the intricate processes that take place in the mind.

Social forces—that is, events, structures, and practices that occur *outside-the-head*—certainly contribute to mental development; nevertheless, thinking is a mental activity. Thinking is a process that culminates in products such as thoughts, art, mathematics, and written language. These products do provide some insights into the nature of thinking—but not necessarily the entire picture.

Although adopting a completely *internalist* position is not tenable, our goal is still to describe what is going on *inside-the-head* when individuals engage in science, mathematics, reading, and, in our case, the development of literate thought. As such, literate thought may be a metaphor for cognition; however, we have just begun the journey, especially with this book, of exploring the possible processes and components associated with this metaphor.

The journey begins with an introduction in Chapter 1 of the multifaceted concept of literate thought, defined as the ability to think creatively, logically, rationally, and reflectively. We explore the influence of writing on the use of oral (through-the-air) language and as an external aid in the development of thought. We also attempt to clarify the nature of the demands and constraints associated with the use of orality or the oral tradition for an internal representation of reality. More important, it is suggested that other external forms of captured information might be equivalent to or can provide similar benefits as does writing. In the rest of the chapter, we connect literate thought to other diverse domains such as the New and Multiple Literacies, cognitive or disciplinary models, and critico-creative thinking skills.

Chapter 2 explores the notion of comprehension and relates it to the development of literate thought, particularly with respect to the different types of literacy. We argue that additional research is needed on non-print forms of captured information and the manner in which these forms are affected by skills associated with general listening or language comprehension. A portion of the chapter is devoted to delineating a few major processes and components of literate thought. Although it is admitted that literate thought is not an inside-the-head entity only, we maintain that social practices or environmental enrichment activities will not contribute much to its development (or any other cognitive activity) if individuals do not possess the ability to access and interpret these realms of experiences.

Chapter 3 provides insights into the *brave new world* of the New and Multiple Literacies and the impact on our understanding of literate thought and knowledge. The word *literacy* now means more than the ability to read and write given the multitude of terms that have emerged in recent years. Nevertheless, we emphasize a recurring theme—namely that *literacy* should be defined broadly as a form of captured information. We assert that a few print literacy skills are required in certain New and Multiple Literacies activities whereas other New and Multiple Literacies activities do not involve any basic print literacy skills. The chapter concludes with the effects of the New and Multiple Literacies on children with disabilities and those who have traditional language/literacy problems such as English Language Learners (ELLs).

In Chapters 4 and 5, we complete our discussion of the multifaceted concept of literate thought. The focus of Chapter 4 is on the nature of two broad themes and their interactions: cognitive models and discipline

structures. After providing a brief introduction to models, structures, processes, and products, we discuss the contributions of cognitive psychology to the acquisition of discipline knowledge in three areas: literacy, mathematics, and science. We emphasize what it means to operate like a literacy expert or to think like a mathematician or scientist. In fact, we are convinced of the need for a better understanding of the structures of the disciplines and the capabilities of individuals to acquire and develop their knowledge in a specific discipline.

The murky, but interesting, world of critico-creative thinking is examined in Chapter 5. The term *critico-creative* combines the concepts of critical thinking and that of creative thinking. There should be a few surprises in this chapter when readers grapple with the various problems and challenges associated with generalizability and evaluation. Regardless of whether one believes in general aspects (i.e., generalizations across domains or subjects) or in specific, disciplinary or domain aspects, we maintain that the underlying values and attitudes associated with critico-creative thinking remain constant across content areas or subjects. Finally, the chapter provides a few examples of instructional exercises ranging from simple to complex. These activities can be developed to be used in through-the-air and captured modes.

Chapters 6 to 8 provide highlights on the challenges of developing literate language in various groups of children with disabilities. The types of disabilities we cover include children with language and/or learning disabilities (Chapter 6), children with sensory disabilities such as visual and hearing impairments (Chapter 7), and children with cognitive and developmental disabilities, including mental retardation and autism (Chapter 8). In each chapter, it is important to describe the characteristics of the population, especially those associated with various subgroups.

A considerable portion of each chapter (6 to 8) is devoted to a synthesis of the literature on the development of English language and literacy to illustrate, in part, the range and depth of these difficulties. Much of the attention is devoted to the development of and problems with reading or script literacy skills because reading has received much emphasis in the schools. Finally, we demonstrate the application of the concepts of the New and Multiple Literacies and conclude with specific implications for developing literate thought.

One of the fastest growing groups of children in K to 12th grade settings is that of children who are English Language Learners (ELLs), as discussed in Chapter 9. These children present enormous challenges for teachers and clinicians. After explaining various terms associated with this

population, we synthesize the research on the development and teaching of English focusing on word recognition skills, written language comprehension skills, and motivational factors. We provide highlights on issues such as instruction, programs, and assessment, and we examine the need to consider the effects of sociocultural contexts on literacy achievement. Finally, we conclude with implications for developing literate thought, emphasizing that technology can and should play a major role.

Historically, many educators and scholars have inquired: What is or should be the goal of education? What is or should be the goal of language and literacy programs? Fast forward to the beginning of the twenty-first century. Are we preparing students and others to live in a *brave new world*? It is possible that our students—adolescents and young adults—may turn out to be the *dumbest generation* (Bauerlein, 2008). Even with technological advances and accessibility to information, students expend much of their time and energy on social networking and discovering shortcuts with respect to obtaining and understanding knowledge. In fact, several scholars remarked that most of today's youth (and even a number of adults) exhibit a blatant disregard for deep, serious reading and reflective, rational thinking (Bauerlein; Blackburn, 2005; Specter, 2009).

In our view, the goal of education is to develop literate thought as we remark repeatedly throughout the book and, again, in Chapter 10. We warn about the shortcomings associated with concepts such as functional literacy and the vocationalization of education. With the proliferation of ideas about virtual realities, multiple realities, and possible realities, educators and clinicians need to extend their techniques so that students can handle these different types of realities. This is important for the further development of imagination, intuition, creativity, and, of course, literate thought. In essence, literate thought might be mandatory for survival in a *brave new world*.

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Acknowledgments

We are indebted to the researchers who provided the findings on which this book is based. We are grateful to both our reviewers for their valuable comments on earlier drafts and Ms. Sara Hann, a graduate student at Missouri State University, for assisting us with the index and literature search. The contributions of the staff at Jones & Bartlett Learning, especially Sean Coombs, Maro Gartside, and David Cella, are also appreciated. Thanks to our spouses and children, who helped to maintain our sanity. The first author would like to acknowledge (again) the guidance of his mentor (now retired), Dr. Stephen P. Quigley. The contributions of a mentor leave a lasting imprint and become even more prominent in one's subsequent scholarly works.

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